Feed the Future Innovation Lab for Food Safety

Request for Applications

This Request for Applications (RFA) is issued by the Feed the Future Innovation Lab for Food Safety (FSIL). The FSIL is a five-year collaborative research program implemented by Purdue University (lead institution) and Cornell University. The program is funded by the United States Agency for International Development (USAID) under Cooperative Agreement Award No. 7200AA19LE00003.

Target Countries: Bangladesh, Cambodia, Senegal, Kenya

Anticipated Awards: The FSIL invites researchers to submit proposals for 3.5-year projects that support the Innovation Lab's mission and objectives. Each proposal may request up to $700,000 and must address a single FSIL target country. Four proposals are anticipated to be funded under this solicitation. All applications must be led by a U.S. academic institution and include at least one host-country partner.

Application Submission Process and Timeline

Activity	Date
Issue date	April 7, 2020
Deadline for submission of written questions to fsil@purdue.edu	April 14, 2020
Posting of responses to written questions on Piestar RFx	April 24, 2020
Deadline for submission of concept notes	May 7, 2020
Invitations sent for full proposals	June 2020
Deadline for submission of full proposals *(to be confirmed with invited applicants)*	July 2020
Anticipated award notifications	September 2020
Anticipated start date of awards	October 1, 2020

All concept notes and full proposals must be submitted to Piestar RFx (https://foodsafety.piestar-rfx.com) before **5:00pm EDT (GMT-4:00)** on the date indicated above. Written questions regarding this solicitation must be submitted to fsil@purdue.edu by 5:00pm EDT on the date indicated above.

Table of Contents

Acronyms

AoI	Area of Inquiry
AO	USAID Agreement Officer
AOR	USAID Agreement Officer's Representative
ADS	Automated Directives System
CFR	Code of Federal Regulations
CV	Curriculum Vitae
DUNS	Data Universal Numbering Systems
EDT	Eastern Daylight Time
F&A	Facilities and Administrative Costs
FSIL	Food Safety Innovation Lab
FTF	Feed the Future
GFSS	U.S. Government Global Food Security Strategy 2017-2021
GMT	Greenwich Mean Time
HICD	Human and Institutional Capacity Development
IDC	Indirect Cost
IL(s)	Innovation Lab(s)
MEL	Monitoring, Evaluation, and Learning
MSI	Minority-Serving Institution
NICRA	Negotiated Indirect Cost Rate Agreement
PI	Principal Investigator
RFA	Request for Applications
SAM	System for Award Management
SSA	Sub-Saharan Africa
UNICEF	United Nations Children's Fund
USD	U.S. Dollars
USG	U.S. Government
USAID	U.S. Agency for International Development
WHO	World Health Organization

1. Introduction

1.1. Program Description

Led by the U.S. Agency for International Development (USAID), Feed the Future[1] is the U.S. Government's initiative to end global hunger and poverty. More than 20 Feed the Future Innovation Labs pair experts from leading U.S. universities with research and educational institutions in developing nations to address grand challenges in agriculture and food security. Innovation Labs play a key role in USAID's implementation of the U.S. Government's Global Food Security Strategy (GFSS)[2] and Global Food Security Research Strategy[3].

In 2019, USAID awarded $10MM to Purdue University, in partnership with Cornell University, to lead the first-ever Feed the Future Innovation Lab for Food Safety (FSIL). The FSIL's vision is to enhance agricultural sustainability and resilience, as well as food security, for developing nations — with research and capacity development that increases the production of, and access to, safe and nutritious food. The FSIL aims to generate and facilitate dissemination of knowledge, practices, and technologies that improve and enhance food safety systems for communities, households, and commercial value chains. To achieve its goal and those of the GFSS, FSIL will utilize a competitive process to select and fund research and capacity building projects.

1.2. Alignment with the Global Food Security Strategy (GFSS)

Food safety intersects the three objectives of the GFSS (nutrition, resiliency, and economic growth), as it is necessary for food security. Therefore, there is a clear need to consider food safety challenges and opportunities when conducting and translating research designed within the strategy. The FSIL's research portfolio is framed by three Areas of Inquiry (AoI), which closely align with the GFSS.

- AoI 1 - Improved Nutrition and Human Outcomes: Research under this AoI focuses on the consumption of safe and affordable food as a means of reducing undernutrition. The AoI emphasizes that nutritious foods can still result in illness or disease in the event they are unsafe.

- AoI 2 - Reduce and Mitigate Risk for Enhanced Resilience: Research under this AoI focuses on food safety behavior, practices, and awareness that are closely tied to a population's resilience. One of the overarching aims of resiliency is to reduce costs of recurrent crises, which are exemplified in endemic diarrheal diseases caused by contaminated food and water.

- AoI 3 - Advancing the Productivity Frontier through Economic Development: Research under this AoI focuses on developing opportunities for foods and commodities to reach higher value markets. Advanced food safety regulation and monitoring systems will need to be developed to ensure these products meet international food safety standards that enable products to enter global trade.

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[1] https://www.feedthefuture.gov/about/
[2] https://www.usaid.gov/what-we-do/agriculture-and-food-security/us-government-global-food-security-strategy
[3] https://www.usaid.gov/documents/1867/us-governments-global-food-security-research-strategy

2. Funding Strategy

2.1. Overview and Objectives

The vision for the FSIL research portfolio builds on the recent Global Food Safety Partnership metanalysis of $340MM in food safety development investments representing over 500 projects and 30 donors in Africa. The assessment concluded that investment is fragmented, but has focused on national control, export to high value markets, and chemical hazards such as aflatoxins and pesticide residues. While these investments are foundational to reducing the global burden of foodborne disease, the World Health Organization (WHO) states that the majority of foodborne illnesses are caused by bacterial infections. Further, the vast majority of consumers source foods in informal markets. Therefore, to improve food safety in larger populations, community level development is critical. Most nutritious, short shelf life foods (e.g. produce) are inherently more likely to support the growth and/or transmission of foodborne pathogens. While contamination of foods is in most cases unintentional, it can be prevented through the development and implementation of sustainable food safety management systems. Such systems must ensure food safety along the entire food continuum and are successful when enabling conditions including but not limited to regulatory policy, enforcement, food safety education pipelines, and private sector buy-in are present. Most developing economies lack viable food safety systems[4] largely due to inexistent or under-developed research capabilities; food safety systems thrive when scientific research partnerships, including those with the private sector, provide evidence-based support for continuous improvement.

Consequently, to build resilient food safety systems globally, valuable partnerships should be leveraged to meet the following <u>FSIL objectives</u>:
- Increase stakeholder awareness of food safety issues, impacts, and ability to measure or reduce food safety risks;
- Enable host-country researchers to conduct priority food safety research informed by stakeholders at all levels (i.e. household to value added industry);
- Develop policy and engagement structures to support translation, dissemination, and implementation of food safety research;
- Enhance host-country capacity to translate food safety research into training, guidelines, and commercialized products.

2.2. Rationale for Country-Based Research Priorities

This RFA targets a select group of countries (Bangladesh, Cambodia, Senegal, and Kenya) in order to minimize overhead while maintaining a global focus. In each target country, key research priorities have been identified by the FSIL management entity using early findings of the initial research investments (QuickStarts) as well as collaborative discussions with USAID, host-country government agencies, host-country academic institutions, and international food safety projects funded by the USG and other donors. Specifying country-based priorities allows the FSIL to create a strategic research portfolio. While activities should be proposed in a specific country, successful

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[4] Jaffee et al. 2018; http://documents.worldbank.org/curated/en/484371545400065950/The-Safe-Food-Imperative-Accelerating-Progress-in-Low-and-Middle-Income-Countries

applicants will articulate a vision for how research outputs can be utilized or scaled to achieve regional and global impact.

2.3. Country-Based Research Priorities

2.3.1. Bangladesh Technical Strategy

Background and Problem Statement: There have been significant recent investments in Bangladesh's food regulation structure that spans eighteen ministries. Collectively, these ministries provide food safety oversight from primary production to the consumer. Ministry engagement is sector-specific and based on the source, degree of processing, and consumer of a food. The goal of the Bangladesh Food Safety Authority is a unified food safety system with clear regulatory roles and jurisdiction. However, there is evidence of inconsistent and/or unclear policies (e.g. differences in the food safety requirements among ministries, overlapping jurisdiction) making compliance by the food industry challenging. Further, infrastructure for regulatory microbiological food testing exists, but the capacities of personnel to properly conduct microbiological testing of foods and the inspectors that collect the samples in the field need to be built.

Hypothesis: Strategies to improve government capacity to implement food safety systems coupled with direct private sector engagement will ultimately lead to improved food safety.

Illustrative examples of research for development include, but are not limited to:
- Develop effective strategies to bridge government ministries and create a unified set of food safety regulations with common implementation requirements, using a defined sector of the food industry as an initial case study;
- Conduct inspection and enforcement training and develop good laboratory practices for bacterial pathogen handling in regulatory laboratory environments;
- Design practical, sustainable microbiological training of government laboratory support specialists for the analyses of foodborne pathogens;
- Develop or strengthen university partnerships to improve microbiology and food safety education pipelines;
- Evaluate gendered health and economic effects of improved implementation of food safety regulations along value chains;
- Support host-country government and private sector co-development of small retail food establishment training programs and implementation of scaled good manufacturing practices.

2.3.2. Cambodia Technical Strategy

Background and Problem Statement: Cambodia reported 135 foodborne disease outbreaks resulting in 5,825 cases and 81 deaths from 2014-2019[5]. These outbreaks include numerous chemical hazard-based outbreaks ranging from methanol poisoning to pesticide-contaminated water. Though chemical hazards are a significant concern, detection of microbial hazards has been limited. While Cambodia has significantly improved its health security capacities, efforts have

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[5] Mekong Institute; https://www.mekonginstitute.org/

focused largely on reportable infectious diseases (e.g. HIV). UNICEF has calculated 6-16% of deaths in children under the age of five are due to diarrhea[6], and as is the case in most developing economies, the etiological agents for acute diarrheal diseases are undefined. Little is concretely known about how foodborne disease contributes to malnutrition and associated effects such as stunting in Cambodia. There are significant gaps in foodborne pathogen and illness surveillance and attribution as well as opportunities to improve awareness at the consumer level and throughout the value chain. Substantial motivation among ministries, universities, and other research centers to improve food safety exists and can be leveraged to build a resilient food safety system.

Hypothesis: Integrating foodborne pathogen research into existing government and university research infrastructures coupled with improved outreach will accelerate food safety progress.

Illustrative examples of research for development include, but are not limited to:
- Determine foodborne pathogen prevalence in nutritious, high value commodities and ready-to-eat foods in informal markets coupled with practical, scalable intervention strategies;
- Strengthen existing university partnerships to improve microbiology and food safety education pipelines through collaborative foodborne pathogen research;
- Investigate foodborne pathogen transmission from primary production to consumer in nutritious, high value commodities with limited shelf lives (e.g. vegetables, meat);
- Conduct collaborative foodborne disease attribution studies with Cambodian Ministries' established working groups with food safety responsibilities (e.g. Food Disease Outbreak and Investigation Response Team, Food Safety Technical Working Group, National Food Safety Task Force);
- Analyze how gendered roles across food systems affect implementation of food safety regulations.

2.3.3. Senegal Technical Strategy

Background and Problem Statement: According to estimates from the WHO, Africa faces the highest burden of foodborne illnesses per capita, with an estimated 137,000 deaths and 91 million acute illnesses per year. The WHO estimates that 70% of the disease burden is caused by bacteria (e.g. *Salmonella*, *E. coli*); parasites and chemical hazards (e.g. aflatoxins, pesticide residues) are also significant causative agents. There have been substantial investments investigating aflatoxin contamination of staple commodities in Senegal and sub-Saharan Africa (SSA). However, there is limited academic evidence delineating causative agents of bacterial foodborne diseases in Senegal, including among nutritious, high value commodities and foods (e.g. fish, dairy, rice, maize, millet, groundnuts). There is equally limited evidence on effective interventions to reduce disease risk. However, there is distinct interest from government agencies (e.g. Senegal's Malnutrition Unit [CLM], Ministry of Agriculture, Ministry of Commerce) to enhance food safety, particularly focused on reducing bacterial foodborne pathogen risks. Private sector adoption of food safety practices influences market access, but degrees of motivation and implementation are widely unknown.

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[6] UNICEF diarrhoeal disease data: https://data.unicef.org/topic/child-health/diarrhoeal-disease/

Hypothesis: Public-private partnerships focused on improved food safety will simultaneously reduce foodborne disease risks and increase access to higher value markets.

Illustrative examples of research for development include, but are not limited to:
- Support private-public partnership co-development of training programs and implementation of scaled good manufacturing practices for nutritious, high value, short shelf life foods (e.g. fish, dairy);
- Explore the interface of cost-benefit analyses of practical food safety interventions coupled with increased consumer awareness to influence private sector willingness to invest in improved food safety;
- Develop strategies to bridge government ministries and create a unified set of food safety regulations with common implementation requirements, using a defined sector of the food industry as an initial case study;
- Design applied, sustainable microbiological training of government and private sector laboratory support specialists in concert with host-country university partners to create a pipeline of food safety expertise;
- Design and evaluate training strategies or interventions that effectively address the well-documented gendered roles in the food industry.

2.3.4. Kenya Technical Strategy

Background and Problem Statement: Kenya is among the fastest growing economies in SSA, but it is still sensitive to internal and external economic shocks and weak private sector investment[7]. The agriculture sector directly employs 40% of Kenya's population; it directly contributes 26% to the GDP and equally as much through connections to other sectors[8]. Despite being among the most productive agriculture sectors in SSA, food security is one of four major development goals for Kenya as malnutrition remains prevalent. Food processing is a well-recognized bridge between economic development and improved nutritional outcomes, but its impact on food safety is often overlooked. As Kenya is the seventh most populated country in Africa, it bears a considerable proportion of the continent's foodborne illness cases, and 6-12% of deaths in children under the age of five are attributed to diarrheal diseases[9], partially attributed to contaminated foods. Building food safety capacity in the private sector, especially among local food processors, will complement ongoing efforts to improve food security and nutrition.

Hypothesis: Improved food safety in the local and regional food processing industries will simultaneously reduce foodborne disease risks and enhance nutrition and economic outcomes.

Illustrative examples of research for development include, but are not limited to:
- Support private-public partnership co-development of training programs and implementation of scaled good manufacturing practices for nutritious, high-value, processed foods (e.g. dairy, horticultural products);

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[7] World Bank; https://www.worldbank.org/en/country/kenya/overview
[8] FAO; http://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/
[9] UNICEF diarrhoeal disease data: https://data.unicef.org/topic/child-health/diarrhoeal-disease/

- Leverage university partnerships to determine foodborne pathogen prevalence in nutritious, locally processed foods and to develop practical, scalable intervention strategies;
- Design applied, sustainable microbiological training of private sector laboratory support specialists in concert with host-country university partners to create a pipeline of food safety expertise;
- Design and evaluate training strategies or interventions that effectively address the well-documented gendered roles in food processing;
- Explore the interface of cost-benefit analyses of practical food safety interventions coupled with increased consumer awareness to influence private sector willingness to invest in improved food safety.

3. Eligibility

All applications must be led by a U.S. academic institution and include at least one host-country partner. The lead U.S. academic institution should be prepared to serve as the primary contracting institution, subcontracting with other institutions as necessary. Applicants are encouraged to demonstrate past performance or history of collaboration among the proposed partners as well as to define clear roles and responsibilities for each partner.

The FSIL strongly encourages applications to include qualified Minority-Serving Institutions (MSIs) including, but not limited to, Historically Black Colleges and Universities, Predominantly Black Institutions, Hispanic-Serving Institutions, Tribal Colleges and Universities, and Asian American Native Alaskan and Pacific Islander Serving Institutions.

Applications must be from an institution that has a Data Universal Numbering Systems (DUNS) number and is registered in the System for Award Management (SAM)[10]. DUNS and SAM registration are only required to be provided in invited full proposal submissions.

The applicant is responsible for ensuring that no individual or organization proposed as part of the activity are excluded from U.S. Government assistance and acquisition awards. If selected, the applicant will be required to provide a letter of assurance confirming eligibility.

4. Project Design and Approach

In addition to addressing the priorities of the FSIL, Feed the Future, and USAID as described above, all projects should be designed with consideration of the following guidance.

4.1. Cross-Cutting Themes

The FSIL's cross-cutting themes are directly aligned with priorities specified in the GFSS. All proposals must clearly describe how the project will address cross-cutting themes of gender equity, youth engagement, human and institutional capacity development, and food safety enabling environments.

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[10] Check SAM status or register at https://www.sam.gov/SAM

4.1.1. Gender and Youth

All activities funded by the FSIL should be gender-sensitive and inclusive of youth. Requirements related to gender integration are described below. While a distinct youth strategy is not required, applicants should describe approaches that elevate youth engagement in their research strategy and/or capacity development plan. Applicants are encouraged to review USAID's 2012 Gender and Female Empowerment Policy[11] and 2012 Youth in Development Policy[12] as they incorporate this cross-cutting theme.

Gender Analysis in Research and Application Course
The principal investigator (PI) must complete the LASER PULSE Gender Analysis in Research and Application course[13] prior to concept note submission. The course contains relevant, introductory guidance that aligns with RFA requirements and ensures that FSIL PIs are familiar with applying gender considerations in research and in practice. After successful completion of the course, the PI should download the PDF certificate and include it in the concept note submission package.

Gender Strategy
In addition to integrating this cross-cutting theme throughout project design and implementation, all full proposals must contain a two-page gender strategy that includes the following:
  1. Gender advisor(s) that are identified as members of the proposed project team. All applications are required to include a qualified host-country gender advisor or U.S.-based gender advisor that is integrated into the research team. Applicants may elect to include both in order to strengthen implementation of the gender strategy. The gender advisors will be part of the FSIL's Gender Community of Practice, which will meet virtually on a semi-annual basis.
  2. Background of gender issues that are relevant to the proposed research and context.
  3. Questions that explore or address gender issues that are relevant to the research and context.
  4. Data collection and analysis that explores or describes cultural norms, identity, and relations of gender issues as related to the Background and Questions.
  5. Interventions that directly or indirectly enable the access, use and/or uptake of policies, practices or products that address the gender issues.
  6. Strategies to disseminate the research results and resources developed from the gender study to strengthen the interface between gender and food safety.

The FSIL's approach to gender integration across research activities was developed utilizing the Feed the Future Advancing Women's Empowerment's (AWE) report, "Gender Integration in USAID's Agricultural Research Investments: A Synthesis of Key Findings and Best Practices"[14]. Applicants are encouraged to leverage the findings of this report as they develop their gender strategies.

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[11] https://www.usaid.gov/policy/gender-equality
[12] https://www.usaid.gov/policy/youth
[13] https://stemedhub.org/courses/laser_pulse_gender_training_module
[14] https://www.agrilinks.org/gender-research

4.1.2. Human and Institutional Capacity Development

Human and institutional capacity development (HICD) activities at the individual and/or organizational level should be integrated into research plans with clear rationale. If HICD activities are proposed, the applicant should identify anticipated beneficiaries, how beneficiaries will be selected, and what types of capacity development approaches will be utilized. Examples of potential beneficiaries of HICD activities include universities, national agricultural research institutions, government agencies, students, and private sector actors.

Applicants are encouraged to strengthen and utilize host-country or regional food safety education pipelines for graduate student training whenever possible. Special permission is required if proposals include support of U.S. citizens or foreign nationals not from a Feed the Future target[15] or aligned[16] country, as they are not intended beneficiaries of the FSIL. Any non-U.S. citizen that is proposed for long-term training in the U.S. must utilize a USAID-sponsored J-1 visa with a two-year return residency requirement. For additional guidance, applicants should review ADS 252 - Visa Compliance for Exchange Visitors[17].

4.1.3. Food Safety Enabling Environments

The FSIL recognizes that solutions to agricultural challenges, including food safety, regularly result from robust and highly collaborative relationships among academia, government, and the private sector. University-government-private sector partnerships allow for alignment of priorities, resources, and incentives. Conditions such as infrastructure, technical capacity, education networks, policies, and regulatory frameworks must also be in place to enable collaborations, facilitate research and development, and spur innovation. Concerted efforts to address food safety challenges in many countries are relatively young. As such, the conditions that would foster university-government-private sector collaborations are often weak or non-existent. A core FSIL aim is to facilitate the development of research-based solutions that can be applied within local, regional, and global contexts.

4.2. Private Sector Engagement

The FSIL supports private sector engagement as a vehicle to promote sustainability of results and amplification of impact. Applicants are encouraged but not required to identify private sector partner(s) as appropriate. If private sector engagement is included in a proposal, the applicant is expected to clearly outline the roles of the public and private partner(s). For further guidance in this area, applicants are encouraged to read and apply USAID's Private Sector Engagement Policy[18].

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[15] https://www.feedthefuture.gov/about/
[16] "Aligned countries" are those in which the USG supports ongoing agricultural development programs but are not designated as Feed the Future focus countries. They can be identified by reviewing relevant USAID Mission strategies.
[17] https://www.usaid.gov/ads/policy/200/252
[18] https://www.usaid.gov/work-usaid/private-sector-engagement

4.3. Monitoring, Evaluation, and Learning

The FSIL views monitoring, evaluation, and learning (MEL) as a critical component of all management entity and subaward activities. Through monitoring, the FSIL systematically collects performance indicator data and other qualitative information to determine whether implementation is occurring as planned and whether anticipated results are being achieved. Through both evaluation and learning, the FSIL management entity ensures accountability to its original design and intended outcomes and facilitates learning in order to improve research for development outcomes.

Invited full proposals should include a brief MEL plan that incorporates key evaluation and learning questions as well as project-specific indicators. Per the FSIL's MEL plan, three indicators are required to track across all projects. Proposals must include these indicators in their project-specific MEL design:
- Number of publications and communications materials developed by international research and capacity building teams for internal and external stakeholders [FSIL custom indicator]
- Number of scientific lectures/seminars conducted at institutions in the target countries [FSIL custom indicator]
- Number of conference presentations given by subawardees and the Management Entity to disseminate knowledge [FSIL custom indicator]

The FSIL has identified additional Feed the Future and custom indicators as being particularly relevant to its goals and objectives. Applicants are encouraged to consider including any or all, as appropriate.
- Number of individuals who have received USG-supported degree-granting non-nutrition-related food security training [Feed the Future indicator EG.3.2-2]
- Number of individuals receiving nutrition-related professional training through USG-supported programs [Feed the Future indicator HL.9-4]
- Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance [Feed the Future indicator EG.3.2-24]
- Number of individuals participating in USG food security programs [Feed the Future indicator EG.3-2]
- Number of public-private partnerships formed as a result of USG assistance [FSIL custom indicator]

Proposals may include limited additional Feed the Future or custom indicators not specified above if required to track progress of the proposed activities toward intended results and outcomes. Applicants are strongly encouraged to review the Feed the Future Indicator Handbook[19] and to plan and budget appropriately for collection of indicator data (i.e. baseline and results).

5. Application Information and Process

The RFA process will consist of two stages: concept note and full proposal. Selected concept notes will be invited to submit full proposals.

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[19] https://www.agrilinks.org/post/feed-future-indicator-handbook

5.1.   Submission Instructions

All concept notes and invited full proposals must be submitted in Piestar RFx[20]. Late submissions will not be reviewed. Additions or modifications will not be accepted after 5:00pm EDT on the specified deadline. The FSIL is not responsible for late or incomplete submissions.

5.2.   Format

The application must be written in English and typed on standard 8 ½ x 11-inch paper with one-inch top, bottom, left, and right margins, in Times New Roman font no smaller than 12 point in single line spacing. Scanned PDF documents may be used for documents requiring signatures. All file names should include the PI's last name and institution (e.g. CN-Oliver-Purdue.pdf).

5.3.   Concept Note Submission Guidelines

Concept note submissions must consist of:
  ✓ Concept note (PDF)
  ✓ LASER PULSE Gender Analysis in Research and Application Course Certificate (PDF)

5.3.1.   Concept Note Submission Summary Table

Concept Note	
Section	**Description**
Title Page *(1 page maximum)*	▪ Project title ▪ Target country ▪ Value chains (specify all that apply): meat and animal products, fruits and vegetables, grains and legumes, and/or other ▪ PI (include name, title, institutional address, phone, fax, and email) ▪ List of collaborating institutions and organizations ▪ Duration of the project ▪ Total budget requested (USD) ▪ Contact information for authorized official from the lead institution
Technical Narrative *(3 page maximum)*	▪ Brief overview of technical approach, rationale for the approach, anticipated results and impacts, and incorporation of cross-cutting themes ▪ Geographic focus (zone(s) of influence within the country) ▪ Clear project goal and specific objectives
Timeline *(1 page maximum)*	Schedule or timeline of activities over the life of the project (3.5 years), delineated by the project's objectives. No required format at concept note stage.

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[20] https://foodsafety.piestar-rfx.com

PI Qualifications *(2 pages per CV; 4 page maximum)*	*Required template provided – "FSIL RFA CV-Biosketch Template".* ▪ Required: CV of PI (maximum of 2 pages) ▪ Optional: CV of lead host-country PI/collaborator (maximum of 2 pages)
Citations/References *(as needed)*	List of references used in the concept note
Preliminary Budget *(1 page maximum)*	*Required template provided – "FSIL RFA Preliminary Budget Template". Convert to PDF for inclusion in the concept note.* Summary budget of expenditures for the lead institution and all project partners. See Section 5.5 Budget Guidance.
Budget Justification *(1 page maximum)*	One-page justification of budget expenditures
Letters of Support *(1 page per letter)*	*Encouraged but not required with concept note.* Non-binding documentation of collaborators' intent, willingness, and ability to commit to conducting activities together if the proposal is selected for funding
Separate Document Upload	
LASER PULSE Gender Analysis in Research and Application Course Certificate	*Must be uploaded separately in Piestar RFx submission.* After successful completion of the course, the PI should navigate to the Progress section and select "Download your certificate". This PDF should be uploaded separately in Piestar RFx.

5.4.   Full Proposal Submission Guidelines

Full proposal submissions must consist of:
- ✓ Full proposal (PDF)
- ✓ Budget (Excel)
- ✓ Work plan (Excel)

5.4.1. Full Proposal Submission Summary Table

Full Proposal	
Section	**Description**
Title Page *(2 page maximum)*	▪ Project title ▪ Target country ▪ Value chains (specify all that apply): meat and animal products, fruits and vegetables, grains and legumes, and/or other ▪ PI (include name, title, institutional address, phone, and email) ▪ Co-PIs (include name, institution, and email for each) ▪ Duration of the project ▪ Total budget requested (USD) ▪ Total budget including cost share (USD) *if applicable*

	▪ Signature and contact information for authorized official from the lead institution
Table of Contents	As needed
Acronyms	As needed
1. Executive Summary *(1 page maximum)*	Summary of Technical Narrative
2. Technical Narrative	All specified components (2.1-2.7) should be included in the Technical Narrative.
2.1 Team Composition *(1 page maximum)*	List of team members and their institutions/organizations with clearly identified roles and responsibilities. Include technical and administrative staff.
2.2 Technical Approach *(4 page maximum)*	▪ Background and context, including the current status of research and gaps being addressed ▪ Geographic focus (zone(s) of influence within the country) ▪ Research methodology, including project goal and specific objectives ▪ Description of any planned collaboration with current food safety activities and organizations in the country
2.3 Rationale for the Approach *(1 page maximum)*	▪ Alignment with FSIL objectives and areas of inquiry ▪ Alignment with past or current food safety and security projects supported by the USG or other donors ▪ Description of U.S. co-benefits
2.4 Anticipated Results and Impacts *(1 page maximum)*	▪ Anticipated results, outputs, and impacts ▪ Description of how results and outputs will be positioned for scaling

2.5 Monitoring, Evaluation, and Learning Plan *(2 page maximum)*	▪ Provide a MEL plan for the project, which includes:
	  o Selection of project-specific indicators (see Section 4.3 Monitoring, Evaluation, and Learning)
	  o Key evaluation and learning questions to be utilized by the project

2.6 Gender Strategy *(2 page maximum)*	Include all gender strategy components specified in Section 4.1.1 Gender and Youth.
2.7 Human and Institutional Capacity Development Plan *(1 page maximum)*	▪ Description of capacity development activities, including anticipated beneficiaries and how they will be selected ▪ Specify approximate target numbers where appropriate
3. Environmental Mitigation and Monitoring Assessment *(as needed)*	*Required template provided at time of invitation.* Description of activities, mitigation measures, monitoring indicators and reporting for the following two activity classes: ▪ Food safety research on raw food materials that are contaminated with biological or chemical contaminants, scale-up of any size ▪ People-based surveys and clinical (medical) evaluations (i.e. human subjects research)

4. PI and Collaborator Qualifications *(2 pages per CV)*	*Required template provided.* CV for each PI/collaborator (maximum of 2 pages per CV; no limit)
5. Letters of Support *(1 page per letter)*	Non-binding documentation of collaborators' intent, willingness, and ability to commit to conducting activities together if the proposal is selected for funding. Applicants <u>must</u> provide a letter of support for all proposed collaborating institutions/organizations.
6. Citations/ References *(as needed)*	List of references used in the full proposal
7. Budget Justification *(as needed)*	Detailed budget justification that clearly explains all proposed costs
8. Entity Profile	*Required form provided at time of invitation.* Complete the Subrecipient Entity Profile for the lead U.S. institution only. Include additional documentation as indicated in the form.
Separate Document Uploads	
Budget *(Excel)*	*Required template provided at time of invitation.* See Section 5.5 Budget Guidance
Work Plan *(Excel)*	*Required template provided at time of invitation.* Outline objectives and activities for the life of the proposed project. State anticipated outputs/deliverables for each objective with as much specificity as possible. Examples include reports, policy papers, strategic relationships developed, and specific individual/groups trained.

5.5. Budget Guidance

At the concept note stage, a simple one-page budget and one-page budget justification is required. At the full proposal stage, a budget must be provided for each institution participating in the application in addition to the summary budget for the lead institution. The full proposal budget must also be accompanied by a detailed budget justification that provides information regarding the basis of estimate for each line item, including reference to sources used to substantiate the cost estimate (e.g. organizational policy).

Subawards funded under this solicitation will be required to comply with USAID's Standard Provisions for U.S. Nongovernmental Organizations (https://www.usaid.gov/ads/policy/300/303maa). The following guidance outlined below by Purdue University should be utilized to further guide budget development, and the provided templates must be utilized. The full proposal budget template will be provided to invited full proposal applicants only.

Applicants may request up to $200k/year for years 1-3 and up to $100k for year 4 (six-month period), for a total of up to $700k.

Personnel:
- Include position titles, names of individuals for each position proposed (if known), and number of units (days, months, or Full-time Equivalent (FTEs)) for each position. Salary increases adjusted to inflation are allowed.
- The level of effort should be consistent with the technical narrative.

Fringe Benefits:
- Fringe benefits must be shown as a percentage of salaries. Indicate the individuals to whom the fringe benefit rates apply and the total fringe benefit costs for each individual.
- Unless the Negotiated Indirect Cost Rate Agreement (NICRA) specifies the fringe benefit rates, the proposed rates must be supported by a link/reference to the relevant institutional policy or a detailed breakdown comprised of all items of fringe benefits (i.e. unemployment insurance, retirement, workers' compensation, health and life insurance, etc.) and the costs of each.

Travel:
Estimated travel and transportation costs must be in accordance with the USAID standard provisions entitled "Fly America Act", "Travel and International Air Transportation" and "Ocean Shipment of Goods."
- 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 must be used as the test of reasonableness if the applicant does not have established policies and practices), and must specify, for each trip, the traveler(s), the location(s), the number of days in each location, the daily rate for each location, and the total lodging and subsistence costs.
- Include the cost of travel annually for the PI and lead host-country PI/collaborator (at minimum) to the FSIL Team Meeting (2 days) to be held at a U.S. university. The meeting location of West Lafayette, IN can be used for budgeting purposes.

Materials and Supplies:
- The FSIL will not allow procurement of agricultural commodities, motor vehicles, pharmaceuticals, pesticides, used equipment, U.S. Government-owned excess property, or fertilizer.
- Construction is not eligible for reimbursement under any subaward. Construction is defined as "construction, alteration, or repair (including dredging and excavation) of buildings, structures, or other real property and includes, without limitation, improvements, renovation, alteration and refurbishment".

Contractual:
If any part of the work will be performed by subrecipients or contractors, include a lump-sum for each subaward or contract. In the full proposal budget, a detailed line item budget breakdown for each subaward/contract must be provided in the same format as described (one Excel tab per subaward). For subawards, note the following guidance regarding application of indirect costs (IDCs):
- **With IDC**: The portion of the subaward amount for which indirect cost is charged (first $25,000 of each subaward).
- **Without IDC**: The portion of the subaward for which there is no indirect cost (amount exceeding the first $25,000 of each subaward).

Equipment:

Equipment is defined as tangible, non-expendable property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit. Motor vehicles and used equipment are not allowed. All goods and services must meet the source, origin, and nationality requirements set forth in 22 CFR Part 228 for the authorized geographic code 937. A detailed budget breakdown for purchases of nonexpendable equipment and other capital expenditures must include the types and quantities of equipment to be purchased, the unit prices, and the total costs.

Other Direct Costs:

Other direct costs include costs such as communications and postage, MEL data collection, publication costs, or expendable supplies and materials that do not fall into the categories above.

Facilities and Administrative Costs (F&A):

At the time of full proposal, the applicant must submit a NICRA with the Entity Profile if the organization has such an agreement with an agency or department of the U.S. Government. If no NICRA has been previously determined, the applicant should only include a de minimis rate of 10%.

Cost Share:

Cost sharing is not required but is encouraged as it demonstrates leverage, amplifies resources, and shows commitment by proposed partners. Cost sharing or "matching" represents the 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 22 CFR 226.23 and the USAID standard provisions, which requires that cost sharing be verified from the recipient records. Within the full proposal budget justification, please provide additional details outlining the cost share expectations of the lead institution and any partner institution(s) (if applicable) with details, including dollar amounts and descriptions. Cost sharing will not be considered in review of concept notes.

6. Review and Selection

6.1. Review Criteria

All concept notes and full proposals submitted in response to this RFA will be evaluated according to the following criteria:

Criteria	Weight (%)
Technical merit / scientific quality (e.g. project design, methodologies)	20
Alignment with FSIL research priorities	15
Anticipated outputs and potential impact for adoption and scaling	15
Integration of cross-cutting themes	20
Feasibility, institutional qualifications, and overall effectiveness	30

6.2. Concept Note Evaluation

The FSIL management entity will conduct an initial review of concept notes to ensure they are complete and compliant with the submission instructions. Concept notes deemed acceptable will then be reviewed and scored according to the criteria above. The concept note review panel will be comprised of the FSIL's Director and Associate Director, Advisory Committee, Technical

Experts, and USAID AOR. The USAID Agreement Officer's Representative (AOR) may circulate concept notes within USAID for comment.

6.3. Full Proposal Evaluation

The FSIL management entity will conduct an initial review of full proposals to ensure they are complete and compliant with the submission instructions. Full proposals deemed acceptable will be reviewed and scored according to the criteria above. The full proposal review panel will be comprised of the FSIL's Director and Associate Director, Advisory Committee, Technical Experts, and USAID AOR. External technical reviewers with relevant expertise will also be utilized. The USAID AOR may circulate full proposals within USAID for comment.

6.4. Selection Process

When selecting concept notes for advancement and full proposals for award, the FSIL management entity reserves the right to balance review panel scores with FSIL research portfolio needs. Final decisions will be made in consultation with the USAID AOR and with final approval from the USAID Agreement Officer (AO).

The FSIL management entity may request modifications to selected full proposals in alignment with FSIL portfolio needs and/or feedback from relevant USAID Missions. These requests will be discussed collaboratively with the applicant, though refusal of modification requests may result in rejection of the application.

7. Project Implementation

7.1. Expectations of Subawardees

The FSIL management entity advises that all applicants be aware of additional expectations for subawardees post-selection and throughout the life of the project. Applicants are strongly encouraged to consider these administrative and programmatic requirements in addition to technical activities when designing and finalizing the budget and work plan. These activities will include, but are not limited to:
- Upon selection, the PI will be responsible for collaborating with the FSIL management entity to create a brief project summary to be used in web and print materials.
- Upon selection, the FSIL management entity will schedule an on-campus visit with the PI and other institutional faculty/staff that will be engaged in project implementation. The purpose of this visit is to accelerate administrative start-up, review policy requirements, and discuss implementation of the technical scope of work. The applicant will aid in coordination but will not be responsible for the costs associated with this visit.
- Monthly, the PI and other key collaborators will attend virtual meetings with the FSIL management team to discuss project updates and concerns.
- No less than annually, the PI and/or Co-PIs will be responsible for collaborating with the FSIL management entity to create communication materials intended for a lay audience.

7.2.   Reporting and Funding

The PIs of all funded projects will be responsible for submitting semi-annual technical and performance reports in Piestar DPx and providing other management plans as requested. Assuming performance is satisfactory, annual funding allocations will be aligned with the budget developed at the time of award and initiation of the project. However, as the FSIL is itself subject to annual budgetary approval, changes in research funding may be required in the event that the core budget from USAID decreases below anticipated levels. Such changes will be negotiated with each PI and major budget reallocations will be subject to approval of the FSIL Director and USAID AOR.

7.3.   Open Data Requirements

All applicants should be aware of the requirement to comply with ADS 579 - USAID Development Data[21], which outlines the open sharing of all machine-readable datasets created or collected with USAID funding. Funded projects will be required to develop and execute a plan to collect, clean, and submit datasets using a template and guidance provided by the FSIL management entity.

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[21] https://www.usaid.gov/ads/policy/500/579