



Notice of Funding Opportunity Cover Page

Issue Date: February 7, 2018

Questions Closing Date: 4:00 PM ET (Washington, D.C. Time) February 22, 2018

Application Closing Date: 10:00 AM ET (Washington, D.C. Time) April 23, 2018

Subject: *Notice of Funding Opportunity (NFO)* Number: NFO 7200AA18RFA00007

Program Title: **Seed Systems Support Activity**

Ladies/Gentlemen:

The United States Agency for International Development (USAID), Bureau for Food Security is seeking applications for a cooperative agreement to fund a program entitled Seeds Systems Support activity. Eligibility for this award is *not restricted*. See Section C of this NFO for eligibility requirements.

Subject to the availability of funds an award will be made to that responsible applicant(s) whose application(s) best meets the objectives of this funding opportunity and the selection criteria contained herein. While one (1) award is anticipated as a result of this notice of funding opportunity (NFO), USAID reserves the right to fund any or none of the applications submitted.

For the purposes of this NFO the term "Grant" is synonymous with "Cooperative Agreement"; "Grantee" is synonymous with "Recipient"; and "Grant Officer" is synonymous with "Agreement Officer". Eligible organizations interested in submitting an application are encouraged to read this funding opportunity thoroughly to understand the type of program sought, application submission requirements and evaluation process.

To be eligible for award, the applicant must provide all information as required in this NFO and meet eligibility standards in Section C of this NFO. This funding opportunity is posted on www.grants.gov, and may be amended. Potential applicants should regularly check the website to ensure they have the latest information pertaining to this notice of funding opportunity. Applicants will need to have available or download Adobe program to their computers in order to view and save the Adobe forms properly. It is the responsibility of the applicant to ensure that the entire NFO has been received from the internet in its entirety and USAID bears no responsibility for data errors resulting from transmission or conversion process. If you have difficulty registering on www.grants.gov or accessing the NFO, please contact the Grants.gov Helpdesk at 1-800-518-4726 or via email at support@grants.gov for technical assistance.

The successful Applicant will be responsible for ensuring the achievement of the program objectives. Please read each section of the NFO carefully.

Please send any questions to the point(s) of contact identified in Section D. The deadline for questions is shown above. Responses to questions received prior to the deadline will be furnished to all potential applicants through an amendment to this notice posted to www.grants.gov.

Issuance of this notice of funding opportunity does not constitute an award commitment on the part of the Government nor does it commit the Government to pay for any costs incurred in preparation or submission of comments/suggestions or an application. Applications are submitted at the risk of the applicant. All preparation and submission costs are at the applicant's expense.

This NFO consists of this cover letter and the following sections.

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NFO Attachments	Attachment 1 Past Performance Form Attachment 2 Initial Environmental Examination

Thank you for your interest in USAID programs.

Sincerely,

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Paul Burford
Agreement Officer
Office of Acquisition and Assistance, M/OAA/BFS

General Body

ABBREVIATIONS AND ACRONYMS USED IN THIS NFO

ADS	Automated Directives System of USAID policies
AGRA	Alliance for a Green Revolution in Africa
AO	Agreement Officer
AOI	Area of Inquiry
AOR	Agreement Officer's Representative
BEO	Bureau Environmental Officer
BFS	Bureau for Food Security
BS/MP	Branding Strategy and Marking Plan
CFR	Code of Federal Regulations
CGIAR	A global research partnership for a food-secure future; formerly the Consultative Group for International Agricultural Research
CLA	Collaboration, Learning and Adapting
CPA	Certified Public Accountant
CRP	CGIAR Research Program
CRSP	Collaborative Research Support Program
CV	Curriculum Vitae
DEC	Development Experience Clearinghouse
DMP	Data Management Plan
DUNS	Data Universal Numbering System
EA	Environmental Assessment
EMMP	Environmental Mitigation and Monitoring Plan
ER	Environmental Review
ERF	Environmental Review Form
FAA	Foreign Assistance Act
FTE	Full Time Equivalent
FTF	Feed the Future
FTFMS	Feed the Future Monitoring System
GAAP	Generally accepted accounting principles
GFSA	Global Food Security Act
GFSS	Global Food Security Strategy
HICD	Human and Institutional Capacity Development
IEE	Initial Environmental Examination
IL	Innovation Lab
IR	Intermediate Result
LOE	Level of Effort
LWA	Leader with Associates
ME	Management Entity
MSI	Minority Serving Institution
NFO	Notice of Funding Opportunity
NGO	Non-Governmental Organization
NICRA	Negotiated Indirect Cost Rate Agreement
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PI	Principal Investigator
PMP	Performance Management Plan

RFA	Request for Applications
SAM	System for Award Management
SF	Standard Form
SPS	Standard Program Structure
TEA	Total Estimated Amount
USAID	United States Agency for International Development

<https://www.usaid.gov/sites/default/files/documents/1868/glossary.pdf>

SECTION A: PROGRAM DESCRIPTION

1. PROGRAM

Purpose

The goal of Seed Systems Support Activity (S3A) is to enhance farmers' access to a full range of seed choices and options to maximize their responsive decision making and planning for production. The Activity seeks to improve functioning of national seed sector in [Feed the Future countries](#) and in countries with resilience and emergency seed security programs. By identifying and removing constraints and bottlenecks within the seed systems, the goal is to increase the number of smallholder farmers utilizing quality seeds, including high yielding and stress tolerant commercial and staple crop varieties, in countries with significant Feed the Future and/or emergency seed programming.

The intention is to address seed system constraints that limit the development and uptake of relevant agricultural technologies within and beyond Feed the Future Zones of Influence, by creating self-sustaining, functional seed systems and delivery channels, using market-based approaches, as appropriate to the crop and context. The program will generate tools and approaches to ensure relevant information to guide interventions that reach both the target beneficiaries and smallholder farmers more broadly, and will effectively respond to emerging conditions, especially drought, and mitigate its impacts through planning and smart investments before, during, and after a shock.

Summary Overview

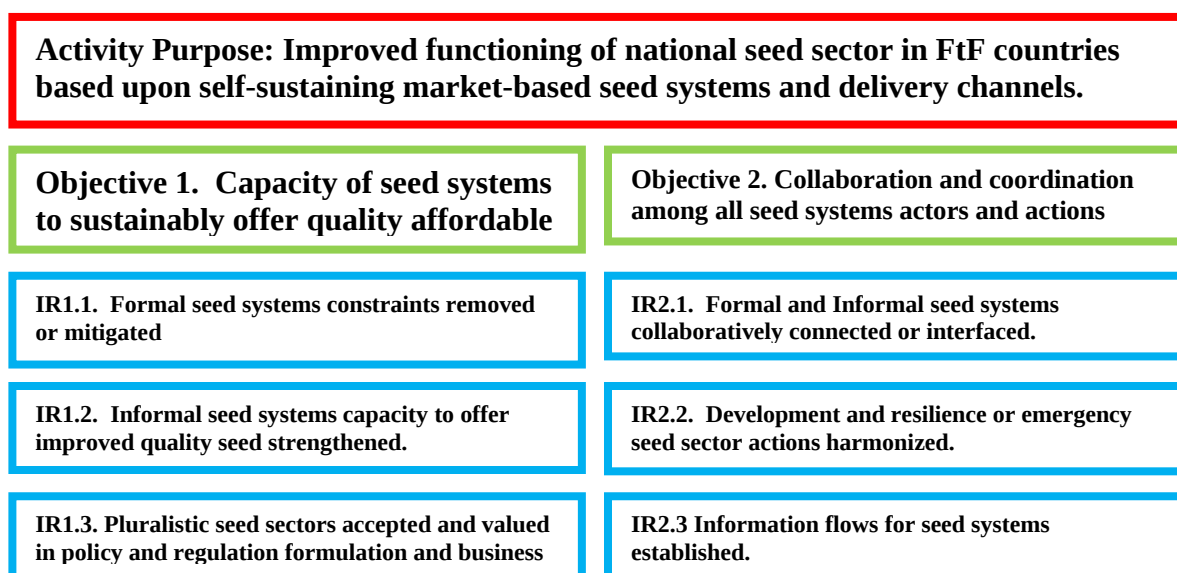
This Notice of Funding Opportunity (NFO) seeks applications from organizations with demonstrated expertise in seed systems and proven management capabilities with the broad range of needed seed-related support services as well as innovative tools, approaches, information, and methods to develop and deploy those critical support services.

- Innovative tools, approaches, and information are needed to develop and implement critical seed system support services to assess and improve formal and informal seed systems in sustainable, commercially oriented ways; support, implement and review Missions' and other development partners' funded national seed sector development programs as requested through Missions' buy-in funding; and strengthen systems while maintaining a market-oriented approach. Support services for Missions may fluctuate over time and space depending on local conditions.
- Demonstrated expertise and experience in managing the provision of such support services in a manner that allows the flexibility to adjust to activity levels quickly as demand for services by host country governments and development partners that USAID Missions' support fluctuate is essential.
- Multi-disciplinary expertise is needed to support both formal and informal seed systems for a wide range of crops within a national or regional seed sector.

II. Anticipated Results and Intervention Areas

An illustrative framework for the type of results that BFS is seeking to support is found in Figure 1 below:

Figure 1: Illustrative Results Framework for S3A



The above illustrative Results Framework provides context and overall results that would be achieved by successful application of the applicant's expertise to the fifteen key areas of focus of this activity detailed below. The activity will improve the functioning of national seed sectors in target FTF countries leading to self-sustaining, market-based seed systems and delivery channels through identification and removal of critical constraints impacting formal seed system, enhancing the capacity of informal seed system to offer improved quality seeds, fostering an enabling policy environment, facilitating close collaboration and coordination of formal and informal seed systems, harmonizing development and emergency seed sector actions and establishing information flows for seed system.

Objective 1. Capacity of seed systems to sustainably offer quality affordable seeds increased.

Objective 2. Collaboration and coordination among all seed systems actors and actions increased

Activity Purpose: Improved functioning of national seed sector in FtF countries based upon self-sustaining market-based seed systems and delivery channels

IR1.1. Formal seed systems constraints removed or mitigated

- Support services to eliminate or reduce bottlenecks to seed systems development and access to quality seed of improved varieties (M)
- Diagnostic Assessment of Local Capacity and Local Seed Networks (C,M)
- Market forecasting and demand estimation, cost estimation (M)
- Seed Production and Marketing Logistics Support (M)
- DNA fingerprinting services to assess genetic purity of seeds and for other uses (C,M)
- Transfer of research material between countries and facilitate implementation of regional seed harmonization protocols (M)
- Ad hoc issues affecting seed systems identified/ removed (C, M)

IR2.1. Formal and Informal seed systems collaboratively connected or interfaced.

- Formal and informal seed system approaches (C, M)
- Determine the effect of market based humanitarian seed interventions (C)
- Diagnostic Assessment of Local Capacity and Local Seed Networks – how to interface, collaborate and build resilient seed systems (C,M)

IR1.2. Informal seed systems capacity to offer improved quality seed strengthened.

- Diagnostic Assessment of Local Capacity/Local Seed Networks (C,M)
- Market forecasting and demand estimation, cost estimation (M)
- Seed Production and Marketing Logistics Support (M)
- DNA fingerprinting services to assess genetic purity of seeds and for other uses (C,M)
- Research on farmer adoption of new varieties (C, M)

IR2.2. Development and resilience or emergency seed sector actions harmonized.

- Leverage and link emergency and development seed programs to support vulnerable smallholder farmers (C,M)
- Shock Responsive Seed Systems for Greater Resilience (C, M)
- Support activity mapping and strategy development for more integrated seed channels (M)

IR1.3. Pluralistic seed sectors accepted and valued in policy and regulation formulation and business planning.

- Policy and Regulatory reform implementation, capacity building and other support to national systems (C, M)
- Market forecasting and demand estimation, cost estimation (M)
- Intervening in both formal and informal seed systems to address other issues the systems (C,M)

IR2.3. Information flows for seed systems established.

- Research on farmer adoption of new varieties (C, M)
- Seed information, data and analytical services (C, M)
- Coordination with seed indexes - EBA, TASAI, Access to Seeds (C)

INTERVENTION AREAS

Through a range of stakeholder meetings, questionnaires, internal and external discussions, program evaluations, studies and analyses of seed systems and seed sector programming, USAID has identified fifteen intervention areas for supporting seed systems that USAID believes are critical in achieving the above results. These fifteen areas presented by the IRs of the RF are relevant to improving the functions of national seed sectors.¹ The fifteen intervention areas are intended to buttress and build upon on-going efforts in the development of a country's seed sector depending on the development and emergency seed support services need of the target countries. The fifteen intervention areas are noted below with references to likely source of support being either C (likely core-funded) and/or M (likely USAID mission funded):

The Fifteen Intervention Areas for Seed Systems Support Activity

1	Seed Systems Support Services to eliminate or reduce bottlenecks to seed systems development and bottlenecks to seed availability, seed access and seed quality (M)
2	Diagnostic Assessment of Local Capacity and Local Seed Networks (C,M)
3	Seed Production Logistics Support (M)
4	Shock Responsive Seed Systems for Greater Resilience (C,M)
5	Market forecasting and demand estimation, cost estimation (M)
6	Policy and Regulatory reform implementation, capacity building and other support to national systems (C,M)
7	DNA fingerprinting services to assess genetic purity of seeds and for other uses (C,M)
8	Intervening in both formal and informal seed systems (C,M)
9	Research on farmer adoption of new varieties (C,M)
10	Coordination with various seed indexes - EBA, TASAI, Access to Seeds (C)
11	Transfer of research material between countries and facilitate implementation of regional seed harmonization protocols (M)
12	Seed information, data and analytical services (C,M)
13	Other issues affecting seed systems (C,M)
14	Map/Develop tools to determine the effect of market-based humanitarian seed interventions in the sense of creating linkages between buyers and sellers and in exposing the most vulnerable farmers to new and/or improved varieties, and track quantities and movement of seeds. (C)
15	Emergency and development seed programs to support vulnerable smallholder farmers (C,M)

The illustrative Results Framework in Figure 1 and the Theory of Change upon which it is based can be adapted and refined to best describe the applicant's approach. The applicant should use the provided illustrative Results Framework as a starting point strategic overview of how the applicant will approach the provision of support services that lead to emergence of functional

¹ A seed sector in any given country or region is made up of many individual seed systems that can be formal or informal or somewhere in between and each seed systems can have sub-systems. Seed systems can serve a single crop, e.g. maize or soybeans or groundnuts, or a group of crops, e.g. roots and tubers or pulses. See definitions in Annex 3.

and enduring seed systems. The approach should assure that support provided is not made up of unrelated individual interventions or instances of support, but that all interventions contribute to measurable outcomes that can achieve a measurable purpose. The approach should be market-oriented, gender inclusive and sustainable both economically and environmentally.

Given the technical scope and global focus of this activity, it is anticipated the applicant will represent a partnership of organizations or groups, each bringing a particular set of program experience and technical expertise that would contribute to successfully undertaking the activities within this NFO. It is also anticipated that the applicant should develop a management plan that would be consistent with the project's technical complexity, the range of potential USAID and external stakeholders to be involved, the global reach, application of the state-of-the-art in seed systems programming, and flexibility need for responding to variable USAID demand. In addition, such a management plan should strive to be efficient in responding to budgetary constraints and emphasize cost effectiveness.

The Activity is not expected to develop complex analytical tools but to advance practical adaptation of existing tools, such as the Early Generation Seed Study methodology, SeedCLIR, and Seed System Security Assessment. Core-funded activities may require an element of pushing the frontiers of the state-of-the-art, while mission-funded activities will focus on direct service provision.

IV. Seed Systems Support Activity Relationship to the Feed the Future and the Global Food Security Strategy

The scaling up of adoption of high quality seeds and improved varieties is a key element in the U.S. Global Food Security Strategy 2017-2021 in order to "...promote agriculture-led growth that is both inclusive and sustainable, economically and environmentally." (See p. 12 of the U.S. Global Food Security Strategy that guides the second implementation period of Feed the Future.)

"Scaling Up for Impact

Inclusive and sustainable agriculture led growth requires widespread adoption of improved technologies and practices by value chain stakeholders. To achieve widespread adoption, we will use scaling approaches to sustainably increase the reach of proven packages of technology innovations among significant numbers of potential adopters. In most cases, scaling requires promoting the diffusion of adoption beyond direct beneficiaries of development interventions."
P. 12 GFS Strategy 2017-2021

In addition, the Global Food Security Strategy puts major emphasis on systemic changes in the agricultural system to ensure sustainability of impacts, in particular with special attention to seed systems development. Based on past experience with the limits of focusing scaling efforts only on project level direct beneficiaries, the GFSS states that the "strategy is not primarily a service delivery strategy, nor is it primarily about reaching the same people with direct benefits year after year. Rather, our strategy is to improve the institutions, markets, choices, and opportunities faced by much larger numbers of poor and hungry people now and in the future to help them move along a sustainable path to better lives." (GFSS, p. 37)

Seeds represent a vital component of the natural resource of “genetic diversity.” As such seeds are a unique type of technology different from other “agricultural inputs” that are manufactured and different from other “innovations.” Seeds are part of natural ecosystems and are also part of human-made agro-ecosystems and human-made value chains. Seed systems are extremely complex, multi-networked, multi-level, and multi-stakeholder systems that interact with many other systems. Women’s and men’s specialized knowledge of the value and diverse use of domesticated crop species and varieties extends to wild plants that are used as food in times of need or as medicines and sources of income. This local knowledge is highly sophisticated and is traditionally shared and handed down between generations. Through experience, innovation, and experimentation, sustainable practices are developed to protect soil, water, natural vegetation, and biological diversity. This has important implications for the conservation of plant genetic resources

Seed systems: The common dictionary definition of a system is: “A group of interacting, interrelated, or interdependent elements forming a complex whole. An organism or body considered as a whole, especially with regard to its vital processes or functions.” This activity will use a functional definition of “seed system” – i.e., a group of interacting, interrelated, or interdependent elements forming a complex whole which provides the following functions: conservation of genetic diversity, varietal development, multiplication, processing, storage, distribution and marketing of seeds. The focus on functions in the definition highlights the socio-ecological nature of seed systems. One aim of S3A is to work with both formal and informal seed systems the role of women as “custodians of seeds” and the knowledge about them will be an important consideration in gender-sensitive analysis and strategy.

USAID investments related to seeds total in the billions of dollars over the past half century (and most recently renewed with the advent of Feed the Future (FTF)). Almost all of USAID’s investment related to seeds has been in developing the improved plant genetics -- better crops --- that then are embodied in seeds. USAID has invested significant amounts of funding in delivering those seeds to farmers, ranging from emergency seed programs during and immediately after humanitarian crises, to farmer extension programs, to International Agricultural Research Center fast delivery and “scaling” programs, to Feed the Future (FTF) value chain programs. Indeed, a quarter of FTF projects have a seed component. In addition, most FTF country/regional policy matrices identify seed policy as a priority, indeed the most frequently occurring priority among the seven priority food security policy areas identified by FTF. Most of the emphasis of USAID and FTF seed delivery -- with the exception of a number of emergency programs targeting vulnerable smallholder farmers -- has been focused formal or commercial channels. The adjective “formal” designates that such seed systems are structured and regulated by laws, rules, regulations, policies which, for example, provide safeguards against transmission of plant diseases, standards for quality, protocols for describing a variety’s traits and characteristics or requirements for proper storage. At the same time, a significant amount of this FTF effort has been focused on short-term scaling approaches to individual technologies, with relatively minor emphasis on identifying constraints and opportunities that must be addressed for building and sustaining both informal and commercial channels as more effective delivery channels in the medium- to long-term.

This Activity will support both formal seed systems and actions to improve, collaborate and engage with informal seed systems. The informal seed systems are not formally structured and operate outside of formal regulations. However, they are part of a broader “seed system” because they provide essential seed system functions, albeit in a less structured way outside of the formal seed system. Given that up to 90% of farmers’ source seed through informal channels in most FTF countries, it is imperative to identify ways to address the seed quality entering these channels. According to the CGIAR, local, informal or farmers’ seed systems are at the heart of food security but these seed systems are currently under stress due to political, social, economic and environmental changes.

USAID is seeking to fund an activity that supports seed sector interventions, specially development and application of effective tools, approaches, policies and information needed to strengthen both formal and informal seed systems and provision of seed system support services to complement, and thus enhance and strengthen, the many and varied development efforts of USAID as well as its implementing partners (e.g. governments, other donors, NGOs, local civil society, development partners and emergency relief partners) that aim to scale up adoption of this complex systems-embedded technology. Women farmers play key roles in local seed systems although they are often overlooked by researchers and development personnel, policies and programs. Participating USAID Missions’ fund will finance formal and informal seed system support services to accelerate sustained availability and access to smallholder farmers of quality seeds of improved crop varieties. USAID/w provided funds will support the development and application of innovative tools, methods, approaches, and information needed to support delivery of demand-driven seed system support services. As the GFS strategy states about scaling up adoption of technologies: *“We will do this by working with delivery pathways (public and private) to demonstrate value and make technologies available to relevant value chain stakeholders, including service providers, input suppliers, smallholder producers, and processors. We will promote adoption through strategic consideration of stakeholder incentives, constraints, and preferences, especially those related to gender. We will place strong emphasis on the policy environment surrounding the incentives and constraints in order to catalyze systemic changes in value chains and market systems.” P. 12 GFS Strategy 2017-2021*

Contribution of this activity to overall objectives of the U.S. Global Food Security Strategy:

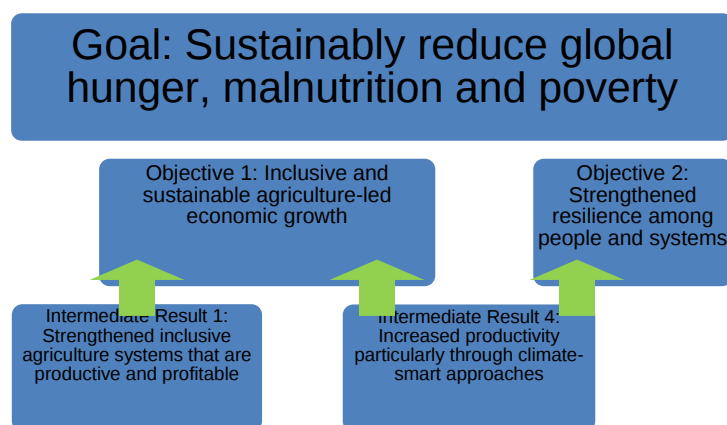
The Global Food Security Strategy is based on a high level results framework to which this activity – and indicative Objectives 1 and 2 in the activity RF outlined in Figure 1 above -- will contribute. That high level GFSS includes three topline objectives noted in Figure 2 below, all of which will be supported by this activity. Specifically, the Seed Systems Support Activity will contribute to the Global Food Security Strategy (GFSS – Feed the Future) Goal to “Sustainably reduce global hunger, malnutrition and poverty” and primarily to high level GFSS Objective 1: Inclusive and sustainable agriculture-led economic growth. By strengthening seed systems efforts through a variety of support actions, the Seed Systems Support activity will also contribute to high-level GFSS Objective 2: Strengthened resilience among people and systems, and will indirectly contribute to high-level GFSS Objective 3: A well-nourished population, especially among women and children.

Within the high level GFSS results framework, the Seed Systems Support activity will focus on contributions to two Intermediate Results in the Global Food Security Strategy: IR1 and IR4. IR1 contributes mainly to Objective 1 while IR 4 contributes to both Objective 1 and Objective 2.

IR 1: Strengthened inclusive agriculture systems that are productive and profitable.

IR 4: Increased productivity particularly through climate-smart approaches.

Fig. 2 Highest level results within the Global Food Security Strategy to which this activity contributes.



Illustrative Theory of Change for the Seed Systems Support Activity

USAID seeks to fund an activity that corresponds to an illustrative theory of change that has been based on learning from extensive USAID experience in designing, implementing and evaluating seed sector development programs and enabling environment:

If major bottlenecks in seed supply chains can be correctly diagnosed and mitigated or removed from selected profitable formal seed systems,
if adaptive seed systems (with or without profit motive) can be allowed to emerge where appropriate,
if informal seed systems can be better understood and strengthened to improve quality and varietal choice,
if informal (and semi-formal) seed systems can be strategically interfaced with aspects of formal seed systems,
if emergency and development seed programs can be harmonized and rationalized within both formal and informal systems, and
if these connections and support can be a source of learning and deployed in ways that do not diminish biodiversity and do not disrupt markets,

then significantly more commercial seed businesses will be successful and offer quality, affordable seeds of a range of varieties and more informal seed systems actors will offer quality seeds of a range of varieties and thus smallholder farmers will have better availability and access

to and will use superior quality seed with yield-enhancing traits and productivity may increase.

The operationalization of this illustrative theory of change is proposed in two components each representing an Objective in the illustrative Results Framework.

Objectives:

S3A Objective one: Capacity of seed systems to sustainably offer quality affordable seeds of improved crop varieties increased.

Improved choice, quality and affordability of seed of yield-enhancing and climate-smart varieties offered to smallholder farmers in formal regulated commercial seed systems and in informal non-regulated seed systems and when deemed appropriate in market-based disaster risk reduction and recovery programs.

S3A Objective two: Collaboration and coordination among all seed systems actions and actors promote self-sustaining, market-oriented systems.

Increased collaboration and coordination for the seed sector: among all seed systems actions, markets, policies, activities, projects, – public, private, development or resilience or emergency - and among all seed systems actors increased. (Innovation broker and learning roles).

V. Background

Seed Sector Current State

Nearly one-quarter of Feed the Future activities deal in whole or in part with seed technology and seed value chains and seed innovation systems. In addition, most FTF country policy matrices and priorities include a significant focus on seed policy. Other development partners such as the Netherlands, the United Kingdom's Department for International Development (DfID), the European Union, the World Bank, the United Nations Food and Agricultural Organization (FAO), Bill and Melinda Gates Foundation, Rockefeller Foundation, and the Alliance for a Green Revolution in Africa (AGRA) invest in seed systems, which are seen as critical elements in efforts to increase productivity to increase global food security.

Governments in Africa, Asia and Latin America have invested in building national research capacity and a seed industry, and make seed policy because seed technology innovations can be a major contributor to agricultural development and economic growth. Other donors are also investing in seed systems development: For example, between 2007 and 2012, fifty percent of the World Bank's 191 projects promoting sustainable agriculture, totaling \$513m, had a seed system component.

Most of FTF past and ongoing "productivity" investments are either "upstream" investments in research and technology development or "downstream" investments linking farmers to value chains and markets. A national seed sector is usually comprised of many seed systems of varying types and for varying crops – each system provides the functions of conservation of genetic diversity, varietal development, multiplication, processing, storage, dissemination and marketing but the many different seed systems may provide the functions with greatly varying degrees of quality or success.

The commercial seed industry includes channels for high value crops for which seed production is profitable. The formal seed sector that make up the commercial seed industry are structured and regulated and operate in formal commercial markets. The formal commercial seed industry is often portrayed as a value chain or supply chain with the major links in the seed value chain/supply chain corresponding, more or less with the aforementioned functions of a seed system but often minus an explicit link for the function of conservation of genetic diversity. There are often strategic partnerships between public and private sector actors in the functions of the formal seed systems. For example, public sector may invest in the research and development of new varieties and “hand-off” small quantities of these varieties or genetic material to private sector, which performs the other functions of a seed system.

Informal seed systems are less structured than formal systems and are composed of the full range of ways farmers produce, disperse and procure seed outside of the formal commercial market. The quality of the seed accessed through these informal systems may differ for male and female farmers. Informal seed systems can offer a range of crops most important to farmers in the locality, whether the crop production is for cash income, food, fodder or fiber. These networks are characterized by flexibility, even under extreme duress.

What elements are needed for sustainable seed systems but are missing?

The adoption by smallholder farmers of high yielding varieties with resilient and climate smart traits is a major and critical component to achieve sufficient and increased production of food to feed the increased population predicted on this planet. A sustainable supply of seeds of these high yielding and climate resilient varieties is thus a prerequisite for this increased productivity to achieve the FTF goal. Moreover, if these varieties are to reach a significant number of smallholders, then the informal seed systems cannot be ignored. Availability of certified seeds of high-yielding improved varieties of crops that women tend to produce for household consumption is also critical. USAID’s efforts to build resilience to recurrent crises also require better and more reliable farmer access to appropriate varieties of high quality seeds of a wide range of crops, especially ensuring reliable supplies before, during, and aftershocks such as droughts or floods.

Unfortunately, after decades of investments and some notable successes (e.g. for some categories of crops such as hybrid maize and commercial vegetable seed and in some countries such as India, China, Vietnam, Brazil), the fact remains that the vast majority of smallholder farmers both in Asia and sub-Saharan Africa and large percentages worldwide still do not have sustained access to quality seeds of improved varieties through both formal and informal seed systems.

There are many bottlenecks to the development of functional seed systems in most Feed the Future countries and regions. Limitations in the form of variable seed quality, marketing and technical support, and limited access to new varieties to respond to specific issues, such as varietal susceptibility to disease, exist. Expertise across a range of disciplines needed to support seed systems of all types and for a wide range of crops within a national or regional seed sector is inadequate. Addressing these bottlenecks so that smallholder farmers have access to and

choices among the best seeds of improved crop varieties available is essential to a number of FTF's highest priorities. Consistent access to new varieties through formal market channels is limited and can often be traced to free provision of seed, which is not a sustainable vehicle for exposure to varietal options. The availability of certified seeds is also low for many crops and varieties that offer high nutrition, may require less watering, or otherwise reduce women's labor and/or are tastier to women.

Moving forward

Achieving FTF goals requires major increases in farm productivity that can come only with better seeds, and accompanying agronomic practices. USAID hypothesizes in the theory of change that investing in support to add to and complement the seed systems efforts already ongoing, through an easily accessible means to diagnose, relieve and remove constraints and bottlenecks in the emerging formal seed systems and to strengthen informal seed systems, will improve the supply of quality seeds for smallholder farmers and better meet their demand for a wide range of choice. USAID's efforts to build resilience to recurrent crises also require better and more reliable farmer access to appropriate varieties of high quality seeds of a wide range of crops, especially ensuring reliable supplies before, during, and aftershocks such as droughts or floods. Better understanding of the entire seed sector (formal and informal systems), especially during periods of stress or emergency, will enable USAID to better serve farmers. Emergency response programs have an important role to play in seed system development as well and through seed system mapping, opportunities to leverage both development and relief interventions should become apparent. More is required to create fully sustainable seed systems. Climate adaptation and mitigation can be supported by farmer access to and use of better performing climate resilient seeds. Farmers in many FTF countries are already dealing with significant climate variability. Longer-term climate change is highly likely to result in increasing temperatures, more variable rainfall patterns, and increasing droughts and floods, all of which will put additional stress on seed varieties and the systems that produce and deliver them.

VI. Program Statement – Expected Outputs and Outcomes

A description of S3A follows below.

A. Operational relationship between centrally funded and Mission funded outcomes:

This Activity will receive central funding from USAID/Washington operating units (the Bureau for Food Security and the Office of Foreign Disaster Assistance) and Mission funding through buy-in transfers to the core Leader agreement or development of separate Associate Awards under the umbrella authority of that agreement.

Central funding will support some core actions within the Leader award with

- (a) development of tools, approaches, and information that will assist USAID Missions and their partners in more effective and sustainable seed systems development work; and
- (b) development of tools, approaches, and information required for central seed systems support and policy dialogue.

Missions may provide buy-in support

- (a) to use the expertise and mechanisms of this activity as a way to implement bilateral seed systems support activities in the field;
- (b) to complement Mission seed system support activities being implemented by others with crucial information, tools, approaches, analytical support, or training; and/or
- (c) to apply the tools, approaches, and information developed with central funding to assist Missions in achieving their bilateral seed systems objectives. Individual buy-ins will not exceed annual funding of \$1 million without appropriate justification.

While this NFO may specify for some sub-activities and components specific tools, systems and approaches that we expect the applicant to develop, in many cases this NFO simply identifies the problems or needs in a general way by component or sub-activity in the expectation that the applicant's application will specify in a more detailed way the tools, approaches and information that it would develop with central funding to respond to that need, problem or opportunity.

B. Expected or Anticipated outcomes and outputs:

Per the results framework for the Seed Systems Support Activity (S3A) outlined in Figure 1, this section identifies indicative and anticipated activity outcomes and outputs; indicative actions; and intervention areas, categorized according to that results framework. These are first described visually in Figure 2, and then in more extended text form in the sections that follow Figure 2. Figure 2 arrays the fifteen intervention areas against the Objective(s) and IR(s) that they may, for illustrative purposes only, support. The applicant may have a different or varied approach in terms of which intervention areas support which IRs and SOs.

Following are the activity outcomes for which the awardee will be responsible, grouped by the S3A IRs outlined in Figure 1. For purposes of clarity, a three tiered numbering system is used, with the two Objective level outcomes providing the first level, the IRs under each of those objectives the second level, and the intervention area the third level. Please note that intervention areas are grouped under the most appropriate IR level, but that several intervention areas may in fact contribute to more than the single IR that they are grouped against in Figure 1 and in the following sections. In their applications, applicants must describe their capacity to deliver these results.

- **Objective 1: Outcomes/IRs and Intervention Areas: Capacity of Seed Systems to Sustainably Offer Quality Affordable Seed.**
- **Objective 2: Outcomes/IRs and Intervention Areas: Increased collaboration and coordination among all seed systems interventions, activities, and projects - development or resilience or emergency to promote self-sustaining market-based systems. (Innovation broker role and learning role)**

I. Objective 1 Outcomes/IRs and Intervention Areas: Capacity of Seed Systems to Sustainably Offer Quality Affordable Seed.

❖ **S3A Objective 1 - EXPECTED OUTCOME/IR 1.1: Formal seed system bottlenecks removed or mitigated.**

The actions and outputs to achieve this outcome should diagnose, remove and/or mitigate major constraints and bottlenecks in seed system that are preventing more choice, better quality and more affordable seed through formal seed systems. This outcome should be achieved with a combination of centrally funded core actions within the Leader award and a number of country or regional requests for specific support action.

The core actions will develop capacity, models, and tools for

- Assessing, diagnosing and addressing the “bottlenecks” and constraints in formal seed sector – especially early generation seed (EGS) supply
- Assessing the gender dimension in the formal and informal seed sectors and addressing the bottlenecks related to acquisition of quality seeds by both men and women farmers
- Redesigning seed sector development and business plans taking account of the most appropriate public and private sector roles, based on profit potential and comparative advantage by crop characteristic and by stage in the seed value chain (building on earlier 2015-17 EGS Studies)
- Redesigning seed sector development and business plans based on recognition of informal seed systems’ role in the national seed sector
- Analyzing and advocating policies that promote not just the regulation of the formal seed sector but also allow space for the informal sector and at the same time accommodate as necessary formal seed distribution methods that are not market-oriented (e.g. free emergency relief seed distribution)
- Assessing, diagnosing and addressing weaknesses in informal seed sector – especially seed quality, and gender roles and equality within the informal seed sector
- Identifying new approaches to informal seed systems for some crops, moving them towards “semi-formal” or Quality Declared Seed systems, where such options exist, emphasizing quality improvement and flexible regulation that enables smallholders to access seeds that are clean, pest- and disease-free.

Intervention Area 1.1.1: Seed Systems Support Services to eliminate or reduce bottlenecks to seed access that constrain existing seed sector development programs.

Many seed system constraints and bottlenecks have already been identified in implementation of ongoing seed sector development programs. Missions will use buy-in or associate awards to access the Seed Systems Support Activity to address these. The applicant must demonstrate capacity to rapidly and effectively respond to such requests.

Seed systems have been an essential focus of FTF mission and central programs. The February, 2016, Early Generation Seed (EGS) Convening in Addis Ababa, was attended by six bilateral missions and two regional missions, demonstrating a high level of interest in seed system support. EGS studies in SSA have been completed or are underway in eleven countries with bilateral programs. FTF seed-system projects are underway in

every regional mission, in Cambodia and Nepal, and many countries in SSA.

Examples of the types of bottlenecks and constraints already identified and for which the applicant must demonstrate both core capacity and “surge” capacity to address include:

- ineffective quality assurance mechanisms
- variety release systems limiting and slowing down instead of facilitating variety deployment,
- mechanisms that constrain rather than promote access to publicly-developed improved varieties by private seed companies and seed producers,
- continued presence of obsolete varieties within seed markets,
- seed and other input subsidies that jeopardize the development of a viable seed sector,
- high degrees of counterfeiting especially in maize seed markets, and
- gender roles, inclusion and equal access to high quality seed varieties and information.

Other seed system support services for which applicants must demonstrate their expertise include:

- a. Seed systems mapping capacity to understand the emerging policy landscape on access to and benefit sharing from the use of plant genetic resources, which may affect licensing arrangements between public sector crop improvement programs and the private sector and could be an additional constraint that needs to be better understood.
- b. Capacity to study and evaluate how informal seed systems access commercial varieties for “recycling” within the informal system and who are the actors involved and how policy on intellectual property rights and benefit sharing from use of plant genetic resources affects the informal system.
- c. Seed system mapping capacity should also be able to consider bottlenecks to innovation and adoption of technology, both by smallholder producers and the seed producers and distributors.
- d. For seed producers, bottlenecks can include technical capacity, inefficient and cost-prohibitive certification systems, and access to early generation seed.
- e. Smallholder producers may face adoption constraints that include risk aversion, challenges to getting quality seed appropriate to their location, and the knowledge of accompanying agronomic practices that are necessary to realize benefits of improved varieties, as well as barriers particular to women farmers in accessing quality seeds for household and commercial purposes.
- f. Coordination with on-going in seed systems development is essential. Global, regional, and national studies of the seed sector already document many of these constraints and provide road maps for addressing this multitude of problems.

Intervention Area 1.1.2: Diagnostic Assessment of Local Capacity and Local Seed Networks (see also 1.2.1 and 2.1.1)

Both in Asia and Sub-Saharan Africa, the sheer number of agro-ecologies argues for

highly locally adapted varieties. And, as many foods are not eaten processed (as wheat is as flour), the unique attributes of varieties (i.e., taste, color, hardness, etc.) are valued and desired by farmers. In addition, varietal characteristics, such as storage properties and cooking/preparation properties, are very important particularly to women who are responsible for the family's food preparation – more so than in the developed world where fuel consumption for cooking is not a huge issue, and food storage solutions are highly developed and available to almost all consumers. Varietal preference may also differ by gender and usage (household or for markets), thus the greater the diversity of high quality options; the more likely programs are to meet demand of all consumers. While Multinational Corporations (MNCs) can play an important role in overall seed sector development, it is almost impossible to imagine that local seed companies will not need to play an equal, if not larger, role. Farmer and household preferences need to be translated into focused research agendas that specifically include consumer preferences of women, which then deliver improved varieties that meet these needs.

Vegetatively propagated crops such as cassava, potato, yam and bananas are important contributors to food security, and suppliers of planting materials for these crops need to be local due to the very high transportation costs involved. Local seed companies will have a necessary role to play in these systems. These companies need to understand seed quality, and be able to function well as ongoing and sustainable businesses. These companies also need to better understand their end markets and what drives consumer preferences. New business models will need to be designed.

Possible areas for intervention in diagnosing and strategizing for mitigation and removal of bottlenecks:

- Business strengthening – but very importantly, strengthening by people who understand the challenges of running a seed company. Among the skills that seed companies typically need help with include market research and outreach to ensure they better understand their end markets and constraints to uptake, demand forecasting and planning for growth, and how to effectively work with suppliers, outgrowers and consumers.
- Developing systems for bio-directional information flows between the market and NARS breeders, particularly for the crops where public sector breeders are the primary source of new varieties, it is critical to ensure the relevance of breeding programs. Both grower requirements and any end-use market specifications must be incorporated into priorities for the breeding programs, as appropriate. This function can be a joint effort between centrally funded crop improvement activities and these seed system programs.
- Local capacity encompassing seed system finance – working capital may only be available to the top three or four performing seed companies in a country, but a “prep program” could be offered to other companies that may eventually qualify for support.
- Regulatory issues – in countries where true-breeding, OPV and vegetatively propagated crops are treated the same as hybrid maize seed produced for export, local seed volumes are low and there is little incentive for private sector

involvement. Seed regulatory systems increasingly must be flexible and adaptable. In addition, given the changing policy landscape on royalties associated with the use of germplasm from the Multilateral System (e.g. CGIAR), governments need greater capacity to comply with these obligations and/or advocate for systems congruent with their practices. Monitoring varietal adoption - track farmers' use of recently released varieties; as warranted, diagnose reasons why local seed systems do or do not adopt these varieties.

- Improve flow of EGS - foster effective, efficient, and sustained flow of EGS that existing public and private sector research efforts and investments generate and/or will generate to reach the end users, while avoiding researching conventional seed/varietal development efforts.

Intervention Area 1.1.3: Market forecasting and demand estimation, cost estimation (see also 1.2.2 and 1.3.2)

A much needed tool for fledgling and emerging local seed enterprises would focus on capacity to forecast the market and estimate demand for seeds of different varieties as well as estimating costs. Applicants should demonstrate capacity to develop such tools, which would help to remedy many of the bottlenecks in seed supply. These tools or tool sets would also link to tools for anticipating or giving early warning of possible seed insecurity situations that could tempt or prompt donors or NGOs to place large orders for commercial seeds at the last minute.

In the developed world, demand estimation, etc., works well. In large part this is due to sophisticated farmers who are moving to newer versions of varieties they already know and like. Knowing how to estimate demand for new varieties is akin to a software company predicting how many people will elect to buy a software upgrade. In a less sophisticated environment where sales are difficult to track and feedback loops are absent, estimating demand and calibrating costs requires use of different kinds of data that may not be complete. Shocks, such as droughts and conflicts, and responses by governments and donors can also significantly positively or negatively affect demand.

In many FTF countries, there are too many ways to derail a demand estimate once it is made and production bets are placed, but before the seed is purchased by farmers (e.g., rains come late, prices at the end of the prior season suddenly drop steeply so farmers look to other crops, food prices rise steeply so at planting time farmers have little money as they have needed to buy food, government comes in with a subsidy scheme that crowds out private sector, etc.). Seed companies realize this, and essentially try to conservatively gauge low levels of shift in farmer's choice among crops, and among varieties. They cannot afford to place big production bets on a new variety, unless a donor is funding them to do that.

Production research/implementation of research findings and reliable provision of high quality EGS are the most important contributors to low cost of goods sold. Without calibrated demand estimates, risk of escalating costs increases.

Market forecasting can often be done the way businesses usually do it – through small-scale pilots that are well run, and then scaled up based on results and lessons learned. For example, a proper product introduction pilot could include sampling the year before, radio promotion in a small area, etc., with close attention to watching results and learning from farmer behavior.

Intervention Area 1.1.4: Seed Production Logistics Support

Fledgling seed companies and producer associations that produce seeds typically do not have the skills or capacity to plan, schedule or estimate multiplication rates of seeds from different crops. Nor do they often know how to site demonstration plots or plan for reaching scale. Among seed companies that have been in business for a while, they have higher-level challenges requiring greater sophistication of business skills; for instance, many companies do not know how to keep track of their cost of goods sold, and analyze, identify, and fix problems. They continue year after year with unsustainable production costs and with low profit and ability start to take shortcuts in quality, or struggle to invest in marketing. Improving cost of goods sold for a seed company is a key step to sustainability.

Another important area of production support may be in production research methodologies. Many seed companies do not understand how to conduct such research, how to keep production research records, or how to fix low production yields. Such constraints have a large impact on their cost of goods sold.

Additionally useful would be supporting small seed companies to reach non-traditional buyers. Often smallholder farmers are risk averse or do not have the resources to front large investments for the use of new varieties. Women farmers are not often targeted although they are roughly one-half of the potential market and are a ‘missing market’. Through options such as small seed packs to reduce the initial investment and allow farmers to experiment with new varieties, and expanded marketing to less accessible market locations, the program could support the widening of the buyer pool for small companies. Mechanisms to encourage seed companies to produce an even greater range of crops (for example, legumes or nutritious and hardy varieties for home gardens) could reach a greater number of people and meet a variety of programming objectives including nutrition.

Agro-dealers also need increased capacity to plan for seed inventory, use proper storage methods, ensure the timely arrival of seed inventory when farmers need for planting, and other such business development support. Tracking specific information on demand segments (by gender, age, etc.) could provide agro-dealers with useful information on their customers.

Intervention Area 1.1.5: DNA fingerprinting services to assess genetic purity of seeds and for other uses (see also interventional area 1.2.4)

Applicants would need to demonstrate that they could have ready access to DNA fingerprinting technologies, expertise and services, as these are likely to be in demand as a support service for seed systems programs. DNA fingerprinting (e.g., DArT molecular marker technology) can now be used to easily and accurately identify the genetic material actually being planted by farmers and has already identified significant situations in which farmers, seed suppliers, governments and donor have highly inaccurate perceptions of that actual material being planted by farmers. This technology can therefore identify points along the seed value chain where genetic impurities are introduced and do so at relatively low cost. Findings can be used to develop remedial measures for fixing the weak links in seed value chains where contamination occurs.

DNA fingerprinting might also be part of research on adoption and “recycling” of commercial varieties. DNA fingerprinting could enhance watchdog efforts – e.g. mystery shoppers, random germ testing from agro-dealers, etc. The impact may not be from the results of the tests, but widespread knowledge that someone is watching and that results will be shared.

Intervention Area 1.1.6: Assist or manage transfer of research material between countries and facilitate implementation of regional seed harmonization protocols

Giving farmers and seed companies access to the best available genetic material requires these initiatives to be expanded, completed, and brought down to practical cross-border implementation level. Phytosanitary certificates and import delays at border crossings have hampered timely implementation of projects, ultimately delaying or prohibiting the release of varieties that could benefit farmers. Several USAID-funded or other initiatives are addressing this constraint.

Intervention Area 1.1.7: Address other identified issues affecting or constraining seed systems

Other issues that affect seed systems, which could be addressed by this program, include the following list. Applicants should demonstrate capacity to analyze constraints and capacity to recommend solutions:

- Mechanisms to develop and enforce model outgrower contracts, which is an increasing problem for many seed companies. There are opportunities to professionalize outgrower production, and move it towards a highly workable model such as in the west, and in India. In many FTF countries, seed growers must often settle for less than other farmers, as they are not allowed to sell their crop upon harvest, and are often paid very late by seed companies. In addition, they must plant EGS provided by the seed companies, and quality is often lacking, which impacts their yield. Finally, if inspections are late, the seed can sit in the field and lose quality, and eventually get rejected by the seed company.
- Cold storage is an ongoing need for retaining parental seed, and certified carryover seed. Cold storage can play a very big role in smoothing supply

patterns.

- Seed driers are a critical component to ensuring seeds are dried down to an appropriate moisture content to ensure quality during storage and high germination rates.
- Seed quality is becoming a very big issue – as discussed above. But, access to ISTA-accredited lab facilities is a big problem. Some countries have no access at all, and other countries have access, but not enough. (Kenya, for example, now tests all seed lots for MLN, but some companies complain that the test results take so long to be delivered that it causes the seed company to miss the selling season.) With climate change bringing new diseases, there will be even greater demand for lab services. It might be possible to provide pilot support for lab start-ups, but through a model that will eventually be private sector, not public.
- Risk management strategies to incentivize adoption

❖ **S3A Objective 1 - EXPECTED OUTCOME/IR 1.2: Informal seed system capacity analyzed and strengthened.**

Intervention Area 1.2.1: Diagnostic Assessment of Local Capacity and Local Seed Networks – the “informal seed systems” (see also 1.1.2 and 2.1.1))

The overwhelming majority of smallholder farmers, and in particular women, source the majority of their seeds from informal systems, using formal systems for particular crops. The diagnostic assessment of local capacity and local seed networks must focus on both formal and informal seed systems. In the past decade the Seed Systems Security Assessments methodology has been developed and successfully used in assessing whether or not seed security intervention may be needed for recovery from emergency situations such as drought or conflict and in creating a baseline map of seed system strengths and weaknesses. Some of these techniques would be very useful in diagnosing areas for quality improvement and interfaces between formal and informal systems. Sperling et al identified seven attributes of informal seeds systems that could make assessment and diagnostics even more challenging in informal systems but which make them essential to any efforts to scale up the use of improved varieties and quality seed. Informal systems already work at scale, are market-driven, move a wide range of crops, work everywhere, rarely break down entirely (are resilient), distinguish between seed and grain and are highly dynamic.

Seeds of certain crops are predominantly supplied by informal systems, which can include farmer-to-farmer transfer of seed, as well as widespread supply by traders who are not part of the formal seed system. Informal seed systems are unable to supply quality genetic material, or sometimes even quality seeds, yet quality systems are essential for maintaining varieties that address smallholder farmers’ needs, as well as to conserve genetic resources. Farmers generally know where to source quality seeds from informal sources (neighbor, traders, local market, etc.), informed by reputation and confidence built over a period of time. However, farmer organizations could have a more substantial role in supplying quality seeds and facilitating changes in technology and

information. It is unknown if there are wide disparities by gender for seed access within informal seed systems but it is known that seed transfers are affected by farmer gender, age and wealth status. Linkages between the informal and formal seed systems could be improved. Prohibitively expensive mechanisms in the formal system make it difficult for farmers to move from the informal to the formal system, yet there are strong links between the two systems. For example, farmers participate in plant breeding and varietal selection, and often are involved in multiplying these varieties and disseminating them. The provision of superior varieties by the formal system to the informal system could create stronger linkages between these systems. National seed policies could catalyze these linkages through, for example, efficient certification and quality control protocols that boost farmer confidence in the quality of seeds delivered through both systems. Efforts to improve quality of seed within informal seed systems may involve building capacity with local traders, farmers groups, women selling grain in informal markets and other market actors who are operating in an informal, less regulated, type of value chain.

Intervention Area 1.2.2: Market forecasting and demand estimation, cost estimation in relation to forecasted potential shocks to seed security (see also 1.1.3 and 1.3.2)

Institutional buyers can play a crucial role in accurate forecasting of demand. Currently they regularly place large orders for certified seeds of specific varieties without giving breeder or foundation seed producers advance notice of their purchase interests. The mass-market consumer goods equivalent of this situation is showing up at the counter with a large order just before closing. The buyer may not get all that they want of the desired goods, the retailer may run out of inventory sooner than planned and there may not be any goods left for the next buyer. Given the importance of NGOs for seeds in many of these markets, this is not a trivial issue.

Core action should develop means to forecast potential shocks to seed security that could tempt donors or NGOs to implement “seed aid” or free or subsidized seed distributions. Connecting with entities such as FEWSNET or the FAO GIEWS that tap into many agencies capacities and use sophisticated satellite and modeling to forecast food insecurity including crop production outlooks and the SeedSystem.Org consortium tools for seed security assessment could suggest ways to forecast such situations. An “early warning” of possible seed insecurity and possible extent could be factored into demand estimates and planned for so that the NGOs and donors could alert seed producers well in advance and the “last minute shopper” syndrome that undermines markets could be avoided or at least mitigated. Better understanding of how informal seed systems manage to be more resilient and shock responsive than formal seed systems could provide insights – for example how traders measure and respond to rapid turnaround market demand, how they differentiate grain and potential seed and determine a reasonable willingness to pay, how farmers purchasing non-certified seed from known sources ensure the varietal characteristics they seek is of acceptable quality.

Intervention Area 1.2.3: Seed Production Logistics Support. (see also intervention area 1.1.3)

Within informal seed systems, market actors such as traders, producer associations or women engaging in petty commerce may be producing, storing and marketing seeds but typically do not have the skills or capacity that a formal seed business might possess. There are emerging semi-formal and informal systems for certain crops that could benefit from capacity building in many functions of a seed system – from varietal selection to multiplication to dissemination and marketing. Like small businesses in formal seed systems these actors and the informal seed system clients could benefit from strengthened capacity to plan, schedule or estimate multiplication rates of seeds and in methods to select seed for multiplying that maintain variety characteristics. Skills in improved ways to properly store seed to preserve quality and to monitor and handle grain that may be sold for seed are also very important for this group. Seasonal price fluctuations can make consistent and long term access to high quality storage a challenge. There could be better methods for petty commerce actors to weigh and package seed at point of sale if going from bulk to small amounts.

Intervention Area 1.2.4: DNA fingerprinting services to assess genetic purity of seeds and for other uses. (see also intervention area 1.1.5)

DNA fingerprinting may serve as a powerful tool in identifying the quality, provenance, and genetic consistency of widely used varieties in the informal system, thereby offering information that could be crucial to identifying appropriate approaches to make better, and adoptable, more productive materials available through informal channels.

Intervention Area 1.2.5: Research on farmer adoption of new varieties. (see also intervention are 2.3.1)

Information on farmer adoption, and criteria/price points that farmers use in making adoption decisions, can be a powerful tool in identifying where and how to invest in effective and sustainable interaction and leverage points between the formal and informal seed sectors.

❖ S3A Objective 1 - EXPECTED OUTCOME/IR 1.3: Pluralistic seed systems accepted and valued in policy and regulation formulation.

Intervention Area 1.3.1: Policy and Regulatory reform implementation, capacity building and other support to national systems that recognize and enable both formal and informal systems

In most, if not all developing countries, the goal of seed sector policy is to raise agricultural productivity and farm income by creating a system that supplies high-quality seed to farmers at affordable prices, along with information on how to use it effectively. Among the policy and regulatory objectives of an effective seed systems that may need support and for which the applicant should demonstrate both core and surge capacity are:

- Farmers have a choice of varieties including those that are ‘women’s crops’ or used in the home garden.
- Good value and selection for farmers.
- Competition between seed companies.
- Quality assurance is reliable to control for risks
- Seed quality unknown and unknowable until planted.
- High risk of counterfeiting.
- Risk management strategies/products to reduce risks to growers
- Phytosanitary protection
- Limit spread of plant disease and pest risks.
- Preservation of intellectual property rights - Necessary to reward private investment in R&D while respecting and recognizing the rights of local communities and farmers.

Seed policy and regulatory issues underlying the above include the appropriate division of labor (and financing) between the public and private sector; the organizational efficiency and reliability of the variety release process; the ease and costs involved in accessing seed or genetic material from external source; and the process of early and frequent consultation between public sector, private seed companies, farmers’ groups and other stakeholders with seed regulatory authorities. Recognition that the informal seed systems have a role to play in the national seed sector should inform policy and regulatory formulation so as to avoid undue disruption or undermining informal seed systems functioning.

Intervention Area 1.3.2: Market forecasting and demand estimation, cost estimation.
(see also 1.1.3 and 1.2.2)

A much-needed tool for fledgling and emerging local seed enterprises would focus on capacity to forecast the market and estimate demand for seeds and different varieties by different target markets such as women farmers, as well as estimating costs. Applicants should demonstrate capacity to develop such tools, which would help to remedy many of the bottlenecks in seed supply. These tools or tool sets would also link to tools for anticipating or giving early warning of possible seed insecurity situations that could tempt or prompt donors or NGOs to place large orders for commercial seeds at the last minute.

In the developed world, demand estimation, etc., works well. In large part this is due to sophisticated farmers who are moving to newer versions of varieties they already know and like. Knowing how to estimate demand for new varieties is akin to a software company predicting how many people will elect to buy a software upgrade. In a less sophisticated environment where sales are difficult to track and feedback loops are absent, estimating demand and calibrating costs requires use of different kinds of data that may not be complete. Shocks, such as droughts and conflicts, and responses by governments and donors can also significantly positively or negatively affect demand.

In many FTF countries, there are too many factors that could derail a demand estimate once it is made and production bets are placed, but before the seed is purchased by farmers (e.g., rains come late, prices at the end of the prior season suddenly drop steeply so farmers look to other crops, food prices rise steeply so at planting time farmers have little money as they have needed to buy food, government comes in with a subsidy scheme that crowds out private sector, etc.). Seed companies realize this, and essentially try to conservatively gauge low levels of farmer movement among crops, and among varieties. They cannot afford to place big production bets on a new variety, unless a donor is funding them to do that.

Production research and/or implementation of research findings and reliable provision of high quality EGS are the most important contributors to low cost of goods sold. Without calibrated demand estimates, risk of escalating costs increases.

Market forecasting can often be done the way businesses usually do it – through small-scale pilots that are well run, gender inclusive, and then scaled up based on results and lessons learned. For example, a proper product introduction pilot could include sampling the year before, radio promotion in a small area, etc., with close attention to watching results and learning from farmer behavior.

Intervention Area 1.3.3: Intervening in both formal and informal seed systems to address other issues the systems (see also 2.1.2)

The applicant should demonstrate core capacity in formal and informal seed systems. Seeds of certain crops are predominantly supplied by informal systems, which can include farmer-to-farmer transfer of seed, as well as widespread supply by traders who are not part of the formal seed system, but can be the only avenue that women farmers have due to their constraints in knowledge and credit opportunities. Oftentimes, informal seed systems are unable to supply quality genetic material, or sometimes even quality seeds, yet quality systems are essential for maintaining varieties that address smallholder farmers' needs, as well as to conserve genetic resources. Women are likely to continue to access informal sources but they should be of high quality. Farmers generally know where to source quality seeds from informal sources (neighbor, local market, etc.), informed by reputation and confidence built over a period of time. However, farmer organizations could have a more substantial role in supplying quality seeds and facilitating changes in technology and information. Linkages between the informal and formal seed systems could be improved. Prohibitively expensive mechanisms in the formal system make it difficult for farmers to move from the informal to the formal system, yet there are strong links between formal and informal systems. For example, men and women farmers participate in plant breeding and varietal selection, and often are involved in multiplying these varieties and disseminating them. The provision of superior varieties by the formal system to the informal system could create stronger linkages between these systems. National seed policies could catalyze these linkages through, for example, efficient certification and quality control protocols that boost farmer confidence in the quality of seeds delivered through both systems.

II. Objective 2 Outcomes/IRs and Intervention Areas: Increased collaboration and coordination among all seed systems interventions, activities, and projects - development or resilience or emergency to promote self-sustaining market-based systems. (Innovation broker role and learning role)

❖ **S3A Objective 2 - EXPECTED OUTCOME/IR 2.1: Formal and Informal seed systems collaboratively connected or interfaced**

Intervention Area 2.1.1: Diagnostic Assessment of Local Capacity and Local Seed Networks – how to interface, collaborate and build resilient seed systems (see also 1.1.2 and 1.2.1)

Applicant should demonstrate capacity to act in role of “innovation broker” and to develop recommendations for models for connecting or interfacing formal and informal seed systems in market-based sustainable manner.

The overwhelming majority of smallholder farmers source the majority of their seeds from informal systems. The diagnostic assessment of local capacity and local seed networks must focus on both formal and informal seed systems. In the past decade the Seed Systems Security Assessments methodology has been developed and successfully used in assessing whether or not intervention is needed for recovery from emergency situations such as drought or conflict. Some of these techniques would be very useful in diagnosing areas for quality improvement and interfaces between formal and informal systems. Collaborative interfaces and connections could play a role in reducing the market disruptions brought about by sudden, unannounced large purchases of commercial seed by NGO or donor seed supply programs. Connection could also consider means to use the informal market as a vehicle for information sharing and improving access to new varieties.

Intervention Area 2.1.2: Intervening in both formal and informal seed systems (see also 1.3.3)

The applicant will need to bring to this activity an understanding of where and how formal and informal seed systems work, where they are constrained, and what specific kinds of intersection or collaboration can operate – to their joint benefit – in ways that deliver a higher quality and moderately priced seed product to farmers.

Intervention Area 2.1.3: Mapping/Determine the effect of market based emergency seed interventions. (see also 2.2.1):

Collaborative connection between formal and informal seed channels can be impeded or facilitated by the modalities of significant seed purchase and sale programs by governments, donors, or NGOs, often but not always in the context of rapid emergency response programs. Seed fairs, voucher programs and other approaches – which are often appropriate in emergency conditions when farmers purchasing power but not local seed availability has been eroded – can promote longer term, more sustainable and

market based formal/informal seed seller and buyer relationships. By contrast, major donor, NGO and/or government purchase and/or sale programs – by putting the public or NGO sector into a major market role and market share – can undermine or impede development of such relationships and channels. Better understanding and quantifying the extent to which projects, donors, NGOs and governments are major market players will be important in better understanding these situations and creating the foundations for dialogue to develop a common vision of key partners of a better more sustainable approach.

❖ **S3A Objective 2 - EXPECTED OUTCOME/IR 2.2: Development and resilience or emergency seed sector actions harmonized**

Intervention Area 2.2.1: Leverage and link emergency and development seed programs to support vulnerable smallholder farmers. (see also 2.1.3)

A functional seed system is a pre-condition to effectively support both development and disaster relief. Much has been achieved on improving emergency seed response globally. Through a shift in the humanitarian community toward needs-based seed assessment and interventions that look toward market-based solutions, emergency and relief programs can support development objectives in a number of ways. With the 2015/16 El Nino, areas of geographic interest for BFS and response for OFDA have converged. A more formalized collaboration and strategic thinking between emergency and development programs is necessary. Working across emergency and development program lines is especially important as major shocks, such as El Nino induced drought, are likely to become more frequent and severe with climate change. Although the mandates of BFS and OFDA are different and thus the objectives for seed programs differ, the ultimate goal is to support sustainable seed systems that serve our targeted farmers. Implementing the activities described in this guidance will take resources, most likely resources and expertise that are not readily available within a Mission's programs. Planning the integration of emergency and development seed programs should look at the following factors before, during and after an emergency:

1. Whether an emergency is caused by an acute event or a chronic underdevelopment of seed systems and/or under-serving of a segment of the population by the seed system. The circumstances will point to the appropriate focus of activities, short-term relief or long-term system development, with an objective of developing and strengthening functional seed systems to ensure that farmers will be able to access quality seeds of improved crop varieties at all times, be it for development, recovery or relief.
2. How to support less prime market areas for development programming. Market reach to the most remote locations is an element that can limit new variety access often missing for the most vulnerable.
3. How to ensure that emergency seed is market based (and linked to other USAID activities) and where appropriate informs farmers on varietal choices available to them through low risk and locally available options (for example, small packs distributed to small stall shop sellers at the "last mile", demonstration plots etc.)

4. How to use a systems perspective to analyze the seed system – both formal and informal – to determine how gains on one side can reduce bottlenecks or challenges to seed security on the other. How to highlight potential unintended consequences of programming.
5. Are emergency seed programs meeting emergency objectives (saving lives and reducing suffering and economic impact of disaster)? Is there a way to better complement development interests? Has farmer preference been reflected and/or have opportunities been taken to expose farmers to other varietal options? How has seed security changed as a result of the relief project? What did farmers really think of the emergency seed provided?
6. Are there linkages with BFS programs that could support better availability of high quality seed to meet vulnerable farmers many objectives of improved nutrition, income generation and improved household food security?
7. Are emergency cash and voucher seed programs noticeably supporting the contributions of the private sector? Is the private sector functional and accessible in the areas of emergency intervention? How can humanitarian partners be better informed and vice versa.
8. Is the current system for Quality Control for emergency seed effective? Are there quality assurance capabilities that could be shared? What are farmer preferences in terms of emergency seed – there are currently two prevailing models – certified high quality seed through vouchers/direct distribution or provision of locally produced but quality checked seed through seed fairs. Did the farmers use it as intended, if not, why not?
9. How to provide improved access to and availability of a wide range of crops and varieties of high quality seed to boost resilience and meet other objectives such as improved nutrition and risk reduction to climate disasters.

Intervention Area 2.2.2: Develop Shock Responsive Seed Systems for Greater Resilience

The applicant should demonstrate capacity to develop models and guidelines for “shock responsive” seed systems including business plans for seed enterprises that include how to address somewhat sudden or unexpected increase in seed demand or to be able to safeguard the production of seeds from shocks such as drought, floods, pest and disease outbreaks.

Whether in response to an emergency or a different shock, the objective of developing and strengthening functional seed systems is to ensure that farmers are able to reliably access seeds of preferred improved crop varieties.

There is the high likelihood in many of the countries where Feed the Future works that agricultural production, including the seed systems that supply it, will be disrupted by a shock (principally drought, but also potentially floods, conflict, and political instability) during a normal (five year or less) project cycle. There is a need to better understand and articulate how development programming can effectively respond to emergent conditions, especially drought, and mitigate its impacts through planning and smart

investments before, during, and after a shock. This issue is especially acute in USAID's resilience focus zones in East Africa (Kenya, Ethiopia, Uganda, Somalia, West Africa (Niger, Burkina Faso, Niger) and Nepal, especially in dryland areas where droughts and other shocks are a recurrent feature. In several countries with strong development portfolios, OFDA and Missions have utilized the model of a crisis modifier. This is an amount of funds (build into existing procurement and assistance instruments and programs) that can be quickly requested by implementing partners to mitigate the risk to ongoing development programs and preserve development gains in a time of shock. Consideration of similar models could support this effort to be more responsive to on the ground realities.

Key questions include:

- How can USAID and other donors effectively support shock responsive seeds systems that can “flex and adapt” in the face of drought and other shocks?
- How can shocks responsive systems build on and leverage existing market and government systems?
- What can USAID and other donors learn from experiences in Malawi and Ethiopia with regard to how shock responsive seed systems were in the face of a drought?
- How can activities during non-shock times develop and support this greater flexibility?

Understanding Seed Systems within the context of resilience of Socio-agro-ecosystems

The past few decades, especially since the emergence of the threat of global climate change and the establishment of global development goals have brought advances in the science of ecology and the merging of ideas from various disciplines into new ways of studying and working with ecosystems. Agronomy has long incorporated ecological thinking into crop production and discussions of how best to manage the “agro-ecosystem” that replaces natural habitat in a farming system. Integrated Pest Management has combined ecology and economics in developing more “natural” ways to manage (not control) crop pests – insects, plant diseases, weeds, and vermin – with minimal use of pesticides and a deeper understanding of the agro-ecosystem. USAID developed an important handbook on multi-disciplinary approaches to natural resource management: *Nature, Wealth and Power*. Sociologists looked at the interface of human activity and eco-systems and how humans use forests and other natural resources in a socio-ecosystem. Ecological concepts such as resilience have come to the forefront in both humanitarian and development community and development partners require resilience to be a major consideration and outcome of investments.

Through this NFO, BFS seeks to support an activity that can bolster the development of “resilient seed systems.” By “resilient seed systems” we mean in the ecological sense, systems that continue to provide the functions even after shocks. Resilient seed systems even after a shock can still provide farmers varietal choice and sufficient quantities of seed to recover and continue their farming systems and livelihood.

Such an activity would be cognizant of resilience as a capacity to maintain a system within a current “regime” or “basin of attraction” and by that definition resilience may be also a source of resistance to “big” or “transformative” changes. As evidenced by seed

security assessments following disasters and shocks from floods, tsunamis, disease outbreaks, drought, conflict, and other shocks over the past decade, informal seed systems are relatively resilient². At the same time the concept of gradually reducing resilience capacity (reducing the depth of the basin) in an ecosystem can lead to a “tipping point” that leads to a regime shift (the system enters a different basin of attraction that has its own new depth or resilience capacity) which can be either a good or bad result. Barrett and Swallow used socio-ecological systems thinking to analyze and discuss the development of fractal poverty traps in situations with multiple-equilibria states³.

The informal seed system for many small holders seems an integral part of the resilience capacity in the socio-agroecological system of the rural environment that on the one hand is allowing them to cope with shocks and at the same time is a part of the resistance to big changes or regime shift towards different socio-agroecological rural environment that could include commercial agriculture and formal seed systems. Access to and use of high quality seed of improved varieties often play major roles in allowing or promoting livelihood regime shifts (e.g. a shift from semi-subsistence smallholder farming to commercial farming), which are at the heart of the transformative systems change for agricultural economies. At the same time access to a wide choice of varieties and crops contributes to the resilience that allows farmers to maintain their livelihood within a particular regime – even if it is a poverty trap.

Although many development and emergency seed programs strive to use a systems approach they often fail to include some basic principles of ecological systems in the design. There is much more of the value chain and market-driven seed-industry-building mentality in many of the seed sector development investments than there is a sense of natural systems, there is oftentimes more economics than ecology. Perhaps the ecological concepts of “resilience” and “tipping points” and their relationship to one another could be used to describe some of the tension or working at cross-purposes that is sometimes perceived between development seed programs and emergency recovery (or resilience) seed programs. For example the frequent complaint that seed relief programs disrupt the development of commercial seed markets and undermine the sustainability of formal commercial seed systems.

Intervention Area 2.2.3: Support activity mapping and strategy development for more integrated seed channels.

Applicant should demonstrate an extensive knowledge of both development and emergency response objectives within the seed arena. Ideally a closer look at the knowledge base and lessons learned from decades of humanitarian response could support activities that better integrate the objectives which currently have potential to undermine each other if done incorrectly. Elements such as more refined early warning of

² McGuire, Shawn and Louise Sperling. 2013. Making seed systems more resilient to stress. *Global Environmental Change* 23 (2013) 644-653. Elsevier.

³ Barrett, Christopher B. and Brent M. Swallow. 2006. Fractal Poverty Traps. *World Development* Vol. 34, No. 1, pp. 1-15.; Barrett, Christopher B. Poverty Traps and Resource Dynamics in Smallholder Agrarian Systems. Chapter 2 in A. Ruijs, R. Dellink, editors. *Economics of poverty, environment and natural resource use*. Springer. 2008.

seed insecurity within the market forecasting and demand estimation, better understanding of the differentiation between seed insecurity and food insecurity, and promotion of best practices are potential activity areas. Donor and NGO seed supply efforts should be considered for their impacts, positive and negative on the broader seed system development objectives. Lessons learned from a variety of programs should be used to determine what interventions support best practices and sustainable improvement in farmer access to seed.

Institutional buyers including donors, NGOs, and governments (often with donor financial resources) are the largest single segment of the commercial seed market in many locations, including both emergency seed purchase programs as well as sometimes recurring purchases for seed subsidy programs. If such purchases were managed in predictable ways that also moved the purchased seed into distribution mechanisms that created sustainable marketing channels and marketing demand by farmers, such purchases might not be problematic, but that is seldom the case.

Actually, these purchases are sometimes managed in ways that can create even greater uncertainty and market variability than extreme weather events. For example, a sudden donor decision based on an acute crisis response to purchase a significant amount of seed in a third country for sale in a second country has several consequences that pose significant barriers to the development of sustainable seed markets and seed systems. First, the seed producing company that is the direct or indirect supplier to the donor has gone through a two- to three-year planning and production cycle based on market/demand estimates that don't include the new donor suddenly in the market for seed. The addition of such a "late" new market opportunity can crowd out customers that may have planned to receive the seed. Such un-forecasted large demand for seed that exceeds the planned supply can also offer more opportunity for unscrupulous market actors to, one way or another, meet the new demand of that original seed demand but with a product that may not be seed at all, or may be an inferior quality, have different, less suitable attributes, or may be a counterfeit version of the original seed specifications. Second, in the third country, the country of distribution of the seed, unless there is an actual seed supply shortfall, the new seed injected into that country would unpredictably displace (possibly with free or subsidized seed) some part of the local market that the local seed industry had planned to meet through their own two- to-three-year planning and production cycle.

A better understanding of quantities, modalities, and secondary market and planning and counterfeiting impacts of this major donor/government/NGO-driven and unpredictable part of seed systems is key to better aligning and managing such actions in the context of developing a long term, sustainable and predictable seed system, and is an absolutely essential aspect of the market forecasting function.

Some examples of the key questions to ask in this context are:

- What are examples of market based mechanisms for relief programs that support

rather than crowd out the full range of sustainable seed players, - how can they be repeated and/or scaled up?

- How can informal market seed growers be supported to improve the quality of seed on offer (both the varietal quality and seed quality). How can we support efforts to offer a quality for which farmers are 'willing to pay' and which is healthy and superior to local seed/grain? What is the right balance of quality/price that stimulates sustainable sales of improved germplasm?
- Overlooking material opportunities to develop local talent, especially innovative young talent.
- How can donors use platforms like the humanitarian food security cluster to be aware of other seed initiatives and to support rather than undermine their development?

❖ **S3A Objective 2 - EXPECTED OUTCOME/IR 2.3: Information flows for seed systems established.**

Intervention Area 2.3.1: Research on farmer adoption of new varieties (see also 1.2.5)

Information from applied research on adoption of new varieties and improved seeds is important for actors in the seed sector. Applicant should demonstrate capacity to develop and describe a learning agenda around farmer adoption that is gender inclusive of new varieties and capacity to do learning and research on this topic.

Farmers integrate many considerations into their decision to adopt new varieties. Among these considerations, risk aversion is a major impediment to adoption. Identifying and testing approaches to incentivize adoption such as demonstration farms, select women and men lead farmers in a community, or even risk management products (payback schemes when germination falls below a certain level), through research innovations would help small companies identify ways to build a market. This mechanism would work with partners who will test these approaches and build an evidence base on strategies that manage risk and also identify other constraints to adoption and introduce strategies to address these. These approaches will also help establish early adopters, and if they are successful, will further incentivize more farmers to adopt.

Intervention Area 2.3.2: Coordination with various seed indexes - EBA, TASAI, Access to Seeds

Applicant should demonstrate capacity to develop a means to coordinate with these various seed indexes and describe an approach to promote use of information and how the coordination could enhance the support available for seed systems.

There are several indexes that seek to measure the performance of seed systems in different geographies:

- Enabling the Business of Agriculture (EBA) aims to measure the quality of agricultural regulation around the world by gathering data and scoring country

performance across a uniform set of indicators, including one module focused specifically on seeds.

- The Access to Seeds Index (TASAI) monitors variables that are essential to the development of a national seed sector.
- Access to Seeds provides insight into the current performance of the seed industry by benchmarking (mostly global) seed companies.

Each of these indexes provides useful, but different, information on seed systems in FTF countries. There may be opportunities to coordinate the outputs of these indexes, or to expand their individual efforts. More importantly, governments, seed companies and civil society can be made aware of their implications and encouraged to improve their relative standings.

Intervention Area 2.3.3: Organize seed information, data and analytical services

Applicant should demonstrate capacity to use Information and Communications Technology in organizing seed information, data and analytical services and describe examples of the types of products that could be developed and would be most useful for seed systems support.

ICT-based regional trade information platforms could accelerate the use of improved seeds and increase seed trade volumes. However, key issues of sustainability must be addressed, especially the dependence on donors for running these platforms and implications for long-term sustainability. Stakeholders' awareness of the services and advantages of using these platforms remains low.

Generally FTF-focus country seed systems are not organized. There is a dearth of information: about new varieties in development, DUS information on released varieties, the availability of EGS of specific varieties, quantities that are available, etc. Seed catalogs are often out of date and not available electronically. There is an opportunity to improve seed certification, inspection, marketing and industry coordination by digitizing the seed catalog. If DUS information is included in an updated, digital catalog, seed inspectors would be able to conduct random inspections of seed companies' varieties to determine if their varieties are true-to-type. Such an approach would be oriented toward enforcement on the basis of truth-in-labeling where these laws exist (and are enforced).

VII. Core Activities

The following are illustrative core activities to be supported with Washington Operating Units provided using Washington core funding.

Activities that could be undertaken with central funding in the core Leader award include:

- Development of a model for "shock responsive" seed systems with guidelines addressing the four questions: (a) How can USAID and other donors effectively support shock responsive

seeds systems that can “flex and adapt” in the face of drought and other shocks? (b) How can shocks responsive systems build on and leverage existing market and government systems? (c) What can USAID and other donors learn from experiences in Malawi and Ethiopia with regard to how shock responsive seed systems were in the face of a drought? (d) How can activities during non-shock times develop and support this greater flexibility?

- Development of tools for seed production logistics that are useful to small and medium seed enterprises and could also assist traders or petty commerce actors who often sell grain as seed in informal seed systems.
- Development of tools for market forecasting and demand estimation, cost estimation.
- Develop and implement a learning agenda on farmer adoption of new varieties.
- Develop a means to help with/facilitate or remove bottlenecks in implementation of regional seed harmonization protocols and transfer of genetic material.
- Produce some selected seed information, data and analytical services that make use of ICT for seed system strengthening.
- Map/Develop tools to determine the effect and efficacy of market based humanitarian seed intervention at creating linkages between buyers and sellers and in creating lasting access to new/improved varieties, and to track movement and quantities of seed.
- Gender assessment to identifying opportunities and constraints for women and the most vulnerable to benefit from the project.

VII. Geographic Focus

The Seed Systems Support Activity is global, with an expectation that actions will advance work in Feed the Future countries and aligned countries with resilience or emergency recovery food security programs. The Activity may operate in multiple locations within multiple Feed the Future and Resilience countries, but will be available to Feed the Future aligned and nonaligned countries as well. The Activity will include core (BFS) actions as well as Mission-funded and actions. Support is expected to be provided to a variety of stakeholders ranging from host country and regional government departments to private-sector, emerging seed enterprises, to USAID implementing partners and Missions working with seed value chains, to NGOs working with vulnerable farmers following a natural disaster. Most actions will be short-term and focused in nature but will be in support of ongoing activities in the seed sector and will be embedded within an overarching seed system strengthening strategy that will prevent them from being disjointed, random, ad hoc interventions. The Activity is expected to cover a range of ecologies and associated agro-ecosystems.

VIII. Gender Considerations

Gender inequality cuts across each dimension of food security: availability, access, and utilization and across the interactions between women and men that affect gender roles and responsibilities—status, negotiating power, decision making, time and mobility. Through all its work, USAID aims to integrate a gender perspective that identifies and addresses the differential impact of development on women and men. As a policy and as a goal in itself, —USAID strives “to promote gender equality, in which both men and women have equal opportunity to benefit from and contribute to economic, social, cultural, and political development; enjoy socially

valued resources and rewards; and realize their human rights” (Automated Directives System [ADS] 201, 2009, Revised 2010, 201.3.9.3, p. 31).

The Activity involves interventions in systems that could induce transformation and change in the access to seeds and plant genetic diversity by women and the most vulnerable. The implementing partner will be responsible for developing a work program that includes activities that target and measure capacity to address gender gaps and to meet the needs of women farmers and entrepreneurs. Where possible M&E indicators will be disaggregated by sex. The analysis will identify project elements necessary to promote women’s leadership capacity building and gender-equitable participation and sharing in program benefits especially with regards to access to and knowledge of quality seed stock for home and markets.

Implementing Partners must incorporate systematic analysis of gender issues, gaps, constraints, and impacts in the Activity and will be required to promote gender equality by identifying sex-disaggregated indicators to assess it, setting targets for equitable participation of women and men, and reporting on performance and impacts disaggregated by sex in order to comply with USAID ADS 205 Gender Requirements.

The Activity will assess gender issues relevant to the institutional sub-sector and identify measures the Activity may take to enhance positive gender impacts. In the event that a program falls substantially behind targets for gender-based indicators, the implementer must modify subsequent Annual Work Plans to address these shortfalls. Applicants are expected to adapt and refine the illustrative Results Framework and Theory of Change to be gender inclusive and explain their strategic approach to providing Seed Systems Support as part of the application.

IX. Environmental Considerations

An Initial Environmental Examination (IEE) has been completed for the Seed Systems Support Activity. The purpose of the Initial Environmental Examination, in accordance with Title 22, Code of Federal Regulations, Part 216 (22CFR216), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the described activity, and to recommend determinations and, as appropriate, conditions, for these activities. Upon final approval of this IEE, these recommended determinations are affirmed as 22 CFR 216 Threshold Decisions and Categorical Exclusions, and conditions become mandatory elements of implementation. This IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation.

*For the fifteen interventions areas, nine have been determined to merit Categorical Exclusion. And the remaining five are recommended for a determination of “Negative with Conditions.”

The SSSA IEE specifies that when the Threshold Decision is a Negative Determination with Conditions, an Environmental Mitigation and Monitoring Plan (EMMP) will be developed by the Implementing Partner (IP) to mitigate the conditions described in the IEE. The EMMP will be completed before activities start. Periodic EMMP Reports shall be prepared by the IP to describe how well the monitoring and mitigation measures are working, and if any modifications are necessary.

X. Performance Monitoring, Evaluation and Learning

Results Framework and Theory of Change for Seed Systems Support Activity

Applicants are expected to adapt and refine the illustrative Results Framework and Theory of Change and explain their strategic approach to providing Seed Systems Support as part of the application. This will be a crucial piece of the plan for Performance Monitoring, Evaluation and Learning. USAID intends to support a program that will create long-term success through adoption of a Collaborating, Learning and Adapting (CLA) approach, focusing on collaborating with stakeholders, learning (identifying, researching and documenting emergent good practice), adapting (tailoring good practices for local situations by providing technical assistance for analysis and program/project design), and thought leadership (disseminating good practice through media and training). The application should provide a good description of how the Seed Systems Support Activity will accomplish learning and the probable key questions or issues of interest that would make up a learning agenda.

Performance Monitoring Plan (PMP)

The Recipient will operate with a focus on achieving developmental results and impacts. A Performance Monitoring Plan (PMP) will be completed as part of the Life-of-Project Work Plan and will provide for routine monitoring and reporting, focusing on program performance and impact. Specific performance and results indicators will be provided for all Project activities. Such M&E systems and tools may be useful to monitoring performance of the SSSA activity and may be critical to sustainable performance of the seed sector actors.

The recipient will identify appropriate Life of Project Indicators and Targets, including those for gender inclusion, based on their program description; it is likely that this will include custom indicators (to be sex-disaggregated as applicable) to be developed by the applicant and specifically tailored to the nature of building sustainable seed systems. However the PMP must incorporate Global Food Security Strategy (Feed the Future) indicators. In addition, based on the final application USAID BFS may require certain indicators based on BFS reporting requirements. Until release of the new Gender and M&E Guide later this year for developing and using indicators and methods for data collection, Applicants should reference:

https://www.feedthefuture.gov/sites/default/files/resource/files/ftf_guidanceseries_vol6_gender_impact_march2014_0.pdf

For GFSS Indicator Reference see: <https://feedthefuture.gov/resource/feed-future-performance-indicators-under-global-food-security-strategy>

End of Section A

SECTION B: FEDERAL AWARD INFORMATION

B1. Estimate of Funds Available and Number of Awards Contemplated

Subject to funding availability, USAID intends to provide up to **\$20,790,000.00** dollars in total USAID funding over a five year period for the Leader Award. The total estimated ceiling budget for this program is **\$49,500,000.00**. For the purpose of this NFO, applicants shall prepare a budget reflecting the core budget of **\$20,790,000.00** dollars as indicated in the application instructions. Actual funding amounts are subject to availability of funds.

USAID intends to award one Cooperative Agreement in the form of a Leader with Associates (LWA) mechanism pursuant to this notice of funding opportunity. Approximately one Cooperative Agreement will be awarded at present, but USAID has set aside **\$28,710,000.00** dollars as a pool for potential Associate Awards and buy-ins. Associate Awards and buy-ins will be made during the life of the project based on demand from USAID Missions and other USAID Bureaus or Office to the holder of the Leader Award. The competition under this NFO covers both the Leader Award(s) and all subsequent Associate Awards and buy-ins.

Associate Award Budgets: Associate Awards will be subject to the needs, priorities and funding available to USAID Missions and offices. Funding for Associate Award Agreements will be subject to USAID Mission and other USAID operating unit budget levels and strategies. Recipients must be prepared to respond appropriately to such requests from Missions and applications should demonstrate capacity and planned procedures for responding with applications for and implementing Associate Awards, if any materialize. Associate Awards may run for up to five years from date of award and may extend beyond the period for the Leader Award.

USAID reserves the right to fund any one or none of the applications submitted.

B2. Start Date and Period of Performance for Federal Awards

The period of performance anticipated herein is 5 years from date of award. The estimated start date will be upon the signature of the award.

B3. Substantial Involvement

USAID intends to award a cooperative agreement for the Leader Award. A cooperative agreement is distinguished from a grant by virtue of USAID having substantial involvement (beyond that which is permitted under a grant) in the implementation of the program.

I. Substantial Involvement - Leader Award

USAID will be substantially involved in the implementation of the core program described in Section A of this NFO under the Leader Award described above. The intended purpose of the Agreement Officer's Representative (AOR) involvement during the implementation of the

program is to assist the recipient in achieving the supported objectives. It is expected that the Agreement Officer will delegate the following approvals to the AOR, except for changes to the Program Description or the approved budget, which may only be approved by the Agreement Officer.

Substantial involvement is limited to:

a. Approval of the Recipient's Annual Implementation Plans (Work Plans & Budgets):

If at the time of award, the program description does not establish a timeline in sufficient detail for the planned achievement of milestones or outputs, USAID may delay approval of the recipient's implementation plan for a later date. USAID must not require approval of implementation plans more often than annually. If the AO has delegated authority to the AOR to approve implementation plans, the AOR must review the agreement's terms and conditions to ensure that changes to the terms and conditions are not inadvertently approved by the AOR.

b. Approval of Specified Key Personnel

USAID may designate as key personnel only those positions that are essential to the successful implementation of the recipient's program. USAID's policy limits this to a reasonable number of positions, generally no more than five positions or five percent of recipient employees working under the award, whichever is greater. USAID recommends the following Key Personnel:

1. *Chief of Party*
2. *Monitoring and Evaluation/Learning and Knowledge Manager*
3. *Development Seed Systems Advisor*
4. *Emergency and Resilience Seeds Systems Advisor*

c. Agency and Recipient Collaboration or Joint Participation

- 1) Approval of the Recipient's overall Performance Management Plan (PMP) for the Leader Award.
- 2) Approval of the Recipient's monitoring and evaluation and Environmental Mitigation & Monitoring plans.
- 3) Collaborative involvement in selection of advisory committee members, if the program will establish an advisory committee that provides advice to the recipient. USAID may participate as a member of this committee as well. Advisory committees must only deal with programmatic or technical issues and not routine administrative matters.

- 4) Concurrence on the substantive provisions of sub-awards. 2 CFR 200.308 already requires the recipient to obtain the AO's prior approval for the subaward, transfer, or contracting out of any work under an award. This is generally limited to approving work by a third party under the agreement. USAID reserves approval rights for sub-awards or contracts made by the Grants Committee.
- 5) Monitor to authorize specified kinds of direction or redirection because of interrelationships with other projects. All such activities must be included in the program description, negotiated in the budget, and made part of the award.

d. Agency Authority to Immediately Halt a Construction Activity.

e. Review and Approval of Program Descriptions for Proposed Associate Awards and Buy-Ins

II. Substantial Involvement - Associate Awards

An Associate Award may be a grant or a cooperative agreement. If an Associate Award will be a cooperative agreement, specific substantial involvement provisions will be identified for that Associate Award.

B4. Purpose of the Award

The principal purpose of the relationship with the Recipient and under the subject program is to transfer funds to accomplish a public purpose of support or stimulation of the Seeds System Support Activity which is authorized by Federal statute.

The successful Recipient will be responsible for ensuring the achievement of the program objectives and the efficient and effective administration of the award through the application of sound management practices. The Recipient will assume responsibility for administering Federal funds in a manner consistent with underlying agreements, program objectives, and the terms and conditions of the Federal award. The Recipient using its own unique combination of staff, facilities, and experience, has the primary responsibility for employing whatever form of sound organization and management techniques may be necessary in order to assure proper and efficient administration of the resulting award.

SECTION C: ELIGIBILITY INFORMATION

U.S. and non-US organizations, universities and firms may participate under the NFO.

Collaborating partners may be contractors or sub-recipients, and applicants should be aware of the distinction between procurement contracts (acquisition) and sub-awards (assistance). Contracts are subject to 2 CFR 200.318-326 and the USAID standard provision entitled "USAID Eligibility Rules for Goods and Services" (see Section C.3 below). Sub-awards are subject to 2 CFR 200, 2 CFR 700 and the USAID standard provision entitled "Applicability of 2 CFR 200 and 2 CFR 700."

The recipient's and sub-recipients' contractors and subcontractors at all tiers must also meet USAID's supplier nationality requirements described in Section C.3 below. Please note that it is USAID policy that no profit (*i.e.*, any amount in excess of allowable direct and indirect costs) is payable under the prime award or under any sub-award (*i.e.*, sub-grants and sub-cooperative agreements, but excluding procurement contracts). However, profit is payable by the prime recipient or a sub-recipient to a contractor/vendor if the recipient or sub-recipient is procuring goods or services in furtherance of the program being supported by the award or sub-award. Please refer to the following for additional information:
(<http://www.usaid.gov/ads/policy/300/303sai>).

USAID welcomes applications from organizations which have not previously received financial assistance from USAID.

Applicants must have established financial management, monitoring and evaluation processes, internal control systems, and policies and procedures that comply with established U.S. Government standards, laws, and regulations. The Recipient must be a responsible entity.

The AO may determine a pre-award survey is required to conduct an examination that will determine whether the prospective recipient has the necessary organization, experience, accounting and operational controls, and technical skills – or ability to obtain them – in order to achieve the objectives of the program and comply with the terms and conditions of the award.

1. COST SHARING (MATCHING)

I. Leader Award

There is no mandatory level of cost-sharing (matching) for this program but USAID nevertheless encourages cost-sharing to the maximum practicable extent, and any proposed cost-sharing will be assessed by USAID as part of determining which applications offer the greatest value. Cost-sharing or matching means that portion of project or program costs not borne by the U.S. Government. Cost sharing includes cash and in-kind contributions, and is subject to 2 CFR 200.306 and 2 CFR 200.1 and the USAID standard provision for U.S. NGOs entitled "Cost-Sharing (Matching)", which, *inter alia*, requires that cost sharing, be verifiable from the Recipient's records. Cost-sharing or matching is normally associated with contributions from the

same prime and sub-recipient sources that also receive USAID funds under an award, but can include contributions from third parties. Failure to meet a cost-sharing requirement can result in the Recipient having to make refunds to USAID or a reduction in future funding.

II. Associate Awards

Cost sharing requirements, if any, will be established for each Associate Award by the USAID Mission or office that finances the Associate Award.

2. RISK ASSESSMENT

In order for an award to be made, the USAID Agreement Officer must evaluate the risks posed by applicants as outlined in 2 CFR 200.205 and ADS 303.3.9. This means that the applicant must possess, or must have the ability to obtain, the necessary management and technical competence to conduct the proposed program, and must agree to practice mutually agreed-upon methods of accountability for funds and other assets provided or funded by USAID.

In evaluating the risks posed by applicants, the Federal Awarding Agency uses a risk-based approach and may consider:

1. Financial stability;
2. Quality of management systems and ability to meet the management standards prescribed in this part;
3. History of performance. The applicant's record in managing Federal awards, if it is a prior recipient of Federal awards, including timeliness of compliance with applicable reporting requirements, conformance to the terms and conditions of previous Federal awards, and if applicable, the extent to which any previously awarded amounts will be expended prior to future awards;
4. Reports and findings from audits performed under Subpart F—Audit Requirements of this part or the reports and findings of any other available audits;
5. The applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities; and
6. That applicant is otherwise qualified to receive an award under applicable laws and regulations (e.g., Nondiscrimination, Lobbying, Debarment/Suspension, Terrorist Financing, etc.).

In the absence of a positive risk assessment, an award can ordinarily not be made. Awards to potential new partners may be significantly delayed if USAID must undertake necessary pre-award reviews of these organizations to make an adequate risk assessment. These organizations should take this into account and plan their implementation dates and activities accordingly.

SECTION D: APPLICATION AND SUBMISSION INFORMATION

D1. DEFINITIONS – AS USED HEREIN

“Discussions” are negotiations that occur that may, at the Agreement Officer’s discretion; result in the applicant being allowed to revise its application.

“In writing,” “writing,” or “written” means any worded or numbered expression that can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Application modification” is a change made to an application before the RFA’s closing date and time, or made in response to an RFA amendment, or made to correct a mistake at any time before award.

"Revised application/addendum" is a change to an application made after the RFA's closing date, at the request of or as allowed by the Agreement Officer as the result of negotiations.

“Time,” if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

D2. AGENCY POINT OF CONTACT

Agency Point of Contact

US Agency for International Development
Office of Acquisition and Assistance
Kimberly Tran, Agreement Officer
Email: ktran@usaid.gov

Alternate Agency Point of Contact

US Agency for International Development
Office of Acquisition and Assistance
Paul Burford, Agreement Officer
Email: pburford@usaid.gov

Questions and Answers: All questions regarding this NFO should be submitted in writing to Paul Burford at pburford@usaid.gov and Kimberly Tran at ktran@usaid.gov.

Questions regarding this NFO should be submitted via e-mail the agency Point of Contact to provide sufficient time to address the questions and incorporate the questions and answers as an amendment to this NFO. Any information given to a prospective Applicant concerning this NFO will be furnished promptly to all other prospective Applicants as an amendment to this NFO, if

that information is necessary in submitting applications or if the lack of it would be prejudicial to any other prospective Applicant.

D3. AMENDMENTS TO NFO

If this NFO is amended, all terms and conditions that are not amended remain unchanged. The AO will do their best to alert Applicants that have already submitted applications that an amendment to the NFO has been published; however, it is ultimately the responsibility of the applicants to be aware of published amendments to the NFO through the Grants.gov platform.

D4. CONTENT AND FORM OF APPLICATION SUBMISSION

a. Preparation of Applications:

The Applicant shall furnish the information required by this NFO. Applications shall be submitted in two separate parts:

- (I) Technical Application, and
- (II) Cost/Business Application.

Applicants should retain for their records one (1) copy of the application and all enclosures which accompany it.

Unless otherwise indicated, applications must cover only the Leader Award. Separate applications will be submitted for Associate Awards when and if they arise.

b. Changes to the Application

Any erasures or other changes to the application must be initiated by the person signing the application.

Applications signed by an agent on behalf of the Applicant shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

After the closing date (deadline) of the application period, applicants may submit revised applications/addenda only if requested or allowed by the Agreement Officer.

Applications must be withdrawn by written, electronic notice (email) received at any time before award.

Withdrawals are effective upon receipt of notice by the Agreement Officer.

c. Restriction on Disclosure and Use of Data

Applicants who include data that they do not want disclosed to the public for any purpose or used by the U.S. Government except for evaluation purpose, must mark the title page with the following legend:

“This application includes data that shall not be disclosed outside the U.S. Government and shall not be duplicated, used, or disclosed – in whole or in part – for any purpose other than to evaluate this application. If, however, a grant is awarded to this Applicant as a result of – or in connection with – the submission of this data, the U.S. Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting award. This restriction does not limit the U.S. Government’s right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets *[insert sheet numbers or other identification of sheets]*.”

Applicants must also mark each sheet of data it wishes to restrict with the following legend:

“Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this application.”

Applicants are advised that it is anticipated that the successful technical application, application modification, and/or revised application/addendum will become the Program Description of the grants(s) or cooperative agreement(s) awarded as a result of this NFO. Pursuant to the Freedom of Information Act of 1981, the public is entitled to request information from Agency award files. As a general rule, information will be disclosed except:

- 1) Information submitted in response to this NFO, prior to award of the grant or cooperative agreement, or modifications or revisions thereto;
- 2) Information properly classified or administratively controlled by USAID; and
- 3) Information specifically exempted from disclosure under the Freedom of Information Act.

Upon award of the cooperative agreement resulting from this NFO, USAID will disclose, use, or duplicate any information submitted in response to this NFO to the extent provided in the award and as described in Section F.I of this NFO and as required by the Freedom of Information Act.

d. Responsiveness to NFO and False Statements

The applicant must follow the instructions contained herein and supply all information as required. Failure to furnish all information requested, or to submit an application directly responsive to the terms, conditions, specifications, and provisions of this NFO may disqualify an application. Applicants must set forth full, accurate and complete information as required by this NFO. The penalty for making false statements to the Government is prescribed in 18 U.S.C. 1001.

D5. APPLICATION SUBMISSION PROCEDURES

It is the Applicant’s responsibility to ensure that all necessary documentation is complete and received on time.

Applications must be submitted electronically to Kimberly Tran via email at ktran@usaid.gov and Paul Burford at Pburford@usaid.gov. **Applications must not be submitted through grants.gov.** USAID cannot accept e-mails over 25MB in size. If the Application attachments are in excess of that size, then the Applicant must submit over multiple e-mails. For an application sent by multiple e-mails, please ensure the subject lines clearly indicate the NFO number and whether the e-mail relates to the 1) technical application, 2) cost application, or 3) risk assessment. The technical application and the cost application should be submitted as separate e-mail attachments. USAID will not be responsible for errors in compiling electronic applications if instructions are not provided or are unclear. All applications received by the submission deadline will be reviewed for responsiveness to the NFO and the application format. No addition or modifications will be accepted after the submission date.

D6. TECHNICAL APPLICATION INSTRUCTIONS

Applications submitted in response to this NFO must be received by email in MS Word or PDF format to the agency points of contact listed in Section G.

It is the Applicant's responsibility to ensure that all necessary documentation is complete and received on time. USAID bears no responsibility for data errors resulting from transmission or conversion processes associated with electronic submissions.

General

- All information shall be presented in the English language and any monetary figures listed in U.S. Dollars.
- The Application shall be Typed, single space on letter size paper (not legal size paper)
- 12-point font using fixed pitch spacing per inch
- 1" margins on standard, letter-sized paper (8½" x 11").
- Spreadsheets must be in MS Excel (version 2000 or later).

Page Limitation: The technical application is limited to **25 pages**. The Cover Page, Table of Contents, Technical Assumptions, Project Management Plan, Resumes, the Branding Strategy and Marking Plan, Initial Environmental Examination (IEE) Response are not included in the total page limitation. Submissions that are non-compliant with the page limitations will not be evaluated.

- Individual resumes are limited to three (3) pages per person. Resume pages in excess of three (3) pages will not be evaluated.
- Past Experience is limited to three (3) pages maximum per each project submitted.
- The Cost Application has no page limits.
- Applicants shall not include any cost related information in the technical application

I. Technical Application Content

The application must address all of the above technical items as well as their respective components listed below. Please number the pages of your application and its required sections. Pages in excess of stated limitation will not be considered. No cost information shall be contained within the Technical volume. To facilitate the review of applications, narrative portions of applications should be organized in the same order as they appear below.

The technical application shall include the following sections:

(i) Cover Page

The Cover Page should include the following:

- a. Program title;
 - b. Notice of Funding Opportunity reference number;
 - c. Name of organization (s) applying for the agreement;
 - d. Data Universal Numbering System (DUNS) Number;
 - e. Point of Contact (Primary & Alternate);
 - f. Date of Application/Expiration of Quotation;
 - g. Payment Terms;
 - h. Any partnerships; and
 - i. Contact person, telephone number, fax number, address, and types name(s) and title(s) of person(s) who prepared the application, and corresponding signatures and authorized to negotiate on the applicant's behalf. Please submit identical information for all proposed sub awards.
- (ii) Table of contents that follows the technical application format outlined herein.
- (iii) Technical Application Sections as required by the technical application format.

Applicants are advised that lack of completeness or superficiality of the application may constitute grounds for excluding it from consideration.

General Instructions

It is anticipated that the successful application (as may be revised) will become the Program Description for the award resulting from this NFO. Thus, applications submitted in response to this NFO must, in addition to being responsive hereto, be written in the active voice and in results-oriented terms in order to address what is proposed to be done, why it is proposed to be done, how it is proposed to be done, who will do it, where it will be done, when it will be done, and the anticipated results and impact. The technical application shall contain the following sections:

1. Technical Understanding and Approach (Suggested 10 pages)

The Technical Understanding and Approach shall demonstrate the Applicant's understanding and expertise with respect to the **fifteen areas of intervention** and how these are strategically connected within a theory of change and results framework that is adapted from and comparable to the illustrative example for Seed Systems Support Activity as described Section A. The Applicant shall further demonstrate understanding and expertise with respect to achieving those objectives and intermediate results of the results framework by objectives and sub-objectives.

This section shall also demonstrate an understanding of the type and scope of other programs

involved in seeds systems development including the Early Generation Seed efforts, seed policy, enabling environment, AGRA, Innovation Labs, resilience and disaster recovery projects and how the SSSA could and can coordinate and collaborate with these.

This section must describe how collaborative learning approaches are incorporated into the design and how the applicant would develop the tools and assessments in the core Leader award.

The Technical Approach shall provide a good description of how the Seed Systems Support Activity will accomplish learning and the probable key questions or issues of interest that would make up a learning agenda

This section will include a Monitoring and Evaluation Plan
Applicants shall:

- Provide an illustrative performance monitoring plan for Seed Systems Support Activity that includes the indicators that will be used for the project objectives and IRs. This may be included as an annex.
- Identify the data collection method, type, and source of information to be collected.
- Describe how USAID reporting requirements will be met.

The Applicant shall develop a Performance Monitoring Plan detailing the Life-of-Project Work Plan and routine monitoring and reporting, focusing on program performance and impact; and Life of Project Indicators and Targets.

Evaluation shall be designed and implemented at the beginning of the project and continue throughout the project. The plan must be consistent with USAID's Evaluation Policy (<http://www.usaid.gov/evaluation/>).

Technical applications must be specific, complete and presented concisely.

2. Management Plan and Institutional Capability (Suggested 7 pages)

The Applicant shall propose a management plan, including an organizational chart, which addresses the breadth, depth and technical areas required to successfully undertake Seed Systems Support Activity. Given the technical scope and global focus of this activity, it is anticipated the applicant will be a partnership of organizations or groups, each bringing a particular set of program experience and technical expertise that can contribute to successfully undertaking the activities within this NFO.

The Applicant's management plan shall be consistent with the project's technical complexity, the range of USAID and external stakeholders potentially to be involved, the global reach, and application of the state-of-the art in seed systems programming. In addition, the management plan needs to be efficient in responding to budgetary constraints and emphasize cost effectiveness. The management plan must address how the applicant will coordinate and collaborate with other seed systems stakeholders and players in seed markets.

The management plan must explain how the S3A will be responsive and flexible and able to respond to requests quickly with needed expertise.

The Applicant shall:

- Develop a management plan that would be consistent with the project's technical complexity, the range of potential USAID and external stakeholders to be involved, the global reach, application of the state-of-the art in seed systems programming, and flexibility need for responding to variable USAID demand.
- Provide a management plan that should strive to be efficient in responding to budgetary constraints, emphasize cost effectiveness, and explain how it will manage a request for support from a Mission through buy-in to the core Leader award.

As such, the Management Plan must include the following:

A. Organizational chart with the roles and responsibilities and lines of authority and reporting within S3A including both technical and administrative.

B. A description of meaningful cost savings and cost efficiency measures on both the administrative and programmatic elements of the proposed program. USAID is open to creative solutions for cost efficiencies and will evaluate the management plan on the degree to which the applicant demonstrates their commitment to these efforts and provides concrete and specific examples without including cost information.

C. An accompanying management plan narrative shall describe and demonstrate:

- The merit and feasibility of the presented approach for meeting both country-level and global technical needs
- How the organizational chart and supporting management plan clearly address the depth and technical skills necessary to successfully implement the proposed technical approach.
- The organization's commitment to support on-going high-priority activities that are integral to expanding the evidence base and improving programming approaches.
- The appropriate lines of authority for managing all staff, including partners and sub-Awardees, includes clear and feasible roles for any proposed sub-Awardees, and outlines a clear approach to managing technical and financial reporting, project logistics, and procurement issues while taking advantage of each organization's strength, emphasizing cost effectiveness, and avoiding duplication of effort.

D. Institutional Capability narrative

The Applicant shall:

- Demonstrate at least 5 years of institutional experience implementing seed systems and food security-related programming and any proposed partners or sub-Awardees
- Identify at least 10 countries where the applicant or any proposed partners or sub-Awardees has provided technical assistance to seed systems programs
- Identify at least 10 countries where the applicant or any proposed partners or sub-Awardees has operational programming and staff in food security technical areas

- Demonstrate the institutional capacity of the Applicant and any proposed partners or sub-Awardees in the seed systems technical areas relevant to achieving the goal and objectives of SSSA.

3. Key Personnel Qualifications and Staffing Capabilities (Suggested 8 pages)

The applicant is required to provide staffing plan for all proposed staff/personnel roles and responsibilities. The Staffing plan should include:

- A Brief description of the composition and organizational structure of the core program team (including home office support and field office(s), as appropriate).
- Description of each proposed staff member's identity, role, technical and managerial experience and skills, and estimated amount of time s/he will devote to the Program in addition to non-key personnel involved with proposed cooperative agreement on a part-time basis.

Seed Systems Support Activity will include personnel with an appropriate balance of managerial, technical and operational skills sufficient to achieve its objective and sub-objectives including the identification of in-country professionals. The core team should reflect expertise in seed systems, seed business, food security; emergency specialists, gender integration, as well as program design, implementation, monitoring and evaluation.

USAID's intent is to have a sufficient staff available to continue to plan and provide consistent specialized, targeted technical assistances in seed systems program analysis, design, implementation, monitoring and evaluation and to provide global leadership in the identification and application of promising practices. Applicants should propose the optimal mix of technical personnel considered necessary for specialized, targeted technical assistance in seed systems.

A total of four (4) key personnel shall be proposed by name and position. Each of these four key personnel position requires USAID approval, as noted in substantial involvement provisions in Section II.

1. Project Director/Chief of Party
2. Senior Advisor for Monitoring and Evaluation/Learning and Knowledge.
3. Development Seed Systems Advisor
4. Emergency or Resilience Informal Seeds Systems Advisor

Applicants may propose alternative positions to these positions but must present their rationale for doing so. Offerors must note the percentage of time the Key Personnel will be assigned to the Activity. Key persons are not required to be full time.

Key Personnel Responsibilities and Descriptions

1. Project Director:

The Project Director is responsible for the overall management The Project Director will have

the following experience and qualifications:

- A minimum of a Master's degree in management, agriculture, international development, or a related field
- At least 15 years' experience leading, managing and implementing large international projects, specifically with experience in two or more of the following areas: management, agriculture, natural resource management, ecology or food security, including at least 5 years of experience on seed-systems specific programming;
- At least 15 years' experience demonstrating broad understanding of agriculture and food security as they relate to seed systems and should be knowledgeable about the relevant socioeconomic, institutional and policy issues that are related to seed systems;
- professional experience interacting with U.S. Government agencies, host country governments, and other relevant stakeholders;
- demonstrated experience working in partnership with international donors and agencies;
- Professional experience working in nutrition programs in low or middle income countries.

This should be a full-time position; in order to ensure adequate managerial oversight of the project, it may involve significant overseas travel.

2. Senior Advisor for Monitoring and Evaluation and Learning:

- The Senior Advisor for Monitoring and Evaluation and Learning will focus on learning agenda research and capacity for technical assistance in monitoring and evaluation.
- The Advisor will serve as a technical expert to lead the activities providing technical assistance in research, monitoring and evaluation. S/he should have the following experience and qualifications.
- A Master's degree or Equivalent in agriculture, plant breeding, ecology or related field.
- At least 5-10 years of experience in monitoring, evaluation and research inclusive of each of the following:
- Experience in designing and implementing monitoring and evaluation systems in low income and resource constrained settings
- Experience in gender inclusive, gender sensitive project design and implementation
- Experience in training implementers and/or policy makers
- Experience in data analysis

3. Development Seed Systems Advisor:

The Development Seed Systems Advisor is part of the management team which is expected to complement the Project Director in knowledge and experience.

- He/She should be a senior manager with the following level of experience and qualifications:
- an advanced degree (MS, MA or Ph.D.) in agricultural economics or agri-business or a related field;
- at least 10 years of experience in agri-business management or value chain development

preferably seed business

- at least 3-5 years of experience in gender inclusive programs in seed system value chains
- Professional experience interacting with U.S. Government agencies in relation to the duties of this position.
- This position may involve significant overseas travel.

4. Emergency or Resilience Informal Seed Systems Advisor:

The Emergency or Resilience Informal Seed Systems Advisor is part of the management team which is expected to complement the Project Director in knowledge and experience.

- He/She should be a senior manager with the following level of experience and qualifications:
- an advanced degree (MS, MA or Ph.D.) in agriculture, socio-ecology, food security, agricultural economics or a related field;
- at least 10 years of experience in food security and seed programming and can include value chain
- at least 3-5 years of experience in programs in informal seed systems
- Professional experience interacting with U.S. Government agencies in relation to the duties of this position.
- Professional experience with humanitarian response and the seed system security assessment framework

This position may involve traveling overseas 20-30 percent of the time.

Non-key senior program staff: In addition to the Key Personnel, the Applicant will have sufficient other senior program staff, including professionals from developing countries and institutions, to help address the objectives of SSSA and to be available for short-, medium-, and long-term assignments. SSSA will have sufficient staffing to address technical and administrative aspects that may include but not be limited to the following areas of expertise:

- ability to do diagnostic assessments - formal and informal seed systems
- expertise in formal and informal seed systems
- seed business development expertise - expertise specific to seed business not just business development in general
- seed policy and regulation expertise
- capacity to access DNA fingerprinting services
- expertise in measuring indirect benefits or clients, adoption, informal networks, etc.
- research design and implementation, data analysis, monitoring and evaluation, capacity building and other skill areas required for implementation.

Additionally, Applicants should also propose up to 10 non-US-based staff that can serve as experts (inclusive of US citizens who reside abroad). The section on personnel capability in the main body of the application should include brief statements of major duties, experience, academic background and resumes for each of the five (4) key personnel and also include other senior program staff.

Resumes for key personnel, other senior program staff will be limited to three (3) pages in length and should be included in the annexes. The annexes (which are beyond the 25-page limit) will include letters of intent to participate for those not already employed by the proposing organization and letters of commitment from proposed key personnel. The applicant must provide resumes and letters of intent for key personnel. The applicant must provide resumes for other non-key senior program staff. It is not required to submit resumes from the up to ten non-US based experts, but will do so upon request from USAID.

Applicants may propose and justify an alternative staffing structure, including a different configuration of key staff positions, if they feel that a different structure is more conducive to achieving the desired project results.

Monitoring and Evaluation Plan

The applicants should include a description of the approach the Applicant will use to monitor and evaluate the project, including an analysis of why this approach is appropriate. The plan should clearly articulate an illustrative Performance Monitoring and Evaluation Plan, including the results to be achieved, targets and associated performance measurement indicators, and data sources, methods of collection and frequency of collection using agreed indicators.

D. COST/BUSINESS APPLICATION

The Cost/Business Application

- The Applicant's proposed budget should provide estimates of the program based upon their understanding of the Program Description. Applicants should minimize their administrative and support costs for managing the project to maximize the funds available for project activities.
- The cost/management application must include the following. The following applies only to the Leader Award, and excludes any and all Associate Awards and any other donor funding.
- Note: The Agreement Officer may request additional detailed budget information, particularly for responsibility determination, following notification to an applicant that it is under consideration for an award. If necessary, the Agreement Officer may conduct discussions to verify cost data, evaluate specific elements of costs and examine data to determine the necessity, reasonableness and allocability of the costs reflected in the budget and their allowability pursuant to the applicable cost principles. The Agreement Officer may require other information to determine responsibility and cost efficiency.
- While there is no page limit for this portion, Applicants are encouraged to be as concise as possible, but still provide the necessary details to address the following:

The following sections describe the documentation that the Applicant must submit to USAID with their cost proposal.

1. Application for Federal Assistance

The cost/management application must include the applicable forms from the Standard Form 424 (SF-424) series, which includes the:

- (a) SF-424 Application for Federal Assistance
- (b) SF-424A Budget Information- Non-Construction Programs
- (c) SF-424B Assurances for Non-Construction Programs
- (d) SF-424C Budget Information for Construction Programs
- (e) SF-424D Assurances for Construction Programs

Standard Forms can be accessed electronically at
<http://apply07.grants.gov/apply/FormLinks?family=15>.

Standard Form 424A should be supplemented by the following additional cost breakdowns and details, as described below. These supplemental budgets must be delineated by year (and five-year total), with each year (and five-year total) further delineated by USAID funding, other funding (cost-sharing), as applicable, and total, as illustrated in the summary budget format set forth in paragraph (a) below. It is recognized that it may be difficult for the applicant to project actual needs and costs. Accordingly, estimates, based on assumptions, are acceptable. However, the applicant must indicate the basis of the estimate, and/or the assumptions on which the estimate is based. The budgets shall include whatever supporting schedules and narrative budget explanations as may be necessary to adequately support and/or explain proposed costs. This information is required in order to permit USAID to determine whether estimated costs are fair and reasonable, necessary, allowable, allocable, and realistic, which, in turn, is prerequisite for making an award. Please note that 2 CFR 200.308 provides a great deal of flexibility to the Recipient to make budget adjustments during the award period without the need to obtain prior approval from the USAID Agreement Officer.

2. USAID Certifications, Assurances, and Other Statements of Recipient

See NFO Section H for details

I. Illustrative Leader Award Budget

The Cost or Business application for the Leader Award is to be submitted under a separate cover from the Technical application and should include the following:

- a) **Cost Assumptions-** The Applicant shall indicate, in this section only, if any cost related assumptions have been made, conditions have been stipulated or exceptions have been

taken with the Program Description as written. If it is not noted in this cost application, it will be assumed that the application reflects no price assumptions for award and agrees to comply with all of the terms and conditions set forth herein. It is not the responsibility of the Government to seek out and identify assumptions, conditions, deviations, or exceptions buried within the cost application.

- b) **Budget Spreadsheet:** The budget must include a spreadsheet in Microsoft Excel, with formulas visible.

The budget cost spreadsheets must be prepared in Excel which detail the breakdown of each line item captured in the SF-424A. The breakdown must show separate costs according to any partner organization (sub-recipients) involved in the program. The budget must provide a breakdown of the financial and in-kind leverage or cost share contributions, converted to dollar value, of all organizations involved in implementing this Cooperative Agreement. Please indicate clearly if the resource contributions will be in-kind or cash in the budget and budget narrative.

- c) **Budget Narrative:** The budget must have an accompanying detailed budget narrative and justification that provides in detail the total USAID estimated amount for implementation of the program your organization is proposing. The budget narrative should provide information regarding the basis of estimate for each line item, including reference to sources used to substantiate the cost estimate (e.g. organization's policy, payroll document, and vendor quotes, etc.). The basis of the estimate must justify the allocability, reasonableness, and allowability of each cost in accordance with applicable federal cost principles.

The Budget Narrative must provide:

- a) The breakdown of all costs associated with the program.
 - b) The budget should include detailed budget information by year to show to show the total proposed during the five year duration in the budget spreadsheet and narrative.
 - c) The breakdown of all costs according to each partner organization involved in the program.
 - d) The costs associated with external, expatriate technical assistance and those associated with local in-country technical assistance.
 - e) The breakdown of any financial and in-kind contributions of all organizations involved in implementing this program.
 - f) Potential contributions of non-USAID or private commercial donors to this program (cost share) in accordance with 2 CFR 200.306 and 2 CFR 700.1.
 - g) Procurement plan for commodities, goods and services (if applicable).
- d) **Budget Details:** An extensive cost analysis will be performed for the apparently successful Applicant. Budget information required from the apparently successful Applicant should be in enough detail to determine the proposed cost for the Applicant's program to be allocable, allowable and reasonable. The following sample language

assumes the cost information will be submitted with the initial application. However the AO could modify the amount of initial information that is needed for submission to determine the successful Applicant and restructure NFO language to get the more detailed information from only the successful Applicant.

Guidance: The following sections describe the documentation that the Applicants must submit to USAID prior to award. While there is no page limit for this portion, Applicants are encouraged to be as concise as possible, but still provide the necessary details to address the following:

- a. In addition to the forms listed above, a summary and detailed budget in EXCEL format which provides in detail the total costs for implementation of the program. The budget should contain the budget categories as shown on the SF-424A, at the summary level, but be broken down into individual cost items associated with the program according to the costs of, if applicable, headquarters, regional and/or country offices. The following items must be included as relevant:

(1) Direct Salaries and Wages

The application shall include a detailed indication of level of effort, including the position titles, names of proposed individuals to fill each position (if known), number of units (days, months, FTEs) for each position, proposed unit rate(s) for each position, and the total direct salaries and wages. Anticipated salary increases during the term of the award may be included, but the percentage of increase and the anticipated date(s) of increase must be specified. The level of effort and position titles must be consistent with the technical application.

(1) Fringe Benefits

(A) Fringe benefits, if not included in direct salaries and wages or indirect costs, shall be shown as a percentage of salaries, and shall indicate the individuals to whom the fringe benefit rate(s) apply, the salary of each individual, the total fringe benefit costs for each individual, and the total fringe benefits.

(B) Unless the negotiated indirect cost rate agreement (see paragraph [3] below) specifies the fringe benefit rate(s), the proposed rate(s) shall be supported by a detailed breakdown comprised of all items of fringe benefits (e.g., unemployment insurance, retirement, workers' compensation, health and life insurance, FICA, etc.) and the costs of each, expressed in dollars and as a percentage of salaries.

(3) Indirect Costs (Overhead)

(A) Estimated indirect costs shall be in accordance with the USAID standard provisions entitled "Negotiated Indirect Cost Rates - Predetermined," "Negotiated Indirect Cost Rates - Provisional (Nonprofits)," or "Negotiated Indirect Cost Rates - Provisional (For-Profits)," as applicable.

(B) The budget shall be structured in such a way as to permit easy identification and application of home office/on-campus and off-site/off-campus rates, if applicable, the base to which the rate(s) is (are) applied, and the applicant's fiscal year (*e.g.*, October 1 through September 30).

(C) To substantiate the rate(s) and the base(s) of application, the applicant must submit a copy of its current negotiated indirect cost rate agreement (NICRA), signed by the cognizant U.S. Government audit agency. The applicant shall also provide the name and address of the cognizant U.S. Government audit agency, and the name and telephone number of the cognizant auditor, if other than USAID.

(D) If the applicant does not have a cognizant U.S. Government audit agency and/or NICRA, the applicant must submit sufficient information to allow USAID to determine the reasonableness of the rates without a full-scale pre-award survey/audit, *e.g.*, audited balance sheets and profit and loss statements for the last two complete years and the current year to date (or such lesser period of time if the applicant is a newly-formed organization). The profit and loss statements should include the total costs of goods and services sold, including a listing of the various indirect administrative costs, and be supplemented by information on the applicant's customary indirect cost allocation method, together with supporting computations of the basis for the indirect cost rates proposed (*e.g.*, a breakdown of labor bases and overhead pools, the method of determining the rate, annual financial statements, etc.).

If there is no NICRA, the Applicant may also submit the following:

Reviewed Financial Statements Report: a report issued by a Certified Public Accountant (CPA) documenting the review of the financial statements was performed in accordance with Statements on Standards for Accounting and Review Services; that management is responsible for the preparation and fair presentation of the financial statements in accordance with the applicable financial reporting framework and for designing, implementing and maintaining internal control relevant to the preparation. The account must also state the he or she is not aware of any material modifications that should be made to the financial statements; or

Audited Financial Statements Report: An auditor issues a report documenting the audit was conducted in accordance with Generally Accepted Auditing Standards (GAAS), the financial statements are the

responsibility of management, provides an opinion that the financial statements present fairly in all material respects the financial position of the company and the results of operations are in conformity with the applicable financial reporting framework (or issues a qualified opinion if the financial statements are not in conformity with the applicable financial reporting framework).

(E) In the alternate, if the applicant has never received a negotiated indirect cost rate, applicant may elect to charge a de minimis rate of 10% of modified total direct costs as per 2 CFR 200.414(f). If the prospective applicant chooses the de minimis rate, the AO must incorporate the 10% indirect cost rate in the award budget and the recipient must follow the requirements in 2 CFR 200.414(f).

(F) Unless the subject is addressed in the NICRA, the applicant must describe when the home office/on-campus rate vs. the off-site/off-campus rate is applied.

(G) If the applicant proposes to charge less than its full indirect cost rate to the award, or proposes not to charge indirect costs, the applicant will still incur indirect costs at the full rate. In such circumstances, the difference between the rate to be charged to the award and the applicant's full indirect cost rate must be reflected as a cost-sharing (matching) contribution.

(4) Consultants

The budget must specify the position title(s), name(s) of proposed individual(s) to fill the position(s), if known, number of units (days, months, FTEs) for each position, proposed unit rate(s) for each position, and the total consultant costs. The level of effort and position titles must be consistent with the annex to the technical application.

(5) Travel, Transportation, and Per Diem

(A) Estimated travel and transportation costs shall be in accordance with the USAID standard provisions entitled "Travel and International Air Transportation" and "Ocean Shipment of Goods."

(B) The budget shall specify, for each traveler, the itinerary (in terms of locations, and, if possible, dates), the estimated airfares, class of travel, any transportation (*e.g.*, excess baggage, unaccompanied baggage, household effects, privately-owned vehicle) costs (to include the weights, mode of transportation [air, vessel], and unit prices), and the subtotal of all travel and transportation costs.

(C) Estimated lodging and subsistence costs must be in accordance with the applicant's established policies and practices which are consistently applied (however, the U.S. Government's per diem rates shall be used as the test of reasonableness if the applicant does not have established policies and practices), and should specify, for each traveler and for each trip, the location(s), the number of days in each location, the daily rate for each location, and the total lodging and subsistence costs. The lodging and subsistence costs must be consistent with the travel itinerary and the level of effort.

(D) For miscellaneous travel expenses such as ground transportation/taxis, airport taxes/transfers, or in-country travel, the basis for the estimate must be indicated, rather than a lump-sum amount. For example, "ground transportation/taxis might be \$100, based on 2 round-trips @ \$50; airport taxes/transfers might be \$40, based on 2 round-trips @ \$20; and in-country travel might be \$500, based on 20 days @ \$25".

(E) The budget must distinguish between domestic (U.S.) and international travel.

(F) The budget shall also include the total travel, transportation, and per diem costs.

(6) Overseas Allowances

Overseas allowances (excluding per diem and shipping/storage allowances, which shall be budgeted under "Travel, Transportation, and Per Diem," above) shall be in accordance with the applicant's established policies and practices, which are consistently applied. The Standardized Regulations (Government Civilians, Foreign Areas) shall be used as a test of reasonableness for overseas allowances if the applicant does not have established policies and practices.

(7) Nonexpendable Equipment

The detailed budget breakdown for purchases of nonexpendable equipment and other capital expenditures shall include the types and quantities of equipment to be purchased, the unit prices, and the total costs.

(8) Training

Training costs must include a complete budget breakdown of all training-related costs, *e.g.*, number of participants, pre-departure medical exams, health and accident coverage, passports/visas, travel and per diem or maintenance costs, registration or tuition fees, books/training materials, etc.

(9) Other Direct Costs (ODCs)

ODCs include costs such as branding and marking, communications and postage, passports/visas, medical exams/inoculations (for international travel), insurance (extra insurance such as medical evacuation for international travel), expendable supplies and materials (as distinct from nonexpendable equipment), report preparation/reproduction, etc. Again, the basis for each estimate should be indicated. For example, communications costs might be \$600, based on 12 months at \$50. Report reproduction might be \$40, based on 4 reports of 100 pages each @ \$0.10 per page. Expendable supplies and materials must indicate the types of supplies, the quantity of each, the unit price for each, and total costs.

(10) Sub-Awards and Contracts

If any functions will be performed by sub-recipients or contractors, the detailed line item budget shall include a lump-sum for each such sub-award and contract, and identify the purpose of the sub-award/contract and the sub-recipient or contractor, if known. This will be followed by a detailed line item budget breakdown for each such sub-award/contract, which provides the same information for each line item as described above.

The cost/management application must indicate whether the instrument will be a contract or sub-award, as the terms are defined in 2 CFR 200, Subpart A. Contracts are subject to 2 CFR 200.317-326, 2 CFR 700.12, and the USAID standard provision entitled "USAID Eligibility Rules for Goods and Services". Sub-awards are subject to 2 CFR 200, 2 CFR 700, and the USAID standard provision entitled "Applicability of 2 CFR 200 and 2 CFR Part 700."

Pursuant to 2 CFR 200, Contract means a legal instrument by which the Applicant purchases property or services needed to carry out the project or program under a resulting award. The term does not include a legal instrument when the substance of the transaction meets the definition of a Federal award or sub-award (see § 200.92 Sub-award), even if the Applicant considers it a contract. The Applicant must describe the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting proposed by the contractor, and the quality of its record of past performance for similar work. For-profit contract organizations that work under the award and do not meet the above definition of a sub-awardee are eligible for profit/fee.

If the Applicant has established a consortium or other legal relationship among its partners, the Cost/Business application must include a copy of the legal relationship between the parties. The agreement should include a full discussion of the relationship between the Applicant and Sub-Applicant(s) including identification of the Applicant with whom USAID will work with for

purposes of Agreement administration, identity of the Applicant which will have accounting responsibility, how Agreement effort will be allocated and the express agreement of the principals thereto to be held jointly and severally liable for the acts or omissions of the other.

Financial Plans for all proposed sub-grants and subcontracts must have the same format and level of detail as those of the Applicant. Following the Applicant's detailed budget breakdown, detailed budget breakdowns for each sub-Recipients/(sub) contractor must be presented. Sub-Recipient/ (sub) contractor budgets must not be intermingled. The first page must be a summary budget, following the same budget format and line items as are set forth above for the full term of the sub-agreement/subcontract. Detailed budget notes which explain how the subs' proposed budget was reviewed and how a determination was made that it is fair and reasonable must be provided.

An illustrative summary budget for the Leader Award must be included using the following Budget Template.

To promote standardization across submissions, USAID has provided a cost template that shall be used when completing the spreadsheet. The budget shall include totals and subtotals for all columns and rows of data to for all cost elements. Details of the budget shall be broken out by year. Partnering, teaming arrangements shall be identified and rate information shall also be included, if applicable. There is no page limit for the price quote spreadsheet.

Budget Template

Table 1. Summary Budget							
Line Item		Year 1	Year 2	Year 3	Year 4	Year 5	Grand Total
I.	Salaries						
II.	Fringe Benefits						
III.	Travel & Transportation						
IV.	Allowances						
V.	Other Direct Costs						
VI.	Equipment, Vehicles, Freight						
VII.	Training						

Table 1. Summary Budget							
Line Item		Year 1	Year 2	Year 3	Year 4	Year 5	Grand Total
VIII.	Subcontracts or subgrants - consortium						
IX.	Grants & Funds						
Subtotal, Items I-IX							
X.	Indirect Costs (NICRA)						
Grand Total							

PAST PERFORMANCE

Past performance is the degree to which the applicant completed related work successfully, satisfied its customers/partners/sponsors under past agreements, and complied with relevant laws, regulations, and terms and conditions of its past awards. Past performance information shall be provided in an annex to the technical application, which will not count against the page limit.

In an annex, provide past performance information (using the form attached at **NFO Attachment 1**) for three (3) past performance references which describe any contracts, grants, or cooperative agreements which the applicant organization, as well as any substantive sub-recipient partners, has implemented involving similar or related programs over the past three years. Past performance references should describe the size and complexity of activities in terms of dollar value of the activity, diversity of activities, and requirement for coordinating and supporting activities across countries.

Provide three (3) past performance references each for the prime and for any substantive sub-recipient partners if applicable. Include the following information for each reference: name and address of the organization for which the work was performed; name and current telephone number and email address of responsible representative from the organization for which the work was performed; contract/grant name and number (if any), the period of contract/grant performance, annual amount received for each of the last three years and beginning and end

dates; brief description of the project/assistance activity and key project accomplishments/results achieved to date.

If problems were encountered on any of the listed awards, a short explanation and the description of the corrective action taken may be provided. General information on past performance should not be provided, but any quality awards or certificates that indicate exceptional capacity to implement the proposed project may be described.

As part of this review, USAID may contact some of the applicant's past or current customers and partners to find out whether the applicant (1) was capable, efficient, and effective in carrying out the activity; (2) conformed to the terms and conditions of its contract/agreement/grant; and (3) was responsive to and collaborative with the sponsor during the activity implementation. In addition to contacting some of the references provided by the applicant USAID may also contact other sources of information, including, but not limited to: other donors, other government agencies, published media, and electronic data bases.

EVIDENCE OF POSITIVE RISK ASSESSMENT

Responsible Applicants: Applicants should submit evidence of responsibility they deem necessary for the Agreement Officer to make a determination of responsibility. The business section of the cost/business application should include:

1. Evidence that the Agreement Officer can use to determine the Applicant:

- a. Has adequate financial resources or the ability to obtain such resources as required during the performance of the award;
- b. Has the ability to comply with the award conditions, taking into account all existing and currently prospective commitments of the Applicant;
- c. Has a satisfactory record of performance. Past relevant unsatisfactory performance is ordinarily sufficient to justify a finding of non-responsibility, unless there is clear evidence of subsequent satisfactory performance;
- d. Has a satisfactory record of integrity and business ethics; and
- e. Is otherwise qualified and eligible to receive a Cooperative Agreement under applicable laws and regulations (e.g., EEO).

2. Statutory and Regulatory Certifications: The Applicant shall complete Required Certifications referenced in Section H and shall sign and date in the signature space provided. The signed and dated printout must then be submitted with the application as an annex to the cost application.

Unique Entity Identifier and System for Award Management

All applicants must have a DUNS number and hold an active U.S. Government's System for Award Management (SAM) registration at the time of application submission. USAID cannot fund organizations that do not comply. A DUNS number may be obtained at <http://fedgov.dnb.com/webform>, and is required for registration in SAM. SAM registration may be done on-line at <https://www.sam.gov/portal/public/SAM/>.

Dun and Bradstreet and SAM.gov Requirements

USAID may not award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements. Each applicant is required to:

- (i) Be registered in SAM before submitting its application. SAM is streamlining processes, eliminating the need to enter the same data multiple times, and consolidating hosting to make the process of doing business with the government more efficient.;
- (ii) Provide a valid unique entity identifier in its application; and
- (iii) Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency.

Funding Restrictions

USAID policy is not to award profit under assistance instruments. However, all reasonable, allocable and allowable expenses, both direct and indirect, which are related to the agreement program and are in accordance with applicable cost principle under 2 CFR 200 Subpart E. of the Uniform Administrative Requirements may be paid under the anticipated award.

Potential Request for Additional Documentation

Upon consideration of award or during the negotiations leading to an award, Applicants may be required to submit additional documentation deemed necessary for the Agreement Officer to make an affirmative determination of responsibility. Applicants should not submit the information below with their applications! The information in this section is provided so that Applicants may become familiar with additional documentation that may be requested by the Agreement Officer:

The information submitted should substantiate:

1. Bylaws, constitution, and articles of incorporation, if applicable.
2. Whether the organizational travel, procurement, financial management, accounting manual and personnel policies and procedures, especially regarding salary, promotion, leave, differentials, etc., submitted under this section have been reviewed and approved by any agency of the Federal Government, and if so, provide the name, address, and

phone number of the cognizant reviewing official. The Applicant should provide copies of the same.

Branding Strategy and Marking Plan:

Applicants are required to submit a Branding and Marking Plan in accordance with ADS

320.3.3.2. The Branding and Marking Plan that should include and discuss:

- i. Well defined Branding Strategy that describes how the program, project, or activity is named and positioned; how it is promoted and communicated to beneficiaries and cooperating country citizens; and identifies all donors and explains how they will be acknowledged.
- ii. Well defined Marking Plan detailing the public communications, commodities, and program materials and other items that will visibly bear the USAID Identity in compliance with Feed the Future graphic and naming Standards.

For activities specific to ***Feed the Future***, the Branding and Marking plan shall comply with the Feed the future Branding and Marking requirements, set forth in 2 CFR 700.16 with Feed the Future specific guidance located [at feedthefuture.gov](http://www.feedthefuture.gov).

For more information on Branding Strategy and Marking Plan please visit http://www.usaid.gov/sites/default/files/documents/1868/aapd05_11.pdf and [Feed the Future Graphic and Naming Standards Manual june2015\(1\).pdf](#)

These regulations and provisions include the requirement for the apparently successful applicant to submit a **Branding Strategy and Marking Plan (BS/MP)** for pre-award review, negotiation, and approval by the Agreement Officer. Under these regulations and provisions, the BS/MP does not need to be submitted until the applicant is notified by the Agreement Officer that it is the apparently successful applicant, and is requested to submit the BS/MP by a time specified by the Agreement Officer. Thus, the initial cost/business application is not required to include a BS/MP.

Nevertheless, applicants are encouraged, but are not required, to submit their BS/MP with their initial cost/management applications. Applicants who choose not to include their BS/MP with their initial cost/management application will not be penalized during the evaluation process, but should be aware that, if the applicant is the apparently successful applicant, the applicant will be required to submit an acceptable BS/MP as a prerequisite for any resulting award. This would delay any such award, pending receipt, review, and, if necessary, negotiation of the applicant's BS/MP, with failure to submit or negotiate a BS/MP within the time specified by the Agreement Officer making the apparently successful applicant ineligible for award. Moreover, because USAID's branding and marking requirements have cost implications, such costs must be included in the detailed budget even if the applicant does not submit its BS/MP with the initial cost/management application.

Failure to submit or negotiate a Branding Strategy within the time specified by the Agreement Officer will make the Apparently Successful Applicant ineligible for award.

The proposed Branding Strategy and Marking Plan (BS/MP) will not be evaluated competitively. The Agreement Officer shall review for adequacy the proposed BS/MP, and will negotiate, approve, and include the BS/MP in the award

Environmental Compliance

Section 117 of the Foreign Assistance Act of 1961, as amended, requires that the impact of USAID's activities on the environment be considered and that USAID include environmental sustainability as a central consideration in designing and carrying-out its development programs. This mandate is codified in [22 CFR 216](#) and in USAID's [Automated Directives System \(ADS\) Parts 201.5.10g and 204](#), which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities. The environmental compliance obligations of the Recipient of the award(s) resulting from this NFO under these regulations and procedures are specified in the following paragraphs.

(a) In addition, the Recipient must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between host country and USAID regulations, the latter shall govern.

(b) No activity funded under the award(s) resulting from this NFO may be implemented unless an environmental threshold determination, as defined by 22 CFR 216, has been reached for that activity, as documented in a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE), or Environmental Assessment (EA) duly signed by the Bureau Environmental Officer (BEO). (Such documents are hereinafter described as "approved Regulation 216 environmental documentation.")

(c) To this end, the technical application and any environmental analysis therein will be reviewed by USAID for the purpose of conducting an IEE of the proposed program. Depending on the results of the IEE, USAID may:

- 1) Approve a Request for Categorical Exclusion.
- 2) Determine that a Negative Determination with Conditions applies to one or more of the proposed activities. This indicates that if these activities are implemented subject to the specified conditions, they are expected to have no significant adverse effect on the environment. Such conditions shall be stipulated in the award, and the Recipient will be responsible for implementing all IEE conditions pertaining to activities to be funded under the award. Because the exact nature and location of many activities will only be fully known after sub-awardees are selected, which will take place after award, the initial IEE may require further environmental review and

an IEE amendment to be completed post-award, before sub-award activities may proceed.

3) Determine that a Positive Determination applies to one or more of the proposed activities. This indicates that these activities have the potential for significant adverse effects on the environment. In such cases, the Recipient may be required to prepare and submit an EA addressing the environmental concerns raised by such activities. No activity identified under a Positive Determination can proceed until Scoping (as described in 22 CFR 216.3[a][4]) and an EA (as described in 22 CFR 216.6) are completed and approved by USAID. (Note: The completed Scoping Statement is normally submitted by the Mission Environmental Office [MEO] to the BEO when the project originates in a mission. The Statement may be circulated outside the Agency by the BEO with a request for written comments within 30 days and approved by the BEO subsequently. Approval of the Scoping Statement must be provided by the BEO before the EA can be initiated.) Accordingly, the technical and cost/business applications would need to reflect IEE or EA preparation costs and approaches.

Note: for this project, USAID has already completed an Initial Environmental Examination (IEE) for the Seed Systems Support Activity. See IEE attached as NFO Attachment 002. The IEE reference number is BFS-17-3-005.

The purpose of the Initial Environmental Examination, in accordance with Title 22, Code of Federal Regulations, Part 216 (22CFR216), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the described activity, and to recommend determinations and, as appropriate, conditions, for these activities. Upon final approval of this IEE, these recommended determinations are affirmed as 22 CFR 216 Threshold Decisions and Categorical Exclusions, and conditions become mandatory elements of implementation. This IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation.

*For the fifteen interventions areas nine have been determined to merit Categorical Exclusion. And the remaining five are recommended for a determination of “Negative with Conditions.” The Seeds 3A IEE specifies that when the Threshold Decision is a Negative Determination with Conditions, an Environmental Mitigation and Monitoring Plan (EMMP) will be developed by the Implementing Partner (IP) to mitigate the conditions described in the IEE. The EMMP will be completed before activities start. Periodic EMMP Reports shall be prepared by the IP to describe how well the monitoring and mitigation measures are working, and if any modifications are necessary.

INSTRUCTIONS: Recipients shall comply with the terms of the Initial Environmental Evaluation. Applicants shall submit a narrative to describe how they plan to address the recommendations cited in the IEE, in particular address areas with a “Negative with Conditions” determination. The Applicant’s response to environmental compliance will be not rated competitively. However, the Agreement Officer shall review the Applicant’s responses for

compliance and will negotiate, approve, and include the environmental compliance proposal in the award. Failure to adequately address environmental compliance matters within the time specified by the Agreement Officer will make the Apparently Successful Applicant ineligible for award.

(d) As part of its annual work-plans, the Recipient, in collaboration with the AOR and MEO/BEO, shall review all ongoing and planned activities under the award to determine if they are within the scope of the approved Regulation 216 environmental documentation. If the Recipient plans any new activities outside the scope of the approved Regulation 216 environmental documentation, it shall prepare an amendment to the documentation for USAID review and approval. No such new activities shall be undertaken prior to receiving written USAID approval of environmental documentation amendments. Any activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received.

(e) Unless the approved Regulation 216 documentation contains a complete Environmental Mitigation and Monitoring Plan (EMMP) or a Project Mitigation and Monitoring (M&M) Plan, the applicant or Recipient may need to prepare and submit an EMMP or M&M Plan for USAID approval. The EMMP or Project M&M Plan will describe how the Recipient will, in specific terms, implement all IEE and/or EA conditions that apply to proposed project activities within the scope of the award. The EMMP or M&M Plan shall include monitoring the implementation of the conditions and their effectiveness. Unless included in the successful technical application or revisions/addenda thereto, the completed EMMP or M&M Plan will be integrated into the initial work-plan. The approved EMMP or M&M Plan will be integrated into subsequent annual work-plans, making any necessary adjustments to activity implementation in order to minimize adverse impacts to the environment.

(f) The Recipient will be required to use an Environmental Review Form (ERF) or Environmental Review (ER) checklist using impact assessment tools to screen sub-award and contract proposals to ensure the funded proposals will result in no adverse environmental impact, to develop mitigation measures, as necessary, and to specify monitoring and reporting. Use of the ERF or ER checklist is required when the nature of the proposals to be funded is not well enough known to make an informed decision about their potential environmental impacts; yet, due to the type and extent of activities to be funded, any adverse impacts are expected to be easily mitigated. Implementation of these activities cannot proceed until the ERF or ER checklist is completed and approved by USAID. The Recipient is responsible for ensuring that mitigation measures specified by the ERF or ER checklist process are implemented. The Recipient will also be responsible for periodic reporting to the AOR, as specified in the award.

(g) The costs of environmental compliance will be reimbursable under the award(s) resulting from this RFA provided that they are otherwise in accordance with the terms and conditions of the award.

Waivers from or Approvals under USAID Procurement Requirements

If the applicant foresees the need for waivers from, or approvals required under, USAID's source and supplier nationality requirements (see Section C.IV of this NFO), the application should describe which goods and services need approval/waivers, and provide an explanation and justification for the same.

Voluntary Survey on Faith-Based and Community Organizations

The applicant is encouraged, but is not required, to submit USAID's [Voluntary Survey on Faith-Based and Community Organizations](#).

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SECTION E: APPLICATION REVIEW INFORMATION

Applications will be evaluated in accordance with the criteria set forth in Section E. After evaluation of the applications, either: (1) award(s) will be made without discussions/negotiations; or (2) if deemed necessary or desirable by USAID, written and/or verbal discussions/negotiations will be conducted with applicants that submit the most highly rated applications. USAID hopes to evaluate applications and award a grant(s) or cooperative agreement(s) without discussions with applicants (except clarifications, which are limited exchanges between USAID and applicants, such as the relevance of an applicant's past performance information and adverse past performance information to which the applicant has not previously had a chance to respond). Therefore, the applicant's initial application should contain the applicant's best terms.

If discussions are conducted with applicants, they will be conducted with all applicants that submitted the most highly rated applications. However, the Agreement Officer may limit the number of such applications to the greatest number that will permit an efficient competition among the most highly rated applications. Exchanges with applicants after receipt of an application do not constitute a rejection or counteroffer by USAID.

After the conclusion of any such discussions, applicants with whom discussions were conducted will, unless otherwise advised, be required to submit a revised application or addendum to the initial application, which will be re-evaluated against the criteria set forth below. It is expected that award(s) will ordinarily be made after the first round of any such discussions and revised applications/addenda; however, USAID reserves the right to conduct subsequent rounds of discussions and revised applications/addenda, and to further limit the number of applicants with which such subsequent discussions would be conducted and from which a subsequent round of revised applications/addenda would be requested.

The Agreement Officer will make the final decision as to which institution(s), if any, will be awarded a cooperative agreement based on the determination of the Technical Evaluation Committee, the cost/business evaluation, and whether the applying institutions are eligible to receive the award.

USAID intends to award a grant(s) or cooperative agreement(s) resulting from this NFO to the responsible applicant whose application, application modification(s), and/or revised application(s)/addendum(s) represents the greatest value to USAID based on the evaluation of applications in accordance with the evaluation criteria set forth below.

Each technical application submitted in response to this NFO will be evaluated in relation to the evaluation factors set forth in this solicitation and which have been tailored to the requirements of this NFO to allow USAID to choose the highest quality application. These criteria: a) identify the significant areas that Applicants should address in their applications; and b) serve as the standard against which all applications will be evaluated.

Evaluation Criteria Factors:

The Applicant's submission is evaluated in accordance with the following technical evaluation criteria

- ☐ Factor A: Technical Understanding and Approach
- ☐ Factor B: Management Plan and Institutional Capability
- ☐ Factor C: Key Personnel Qualifications and Staffing Capabilities

Hierarchal Representation of Evaluation Factor Importance		
1 st Order of Importance	FACTOR A Technical Understanding and Approach	FACTOR B Management Plan and Institutional Capability
2 nd Order of Importance	FACTOR C Key Personnel Qualifications and Staffing Capabilities	

Each application submission is evaluated in accordance with the listed evaluation criteria. The technical evaluation factors are Factor A, Technical Approach and Understanding Factor B, Management and Institutional Capabilities, and Factor C, Key Personnel and Personnel Qualifications. The Cost and Business application will be evaluated separately. Factors are listed in decreasing order of importance. Factor A and Factor B is of equal importance. Factor A and Factor B combined is more important than Factor C. Sub-factors listed under each factor are of equal importance to each other.

FACTOR A. Technical Understanding and Approach

1. Technical Understanding and Expertise: The extent to which the overall technical approach reflects understanding of US Government Feed the Future objectives and priority seed systems initiatives; the global climate change and plant genetic diversity environment; and the ability to synthesize and apply the lessons learned from other program experiences; demonstrated technical understanding and ability to interact with a wide range of organizations (including multiple USAID Operating Units) to achieve results; degree to which the applicant demonstrates state-of-the-art expertise in methods and strategy to develop the proposed tools, assessments.

2. Technical Approach: The extent to which the applicant's result framework and theory of change for the S3A strategically address the fifteen intervention areas, weave them together, guard against piecemeal implementation and guarantee coherent contributions to achievement of the results through both core actions with central funding and Missions issued and/or funded Associate Awards' interventions; degree to which applicant's approach demonstrates state-of-the-art and evidence-based interventions and approaches that allow a rapid, effective start-up of program activities and continuation of critical research investments and efficient contracting mechanisms; extent to which the Applicant prioritizes activities, demonstrates how principal activities under each IR will be implemented and how key approaches maximize opportunities to

meet the overall objectives; degree to which gender issues, opportunities, and constraints are considered throughout the program description and presents specific approaches to tackle gender-related constraints in seed systems programming.

FACTOR B. Management Plan and Institutional Capability

1. Management Plan including Sub-Awardee Roles and Responsibilities:

The degree to which the organizational chart and supporting management plan narrative clearly address the depth and technical skills necessary to successfully implement the proposed technical approach; extent to which the management plan demonstrates a clear commitment to support on-going high priority activities that are integral to expanding the evidence base and improving programming approaches; degree to which the management plan presents appropriate lines of authority for managing all staff, including partners and sub-Awardees, includes clear and feasible roles for any proposed sub awardees, outlines a clear approach to managing technical and financial reporting, project logistics, and procurement issues while taking advantage of each organization's strength, emphasizing cost savings and effectiveness, and avoiding duplication of effort.

2. Institutional capability: The degree to which the applicant and proposed sub-partners demonstrate institutional capabilities in the seed sector in line with the Scope of Work and provides evidence of a strong network of partners globally and, more specifically, in Feed the Future countries; demonstrated relevant expertise and institutional capacity of the Applicant and any proposed partners or sub-Awardees in the seed systems technical areas.

3. Monitoring and Evaluation: The extent to which the Applicant presents appropriate performance indicators (disaggregated by sex where appropriate) that describe data collection method, type, information source, as well as the anticipated outcomes; the extent to which the Monitoring and Evaluation (M&E) plan details a clear approach for how the Applicant will meet USAID reporting requirements.

FACTOR C. Key Personnel Qualifications and Staffing Capabilities

The extent to which the FOUR key personnel meet or exceed the requirements described in Section A; the degree to which the proposed personnel, including other senior program staff, have the requisite skills and experiences, as well as clearly defined duties to enable the Applicant to effectively implement the project.

COST/BUSINESS EVALUATION

While Cost is less important than technical and is not weighted, the cost applications of the apparently successful technical applications will be evaluated for cost effectiveness including the level of proposed cost share. Other considerations are the completeness of the application, adequacy of budget detail and consistency with elements of the technical application. In addition, the organization must demonstrate adequate financial management capability, to be measured for a responsibility determination.

The application with the lowest estimated cost may not be selected if award to a higher priced technical application offers a greater overall benefit for the program. All evaluation factors other than cost or price, when combined, are significantly more important than cost. However, estimated cost is an important factor and the estimated cost to the Government increases in importance as competing applications approach equivalence and may become the deciding factor when technical applications are approximately equivalent in merit.

USAID has not established a suggested cost share for this Award. Leveraged non-USAID resources from private and public firms and institutions (such as equipment, training, level of effort and any in-kind contributions) may be considered part of cost share. Cost sharing may also be demonstrated either through direct funding, beneficiary contributions, in-kind assistance, or a combination thereof. USAID shall make the final determination and assess whether or not the Applicant's cost share contributions (e.g. categories or items) meet the standards set in 2 CFR 200. Under no circumstances can funding or in-kind contributions traced back to U.S. Government resources be considered cost share. If two otherwise equivalent applications are being considered, the institution that proposes the best financial benefit to the U.S. Government through cost sharing may be granted the Award.

Cost estimates will be analyzed as part of the application evaluation process. Proposed costs may be adjusted, for purposes of evaluation, based on results of the cost analysis and its assessment of reasonableness and completeness. Proposed costs are not competitively scored but will be evaluated for general reasonableness, effectiveness, fairness, necessity, allowability, and allocability.

USAID reserves the right to conduct a cost realism analysis if it is in the best interest of the government. Cost realism analysis is intended to meet the following three goals:

- Verify the Applicant's understanding of the requirements and regulations;
- Assess the degree to which the cost application reflects the approaches in the technical application; and
- Assess the degree to which the cost included in the cost application accurately represents the work effort included in the technical application.

Risk Assessment

1. Business information will be evaluated to: (1) determine the eligibility and risk of the applicant; (2) ensure compliance with USAID requirements; and (3) address/resolve issues that may impede performance and implementation, with an eye toward reducing post-award administrative requirements and burdens by resolving issues and providing approvals as part of the pre-award and award process.
2. **Past Performance (Past Performance will be rated as High Risk, Medium Risk, Low Risk or Neutral):** Applicants' past performance will be evaluated to determine potential performance risk based on the following however Past Performance will not be considered as part of the overall Technical Score. If the most highly rated applicant(s) is determined to be of high risk based on Past Performance and other Risk Factors

(including the organization's financial health), the government reserves the right to select the next most highly rated applicant or no applicant. The following will be considered in the Past Performance evaluation of risk:

- How well an applicant performed overall including but not exclusive to the areas of technical achievement management/business relations, key personnel (both of those proposed and those utilized by the applicant organization, cost control, and
- The relevancy of the work performed under the program (e.g. size and complexity of past activities, coordination of implementation across countries and geographic areas. analysis and development of efficient, effective, and sustainable extension and advisory services systems in multiple country conditions, experience in multiple geographic areas in which Feed the Future programs are active, experience with extension and advisory services for multiple objectives, and experience with analysis and dissemination of good practice in agricultural development topics)
- Instances of poor performance
- Significant achievements
- Significant problems
- Any indications of excellent or exceptional performance in the most critical areas

Note: As part of this review, USAID will contact some or all of the references provided by the applicant to verify institutional past performance. In addition to references provided by the Applicant, USAID may also contact other past or current customers, partners or others knowledgeable about the Applicant's past performance on specific programs or activities.

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SECTION F: FEDERAL AWARD ADMINISTRATION INFORMATION

1. Federal Award Notices

Award of the agreement contemplated by this NFO cannot be made until funds have been appropriated, allocated and committed through internal USAID procedures. While USAID anticipates that these procedures will be successfully completed, potential applicants are hereby notified of these requirements and conditions for the award. The Agreement Officer is the only individual who may legally commit the Government to the expenditure of public funds. No costs chargeable to the proposed Agreement may be incurred before receipt of either a fully executed Agreement or a specific, written authorization from the Agreement Officer.

Only an award signed by the USAID Agreement Officer will constitute the USAID commitment of award and obligation of funds. USAID may, at its sole discretion, provide the award to the successful applicant's designated point of contact in hardcopy originals, by fax, or electronically. The signed award will authorize the applicant to begin implementation of the activities described in their technical applications or revised technical applications/addenda, and will obligate funds for payment to the recipient of the award for costs incurred in such implementation.

Unsuccessful applicants will be notified of their non-selection after the award(s) has been made. Within 10 working days after an applicant receives notice that USAID will not fund its application, the unsuccessful applicant may send a written request for additional information to the Agreement Officer. This information may be provided at the discretion of the Agreement Officer orally or in writing. To the maximum extent practicable, the Agreement Officer should respond to the request within 30 days or inform the applicant that more time is necessary. If a response is granted, it will be limited to the Agency's interest in supporting the applicant's program as described in the application without comparison of one applicant to another. Only additional information that would be useful to the applicant in future application preparation should be provided.

2. Administrative & National Policy Requirements

Any cooperative agreement resulting from this NFO will be administered in accordance with 2 CFR 200—Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, applicable OMB circulars, and the Standard Provisions for U.S. Nongovernmental Recipients. For non-U.S. organizations, the Standard Provisions for Non-U.S., Nongovernmental Recipients will apply. The applicant may obtain copies of the referenced material at the following websites:

2 CFR 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards:

http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl

OMB circulars:

<http://www.whitehouse.gov/omb/circulars/>

Standard Provisions for U.S. Nongovernmental Recipients:

<https://www.usaid.gov/ads/policy/300/303maa>

Standard Provisions for Non-U.S., Nongovernmental Recipients:

<https://www.usaid.gov/ads/policy/300/303mab>

USAID's Automated Directives System (ADS-303)

[2 CFR 700](#) (USAID'S implementation of 2 CFR 200)

AAPD 02-10 Cost Sharing in Grants and Cooperative Agreements to NGOs:

http://www.usaid.gov/business/business_opportunities/cib/pdf/aapd02_10.pdf

Development Clearinghouse:

http://dec.usaid.gov/submit_doc.cfm

Requirements and standard formats/logos for USAID branding requirements:

<http://www.usaid.gov/branding/assistance-awards/>

Environmental Compliance

1. The Foreign Assistance Act of 1961, as amended, Section 117 requires that the impact of USAID's activities on the environment be considered and that USAID include environmental sustainability as a central consideration in designing and carrying out its development programs. This mandate is codified in Federal Regulations (22 CFR 216) and in USAID's Automated Directives System (ADS) Parts 201.5.10g and 204 (<http://www.usaid.gov/policy/ADS/200/>), which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities. Recipient environmental compliance obligations under these regulations and procedures are specified in the following paragraphs of this cooperative agreement.

2. In addition, Recipients must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between host country and USAID regulations, the latter shall govern.

3. No activity funded under this cooperative agreement will be implemented unless an environmental threshold determination, as defined by 22 CFR 216, has been reached for that activity, as documented in a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE), or Environmental Assessment (EA) duly signed by the Bureau Environmental Officer (BEO). (Hereinafter, such documents are described as "approved Regulation 216 environmental documentation.")

3. Reporting Requirements.

Financial Reporting

The recipient shall list each country included in the program and the total amount expended for each country under the award for the reporting period in the “Remarks” block on the Federal Financial Form (SF-425), or on a separate sheet of paper. Financial Reports will be required on a quarterly basis. The recipient shall submit these forms in the following manner:

For recipients without a letter of credit:

The Recipient must submit one electronic original to the Agreement Officer’s Representative (AOR) with one copy to the Agreement Officer of Standard Form 425 (SF-425) on a quarterly basis.

For recipients with a letter of credit:

- (1) The recipient must submit the Federal Financial Form (SF-425) on a quarterly basis via electronic format to the U.S. Department of Health and Human Services (<http://www.dpm.psc.gov>). The recipient must submit a copy of the FFR at the same time to the Agreement Officer and the Agreement Officer’s Representative (AOR).
- (2) The recipient must submit the original and two copies of all final financial reports to USAID/Washington, M/CFO/CMP/LOC Unit, the Agreement Officer, and the AOR. The recipient must submit an electronic version of the final Federal Financial Form (SF-425) to U.S. Department of Health and Human Services in accordance with paragraph (1) above.

Electronic copies of the SF-425 can be found at:

http://www.whitehouse.gov/omb/grants/standard_forms/ff_report.pdf and
<http://www.forms.gov/bgfPortal/docDetails.do?dId=15149>.

Line item instructions for completing the SF-425 can be found at:

http://www.whitehouse.gov/omb/grants/standard_forms/ffr_instructions.pdf.

4. Reporting on Foreign Taxes shall be in accordance with Standard Provision II.15., Reporting of Foreign Taxes (March 2006), at the following address:
<http://www.usaid.gov/policy/ads/300/303maa.pdf>

Performance Reporting

The Performance Progress Report (SF-PPR) is a standard, government-wide performance progress reporting format used by Federal agencies to collect performance information from recipients of Federal funds awarded under all Federal programs that exceed \$100,000 or more per project/grant period, excluding those that support research. The successful Applicant will use the standard form Performance Progress Report (SF-PPR) to report performance progress for the program under the award when the program exceeds \$100,000 or more per project/grant period.

Monitoring and Reporting Program Performance

I. Leader Award

a. Annual Work-Plans

The Recipient will be required to submit annual project work-plans, delineated by the reporting periods described in paragraph (c)(1) below, which describes all activities planned for the year, including activities planned under Associate Awards to the extent known at the time; the site(s) where they will be conducted, benchmarks/milestones and annual performance targets; the outputs/outcomes which the Recipient expects to achieve; and the input/support planned to be provided by the Recipient, during the work-plan period. Included shall be an explanation of how those inputs are expected to achieve the outputs/outcomes and benchmarks/milestones. The Recipient shall describe and use appropriate gender-sensitive methodologies and shall maintain gender- integration and - balance in all activities, targeting women and girls when is necessary to achieve that balance.

The first-year work-plan will include the environmental documentation that may be required by the approved Regulation 216 environmental documentation. An EMMP (Environmental Mitigation and Monitoring Plan), PERSUAP (Pesticide Evaluation Report and Safer Use Action Plan), or other document which is approved by USAID as a requirement of the approved Regulation 216 environmental documentation will be integrated into subsequent-year annual work-plans, making any necessary adjustments to activity implementation in order to minimize adverse impacts to the environment.

Project Work Plans and Reports will be aligned with the USG fiscal year (October through September). The final annual work-plan for the first year will be submitted not later than 90- days after the effective date of the award. Annual work- plans for subsequent years shall be submitted no later than 30 days prior to the start of the next year. Annual work-plans and significant revisions thereto are subject to USAID approval.

The work-plans will describe activities to be conducted at a greater level of detail than the Program Description of the award, but shall be cross-referenced with the applicable sections in the Program Description. All work-plan activities must be within the scope and objectives of the award. Work-plans shall not change such scope and objectives or any other terms and conditions of the award in any way; such changes may only be approved by the Agreement Officer, in advance and in writing. Thereafter, if there are inconsistencies between the work-plan and the Program Description or other terms and conditions of the award, the latter will take precedence over the work-plan.

b. Performance Management Plan (PMP)

The Recipient will be required to submit a final PMP, after the award is made. The PMP, which describes the program over the life of the project, will be submitted at the same time as the first-year work-plan discussed in the previous paragraph. As indicated, the PMP and significant revisions thereto are subject to USAID approval.

c. Performance Reports

The Recipient shall electronically submit all performance reports to the AOR in USAID/Washington. All country-level activities implemented under the Leader Award shall be included in the performance reports. Performance reports will consist of the following:

(1) Semi-Annual Reports

- (A) Semi-annual reports covering the period October 1 through March 31, or the equivalent time period as per the award date, shall be submitted not later than 30 days after the end of the reporting period. A copy of the semi-annual reports shall also be submitted to the USAID Development Experience Clearinghouse.
- (B) In accordance with 2 CFR 200.328, the semi-annual reports shall be very concise and also present the following information:
- A comparison of actual accomplishments with the goals and objectives established for the period, the findings of the investigator, or both with reasons why established goals were not met, if appropriate. Whenever appropriate, and when the output of programs or projects can be readily quantified, such quantitative data should be related to cost data for computation of unit costs.
 - Progress made toward established benchmarks and result indicators of development impact, as discussed in the program description of this RFA and detailed in the Recipient's PMP.
 - Discussion of any implementation problems encountered.
 - Expected activities over the next six months.
 - Other pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.
 - When available, qualitative descriptions of success stories and achievements to illustrate impacts of the program must be included when possible.

(2) Annual Reports

Annual Reports covering the period October 1 through September 30, or the equivalent time period as per the award date, shall be submitted not later than 30 days after the end of the reporting period. The reports are to include:

- Overview of progress with project implementation;
- Comparison of accomplishments against and targets for established performance and impact indicators, with explanations for deviations from the targets;
- Summary of accomplishments and lessons learned with regard to good

practice for development and operation of local extension and advisory services systems;

- Summary of accomplishments and experience with dissemination of good practice for development and operation of local extension and advisory services systems;
- Summary and discussion of experience with country level development of capacity for efficient, effective, and sustainable extension and advisory services systems;
- Discussion of any implementation problems encountered;
- Summary of lessons learned from any Associate Awards; and
- Summary of expected activities over the next six months.

A copy of the annual report shall also be submitted to the USAID Development Experience Clearinghouse.

(3) Notifications

The Recipient will be required to immediately notify the AOR and the Agreement Officer of developments that have a significant impact on the award-supported activities. Also, notification shall be given in the case of problems, delays, or adverse conditions which materially impair the ability to meet the objectives of the award. This notification shall include a statement of the action taken or contemplated, and any assistance needed to resolve the situation.

(4) Final Report

The final performance report will replace the last semi-annual report, and shall include the information described in paragraph (c) (1) above. The final report shall include an executive summary of the Recipient's accomplishments overall and by country program in achieving results and impact; conclusions about lessons learned; future challenges and opportunities; an overall description of the Recipient's activities and attainment of results by country or region; an assessment of progress made toward accomplishing the development impact objectives and expected results; significance of these activities; important research findings; and comments and recommendations. The final report shall incorporate the findings and results that were included in previous annual reports, and is due no later than 90 days after the completion, expiration, or termination of the award. A copy of the final report shall also be submitted to the USAID Development Experience Clearinghouse.

Development Experience Clearinghouse (DEC) Requirements

USAID maintains the DEC as its primary institutional memory resource. It provides Agency staff and development partners with accurate, comprehensive, and timely Information on the

Agency's development experience. The DEC includes USAID-funded materials created by the Agency and its contractors and grantees. OMB Circular A- 130, Management of Federal Information Resources, requires executive agencies to establish a system to acquire and disseminate information for the purpose of supporting strategic planning activities.

Submission of Performance Reports and Other Deliverables

The Recipient shall submit an original performance report to the Washington AOR, one copy to the Agreement Officer, and one electronic copy of the final report to the Development Experience Clearinghouse (DEC). Documents submitted to the DEC should be sent in original format via email to:

E-mail: docsubmit@dec.cdie.org

Please reference web site http://www.dec.org/submit_doc.cfm or contact one of the following concerning any questions your organization may have on the reporting requirements:

Development Experience Clearinghouse

E-mail: docsubmit@dec.cdie.org

Phone: (301) 562-0641

USAID/PPC/DEI

Phone (202) 712-4696

II. Associate Awards under LWAs

Reporting requirements and evaluation plans for Associate Awards will be specified in such awards. The Recipient will be required to provide an electronic copy of all reports produced under Associate Awards to the AOR for the Leader Award.

Title to Property

Unless otherwise specified in an Associate Award, title to property financed by USAID under the award(s) will vest in the Recipient, and will be subject to 2 CFR 200.310-316 and 2 CFR 700.

Authorized Geographic Code

For the award(s) resulting from this solicitation, the authorized geographic code for the source of USAID financed commodities (other than “restricted commodities,” as discussed below), and for the nationality of suppliers of USAID-financed commodities (other than restricted commodities) and services (other than ocean and air transportation, construction, and engineering services, as discussed below), is Geographic Code 937. Geographic Codes are described in 22 CFR 228.03 and the Internal Mandatory References to Chapter 310 of USAID’s Automated Directives System (ADS 310) entitled “[List of Developing Countries](#)”, “[List of Advanced Developing Countries](#)”, and “[List of Prohibited Source Countries](#)”.

Program Income

The Recipient shall account for any Program Income in accordance with 2 CFR 200.307 (or the Standard Provision entitled Program Income for non-U.S. organizations). Program Income earned under this award shall be added to the USAID funding and applied towards program use. Program income is not anticipated for this program.

Branding & Marking

The applicant is required to comply (and ensure compliance by partners) with USAID's branding and marking requirements set forth in 2 CFR 700.16 with Feed the Future specific guidance located at feedthefuture.gov/branding. These regulations and provisions include the requirement for the applicant to submit a Branding Implementation Plan and Marking Plan for pre-award review, negotiation, and approval by the Agreement Officer.

SECTION G: FEDERAL AWARDING AGENCY CONTACT(S)

Agency Point of Contact

US Agency for International Development
Office of Acquisition and Assistance
Kimberly Tran, Agreement Officer
Email: ktran@usaid.gov

Alternate Agency Point of Contact

US Agency for International Development
Office of Acquisition and Assistance
Paul Burford, Agreement Officer
Email: pburford@usaid.gov

SECTION H: OTHER INFORMATION

The USAID website provides the necessary forms, which must be signed and dated
<http://www.usaid.gov/sites/default/files/documents/1868/303mav.pdf>

NFO ATTACHMENT 001: Past Performance Reference Form

1. Contract Number:
2. Contractor (Name and Address):
3. Type of Contract: Negotiated ☐ Sealed Bid ☐ Fixed Price ☐ Cost Reimbursement ☐ Hybrid (explain) ☐
4. Complexity of Work: Difficult ☐ Routine ☐
5. Description, location, and relevancy of work:
6. Contract Dollar Value: Status: Active ☐ Completed ☐
7. Date of Award: Contract Completion Date (including extensions):
8. Type and Extent of Subcontracting:
9. Name, Address, Telephone Number, and E-mail Address of the Procuring Contracting Officer and/or the Contracting Officer's Representative (and other references—e.g., Administrative Contracting Officer—if applicable):

NFO No. 7200AA18RFA00007

Attachment 002

INITIAL ENVIRONMENTAL EXAMINATION (IEE)

Seed Systems Support Activity (S3A)

Bureau for Food Security

Initial Environmental Examination (IEE)

Project Information:	
Activity/Project Title: Seed Systems Support Activity	
Contract/Award Number (if known):	
Geographic Location: <i>Sub-Saharan Africa, South Asia, and including additional countries that are aligned with Feed the Future and are disaster-prone</i>	
Is this is an Amendment to an existing IEE? NO ☐ Yes, and this will be Amendment #: _____	
Original IEE Tracking #: _____, BEO Approval Date: _____,	
Title of Original document: BFS-;17-3-005 SSSA IEE.docx	
Funding: \$ <i>Up to \$50 million</i>	
Implementation Start/End: <i>FY18 – FY23</i>	Expiration Date (if any):
Prepared By: Mark Huisenga, BFS Office: MPI	Date Prepared: 03/20/2017
Recommended Threshold Determination:	
☒ Negative Determination with Conditions ☒ Categorical Exclusion [include rationale per 216.2(c)]	☐ Positive Determination [see 216.3(2)(iii)] ☐ Exemption [include rationale per 216.2(b)] ☐ Deferral [include rationale per 216.3(a)(1)(iii)]
Guidance:	
Environmental Mitigation and Monitoring Plan (EMMP): If the Threshold Decision is a <u>Negative Determination with Conditions</u> , an EMMP will be developed by the Implementing Partner (IP) to mitigate the conditions described in this IEE. The EMMP will be completed before activities start. Periodic EMMP Reports shall be prepared by the IP to describe how well the monitoring and mitigation measures are working, and if any modifications are necessary. Guidance on BFS EMMP development is available at the BFS Environmental Compliance Tracking site. EMMP Reporting: <i>Annual</i>	
Gender Equality and Women’s Empowerment: Per USAID policy, this IEE will consider the proposed activity in the full light of gender equity and women’s empowerment related to environmental impact, not as a separate component, but as a core activity.	
Global Climate Change: A Climate Risk Management (CRM) narrative and table is included in section 3 of this document.	
This Document: The purpose of the Initial Environmental Examination, in accordance with Title 22, Code of Federal Regulations, Part 216 (22CFR216), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the described activity, and to recommend determinations and, as appropriate, conditions, for these activities. Upon final approval of this IEE, these recommended determinations are affirmed as 22 CFR 216 Threshold Decisions and Categorical Exclusions, and conditions become mandatory elements of implementation. This IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation.	

IEE Summary:

1. Project Context:

The overarching goal of the proposed activity, the Seed Systems Support Activity, is that smallholder farmers will have access to and use superior quality seed with yield-enhancing and stress tolerance traits so that productivity and resilience may increase. The Activity purpose is to improve functioning of national seed sector in FtF countries based upon self-sustaining market-based seed systems and delivery channels. The activity will expand and deepen formal and informal delivery channels for improved seed and other genetic material to smallholder farmers in ways that are commercially and institutionally sustainable. This purpose will be accomplished through two broad intervention areas: (2) Increased capacity of seed systems to sustainably offer quality affordable seeds through formal and informal seed systems strengthening; and (2) Increased collaboration and coordination among all seed systems interventions. The identification of these intervention areas is informed by the key challenges faced by African and Asian emerging commercial seed sector and by smallholder farmers and the need for increased inclusive growth, productivity and resilience. Smallholder farmers in parts of south Asia, and especially in sub-Saharan Africa have limited access to seed of responsive, high-yielding, locally-adapted varieties of their staple food crops, and cannot therefore meet the demands of a fast growing population and effectively cope with effect of climate change and shocks to the system. USAID and other development partners have invested significant resources in research and development of such varieties but there are physical and policy bottlenecks in the seed systems that prevent more broad-based and sustained access and use of the varieties. High quality seeds of yield-enhancing and climate smart improved varieties are a key element to increasing productivity and resilience.

2. Activity description, location & conditions:

Illustrative actions and outcomes (Intermediate results) expected.

Purpose: Improved functioning of national seed sector in FtF countries based upon self-sustaining market-based seed systems and delivery channels

Objective 1. **Capacity of seed systems to sustainably offer quality affordable seeds increased.**

Objective 2. **Collaboration and coordination among all seed systems interventions increased**

IR 1.1 Formal seed systems bottlenecks removed or mitigated.

- Seed Systems Support Services to eliminate or reduce bottlenecks to seed access
- Diagnostic Assessment of Local Capacity and Local Seed Networks – develop a framework for diagnostic assessment
- Seed Production Logistics Support - Development of tools for seed production logistics that are useful to small seed enterprises
- DNA fingerprinting services to assess genetic purity of seeds and for other uses
- Assist or manage transfer of research material between countries and facilitate implementation of regional seed harmonization protocols
- Address other identified issues affecting or constraining seed systems

IR 1.2 Informal seed system strengthened.

- Diagnostic Assessment of Local Capacity and Local Seed Networks
- Market forecasting and demand estimation, cost estimation in relation to forecasted potential shocks to seed security
- Seed Production Logistics Support - Development of tools for seed production and distribution logistics that are useful to smallholder farmers

IR 1.3 Pluralistic seed sector accepted and valued.

- Policy and Regulatory reform implementation, capacity building and other support to national systems that recognize and enable both formal and informal systems

- Market forecasting and demand estimation, cost estimation - Development of tools for market forecasting and demand and cost estimation
- Intervening in both formal and informal seed systems to address other issues affecting seed systems

IR 2.1 **Formal and Informal seed systems collaboratively interfaced.**

- Diagnostic Assessment of Local Capacity and Local Seed Networks

IR 2.2 **Development and resilience or emergency seed sector actions harmonized.**

- Leverage and link emergency and development seed programs to support vulnerable smallholder farmers.
- Develop Shock Responsive Seed Systems for Greater Resilience - development of a model for "shock responsive" seed systems with guidelines and connect to forecasts of potential shocks to seed security
- Monitor donor and NGO seed supply programs - Develop and put into action a means to monitor donor and NGO seed supply (seed aid) programs vis a vis market mechanisms and sustainability

IR 2.3 **Information flows for seed systems established.**

- Research on farmer adoption of new varieties - develop and implement a learning agenda on farmer adoption of new varieties
- Market forecasting and demand and cost estimation - Development of tools for market forecasting and demand and cost estimation
- Coordination with various seed indexes - EBA, TASAI, Access to Seeds
- Organization of seed information, data and analytical services - Produce some selected seed information, data and analytical services that make use of ICT for seed system strengthening
- Monitor donor and NGO seed supply programs vis-à-vis market mechanisms and sustainability

3. **Potential Environmental impacts:**

The only proposed work that might potentially have an adverse impact on the natural or physical environment are possible sub-activities (a) supporting the growth of foundation or certified seed companies and local community efforts to multiply seeds within informal systems; (b) small scale infrastructure rehabilitation or construction and (c) pesticide use that could be actions within the following five illustrative intervention areas: i) Leverage and link emergency and development seed programs to support vulnerable smallholder farmers; ii) Develop shock responsive seed systems for greater resilience; iii) Seed Systems Support Services to eliminate or reduce bottlenecks to seed systems development and bottlenecks to seed availability, seed access and seed quality; iv) Intervening in both formal and informal seed systems; v) Addressing other issues affecting seed systems. The remaining ten illustrative intervention areas are recommended for Categorical Exclusion as there would be no adverse impact on the natural or physical environment.

4. **Mitigation conditions:**

Key sub-activity (pose risk)	Mitigation condition
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Support the growth of foundation /certified seed companies and local efforts for quality seed improvements within informal systems	i) the program will rely on seed varieties that have already been developed, field tested and officially released ii) Approved chemical and cultural pest and disease control measures will be practiced to ensure that seeds are free of seed-borne pests and diseases iii) Only GMOs that have been evaluated in line with country regulations, and are officially released will be promoted. iv) Where feasible, the use of out growers (contract seed growers) that already have access to irrigation facilities and can do time and space isolation v) support to small scale irrigation for bulking Early Generation Seed vi) Appropriate soil and water conservation practices will be promoted vii) Capacity building for formal and informal seed systems actors
Development of infrastructure (irrigation and construction of warehouses, and cold storage)	i) Water Quality Assessment (WQA) Plan will be put in place and in accordance with the USAID regulations; ii) ensure that construction or rehabilitation activities will be done within existing facilities where changes have already occurred and may not cover more than 10,000 sq. ft.
Use of pesticides	It is unlikely that the Seed Systems Support Activity will use pesticides but if necessary to use pesticides in implementation then, the SSSA will use and update the already approved PERSUAP developed for the seed scaling activity by AGRA Seed and Technology Scaling covering five countries (Mozambique, Ethiopia, Ghana, Tanzania and Malawi) and the proposed new AGRA PERSUAPs in the 6 other target countries (Burkina Faso, Kenya, Uganda, Rwanda, Mali, and Nigeria) which will evaluate the interventions for pesticide impacts on humans and environmental resources. The SSSA will use and update already approved PERSUAPs in any other country where pesticide use may be a needed action.

5. Threshold Determination:

As a general condition of this project, the BFS BEO, in consultation with the REA, MEO and AFR BEO (as appropriate), will be provided full details of any irrigation scheme, land clearing, and pesticide use prior to implementation in location countries. An amendment to this IEE may be necessary to ensure project compliance with 22 CFR 216 as well as to facilitate long-term project sustainability.

Activity	Recommended Determination
Leverage and link emergency and development seed programs to support vulnerable smallholder farmers	Negative Determination with Conditions
Develop Shock Responsive Seed Systems for Greater Resilience	Negative Determination with Conditions
Seed Systems Support Services to eliminate or reduce bottlenecks to seed systems development and bottlenecks to seed availability, seed access and seed quality	Negative Determination with Conditions
Diagnostic Assessment of Local Capacity and Local Seed Networks	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings
Seed Production Logistics Support	Categorical Exclusion §216.2(c)(2)(i) Education, technical assistance and training
Research on farmer adoption of new varieties	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings

Market forecasting and demand estimation, cost estimation	Categorical Exclusion §216.2(c)(2)(v) Document and information transfers
Policy and Regulatory reform implementation, capacity building and other support to national systems	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(i) Education, technical assistance and training
DNA fingerprinting services to assess genetic purity of seeds and for other uses	Categorical Exclusion §216.2(c)(2)(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored;
Intervening in both formal and informal seed systems	Negative Determination with Conditions
Coordination with various seed indexes - EBA, TASAI, Access to Seeds	Categorical Exclusion §216.2(c)(2)(v) Document and information transfers
Assist or manage transfer of research material between countries and facilitate implementation of regional seed harmonization protocols	Categorical Exclusion §216.2(c)(2)(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored;
Organize seed information, data and analytical services	Categorical Exclusion §216.2(c)(2)(v) Document and information transfers
Address other issues affecting seed systems	Negative Determination with Conditions
Monitor donor and NGO seed supply programs vis-à-vis market mechanisms and sustainability	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

CLEARANCE:

Office Director: _____
Charisse Adamson

Date: _____

Activity Manager: _____
Bahiru Duguma

Date: _____

CONCURRENCE:

BFS Bureau Environmental Officer: _____
William Thomas

Date: _____

BFS Tracking #: BFS-17-3-005

Initial Environmental Examination (IEE)

1. Project Context:

The goal of the proposed activity, Seed Systems Support Activity, is to contribute to improved functioning of national seed sector in Feed the Future countries and in countries with resilience and emergency seed security programs through increased capacity of and coordination of formal and informal seed systems. The FtF countries most likely using the support from this activity are located in three high-potential, under-exploited agro-ecologies - the Guinea Savannah Zone (West Africa), the East African Highlands, and the Miombo Woodland (Southern Africa). The activity may also work in several Asian FtF and resilience countries such as Bangladesh, Cambodia, India, Nepal, or Burma. As agricultural development is significantly influenced by national policies, investments and institutions, the activity will align with country priorities and work closely with country missions, national governments and other agriculture sector players. The proposed work under this Seed Systems Support Activity will be delivered over a period of 5 years, 2017-2020, in FtF countries and countries with resilience and emergency recovery seed programs.

Removing bottlenecks to Seeds Systems Development: Smallholder farmers in sub-Sahara Africa and in some FtF countries in Asia have limited access to seed of responsive, high-yielding, locally-adapted varieties of their staple food crops. They rely primarily on recycled local stocks of unimproved varieties and as a result, crop yields on the majority of fields - especially in Africa - have remained far below their potential and cannot meet the demands of a fast growing population. Africa's food situation is critical and in need of drastic change, beginning with supply of quality seed of improved, adapted crop varieties.

There are many bottlenecks to the development of seed systems in most Feed the Future countries and regions. Addressing these bottlenecks so that smallholder farmers have access to and choices among the best seed available is essential to a number of FTF's highest priorities. Achieving FTF goals requires major increases in farm productivity that can come only with better seeds, and accompanying agronomic practices. Most of FTF "productivity" investments have been either "upstream" investments in research and technology development or "downstream" investments linking farmers to value chains and markets; but without functional seed systems delivering the best genetic materials to farmers, then both the research and development and downstream investments are constrained in their impacts.

Hand-off of research and development products to seed producers and distributors is a key upstream investment, and FTF initiatives on scaling technology and on solving some of the bottlenecks in availability of breeder and foundation seed (early generation seed) have begun to address some of these issues. More is required to create fully sustainable seed systems.

Climate adaptation and mitigation also require farmer access and use of stress tolerant and better performing seeds. Farmers in many FTF countries are already dealing with significant climate variability and longer-term climate change is highly likely to result in increasing temperatures, more variable rainfall patterns, and increasing droughts and floods, all of which will put additional stress on seed varieties and the systems that produce and deliver them.

USAID's efforts to build resilience to recurrent crises also require better and more reliable farmer access to appropriate varieties of high quality seeds, especially ensuring reliable supplies before, during, and aftershocks such as droughts and floods. Better understanding of the entire seed sector (formal systems and informal systems), especially during periods of stress or emergency, will enable USAID to better serve farmers. Emergency response programs have an important role to play in seed system development as well and through seed system mapping, opportunities to leverage both development and relief interventions should become apparent.

2. Activity Description, Location, & Baseline:

2.1. Activity Description:

The focus of the proposed program will be on 15 key intervention areas grouped into two components: (1) Increased capacity of seed systems to sustainably offer quality affordable seeds; and (2) Increased collaboration and coordination among all seed systems interventions.

The result expected in countries where project will work is an improved national seed sector that can offer more choice, better quality and affordability of seed of yield-enhancing and climate-smart varieties to smallholder farmers in formal regulated commercial seed systems and in informal non-regulated seed systems.

Anticipated outputs and outcomes:

Intervention area	Outputs	Outcomes
Leverage and link emergency and development seed programs to support vulnerable smallholder farmers	• number of seed companies and agro-dealers supported; • increased production and adoption of early generation seed and certified seed, and number of smallholder farm (SHF) households reached with varied channels of awareness creation	• Vulnerable smallholder farmers have access to better quality seeds and wider choice of adapted varieties. • Little or no disruptions in seed markets due to last minute NGO or donor purchases for large subsidized distributions. • Less or no undermining of fledgling seed companies with subsidized seed or free seed.
Develop Shock Responsive Seed Systems for Greater Resilience	• Models of shock responsive seed systems developed. • Seed demand estimation methods that include early warning on shocks to production systems and possible seed insecurity.	• Vulnerable smallholder farmers have access to better quality seeds and wider choice of adapted varieties. • Enhanced and flexible mechanisms that can increase and decrease production/availability of seed of selected crops and varieties when necessary to cope with shocks and stresses.
Seed Systems Support Services to eliminate or reduce bottlenecks to seed systems development and bottlenecks to seed availability, seed access and seed quality	• specific policy constraints and priorities identified by country; • quality of national plans and proposals developed; • government supported to create enabling policies and countries complying with CAADP aspirations	• new policies, laws and regulations adopted and implemented; • stronger agricultural coordination mechanisms; • appropriate regulatory instruments in place; • improved implementation and accountability for national agriculture investment plans and budgets, • Capacities that ensure that systems are resilient enough to sustain a growing agricultural sector.
Diagnostic Assessment of Local Capacity and Local Seed Networks	• Seed Systems Assessment Reports with identification of bottlenecks and constraints. • Realistic recommendations to relive or mitigate bottlenecks and constraints.	• Evidence used to adjust business plans and policy.

Intervention area	Outputs	Outcomes
Seed Production Logistics Support	Tools for small seed companies to do cost estimates, plan production, monitor inventory and other business management actions.	More, successful small seed businesses in more places and offering better quality seed at appropriate time.
Research on farmer adoption of new varieties	Study conclusions about the determinants and drivers of adoption of different types of varieties.	Evidence used by stakeholders to adjust and influence policy and regulations about seeds.
Market forecasting and demand estimation, cost estimation	Tools for seed businesses to more accurately forecast demand for seed and varieties.	More, profitable seed businesses producing quality seeds of a greater range of varieties.
Policy and Regulatory reform implementation, capacity building and other support to national systems	Advocacy and evidence-base developed for strategic seed policy and seed regulations adjustments.	- Faster release of varieties. - Less counterfeit seeds on the market. - Easier business start-up for seed businesses. - Easier border crossing for seed harmonization and trade.
DNA fingerprinting services to assess genetic purity of seeds and for other uses	DNA fingerprinting completed on seeds as part of verifying seed purity, quality control of certified seed, quality control of Quality Declared Seed, spot check deterring of counterfeit seed, tracking adoption, studying effects of recycling seeds on maintenance of variety characteristics.	- Improvement in seed quality and varietal purity in certified seed systems. - Reduction in counterfeit seeds - Evidence for strategic decisions on policy and regulations for recycled seeds or for quality declared seeds.
Intervening in both formal and informal seed systems	- Training for grain traders in methods to store grain intended or potentially to be sold as seed. - Agro-dealerships established in remote areas.	- Better quality seed available to those using informal seed systems. - More choice of quality certified seed for farmers in more remote areas.
Coordination with various seed indexes - EBA, TASAI, Access to Seeds	Methodology to coordinate and gain synergies from all three indexes developed and implemented	Better monitoring of progress in transforming seed access for smallholder farmers.
Assist or manage transfer of research material between countries and facilitate implementation of regional seed harmonization protocols	- Tools to facilitate border crossings. - Constraints to implementation of harmonization protocols removed. - Evidence for better policy and regulation of seed harmonization.	- Easier and faster border crossings. - Seed harmonization protocols providing ease of access of varieties and genetic material to seed businesses

Intervention area	Outputs	Outcomes
Organize seed information, data and analytical services	• ICT tools to assist seed businesses and smallholder farmers.	• Small businesses and farmers' access and use with more ease. More information on seeds.
Address other issues affecting seed systems	• Cold storage built. • Seed warehousing constructed. • Irrigation installed	• Seed companies produce seed more efficiently and with better productivity.
Monitor donor and NGO seed supply programs vis-à-vis market mechanisms and sustainability	• Methodology developed and implemented to monitor programs that supply seed to farmers through such mechanisms as seed fairs, subsidized vouchers, free distribution and such. • Better information relayed to seed businesses and policy makers and other seed sector stakeholders.	• Fewer “surprise” last minute huge orders that devastate a small seed business. • Better estimation of seed demand and better planning for production.

2.2. Location

The Seeds System Support Activity will operate in multiple locations within multiple Feed the Future and Resilience countries and will include core actions as well as demand-driven actions. Support actions from this activity are expected to be provided to a variety of stakeholders ranging from host country and regional government departments to private sector emerging seed enterprises, to USAID implementing partners and Missions working with seed value chains, to NGOs working with vulnerable farmers following a natural disaster. Most actions will be short-term and focused in nature but will be in support of on-going activities in the seed sector and will be embedded within an overarching seed system strengthening strategy that will prevent them from being disjointed, random, ad hoc interventions.

The Seed Systems Support Activity is global in nature and actions will take place mainly in Feed the Future countries and in other New Alliance or FtF aligned countries with resilience or emergency recovery food security programs. The FtF focus countries are Bangladesh, Cambodia, Ethiopia, Ghana, Guatemala, Haiti, Honduras, Kenya, Liberia, Malawi, Mali, Mozambique, Nepal, Rwanda, Senegal, Tajikistan, Tanzania, Uganda, and Zambia. There are a number of countries aligned with FtF results framework and some of these are also countries where Resilience programs include seed interventions of some type and these include Niger, Nigeria, Sierra Leone, Guinea, Zimbabwe, Burundi, Democratic Republic of Congo, and South Sudan. It is possible that the Seed Systems Support Activity could have some short term actions in these other priority countries although the focus is expected on the FtF countries.

These countries are characterized by high poverty rates, high rates of malnutrition and rural economies that are based in a large part on agriculture much of which is subsistence or semi-subsistence farming systems but with emerging commercial agriculture as well. These countries cover a range of ecologies and associated agro-ecosystems. Many of the countries with Resilience programs struggle with effects of climate change and a number are also experiencing conflict.

2.3. Host Country Laws:

Implementation of the proposed program will in all cases adhere to applicable host country environmental laws and policies. AGRA, sub-grantees and or subcontractors shall comply with host country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.

3. Potential Environmental Impacts:

- **Adverse impacts:**

The majority of the Seed Systems Support Activity interventions would not have an effect on the natural or physical environment. (See Annex 1 Justification and Request for Categorical Exclusion)

However there are a number of actions foreseen in this Seed Systems Support Activity that could have an effect on natural or physical environment. Some of these actions would be of a generic sort, short-lived and small-scale so that environmental evaluation can be generalized and any conditions or necessary mitigating actions can be described in general. These actions such as field level multiplication of foundation seed, should consider the local agro-ecosystem and local environment and it is recommended that either an Environmental Review Form or Environmental Mitigation and Monitoring Plan (EMMP) be required for each instance or that the EMMP be submitted before implementation of that action begins.

The only proposed work that might potentially have an adverse impact on the natural or physical environment relates to the following interventions:

- a) **Support the growth of foundation /certified seed companies operating nationally or regionally:** This activity poses potential risks such as (i) introduction and/or spread of invasive species that can displace indigenous varieties, (ii) introduction and/or spread of pests and diseases, (iii) introduction of genetically modified (GM) crops in countries where the policies, regulations and systems do not support them, and (iv) pollution of water and poisoning of human, livestock and marine life from agro-chemicals.

Land Clearing: Seed production may need creating new fields for seed production purposes by seed companies. Seed production requires land that has good soil fertility and isolation from other similar crops. As such, it is usually a challenge to find such land, especially in densely populated communities. There is therefore a risk of land degradation due to vegetation clearing in search of good temporal isolation land and where irrigation infrastructure is not available to use temporal isolation. Some of the indirect adverse impacts associated with sub-awards and/or sub-grants to the agricultural sector include, but are not limited to:

- i) Accelerated topsoil loss through expanded cultivation on marginal lands (e.g. hillsides, floodplain, etc.);
- ii) heavily compacted soils by machinery (e.g., tractors, trucks, etc.) may result in reduced rate of both water infiltration and drainage
- iii) Clearing to permit better access to farmers' fields and demonstration sites may result in loss of biodiversity
- iv) Pollution from mishandling or misuse of previously unaffordable agricultural inputs
- v) Loss of forest cover or sensitive habitats (e.g., wetlands) as land is converted for cultivation

- b) **Development of infrastructure:** The proposed program may require sub grantees to develop **irrigation infrastructure** especially in an effort to boost breeder, foundation and certified seed production, to mitigate the effects of weather variability and climate change on seed production. The risk with irrigation infrastructure development include:

- i) Degradation of irrigated land (salinization, alkalization, water logging and soil acidification)
- ii) Reduced socio-economic conditions (increased incidence of water borne diseases, increased inequity)
- iii) Poor water quality problems for downstream populations

- iv) Ecological degradation characterized by reduced biodiversity in project area, damage to downstream ecosystems due to reduced water quality and quantity
- v) Electrical hazards from the equipment used to power the irrigation systems.

Other activities such as **improper construction and rehabilitation of warehousing infrastructure** may cause the risk of loss of vegetative cover/biodiversity, soil erosion and water quality degradation. The establishment of cold storage facilities may also contribute to ozone depletion if the system uses CFC gases.

Potential adverse impacts related to the use of pesticides: Some solutions to relieve constraints or bottlenecks in seed supply that the activity may need to address could potentially involve the use of pesticides. The main areas for use of pesticides would be in seed treatment, pest and disease control, seed storage and use of herbicides in seed production. For example, an agro-input dealer may face intractable insect pest problems in deteriorated storage in a remote area with no other storage options. Similarly, individual foundation seed producers or contracted out-growers supported by the activity might propose to alleviate pest constraints in seed production during the growing season in event of a widespread outbreak of a crop pest. A seed company may use conservation agriculture to produce seed crop and might propose using herbicides for weed control. Pesticide use carries significant risk of harm to human health and the environment and such cases of seed systems support would be exceptional and only considered as last resort.

As pesticides become more widely available to help protect against agricultural pests and boost yields, a greater number of workers and communities will be put at risk of exposure through improper labeling, storage, handling, mixing, application, and disposal. To the extent that agricultural goods and services involve the procurement of pesticide chemicals and application equipment, or handling and storage of pesticides, USAID's Pesticide Procedures would first need to be satisfied through a modified IEE referred to as a PERSUAP (see below under Pesticide Restrictions).

Climate Risk Management:

In the target countries, weather variability and climate change is a threat to economic growth (due to changes in natural systems and resources), long-term prosperity, as well as the survival of already vulnerable populations. Consequences of this include persistence of economic, social and environmental vulnerabilities particularly for the economic and livelihood sectors, including agriculture. Weather variability and climate change, and associated risks leading to disasters are an additional burden to sustainable development in Africa, as well as a threat and impediment to achieving the Sustainable Development Goals. Constraints in technological options, limited infrastructure, skills, information and links to markets further heighten vulnerability to climate stresses. Africa's human existence and development is under threat from the adverse impacts of climate change – its population, ecosystems and unique biodiversity will all be the major victims of global climate change.

Any increases in income and food security achieved through inclusive agriculture transformation interventions can be wiped out by shocks and stresses whose impact is most keenly felt by the rural poor, a large portion of who are smallholder farmers. Sustainably increasing productivity in the face of erratic weather patterns, pests, diseases and soil degradation poses a significant challenge and calls for not only productivity enhancing technology but technology that enhances resilience to drought, pests and diseases.

The activity will build absorptive, adaptive and transformative resilience capacity at household, system and national level:

- **Absorptive capacity:** Seed Systems Support Activity will seek to build the ability to minimize exposure to shocks and stresses through preventative measures and appropriate coping strategies to avoid permanent, negative impacts. Activities could include training and information sharing on various risk management strategies and support for development and use of products through which individuals and/or households can moderate or cope with the impacts of shocks on their livelihoods and basic needs.
- **Adaptive capacity:** Seed Systems Support Activity will enhance the capacity of its partners to make proactive and informed choices about alternative livelihood strategies based on an understanding of changing conditions. Through pro-active training and information sharing to leverage benefits, as well as

build access to business development and finance, AGRA beneficiaries will build a ‘capacity to learn, combine experience and knowledge, adjust responses [in a pro-active way] to changing external drivers and internal processes, and continue operating’.

- **Transformative capacity:** Seed Systems Support Activity will work with local and national governments to build the capacity to create an enabling environment through investment in good governance, infrastructure, formal and informal social protection mechanisms, basic service delivery, and policies/regulations that constitute the necessary conditions for systemic change.

CRM Table:

Defined or Anticipated Project Elements (Purpose / Sub-purpose, Areas of Focus, or Activities / Mechanisms, etc.)	Climate Risks List key risks related to the project elements identified through either the strategy- or project-level climate risk assessment.	Risk Rating Low / Moderate / High	How Risks are Addressed at Project Level Describe how risks have been addressed at the project level. If a decision has been made to accept the risk, briefly explain why.	Further Analysis and Actions for Activity Design/ Implementation Describe CRM measures to be integrated into activity design or implementation, including additional analysis, if applicable.	Opportunities to Strengthen Climate Resilience Describe opportunities to achieve development objectives by integrating climate resilience or mitigation measures.
Seed Production	Drought that results in Germplasm loss	High	Seed Companies install irrigation facilities	Include in the award provision installation or rehabilitation of small scale irrigation facilities	• Use of drought tolerant crop varieties will help reduce loss • Linkages with institutions that have produced improved varieties e.g. CIMMYT, etc
	Excessive heat that results in loss of seed viability: pollen viability	Moderate	Installation of cold storage	Include construction of cold storage facilities in the award	Use of heat tolerant crops
Farmer access to improved varieties	Drought	High	Promotion of drought tolerant crops	Raise awareness amongst farmers on improved, drought tolerant varieties	• Improve farmer access to weather data to aid planning • Capacity building of farmers to adopt alternative livelihood strategies based on an understanding of changing conditions
Develop Competitive markets	Drought; Floods; changing weather patterns; (result in commodity loss or unavailability)	High	Promotion of drought tolerant crops Support to develop storage facilities, better post-harvest management technologies Access to finance and insurance products		Conservation agriculture; Water resource management
Policy and	Drought; Floods;	Moderate	support governments in		Leverage on NEPAD's

country support	changing weather patterns		building resilience into national plans		African Resilient Landscapes Initiative (ARLI) to strengthen resilience at country level.
Regional technical support	Drought; Floods; changing weather patterns	Moderate	technical support regional institutions on the implementation of the CAADP framework		At the regional level, engagement with AUC-supported NEPAD Africa Regional Strategy for Disaster Risk Reduction and ARLI

4. Mitigation Conditions:

a) Support the growth of foundation /certified seed companies operating nationally or regionally

The proposed program will primarily rely on varieties that have already been developed, field tested and released by their respective government research institutes. Both chemical and cultural pest and disease control measures may be practiced to ensure only seeds that are free of pests and diseases and/or comply with the nationally set quality standards are sold under the project. Further, the implementing partners/sub awardees will be trained on agrochemical management – acquisition, storage, use and disposal of both the chemicals and their containers. Treated seed will be properly labelled and a Pesticide Evaluation and Safe Use Action Plan (PERSUAP) will be developed and enforced to ensure use of known, registered and appropriate agro-chemicals. These measures will minimize the associated risks. In the event that GMO technologies are considered under this activity, Seed Systems Support Activity, in consultation with the BFS BEO and Agency Biosafety Advisor, will ensure full compliance with applicable guidance.

To mitigate on adverse effects associated with land clearing for seed production purposes, AGRA and its sub awardee/implementing partners will mitigate this through (i) the use of out growers (contract seed growers) that already have access to irrigation facilities and can do time isolation and (ii) support to small scale irrigation for bulking delicate seed stages such as breeder and foundation seed production. Further, sub grantees who need to clear land will use appropriate land-clearing methods, and the use of appropriate soil and water conservation measures.

b) Development of infrastructure – Irrigation and warehouses:

To mitigate against this risk associated with irrigation, Seed Systems Support Activity will ensure that sub grantees undertake appropriate environmental practices. The following mitigation measures shall be considered:

Adverse effect	Mitigation measures
Degradation of irrigated land	- provide drainage including disposal of water to evaporation ponds or the sea if quality of river flow adversely affected by drainage water - Maintain channels to prevent seepage, and reduce inefficiencies resulting from siltation and weeds. Allow for access to channels for maintenance in design.
Reduced socio-economic conditions	- Educate communities on diseases and prevention, support intervention measures - extensive public participation to ensure that plans are optimal, that all sections of affected society are considered and that local institutions are in place to sustain irrigated agriculture, particularly in respect of land and water rights
Ecological degradation	- Develop irrigation projects that suit downstream requirements - Designate land (in law and supported by protection institutions) for flood plains; wetlands; watersheds; drainage water disposal; river corridors.
Poor water quality	- Educate for pesticide or sewage contamination dangers. - Develop a Water Quality Assessment (WQA) Plan in accordance with

	USAID regulations
Electrical hazards from the equipment to power the irrigation systems	Professionals will be contracted to undertake the electrical installation using the Best Engineering Practices.

Seed Systems Support Activity will strive to ensure that construction or rehabilitation activities will be done within existing facilities where changes have already occurred and may not cover more than 10,000 sq. ft. (which is the limit for small scale construction activities), considered a low risk activity according to the Africa Bureau Environmental Review Procedures. In cases where a construction activity is to exceed 10,000 sq. ft., Seed Systems Support Activity will screen for potential environmental impacts using the Environmental Review Form (ERF), and will endeavor to mitigate against any unforeseen adverse impacts. The use of non CFC refrigeration gases will mitigate against the potential risk of ozone depletion from this activity. Such construction projects will be required to follow principles for environmentally sound construction, as provided in the Small Scale Construction chapter of the USAID Environmental Guidelines for Small-scale Activities in Africa (EGSSAA). See http://www.encapafrica.org/EGSSAA/Word_English/construction.doc. Most such activities can be addressed by expecting good practices to be applied, for example as reflected in the appropriate chapters of the *Environmental Guidelines for Small-Scale Activities in Africa*, <http://www.usaidgems.org/>

c) Use of Pesticides:

Seed Systems Support Activity and its sub awardees shall take precautions to promote safer pesticide use in scenarios where USAID-supported sub grants are realistically expected to increase access to and use of these products, as could in rare situations be the case under this program. Seed Systems Support Activity shall require sub grantees to only use allowed pesticides, those that pass the 12-factor analyses, particularly Factor A (EPA Registration and Restricted Use Pesticide—RUP Status) & Factor E (Acute/Chronic Toxicological Hazards.)

In the event that pesticide use may be a needed solution to a seed system bottleneck, Seed Systems Support Activity would need to develop a PERSUAP and proposes to base it on those already prepared for a program also working in the seed sector. This would be in many cases the most up-to-date AGRA PERSUAPs for five countries (Mozambique, Ethiopia, Ghana, Tanzania and Malawi) and if USAID Mission has not developed a PERSUAP for any seed sector development programs in country Seed Systems Support Activity would develop a new PERSUAPs in the affected target country or countries (e.g. Senegal, Sierra Leone, Liberia, DRC, Burundi, Zimbabwe, Burkina Faso, Kenya, Uganda, Rwanda, Mali, and Nigeria) to evaluate Seed Systems Support Activity interventions for pesticide impacts on humans and environmental resources. The PERSUAP would recommend pesticides that are compliant with 22 CFR 216.3 (b) Pesticide Procedures, and recommend risk reduction and mitigation measures as well as agriculture sector best practices and preventive Integrated Pest Management (IPM) tools and tactics.

Seed Systems Support Activity will also ensure sub awardees / implementing partners undergo Safe Use Action Training to be delivered by an experienced and qualified team. AGRA will routinely monitor adherence through site visits and requiring grantees to report quarterly on environmental compliance.

d) Guidance Materials:

In addition to the mitigation measures listed, the project needs to list the following documentation (attached) for consultation during implementation:

- *Sector Environmental Guideline for Agriculture* -- to be used in the development of small scale irrigation
- *Sector Environmental Guidelines for Construction* -- to be used in the construction or rehabilitation of warehouse facilities
- *Visual Field Guide for Construction* -- to supplement the above document in construction activities
- All warehouse and post-harvest seed fumigation will utilize the *Programmatic Environmental Assessment for Phosphine Fumigation of Stored Agricultural Commodities*

5. Threshold Determinations:

Recommended Threshold Determinations

As general condition of this project, the BFS BEO, in consultation with the REA, MEO and AFR BEO (as appropriate), will be provided full details on any irrigation scheme, land clearing, and pesticide use prior to implementation in location countries. An amendment to this IEE may be necessary to ensure project compliance with 22 CFR 216 as well as to facilitate long-term project sustainability.

The following determinations are recommended:

Activity	Recommended Determination
Leverage and link emergency and development seed programs to support vulnerable smallholder farmers	Negative Determination with Conditions
Develop Shock Responsive Seed Systems for Greater Resilience	Negative Determination with Conditions
Seed Systems Support Services to eliminate or reduce bottlenecks to seed systems development and bottlenecks to seed availability, seed access and seed quality	Negative Determination with Conditions
Diagnostic Assessment of Local Capacity and Local Seed Networks	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings
Seed Production Logistics Support	Categorical Exclusion §216.2(c)(2)(i) Education, technical assistance and training
Research on farmer adoption of new varieties	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings
Market forecasting and demand estimation, cost estimation	Categorical Exclusion §216.2(c)(2)(v) Document and information transfers
Policy and Regulatory reform implementation, capacity building and other support to national systems	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(i) Education, technical assistance and training
DNA fingerprinting services to assess genetic purity of seeds and for other uses	Categorical Exclusion §216.2(c)(2)(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored;
Intervening in both formal and informal seed systems	Negative Determination with Conditions
Coordination with various seed indexes - EBA, TASAI, Access to Seeds	Categorical Exclusion §216.2(c)(2)(v) Document and information transfers
Assist or manage transfer of research material between countries and facilitate implementation of regional seed harmonization protocols	Categorical Exclusion §216.2(c)(2)(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored;

Organize seed information, data and analytical services	Categorical Exclusion §216.2(c)(2)(v) Document and information transfers
Address other issues affecting seed systems	Negative Determination with Conditions
Monitor donor and NGO seed supply programs vis-à-vis market mechanisms and sustainability	Categorical Exclusion §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings

Annex 1

JUSTIFICATION of REQUEST FOR CATEGORICAL EXCLUSION

Seed Systems Support Activity

I. Background and Activity Description

The Seeds System Support Activity will operate in multiple locations within multiple Feed the Future and Resilience countries and will include core actions as well as demand-driven actions. Requests for support from this activity are expected from a variety of stakeholders ranging from host country and regional government departments to farmer associations, to private sector emerging seed enterprises, to USAID implementing partners and Missions working with seed value chains, to NGOs working with vulnerable farmers following a natural disaster. Most actions will be short-term and focused in nature but will be in support of on-going activities in the seed sector and will be embedded within an overarching seed system strengthening strategy that will prevent them from being disjointed, random, ad hoc interventions.

The actions will take place mainly in Feed the Future countries and in other New Alliance for Food Security and Nutrition or Feed the Future aligned countries with resilience or emergency recovery food security programs. These countries are characterized by high poverty rates, high rates of malnutrition and rural economies based in a large part on agriculture much of which is subsistence or semi-subsistence farming systems but with emerging commercial agriculture as well. These countries cover a wide range of ecologies and agro-ecosystems but the majority of the Seed Systems Support Activity interventions would not have an effect on the natural or physical environment.

The following actions which are recommended as qualifying for Categorical Exclusion are planned within the Seed Systems Support Activity and a brief description of each is provided.

1. Diagnostic Assessment of Local Capacity and Local Seed Networks

The diagnostic assessments will be of two general types. The majority of assessments will be looking at markets and value chains within both formal and informal seed systems and using a diagnostic process similar to one developed in the Early Generation Seed (EGS) program but which goes beyond EGS and considers the entire seed systems. One aim of this type of diagnostic is to identify bottlenecks and constraints in the systems. The EGS diagnostic assessment used a ten-step process. The first six steps were used to analyze specific crops within a country's national seed sector in order to inform step seven, development of the optimal market archetype, which is a common economic framework defining public and private goods and applied to EGS systems. Once the optimal market archetype for each crop was developed, steps eight through ten identified the key challenges to achieving the optimal market archetype, possible public-private partnership mechanisms and solutions, and final recommendations. The main actions are information gathering and analysis and could include: farmer surveys, interviews, desk reviews, market studies, business analysis of seed enterprises, inspection of National Research Institute facilities and such. A similar type of diagnostic assessment process would be developed and used in the Seed Systems Support Activity.

The second type of diagnostic assessments that are probable actions would look more closely at seed security – using rapid appraisal methods, focus groups and surveys to collect information about seed availability, seed access and seed quality in an area that is recovering from some kind of shock such as drought, flood, epidemic, or extreme food price increases. This type of assessment also would look at both formal and informal seed systems.

The assessment actions will take place in mainly Feed the Future countries and in other countries with resilience or emergency recovery food security programs. These countries are characterized by high poverty rates, high rates of malnutrition and economies that based in a large part on agriculture much of which is subsistence or semi-subsistence farming systems but with emerging commercial agriculture as well.

2. Provide seed production logistics support: planning, scheduling, estimating multiplication rates (numbers of generations a year), planting area estimation, proximity requirements

This action would provide business development type of support to fledgling seed companies and producer associations that produce seeds but typically do not have the skills or capacity to plan, schedule or estimate multiplication rates of seeds from different crops. The support could also include advice on how to site demonstration plots or plan for reaching scale. Among seed companies that have been in business for a while there are higher-level challenges requiring greater sophistication of business skills; for instance, many companies do not know how to keep track of their cost of goods sold, analyze problems with it, fix the problems, etc. They continue year after year with unsustainable production costs, and with low profitability start to take shortcuts in quality, or struggle to invest in marketing. Improving cost of goods sold for a seed company is a key step to sustainability.

Another important area of production support may be in production research methodologies. Many seed companies do not understand how to conduct such research, how to keep production research records, or how to fix low production yields. Such constraints have a large impact on their cost of goods sold.

Another area of support would be assisting small seed companies in ways to reach non-traditional buyers. For example, often smallholder farmers are risk averse or do not have the resources to front large investments for the use of new varieties. Through advising and assisting seed enterprises with options such as small seed packs to reduce the initial investment and allow farmers to experiment with new varieties, the program could support the widening of the buyer pool for small companies. Mechanisms to encourage seed companies to produce an even greater range of crops (for example, legumes) could reach a greater number of people and meet other objectives such as more production of nutrient-dense crops.

3. Research on farmer adoption of new varieties

This action will be socio-economic type of research looking at adoptions rates, determinants of adoption of new varieties or seed technologies by farmers and also documenting adoption by small businesses of new business practices or new seed production practices. The research will involve information gathering and analysis and use methods such as household surveys, farmer recall, focus groups, and market studies. The research might at times involve DNA fingerprinting of varieties found in farmers' fields and in local markets to verify if a particular variety has actually been planted and entered into the grain markets. Computer modeling and econometric analysis may also be used.

4. Market forecasting and demand and cost estimation

This action is mainly capacity building in information gathering and analysis for small and medium sized seed enterprises that are emerging in the formal seed systems. Knowing how to estimate demand for new varieties is akin to a software company predicting how many people will elect to buy a software upgrade. In a less sophisticated environment where sales are difficult to track and feedback loops are absent, estimating demand and calibrating costs requires use of different kinds of data that may not be complete. Shocks, such as droughts and conflicts, and responses by governments and donors can also significantly positively or negatively affect demand.

In many FTF countries, there are too many ways to derail a demand estimate once it is made and production bets are placed, but before the seed is purchased by farmers (e.g., rains come late, prices at the end of the prior season suddenly drop steeply so farmers look to other crops, food prices rise steeply so at planting time farmers have little money as they have needed to buy food, government comes in with a subsidy scheme that crowds out private sector, etc.). Seed companies realize this, and essentially try to conservatively gauge low levels of farmer movement among crops, and among varieties. They cannot afford to place big production bets on a new variety, unless a donor is funding them to do that. They need improved capacity for market forecasting and estimating demand for various varieties of various crops.

Production research/implementation of research findings and reliable provision of high quality EGS are the most important contributors to low cost of goods sold. Market forecasting can often be done the way businesses usually do it – through small-scale pilots that are well run, and then scaled up based on results and lessons learned. For example, a proper product introduction pilot could include sampling the year before, radio promotion in a small area, etc., with close attention to watching results and learning from farmer behavior.

5. Policy and Regulatory reform implementation, capacity building and other support to national systems

This action would assist national seed sectors to effectively analyze issues and improve efficient implementation of policies related to seed systems. Seed sector policy overall aims to raise agricultural productivity and farm income by creating a system that supplies high-quality seed to farmers at affordable prices, along with information on how to use it effectively. Among the policy and regulatory objectives of an effective seed systems that may need this type of support are:

- Farmers have a choice of varieties
 - Good value and selection for farmers.
 - Competition between seed companies.
- Quality assurance is reliable to control for risks
 - Seed quality unknown and unknowable until planted.
 - High risk of counterfeiting.
- Risk management strategies/products to reduce risks to growers
- Phyto-sanitary protection
 - Limit spread of plant disease and pest risks.
- Preservation of intellectual property rights
 - Necessary to reward private investment in R&D while respecting and recognizing the rights of local communities and farmers.

Issues related to the policy and regulatory objectives would need analytical and implementation capacity support from this Seed Systems Support activity. Examples of seed policy and regulatory issues underlying

the above include the appropriate division of labor (and financing) between the public and private sector; the organizational efficiency and reliability of the variety release process; the ease and costs involved in accessing seed or genetic material from outside the country; and the process of early and frequent consultation between public sector, private seed companies, farmers' groups and other stakeholders with seed regulatory authorities.

6. DNA fingerprinting services to assess genetic purity of seeds and for other uses

DNA fingerprinting (e.g., DArT molecular marker technology) can now be used to easily and accurately identify the genetic material actually being planted by farmers and has already identified significant situations in which farmers, seed suppliers, governments and donor have highly inaccurate perceptions of that actual material being planted by farmers. This technology can therefore identify (at relatively low cost) points along the seed value chain where genetic impurities are introduced. Findings can be used to develop remedial measures for fixing the weak links in seed value chains where contamination occurs.

DNA fingerprinting could be abetted by watchdog efforts – e.g. mystery shoppers, random germ testing from agro-dealers, etc. The impact may not be from the results of the tests, but widespread knowledge that someone is watching and that results will be shared. DNA fingerprinting could also be used in adoption studies and studying “recycling” of varieties in informal seed systems and indirect clients of the formal seed system products.

All of these uses actions would be in controlled and focused situations - gathering samples for DNA fingerprinting and laboratory testing and analysis. The sampling procedures would be according to protocols and closely monitored to prevent any contamination or possibility of disease transmission from one sampling site to another. An example of the process as it might be used in the Seed Systems Support activity: “For the molecular fingerprinting of Open Pollinated Varieties (OPV), seeds of the OPVs in question are obtained from the seed source, and 50–100 seeds are planted in the field or greenhouse. When the seedlings are about 2–4 weeks old, one leaf from at least 30 different plants are harvested. DNA is extracted from each plant, and equal amounts of the DNA from 15 plants are combined into a bulk, so that each OPV is represented by two bulks of 15 plants. The extracted DNA is checked for quality and quantity, and the required working concentration prepared for polymerase chain reaction (PCR). PCR analysis of the two bulks is performed using microsatellite markers (also called simple sequence repeats, or SSRs) that have been optimized for genotyping bulk samples.”

7. Coordination with various seed indexes – EBA, TASAI, Access to Seeds

There are several indexes that seek to measure the performance of seed systems in different geographies:

- Enabling the Business of Agriculture (EBA) aims to measure the quality of agricultural regulation around the world by gathering data and scoring country performance across a uniform set of indicators, including one module focused specifically on seeds.
- The African Seed Access Index (TASAI) monitors variables that are essential to the development of a national seed sector.
- Access to Seeds provides insight into the current performance of the seed industry by benchmarking (mostly global) seed companies.

Each of these indexes provides useful, but different, information on seed systems in FTF countries. USAID is funding EBA and TASAI, while other donors fund Access to Seeds. There may be opportunities to coordinate the outputs of these indexes, or to expand their individual efforts. More importantly,

governments, seed companies and civil society can be made aware of their implications and encouraged to improve their relative standings.

8. Assist or manage transfer of research material between countries and facilitate implementation of regional seed harmonization protocols

This action is mainly coordination and facilitation. Giving farmers and seed companies access to the best available genetic material requires that on-going initiatives in seed harmonization protocols be expanded, completed, and brought down to practical cross-border implementation level. Phyto-certificates and import delays at border crossings have hampered timely implementation of projects, ultimately delaying or prohibiting the release of varieties that could benefit farmers. This action within the Seed Systems Support activity would assist in coordinating and facilitating implementation of a number of different interventions that are focused on removing these constraints but all seed systems could benefit from them working together more. For example: (a) Seeds2B (an initiative of Syngenta Foundation) is one attempt to create opportunities for public breeding institutions to defray part of their operating costs and reach growers at much greater scale, through licensing their seed technologies to competent private sector partners in third countries. (b) The major Regional Economic Communities in Sub-Saharan Africa have invested considerable time, effort, and political and legal resources in aligning country seed laws and regulations to permit much easier cross-border trade in seed, though the actual implementation in practice is only now being tested and improved. (c) One Acre Fund is now both moving seed across borders in East Africa and testing the harmonization rules of the EAC and COMESA to see where/how they fall short and can be improved.

9. Organize seed information, data and analytical services

This action would mainly bring the power of Information and Communications Technology to bear on seed systems development issues in selected countries. Examples of this action are platforms for regional seed trade information, variety catalogues and databases, and modeling for variety and seed demand forecasting. The aim would be to organize the information and make it readily and widely available quickly and cheaply for a variety of users in the seed systems.

10. Monitor donor and NGO seed supply or distribution programs *vis-à-vis* market mechanisms and sustainability

The action would involve monitoring any planned seed purchases for relief or subsidized seed systems interventions and providing information to seed systems stakeholders as well as developing best practice guidelines that can avoid market disruptions and dysfunction. Donor and NGO seed supply efforts should be monitored for their impacts, positive and negative. Lessons learned from a variety of programs should be used to determine what interventions support best practices. Donors, NGOs, and governments (often with donor financial resources) are the largest single segment of the commercial seed market in Africa, including both emergency seed purchase programs as well as sometimes recurring purchases for seed subsidy programs. If such purchases were managed in predictable ways that also moved the purchased seed into distribution mechanisms that created sustainable marketing channels and marketing demand by farmers, such purchases might not be problematic, but that is seldom the case. However, these purchases are managed in ways that quite often create even greater uncertainty and market variability than extreme weather events. The action would involve monitoring any planned seed purchases for relief or subsidized seed systems interventions and providing information to seed systems stakeholders as well as developing best practice guidelines that can avoid market disruptions and dysfunction.

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II. Justification for Categorical Exclusion Request

The items described justify Categorical Exclusions, pursuant to 22 CFR §216.2(c)(1) and (2), for which an Initial Environmental Examination, or an Environmental Assessment are not required because the actions do not have an effect on the natural or physical environment.

These Seed System Support interventions, as currently planned, fall into the following classes of action:

- (a) education, technical assistance and training (216.2(c)(2)(i));
- (b) controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored (216.2(c)(2)(ii));
- (b) analyses, studies, and workshops (216.2(c)(2)(iii));
- (c) document and information transfer (216.2(c)(2)(v)); and
- (d) activities that will develop the capability of recipient countries to engage in development planning (216.2(c)(2)(xiv)).

If during implementation, activities are considered under these action categories within the Seed Systems Support Activity that are outside the above framework, activities other than those described in the subject categorical exclusions, and that may directly affect the environment (such as construction or rehabilitation of facilities), an IEE or amended Request for a Categorical Exclusion shall be submitted, as appropriate.

Annex 2: Seed Systems Support Activity - Results Framework

An illustrative framework for the type of results that BFS is seeking to support:

Activity Purpose: Improved functioning of national seed sector in FtF countries based upon self-sustaining market-based seed systems and delivery channels.

Objective 1. Capacity of seed systems to sustainably offer quality affordable seeds increased.

IR1.1. Formal seed systems constraints removed or mitigated

IR1.2. Informal seed systems capacity to offer improved quality seed strengthened.

IR1.3. Pluralistic seed sectors accepted and valued in policy and regulation formulation and business planning.

Objective 2. Collaboration and coordination among all seed systems actions and actors increased

IR2.1. Formal and Informal seed systems collaboratively connected or interfaced.

IR2.2. Development and resilience or emergency seed sector actions harmonized.

IR2.3 Information flows for seed systems established.