



# FEED THE FUTURE FEEDBACK PROJECT

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## ACRONYMS

BFS	Bureau for Food Security
DHS	Demographic and Health Survey
FTF	Feed the Future
FTFMS	Feed the Future Monitoring System
IFPRI	International Food Policy Research Institute
IP	Implementing partner
LSMS	Living Standards Measurement Survey
M&E	Monitoring and evaluation
NLSS	Nepal Living Standards Survey
ODK	Open Data Kit
PBS	Population-based survey
PMP	Performance Management Plan
UNC	University of North Carolina
USAID	United States Agency for International Development
USG	United States Government
ZOI	Zone of influence



# 1 INTRODUCTION

Feed the Future, the President's global hunger and food security initiative, seeks to sustainably reduce poverty, the root cause of hunger, raise the incomes of the rural poor, and reduce the number of children suffering from under-nutrition. The U.S. Agency for International Development (USAID) Bureau for Food Security (BFS) is responsible for leading the Government-wide effort to implement the Feed the Future initiative. The core investment areas of the initiative are women's empowerment, diet quality and diversification, post-harvest infrastructure, high-quality inputs, and financial services. The high-level target of the initiative is to reduce poverty by 20 percent and prevent stunting among children under age five by 20 percent in regions targeted by Feed the Future focus countries.

In May 2012, BFS awarded the five-year Feed the Future FEEDBACK (FTF FEEDBACK) contract to provide performance monitoring, impact evaluation, and knowledge management support to the initiative. The main objectives of the FTF FEEDBACK project are to (1) enable USAID Missions to meet Feed the Future performance monitoring requirements and maximize the use and benefits of the data collected; (2) provide high-quality empirical evidence to inform program design and investment decisions that will promote sustainable food security; (3) ensure timely availability of high-quality data for use in monitoring performance and evaluating impacts of the Feed the Future initiative; and (4) facilitate accountability and learning about what Feed the Future interventions work best, under what conditions, and at what cost.

FTF FEEDBACK is implemented by Westat in partnership with the International Food Policy Research Institute (IFPRI), the University of North Carolina's Carolina Population Center (UNC), and TANGO International.

This report summarizes the activities and accomplishments of the second year of the FTF FEEDBACK contract. In order to align the contract with the government fiscal year, the first year of the contract was truncated to the four-month period of May 7, 2012 to September 30, 2012. Year 2 designates the period from October 1, 2012 to September 30, 2013. Thus, while being termed "Year 2," this period reflects many project and contract start up activities as well as the launch of project technical activities.

FTF FEEDBACK organizes its work under five components: (1) performance monitoring; (2) impact evaluation; (3) knowledge management (which includes capacity building support for all project activities); (4) project administration; and (5) data management. The last two components (project administration and data management) direct and support the three components that work to achieve FTF FEEDBACK's technical objectives. This report focuses on the three technical components: performance monitoring, impact evaluation, and knowledge management/capacity building. These components are addressed in the sections that follow. FTF FEEDBACK progress in achieving the targets established for all five components in its Performance Management Plan are provided in Annex A.

## 2 PERFORMANCE MONITORING

The performance monitoring component provides three general functions for the Feed the Future initiative. First, it provides periodic monitoring of standard indicators to assess program performance and track the trajectory of change in these indicators. Second, it provides technical assistance and training on Feed the Future indicators and on entry of data into the Feed the Future Monitoring System (FTFMS), a system that manages all of the Feed the Future monitoring data. Third, it provides analytic support that addresses results, trends, and impacts of the initiative. Activities in these areas are summarized in the subsections that follow.

### 2.1 Periodic Monitoring of Standard Indicators

Feed the Future supports activities in more than 30 countries, with intensive support provided in 19 focus countries. Among other things, Feed the Future is collecting, analyzing, and reporting baseline, mid-term and final values for the following indicators in these focus countries:

- Prevalence of poverty: percent of people living on less than \$1.25/day;
- Per capita expenditures of USG targeted beneficiaries;
- Prevalence of underweight children under five years of age;
- Prevalence of stunted children under five years of age;
- Prevalence of wasted children under five years of age;
- Prevalence of underweight women;
- Women's Empowerment in Agriculture Index;
- Prevalence of households with moderate or severe hunger;
- Prevalence of children 6-23 months receiving a minimum acceptable diet;
- Women's dietary diversity: mean number of food groups consumed by women of reproductive age; and
- Prevalence of exclusive breastfeeding of children under six months of age.

These data have to be captured through household surveys in the areas in which Feed the Future is operational, known as the zones of influence (ZOI). Data for some of these population-based indicators already have been collected on other surveys such as a Demographic and Health Survey (DHS) or Living Standards Measurement Survey (LSMS). Where data had not been collected recently, or where the sample size was not large enough in the ZOI, the data had to be collected by FTF FEEDBACK through a large-scale population-based survey (PBS).

Prior to the award of the FTF FEEDBACK country, USAID Missions in many of these countries had already awarded contracts to conduct the baseline surveys. FTF FEEDBACK was given responsibility for the surveys in the remaining nine countries: in Africa - Kenya, Malawi, Mozambique, Rwanda, Senegal, Uganda, and Zambia; and in Asia – Nepal and Tajikistan.

The most pressing task on award of the FTF FEEDBACK contract was to conduct these surveys so that values for the indicators could be entered in the FTFMS by January 31, 2013, for what was termed a hard deadline, which was 8 months after contract signature. Portfolio reviews were scheduled to begin on

February 1 at the Mission level, and therefore an additional reason for the finalization of indicator data in FTFMS. The second project year (FY 2013), which, as explained in Section 1, started on October 1, 2012 (nearly five months after contract signing), was heavily focused on the PBSs. The process for developing and fielding the surveys included:

1. Calculating sample sizes to be able to capture change on specific indicators.
2. Ascertaining whether secondary data could be used for any of the indicators (i.e., the data were collected recently enough and there was an adequate sample in the ZOI).
3. Calculating values from any secondary data.
4. Planning and coordinating the survey with the USAID Mission. In several instances, Missions requested that additional questions be asked or additional geographic areas be covered.
5. Developing a survey protocol that specified the regions/districts of the country where the survey was to take place, outlined standard enumeration areas, and discussed the specific field team assignments.
6. Obtaining Ethics Committee and/or Institution Review Board (IRB) review and approval of the survey.
7. Soliciting, selecting, negotiating, and contracting an in-country partner to collect the data.
8. Tailoring questionnaires to address the indicators required in each country, and customizing the questionnaire to reflect country environment.
9. Determining whether paper-based or electronic data collection was preferable. Once that decision was made in favor of electronic data collection, selecting the hardware (Android tablets) and software (Open Data Kit – ODK).
10. Creating data entry programs for each of the country-specific questionnaires and, in some countries, getting them translated.
11. Developing enumerator manuals to be used in training enumerators. The enumerator manuals had to reflect the data entry procedures that were customized to each country's survey, and include detailed instructions for each part of the survey questionnaire.
12. Developing supervisor manuals to be used in training supervisors. These had to reflect procedures for assigning and tracking work and managing and uploading data from the tablets.
13. Developing training materials on human subject protections to be incorporated in survey training.
14. Developing data transfer procedures to support transfer of data from the field to central FTF FEEDBACK servers.
15. Procuring 1,200 tablets and configuring them for use for each of the in-country surveys.
16. Packing and shipping tablets in quick sequence between countries so the slightly staggered surveys could be completed on time.
17. Piloting the survey and making quick revisions to the questionnaire, data entry program, and procedures as needed based on pilot findings.
18. Training the survey partner's trainers or field teams.
19. Overseeing the conduct of the survey and troubleshooting issues with the survey organization's management as they arose.
20. Uploading and cleaning data.

21. Analyzing data for the Feed the Future indicators and for other indicators requested by BFS or the USAID Mission.
22. Entering the indicator values in FTFMS.
23. Preparing several drafts of each PBS country report.
24. Reporting PBS findings to BFS and the USAID Mission via webinars (as assigned).
25. Assisting BFS and Mission staff with preparation of datasets and reports for submission to host government officials.
26. Preparing public use datasets in multiple formats and a codebook for posting on USAID.gov.

Over the course of Year 2, the tasks related to survey protocol readiness were undertaken in 9 countries and in multiple languages/dialects. Data were collected from more than 18,000 households. By year end, these tasks were largely complete with two exceptions. The first exception is Senegal, where some of the survey data were deleted due to human error and/or were transmitted contrary to written procedures. Extensive efforts were made to recover data from the tablets used in Senegal, and then to match and clean the data. The Senegal data have not yet been analyzed. The second exception is Mozambique, where delays in receipt of the tablets and ethics committee approval, floods, cholera in the ZOI, and the addition of new geographic areas to the survey have prolonged the survey so that data collection is not expected to be completed until December 2013.

Annex B provides summaries of the field activities and data collected on these seven surveys. A report of the Feed the Future baseline findings for each country will be posted on Agrilinks. Datasets from these surveys will be posted on USAID.gov after the host country governments have reviewed the country reports and approve release of the data.

## **2.2 Technical Assistance and Capacity Building on Performance Monitoring**

In general terms, the activities related to technical assistance and capacity-building on performance monitoring were to help USAID Missions and implementing partners (IP) use the Feed the Future indicators and build capacity of host country organizations to collect high quality data. In addition, this subset of activities was to help USAID Missions and IPs enter data into the FTFMS and help BFS improve the functioning and availability of data in FTFMS. In Year 2, this has entailed a variety of activities as described below.

### **2.2.1 Agriculture Indicators Guide**

Many Feed the Future interventions work in the agriculture sector and need to report against a number of agriculture indicators. BFS determined that many IPs would benefit from a better understanding of the indicators and how to calculate accurate values for them. Accordingly, a part of the scope for FTF FEEDBACK was to develop an Agriculture Indicators Guide. FTF FEEDBACK provided a specialist who held one-on-one consultations and a series of webinars with IPs and other key informants. The consultations and webinars provided a field-level perspective of the difficulties IPs face in meeting reporting requirements and providing meaningful data for the FTFMS. They also served to identify issues and challenges to be addressed in the Agriculture Indicators Guide and provided practical examples of

approaches (e.g., survey instruments, beneficiary tracking systems) being implemented. Consultations occurred during April – May 2013 and webinars were held May 29-31 and August 12-13, 2013.

The Agriculture Indicators Guide, co-authored with a senior BFS monitoring and evaluation (M&E) specialist, was submitted to USAID in September. A summary of the Agricultural Indicators Guide's contents is provided in Annex C. The Agriculture Indicators Guide was presented to IPs and other interested parties via three webinars in late September 2013, with an audience of 186 from around the world. Participants were given cases on which they could practice the skills and tools described in the Agricultural Indicators Guide. The Agricultural Indicators Guide and the taped webinars and practice cases are available on Agrilinks.

### **2.2.2 Building Survey Capacity**

Data collection for the baseline population-based surveys was performed by locally-contracted governmental or non-governmental survey organizations. These survey organizations were trained and managed by FTF FEEDBACK.

FTF FEEDBACK was responsible for developing the training manuals and for overseeing training of the local survey organizations' field supervisors and enumerators. A total of 1,044 individuals received training in the use of electronic tablets to collect and transmit data, interviewing techniques, anthropometric measurement techniques, household listing procedures, and human research subjects protection by FTF FEEDBACK for the baseline PBSs. FTF FEEDBACK reports the outcome of this training as one of its own performance monitoring indicators. Specifically, the project is to report "ease in applying skills learned during enumerator/supervisor training." Trainees from four countries responded to questionnaires about ease of use of skills. (The questionnaire is provided in Annex D.) A very high percentage - 98.4% --of respondents reported little or no difficulty in applying the specified skills during their work on the PBSs.

After the PBSs were completed, FTF FEEDBACK administered an After Action Survey to selected FTF FEEDBACK, USAID Mission, and host country organization staff to collect information on the conduct of the PBSs. The survey contained a question about where FTF FEEDBACK might strengthen capacity around areas such as sampling design, use of tablets, etc. Respondents indicated a desire for more training related to use of tablets and survey software.

### **2.2.3 Regional Training**

Capacity building for performance monitoring focuses on selection, monitoring, and interpretation of performance monitoring indicators. FTF FEEDBACK supported BFS in providing training in performance monitoring in the Fall of 2012. Specifically, team members participated in conversations between the USAID Missions and BFS on issues with measuring and reporting on FTF indicators. The conversations highlighted some common weaknesses and specific measurement issues that confront Missions and IPs, and provided content for discussion of indicator use during the regional workshops. In response to these identified needs, FTF FEEDBACK provided content for presentations on mixed methods, theory of change and constructing development hypotheses. The FTF FEEDBACK team assisted with organizing IPs to present poster sessions on new or innovative practices in all five regional workshops. At the training, team members also made presentations and facilitated question and answer sessions and panel discussions on capacity building, mixed methods, impact evaluations, and lessons learned at regional workshops in Africa, Asia, and Latin America and the Caribbean.

## 2.2.4 FTFMS User Support

FTF FEEDBACK information technology and data specialists review and provide feedback on guidance drafted by BFS on how to enter data into the FTFMS and related topics. FTF FEEDBACK provides a help desk function, answering hundreds of emails monthly on use of the FTFMS for users from around the world. Finally, the project helps BFS orient and update users of the FTFMS each Fall prior to the time period when data must be entered into the FTFMS. In Year 2, this entailed providing logistical support for a webinar.

## 2.3 Support for Reporting

FTF FEEDBACK supports reporting of Feed the Future findings in a variety of ways, from analyzing and drafting findings to assisting BFS with its reporting. Work in this regard during Year 2 is summarized below.

**Global Report.** Analysis of indicators and trends in outcome indicators is part of the FTF FEEDBACK scope. At the conclusion of the baseline, mid-term and final assessment of population-based indicators, FTF FEEDBACK will develop a report, known as the Global Report, which will summarize findings across all countries. In Year 2, FTF FEEDBACK starting working with BFS to plan the baseline Global Report, including developing templates to summarize country data. The FTF FEEDBACK team was asked not to proceed with developing the Global Report until updates to the template are decided upon by BFS. The report itself will be developed in early Year 3.

**Feed the Future Progress Report and Scorecard.** Feed the Future publishes an annual Progress Report<sup>1</sup> that summarizes activities and accomplishments across the initiative and provides updates on key Feed the Future outcomes (e.g., farmers and others who have applied new technologies or management practices as a result of United States Government [USG] assistance). It also publishes a Scorecard<sup>2</sup> that reports the initiative's success in doing business differently. FTF FEEDBACK helped identify content and photos for the Progress Report, and designed, laid out, printed, and developed 508-compliant versions of the Progress Report and Scorecard for posting on the web. All documents were ready in time for a highly-publicized launch event.

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<sup>1</sup> <http://feedthefuture.gov/resource/feed-future-progress-report-2013>

<sup>2</sup> <http://feedthefuture.gov/resource/feed-future-progress-scorecard-2013>

## **3 IMPACT EVALUATION**

BFS led the development of a Learning Agenda in the first half of 2011 in consultation with key stakeholders. The Feed the Future Learning Agenda is a set of key unanswered questions related to the causal linkages in the Feed the Future Results Framework. The impact evaluation component works to help address the questions identified in the Learning Agenda. It does this by conducting impact evaluations and by documenting the evidence base for what works in food security. Another objective of the impact evaluation component is to build capacity among USAID Missions, IPs, and others to understand, use, and conduct impact evaluations, and to collect data for use in impact evaluations.

### **3.1 Impact Evaluations**

Impact evaluations are a critical piece of the Feed the Future strategy as they seek to establish whether and to what extent observed results can be attributed to Feed the Future interventions. Feed the Future-funded impact evaluations are to foster learning that will improve the effectiveness of Feed the Future interventions and, hopefully, other food security programs. They also help ensure Feed the Future's accountability to stakeholders.

Feed the Future is supporting a robust program of impact evaluations, many of which are being planned and conducted by FTF FEEDBACK. FTF FEEDBACK will use quantitative and qualitative data collection and analysis methodologies to generate high quality, credible evidence to answer research questions. Evaluations will use experimental or quasi-experimental designs to examine the impacts of Feed the Future interventions on beneficiaries.

#### **3.1.1 Selection of Impact Evaluations**

The Feed the Future Monitoring and Evaluation (M&E) team conducted an assessment of gaps in evidence related to the Learning Agenda as well as geographic gaps in the relevant evidence. The M&E team solicited two rounds of proposals for impact evaluations from USAID Missions and BFS. Early in Year 2, FTF FEEDBACK conducted a thorough review of these impact evaluation proposals. The team also reviewed projects in the FTFMS that appeared to have some potential for an impact evaluation. FTF FEEDBACK also assessed the feasibility of conducting an impact evaluation, taking into consideration the project's phase in the project cycle.

FTF FEEDBACK recommended projects to BFS for consideration for an impact evaluation. The review presented issues that would affect the quality of the recommended impact evaluations and identified key areas in which more information was needed. FTF FEEDBACK and BFS then worked together to learn more, where necessary, in order to select a solid and likely feasible slate of projects for evaluation.

As of the end of Year 2, the FTF FEEDBACK team designed (or is in the process of developing) the following impact evaluations:

1. Senegal/Yaajeende;
2. Malawi/Integrating Nutrition into Value Chains;
3. Zambia/Gender and Groundnut Value Chain;
4. Tajikistan/Water Users Association;

5. Ethiopia/Pastoralist Resilience Improvement and Market Expansion (PRIME);
6. Liberia/Deep Urea Placement (Note: implementation of this impact evaluation has transitioned to another mechanism);
7. Mozambique/Agriculture and Nutrition Linkages;
8. Mozambique/Mobile Savings;
9. Rwanda/Rural Feeder Roads;
10. Uganda/E-Verification;
11. Ghana/Resilience in Northern Ghana (RING) (Note: implementation of this impact evaluation has transitioned to another mechanism);
12. Kenya/Feed the Future Innovation Engine;
13. Multi-country Fisheries and Aquaculture;
14. Haiti/Agriculture, Natural Resource Management;
15. Bangladesh/Integrated Value Chain;
16. Nepal/High Value Vegetable Value Chains and Literacy;
17. Bangladesh/Bt Eggplant;
18. Kenya/Resilience and Economic Growth in Arid Lands;
19. Niger/Food for Peace; and
20. Multi-country Solutions for African Food Enterprises (Note: this project's evaluation will be a reflexive comparison rather than an impact evaluation).

Work on some impact evaluations has not started due to USAID delays in selecting the contractor or grantee to implement the project to be evaluated. Of the evaluations listed above, design work has progressed substantially on seven. Summaries of these projects and their study designs as planned at this point are provided in Annex E.

### **3.1.2 Study Design**

To ensure the quality of the impact evaluation designs, FTF FEEDBACK developed and implemented a peer review process. First, the lead evaluator (the person responsible for designing, planning, overseeing, and analyzing the data for the impact evaluation) develops a concept note on the proposed evaluation, generally after having met with the USAID Mission and the IP to explore options. After BFS and other peers have reviewed and accepted the concept, the lead evaluator develops a work assignment that expands on the concept and proposes data collection approaches, a timeline, and a budget for the evaluation. With an approved work assignment, the lead evaluator develops a draft protocol, and then, based on peer feedback, a final protocol.

### **3.1.3 Study Implementation**

Feed the Future impact evaluations will collect both quantitative and qualitative data. All of the steps for developing, fielding, and managing a survey that were outlined for the PBSs in Section 2.1 have to be completed for the impact evaluation surveys. As well, qualitative research has to be planned and

implemented. To date, fieldwork has been tested on one study, Mozambique Mobile Savings, with a feasibility study conducted in September 2013.

Thus, Year 2 positioned FTF FEEDBACK to launch a number of impact evaluations in Year 3. Development of survey budget templates, training materials, data transfer procedures, and training of FTF FEEDBACK partners to program the tablets all were started by the end of Year 2.

## **3.2 Other Support for Learning Agenda Themes**

An important objective of Feed the Future's M&E component is to use the evidence-based knowledge being generated by Feed the Future M&E activities to address unanswered questions in the development literature pertaining to food security programming. In order to organize this work, the M&E unit in the BFS developed a Learning Agenda to address important unanswered questions in the literature. The Learning Agenda questions link to the Feed the Future Results Framework.

BFS met with IPs and other stakeholders (USG agencies, USAID Missions, universities, research centers, NGOs, think-tanks, the private sector, and others) to develop the questions and explore best practices and methodologies for designing evaluations that would address these questions. At this meeting, concept notes for the first five themes were presented and discussed. Each of these notes was prepared by an expert in the field, and contained a summary list of the most important references on the topic.

BFS subsequently provided resources to FTF FEEDBACK to develop annotated bibliographies, literature reviews and blog posts on the six themes of the Feed the Future Learning Agenda, discussed below.

### **3.2.1 Annotated Bibliographies**

FTF FEEDBACK developed annotated bibliographies of relevant studies for each of the six Learning Agenda themes. The annotated bibliographies build on the lists of important references generated by the experts who developed the concept notes for the Learning Agenda. The annotated bibliographies are listed below.

- Improved Agricultural Productivity<sup>3</sup>
- Improved Research and Development<sup>4</sup>
- Expanded Markets, Value Chains, and Increased Investments<sup>5</sup>
- Improved Nutrition and Dietary Quality<sup>6</sup>
- Improved Gender Integration and Women's Empowerment<sup>7</sup>
- Improving Resilience of Vulnerable Populations<sup>8</sup>

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<sup>3</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-agricultural-productivity>

<sup>4</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-research-development>

<sup>5</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-expanded-markets-value-chains-and>

<sup>6</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-nutrition-and-dietary-quality>

<sup>7</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-gender-integration-and-women%E2%80%99s>

Annex F lists the questions addressed by each of the bibliographies.

### 3.2.2 Literature Reviews

The purpose of FTF FEEDBACK’s literature review activity was to complete a comprehensive assessment of existing evidence and gaps in knowledge. Each of the studies reviews available evidence on key questions for one Learning Agenda theme and identifies gaps in the literature that still need to be addressed.

A leading expert for each of the themes was commissioned to review the literature listed in the annotated bibliography and other seminal works and to prepare an analytical report that summarizes main findings. The experts collated findings from the cited literature; conducted additional bibliographical research; prepared first drafts of the review papers; vetted the paper with other experts and considered their suggestions; finalized the review; and submitted a blog on the literature review to Agrilinks.

Five of the six literature reviews were completed in Year 2:

- Improved Agricultural Productivity.
- Improved Research and Development.
- Expanded Markets, Value Chains, and Increased Investments.<sup>9</sup>
- Improved Nutrition and Dietary Quality.<sup>10</sup>
- Improving Resilience of Vulnerable Populations.<sup>11</sup>

Three of these (for which links to the document are provided) have been posted on Agrilinks. The literature reviews and blogs on Improved Agricultural Productivity and on Improved Research and Development will be posted early in Year 3. The sixth literature review, on Improved Gender Integration and Women’s Empowerment, will be finalized in Year 3, Quarter 1.

Excerpts from the Executive Summaries of the five completed literature reviews are provided in Annex G.

### 3.2.3 Comparative or Methodological Study

BFS has tasked FTF FEEDBACK with developing one to two conceptual or methodological studies or comparative analyses on an issue relevant to BFS each year. The topic selected for Year 2 was *Community Resilience: Conceptual Framework and Measurement*. As part of the broader Learning Agenda, USAID seeks to operationalize and measure resilience, recognizing that there is ongoing debate over definitions of resilience and measurement approaches. These questions are under examination in a range of academic fields and by the community of development practitioners, which inspired BFS to commission the review.

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<sup>8</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improving-resilience-vulnerable>.

<sup>9</sup> <http://agrilinks.org/library/feed-future-learning-agenda-literature-review-expanded-markets-value-chains-and-increased>.

<sup>10</sup> <http://agrilinks.org/library/feed-future-learning-agenda-literature-review-improved-nutrition-and-diet-quality>.

<sup>11</sup> <http://agrilinks.org/library/feed-future-learning-agenda-literature-review-improving-resilience-vulnerable-populations>.

The paper developed by FTF FEEDBACK seeks to advance the discussion by focusing specifically on a conceptual framework for the measurement of community resilience. The study is intended for use by USAID staff and IPs, non-governmental organizations, multilateral organizations, and government and community stakeholders seeking to apply a resilience measurement framework to policy and programming of development initiatives.

The Community Resilience study was largely completed and will be available on Agrilinks early in Year 3, Quarter 1. The draft Executive Summary from this study is provided in Annex H.

### **3.3 Impact Evaluation Capacity Building**

FTF FEEDBACK seeks to build impact evaluation capacity of USAID Missions, IPs, and host country organizations. Capacity building for impact evaluations focuses on methods, design principles, and analytic techniques for impact evaluation (including qualitative methods) that will enable trainees to become better consumers and managers of evaluations. A survey was developed and implemented to identify interest in learning more about concepts and processes related to impact evaluation. The survey was targeted to USAID Mission and IP staff that are involved in FTF FEEDBACK impact evaluations. Capacity building also is conducted for the host country organizations that collect data. Capacity building for survey organizations addresses human subjects protection, use of tablets for data collection, and interviewing techniques.

While FTF FEEDBACK does not have the resources to conduct sustained, in-person training, capacity building will feature importantly in all impact evaluations implemented by the project. FTF FEEDBACK's approach is essentially one of "learning-by-doing." Training/mentoring of interested stakeholders in the country may focus on methods for designing and conducting rigorous impact evaluations and collecting reliable survey data. Presentations of impact evaluation results to stakeholders will include sufficient introduction to impact evaluation methodologies to facilitate understanding and interpretation of the findings.

Also, for each evaluation, a local organization will be contracted to implement the surveys under the overall supervision and guidance of FTF FEEDBACK. The training for this organization will focus primarily on methods for data collection.

Because the impact evaluations are still largely in the design phase, capacity building relating to impact evaluation was limited in Year 2. The main contribution in this regard was training in September 2013 in collecting reliable survey data for a host country survey organization's supervisors and enumerators (a total of 12 individuals) for the Mozambique Mobile Savings project evaluation.

## 4 KNOWLEDGE MANAGEMENT

### 4.1 Introduction

Knowledge management, in the context of FTF FEEDBACK, works to promote effective and sustainable agricultural and nutrition practices by sharing evidence and finding innovative ways to assure evidence is actually used for program improvement. Knowledge management component goals directly support the FTF FEEDBACK project-wide goal and desired impact of having users use evidence-based knowledge disseminated by FTF FEEDBACK to improve their approaches to project and program design. The knowledge management team works to manage the knowledge generated by FTF FEEDBACK surveys, reports and impact evaluations.

In Year 2 the knowledge management component work focused on two objectives. The first objective was to manage evidence-based knowledge to improve program design and promote successful interventions. Milestones associated with this objective included:

- Completing the FTF FEEDBACK Multi-Media Knowledge Management Strategy.
- Establishing the Knowledge Management Working Group.
- Completing an assessment of Feed the Future products and platforms that included the Agrilinks and Feed the Future websites, and the FTFMS reporting module.
- Completing an assessment on the information needs of Feed the Future knowledge users. These assessments included recommendations to help BFS improve the usability of the Agrilinks and Feed the Future websites and the FTFMS reporting module in order to enhance the user experience.
- Completing the design, layout and content of the FTF FEEDBACK pages under the *Activities* section of Agrilinks.org. FTF FEEDBACK will use this as one of the platforms to deploy knowledge to target audiences, which include bilateral and regional USAID Missions, IPs, researchers and other USG staff.
- Launch the FTF FEEDBACK web pages on the Agrilinks website.

The second objective was to develop and deploy a system for managing knowledge. Milestones in Year 2 were to:

- Develop materials and helped BFS conduct regional workshops in October 2012.
- Submit the dashboard design for FTF FEEDBACK pages under the Agrilinks website.

### 4.2 Knowledge Management Strategy

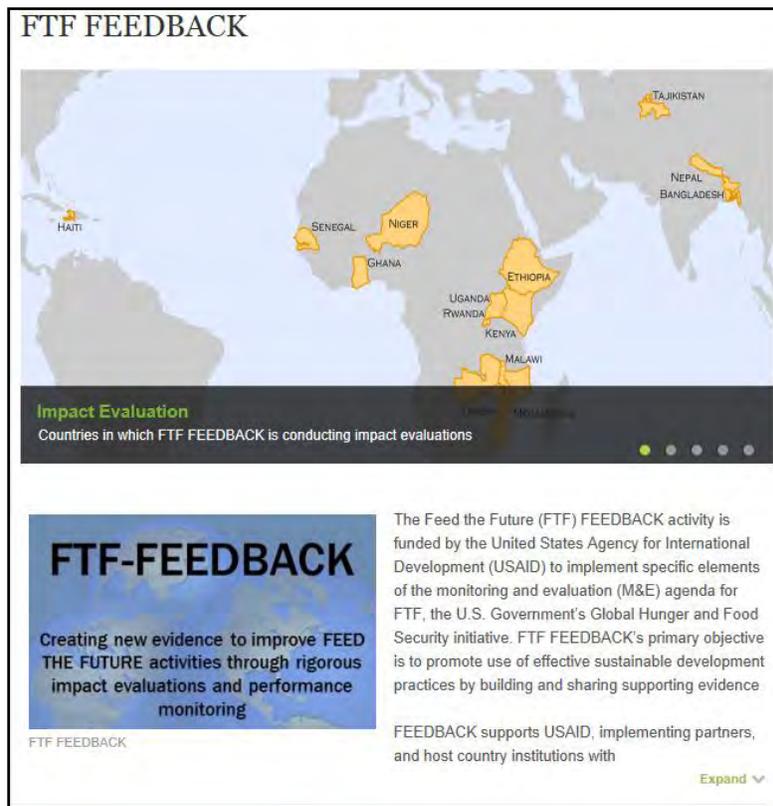
In March 2013, FTF FEEDBACK developed a knowledge management strategy that was approved by BFS. The knowledge management strategy proposed three phases of activities. Phase one discussed the approach, knowledge foci, occasions (events) and mechanisms FTF FEEDBACK intends to use in Year 2 to share evidence-based knowledge. Phases two and three discussed the approach and knowledge foci that will be used in project years three and four. All phases are continuous through project year six.

### 4.3 Mechanisms Used to Share Evidence-Based Knowledge

In this project year, FTF FEEDBACK used several mechanisms to capture and share knowledge. These mechanisms are the Agrilinks website, SmartSheet and webinars.

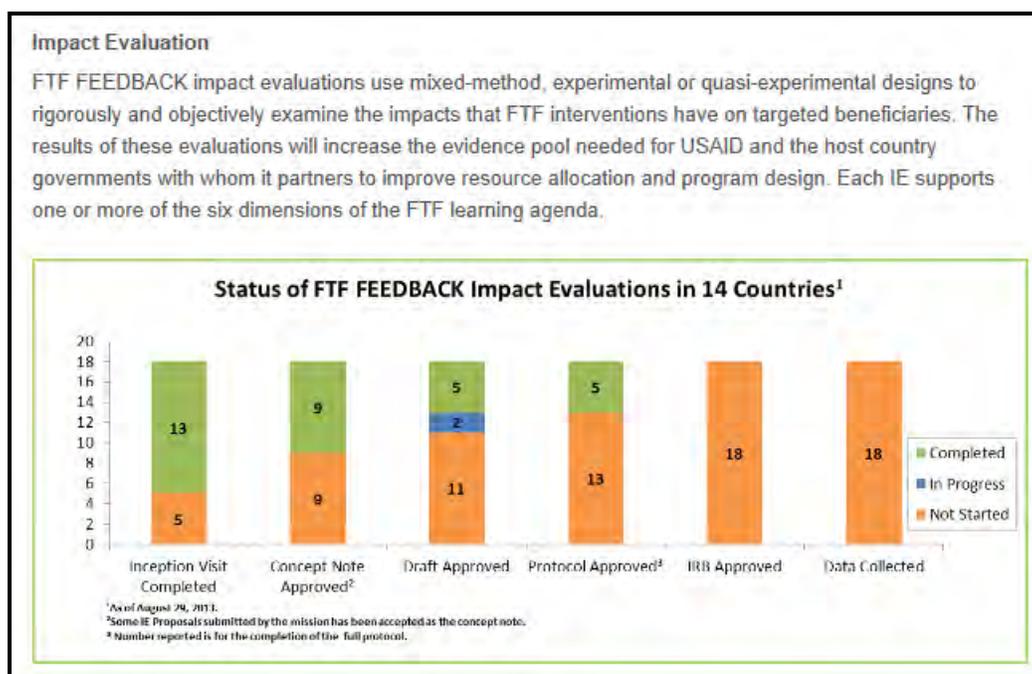
**Mechanism: Agrilinks Website: FTF FEEDBACK Activities Page.** During phase one of the strategy, FTF FEEDBACK executed the design and development of the FTF FEEDBACK Activities page on Agrilinks.org. The FTF FEEDBACK activities landing page provides a high-level dashboard that includes maps of countries in which FTF FEEDBACK is conducting impact evaluations and PBSs (see Exhibit 4-1) as well as a series of charts that reflect the status of project deliverables.

Exhibit 4-1. Screenshot from FTF FEEDBACK impact evaluation dashboard on Agrilinks.org



Also on the FTF FEEDBACK activities page under the *Our Work* section are the status of milestones for impact evaluation, performance monitoring, data management, knowledge management and capacity building objectives. Exhibit 4-2 provides as an illustration a chart of the impact evaluation component’s activities. Charts and tables are presented for the other components as well on the *Our Work* section.

Exhibit 4-2. Status of FTF FEEDBACK impact evaluations from dashboard on *Our Work*



**Mechanism: Agrilinks Website: Blog.** FTF FEEDBACK identified and produced blog topics that were featured on the Agrilinks blogs section. FTF FEEDBACK developed a checklist and standard form to help blog content writers better manage the process to develop, review and approve content before posting to Agrilinks.org.

In this project year, nine blogs were produced and five were published on Agrilinks.org. FTF FEEDBACK proactively alerts colleagues and stakeholders when a new blog is posted on Agrilinks.org.

**Mechanism: Agrilinks Website: Events & Webinars.** BFS requested FTF FEEDBACK facilitate webinars in the Adobe Connect platform. FTF FEEDBACK formed a webinar team and developed a process for tracking logistics for each webinar. Thus far we have facilitated 16 webinars in the Adobe Connect platform and created one event page on Agrilinks.org.

**Mechanism: SmartSheet.** FTF FEEDBACK uses SmartSheet to track project objectives and milestones under the impact evaluation, performance monitoring and knowledge management components. SmartSheet is an online project management tool that has collaboration and file sharing features used to track and manage tasks and activities.

**Assessment of Use and Usability of FTF Information Products and Platforms.** FTF FEEDBACK assisted in the development of the protocol to assess existing FTF FEEDBACK information products and platforms, and conducted several such assessments. The three platforms assessed were the Agrilinks website, the Feed the Future website and the FTFMS reporting database application. FTF FEEDBACK developed the scenarios assessed in each platform. The FTF FEEDBACK assessments submitted to BFS discuss findings and provide recommendations that include improving the cross-cutting features and other specific areas of the websites and improvements for the user experience in each platform.

FTF FEEDBACK also conducted a user needs assessment to identify the preferred formats for receiving information; barriers to accessing information; current use of social networking sites, blogs, and online communities; current use of Agrilinks.org, FeedtheFuture.gov and the FTFMS Reporting Module; information needs relative to specific aspects of impact evaluations; and barriers to utilizing evidence for program design. Twenty-six individuals from various countries in Latin America and Africa and from Washington D.C. participated in this assessment. These individuals held a variety of positions within BFS, USAID Missions, and IPs.

## 5 SUMMARY AND CONCLUSIONS

Year 2 was an extremely busy and productive year for FTF FEEDBACK, laying the groundwork for important ongoing support to Feed the Future's monitoring and evaluation objectives.

**Performance Monitoring.** The project completed data collection for large-scale PBSs in seven countries within 10 months of contract award. A survey in Nepal that was added in December was completed by the end of May. A large number of staff of local survey organizations was trained on survey implementation. The pace of survey activity did not allow for all procedures to be fully planned, tested and documented. As baseline activity concludes, the project team is shifting focus to refining and better documenting procedures and templates so that future surveys are improved and more efficient.

Baseline findings from all of the population-based performance monitoring surveys in Feed the Future focus countries will be consolidated by FTF FEEDBACK in a Global Report, the development of which is underway.

Support for use of Feed the Future indicators was provided via support for BFS regional training and in the development of the Agriculture Indicators Guide. The latter responds to IPs challenges in using the agriculture indicators. The Guide, a case study, and a webinar on the Guide have been updated based on user feedback, and FTF FEEDBACK is preparing to provide assistance to IPs in the use of these tools.

**Impact Evaluation.** Foundational work preparing annotated bibliographies and literature reviews that address the Feed the Future Learning Agenda questions was completed. FTF FEEDBACK also developed a study on a challenging topic in food security: Community Resilience: Conceptual Framework and Measurement.

Planning for impact evaluations that will help address unanswered questions in the Learning Agenda proceeded throughout the year, with significant progress being made in designing several impact evaluations. FTF FEEDBACK will continue advancing the impact evaluation portfolio as interventions to be evaluated get launched and consensus is reached on design issues.

**Knowledge Management.** Systems and procedures were put in place to capture and share information on FTF FEEDBACK's work and on what we are learning through our performance monitoring and impact evaluation activities. We have assessed Feed the Future products and platforms and how users prefer to be reached with new information. Knowledge is being shared through posting of reports and blogging on Agrilinks, through webinars, and through participation in workshops. As more surveys and other studies are completed by FTF FEEDBACK and other Feed the Future contractors, we are prepared to disseminate and support use of the expanding evidence base related to food security.

## **Annex A**

# **FTF FEEDBACK Performance Management Plan – Achievements for Year 2**

## FTF FEEDBACK Performance Management Plan (PMP) Achievements for Year 2

### 1 Achievement of Performance Monitoring PMP Targets

Table 1-1 lists PMP indicators for the performance monitoring component applicable to Year 2. Following the table, we discuss progress in achieving each target.

**Table 1-1 Outcome and output indicators for the performance monitoring component to be reported in Year 2**

ID No	Indicator	Method of Measurement	Target	Actual	Assessment
1.R1	Percentage of individuals surveyed that benefited from training or mentoring in performance monitoring techniques who report little or no difficulty in applying new skills learned	Survey	75%	98.4%	Exceeded target
1.D1	Number of surveys of population-based indicators in the zone of influence completed	Count	9	9	Met target
1.D1	Number of surveys of population-based indicators in the zone of influence completed	Delivery date	1/2013: 6; 2/2013: 2; 5/2013: 1	See Table 2-2	On time: 6; Early: 2; Late: 1
1.D2	Number of protocols with work plans for surveys of population-based indicators in the zone of influence in nine FTF countries submitted	Count	9	9	Met target
1.D2	Number of protocols with work plans for surveys of population-based indicators in the zone of influence in nine FTF countries submitted	Delivery date	10/2012: 7; 12/2012: 1; 4/2013: 1	See Table 2-3	On time: 1; Early 1; Late: 7
1.D3	Percent of population-based indicators in the zone of influence in nine countries for which indicator values are available in FTFMS	Percent	100%	84%	Met 84% of target
1.D5	Number of guidance documents for BFS submitted	Count	1	1	Met target
1.D5	Number of guidance documents for BFS submitted	Delivery date	9/15/2013	9/12/2013	On time
1.D9	Number of individuals who have received FTF FEEDBACK training or mentoring in performance monitoring techniques	Count	400	987	Exceeded target

**1.R1 - Percentage of individuals surveyed that benefited from training or mentoring in performance monitoring techniques who report little or no difficulty in applying new skills learned.**

This indicator refers to the field supervisors and enumerators who received training to conduct the PBSs. A training assessment was conducted in a sample of four countries: Nepal, Rwanda, Tajikistan, and Uganda. A total of 358 trainees responded to the survey, which was conducted immediately after the

conclusion of field data collection. Averaging the results of responses to three questions about skills, 98.4% of respondents reported little or no difficulty in applying the specified skills during their work.

**1.D1 - Number of surveys of population-based indicators in the zone of influence completed.** FTF FEEDBACK completed data collection for nine population-based surveys (PBSs) in Year 2. A second round of data collection specific to an additional province in Mozambique is expected to be completed in early December 2013.

Indicator 1.D1 also has a delivery date target. The due dates and completion dates for data collection are shown in Table 1-2.

**Table 1-2 Dates of data collection for baseline PBSs**

Country	Due date	Completed date	Status
Kenya	2/2013	2/2013	On time
Malawi	1/2013	12/2012	Early
Mozambique*	2/2013	3/2013	Late
Nepal	5/2013	5/2013	On time
Rwanda	1/2013	1/2013	On time
Senegal	1/2013	1/2013	On time
Tajikistan	1/2013	1/2013	On time
Uganda	1/2013	1/2013	On time
Zambia	1/2013	12/2012	Early

\* For Mozambique, this does not include the added districts in the Tete Province.

**1.D2 - Number of protocols with work plans for surveys of population-based indicators in the zone of influence in nine FTF countries submitted.** These protocols were submitted for all nine countries.

Indicator 1.D2 also has a delivery date target. The due dates and submission dates for these protocols are shown in Table 1-3 below.

**Table 1-3 Submission dates of baseline PBS protocols**

Country	Due date	Completed date	Status
Kenya	11/2012	11/2012	On time
Malawi	10/2012	11/2012	Late
Mozambique	10/2012	11/2012	Late
Nepal	4/2013	3/2013	Early
Rwanda	10/2012	11/2012	Late
Senegal	10/2012	11/2012	Late
Tajikistan	10/2012	11/2012	Late
Uganda	10/2012	11/2012	Late
Zambia	10/2012	11/2012	Late

It took longer than anticipated to complete all but two of the protocols. Allowing additional time for protocol preparation will be planned for the subsequent PBSs. Fortunately the late submission of protocols did not delay the completion of field work in most cases.

**1.D3 - Percent of population-based indicators in the zone of influence in nine countries for which indicator values are available in FTFMS.** The FTF FEEDBACK team analyzed data from the baseline

PBSs and from other sources (e.g., Demographic and Health Surveys and Living Standards Measurement Surveys) to calculate values for the population-based indicators required by Feed the Future. The team entered values in FTFMS for 12 population-based indicators for all nine countries: per capita expenditures, percent change in agricultural gross domestic product, prevalence of underweight women, Women's Empowerment in Agriculture Index, prevalence of underweight children, prevalence of stunted children, prevalence of wasted children, prevalence of poverty, women's dietary diversity, prevalence of exclusive breastfeeding, prevalence of children receiving a minimum acceptable diet, and household hunger. Of these 108 data points (12 indicators X 9 countries), 91 (84%) have been entered in the Feed the Future Monitoring System (FTFMS).

The outstanding indicator values are for Senegal and Mozambique. The survey in Senegal was completed on time, but some data were lost when records were deleted contrary to instructions provided. (Detailed reports on the data lost, recovery efforts, and the availability of records by module have been provided separately, and therefore are not discussed in this report.) Efforts to recover data have been completed, though efforts to reconstruct records and clean the data are ongoing. The survey in Mozambique started late, and then was expanded to include new districts. Data collection is expected to be completed in December 2013.

As reported in previous quarterly reports, preliminary indicator values were entered in FTFMS by January 31, 2013. The data used to calculate these values had not been fully cleaned, and final values were entered later. FTF FEEDBACK had to complete the baseline surveys in a very limited timeframe (with data to be collected and analyzed from multiple countries within 8 months of contract award). The time available was insufficient to meet BFS's deadline. For subsequent rounds of the PBSs, the FTF FEEDBACK team will work with BFS to plan a 15 month timeline (from inception visit to entry of final values in the FTFMS) so that BFS's deadlines determined by BDS can be met.

**1.D5 - Number of guidance documents for BFS submitted.** BFS requested that FTF FEEDBACK prepare a guidance document on the agriculture indicators used by implementing partners (IPs) as part of their performance monitoring. The Agriculture Indicators Guide was submitted and has been rolled out via webinars. Plans are underway to finalize and post webinar recordings and case study exercises on Agrilinks.

1.D5 also has a delivery date target. The guidance document was submitted 9/12/2013, which met the target.

**1.D9 - Number of individuals who have received FTF FEEDBACK training or mentoring in performance monitoring techniques.** FTF FEEDBACK's target was to train 400 field supervisors and enumerators for the baseline PBSs. The project actually trained 987 trainees, greatly exceeding the target.

## 2 Achievement of IMPACT EVALUATION PMP Targets

Table 3-1 lists achievement of PMP indicators for the impact evaluation component that require reporting in Year 2. Explanations of achievement of targets for these indicators follow the table.

**Table 2-1 Outcome and output indicators for the impact evaluation component to be reported in Year 2**

ID No	Indicator	Method of Measurement	Target	Actual	Assessment
2.D3	Literature reviews for FTF Learning Agenda themes submitted	Count	6	5	83% of target met
2.D3	Literature reviews for FTF Learning Agenda themes submitted	Delivery date	7/2013: 3 due; 8/2013: 3 due	See Table 3-2	On time: 4; Late: 1; Delayed: 1
2.D5	Number of design protocols (including work plans) for impact evaluations submitted	Count	12	7	58% of target met
2.D5	Number of design protocols (including work plans) for impact evaluations submitted	Delivery date	9/2013	See Table 3-3	On time: 3; Early: 1; Late: 4
2.D10	Number of conceptual and methodological studies and comparative analyses on issues relevant to BFS submitted	Count	1	1	Target met
2.D10	Number of conceptual and methodological studies and comparative analyses on issues relevant to BFS submitted	Delivery date	9/2013	9/25/13	On time

**2.D3 - Literature review for FTF Learning Agenda themes submitted.** The FTF FEEDBACK team was asked to prepare literature reviews on six topics that address important Feed the Future Learning Agenda themes. These topics are listed in Table 3-2. FTF FEEDBACK proposed a format for the reviews, identified experts to prepare the reviews, had the drafts reviewed by experts in and outside BFS, and finalized the reviews. Five of the six literature reviews (83%) were submitted in Year 2.

Indicator 2.D3 also has a delivery date target. The due dates and completion dates for data collection are shown in Table 2-2 below. The due dates were established in consultation with BFS.

**Table 2.2 Literature Review Status**

Topic	Due Date	Date Submitted	Status
Expanded Markets, Value Chains and Increased Investments	7/2013	7/1/13	On time
Improved Resilience of Vulnerable Populations	7/2013	7/9/2013	On time
Improved Nutrition and Diet Quality	7/2013	7/18/13	On time
Improved Agricultural Productivity	8/2013	8/23/13	On time
Improving Research & Development	8/2013	9/23/2013	Late
Improved Gender Integration and Women's Empowerment	8/2013		Delayed

**2.D5 - Number of design protocols (including work plans) for impact evaluations submitted.** FTF FEEDBACK submitted seven impact evaluation design protocols to BFS, as shown in Table 3-3. The target for Year 2 was 12 impact evaluation design protocols. As explained in the discussion of Objective 1 below, many projects that are slated for evaluation have not been awarded yet or are just getting started, which is delaying preparations for impact evaluations.

Indicator 2.D5 also has a delivery date target. The due dates and completion dates for submission of design protocols are shown in Table 2-3 below. Of these, one was submitted early; three were submitted on time; two were submitted after their deadline; and three have not yet been submitted.

**Table 2-3 Status of design protocols for impact evaluations**

Impact Evaluations under active development	Due Date	Submitted	Status
1. Ghana RING	1/31/13	1/31/13	On time
2. Senegal Yaajeende	5/31/13	4/2/13	Early
3. Malawi Integrating Nutrition into Value Chains	5/31/13	6/28/13	Late
4. Zambia Gender and Groundnut Value Chain	6/28/13	6/27/13	On time
5. Tajikistan Water Users Association	7/31/13	9/30/13	Late
6. Ethiopia Pastoralist Resilience Improvement and Market Expansion	5/31/13	6/27/13	Late
7. Liberia Deep Urea Placement	4/30/13	4/30/13	On time
8. Mozambique Ag & Nutrition Linkages	6/28/13		Delayed
9. Mozambique Mobile Savings	2014		
10. Rwanda Rural Feeder Roads	8/30/13		Delayed
11. Uganda E-Verification	8/29/13		Delayed
12. Kenya FTF Innovation Engine	TBD		
13. Multi-country Fisheries and Aquaculture	TBD		
14. Haiti FTF North	TBD		
15. Bangladesh Integrated Value Chain	2014		
16. Nepal High Value Vegetable Value Chains and Literacy	2014		
17. Bangladesh Bt Eggplant	2014		
18. Kenya Resilience and Economic Growth in Arid Lands	TBD		
19. Niger Food for Peace	TBD		
20. Multi-country solutions for African Food Enterprises*	NA		NA

\* The evaluation of this project will be a reflexive comparison, so it will not require a detailed impact evaluation template.

**2.D10 - Number of conceptual and methodological studies and comparative analyses on issues relevant to BFS submitted.** In Quarter 4, one methodological study on the topic of Community Resilience was submitted meeting the target for this year. The study was submitted on time.

### 3 Achievement of Data Management PMP Targets

Table 3-1 lists achievement of PMP indicators for the data management component that require reporting in Year 2. Explanations of achievement of targets for these indicators follow the table.

**Table 3-1 Outcome and output indicators for the data management component to be reported in Year 2**

ID No.	Indicator	Method of Measurement	Target	Actual	Assessment
3.D1	Number of data quality protocols for FTF FEEDBACK surveys submitted	Count	1	1	Met target
3.D1	Number of data quality protocols for FTF FEEDBACK surveys submitted	Delivery date	9/2013	8/30/2013	Early
3.D2a	Data storage databases configured for PM survey data	Delivery date	10/2012	10/2012	On time
3.D2b	Data storage databases configured for IE survey data	Delivery date	9/2013	9/2013	On time
3.D3a	Data transfer procedures in place for ZOI performance monitoring surveys	Delivery date	10/2012	10/2012	On time
3.D3b	Data transfer procedures in place for IE surveys	Delivery date	9/2013	9/2013	On time
3.D4a	All performance monitoring ZOI survey data accessible to client online	Count	9	7	Met 78% of target
3.D4a	All performance monitoring ZOI survey data accessible to client online	Delivery date	See Table 4-2	See Table 4-2	Early: 5; Late: 2; Delayed: 2
3.D6	FTFMS operational on Westat server	Delivery date	12/2012	12/14/2012	On time

**3.D1 - Number of data quality protocols for FTF FEEDBACK surveys submitted.** FTF FEEDBACK submitted a data quality protocol for FTF FEEDBACK population-based surveys on 8/30/2013. This deliverable was early. A second data quality protocol for FTF FEEDBACK impact evaluation surveys is under development.

**3.D2a - Data storage databases configured for PM survey data.** FTF FEEDBACK configured data entry programs for each of the nine PBSs in ODK in advance of the launch of those surveys, starting in October 2012.

**3.D2b - Data storage databases configured for IE survey data.** Data entry programs will have to be configured for each impact evaluation survey. Westat will program the surveys for TANGO, UNC, and itself, and IFPRI will program its own surveys. The first of these was for the Mozambique impact evaluation. That programming was completed in 9/2013.

**3.D3a - Data transfer procedures in place for ZOI performance monitoring surveys.** The data transfer procedures for performance monitoring surveys were in place and documented in the field supervisor's and enumerator's manuals by October 2012.

**3.D3b - Data transfer procedures in place for IE surveys.** The data transfer procedures for the first impact evaluation (the Mozambique impact evaluation) were put in place for the 9/2013 data collection for that evaluation. The procedures are being document in field supervisor's and enumerator's manuals that are under development.

**3.D4a - All performance monitoring ZOI survey data accessible to client online.** The data from the baseline PBSs has been made available to BFS as soon as they were cleaned. The dates the zip files with the datasets were loaded to the FTP site are provided in Table 3-2.

**Table 3–2 PBS ZOI survey data accessible to client online**

Country	Due date	Date Posted	Assessment
Kenya	5/23/13	6/26/13	Late
Malawi	5/1/13	4/13/13	Early
Mozambique	TBD	Delayed	NA
Rwanda	4/5/13	3/26/13	Early
Senegal	TBD	Delayed	NA
Uganda	4/25/13	4/9/13	Early
Zambia	4/15/13	3/26/13	Early
Nepal	6/25/13	7/25/13	Late
Tajikistan	5/8/13	4/9/13	Early

Seven of the nine datasets and codebooks were made available to BFS and USAID Missions after the initial cleaning tasks. (After data cleaning was complete, and in preparation for making data sets publicly available, the datasets were completed in CSV, SPSS and STATA formatted-files). Five of the datasets were made available before the deadline, and two were late. The datasets for Senegal and Mozambique have not yet been posted.

**3.D6 - FTFMS operational on Westat server.** The FTFMS became operational on a Westat server on 12/14/12, which was on time.

## 4 Achievement of Knowledge Management PMP Targets

Table 5-1 lists achievement of PMP indicators for the knowledge management component that require reporting in Year 2. Explanations of achievement of targets for these indicators follow the table.

**Table 4-1 Outcome and output indicators for the knowledge management component to be reported in Year 2**

ID No.	Indicator	Method of Measurement	Target	Actual	Assessment
4.D1	Assessment of needs for FTF FEEDBACK information submitted	Count	1	1	Met target
4.D1	Assessment of needs for FTF FEEDBACK information submitted	Delivery date	1/15/2013	1/15/2013	On time
4.D2a	Assessment of information products already developed by BFS submitted	Count	1	1	Met target
4.D2a	Assessment of information products already developed by BFS submitted	Delivery Date	12/2012	1/14/2013	Late
4.D3	Knowledge management strategy for FTF FEEDBACK submitted	Count	1	1	Met target
4.D3	Knowledge management strategy for FTF FEEDBACK submitted	Delivery Date	2/2013	3/14/2013	Late
4.D5	Capacity building strategy submitted	Count	1	1	Met target

4.D5	Capacity building strategy submitted	Delivery date	12/2012	12/31/12	On time
4.D6	Annual capacity building plans with numeric targets submitted	Count	1	1	Met target
4.D6	Annual capacity building plans with numeric targets submitted	Delivery date	12/2012	12/31/12	On time

The PMP targets for the knowledge management component for Year 2 all relate to submission of assessments, strategies, and plans. As shown in the table above, all of these deliverables were submitted. Three were submit by the deadline and two were submitted within two weeks of the deadline.

## 5 Achievement of Project Administration PMP Targets

Table 5-1 lists achievement of PMP indicators for the project administration component that require reporting in Year 2. Explanations of achievement of targets for these indicators follow the table.

**Table 5-1 Output indicators for the project administration component to be reported in Year 2**

ID No.	Indicator	Method of Measurement	Target	Actual	Assessment
5.D1	Annual Work Plans submitted and approved	Count	1	1	Met target
5.D1	Annual Work Plans submitted and approved	Delivery date	8/2013	8/30/2013	On time
5.D2	Percentage of tasks with an approved scope of work submitted in advance of initiation of work	Percentage	100%	100%	Met target
5.D4	Progress reports and PMP reviews (quarterly and annual) submitted	Count	4	4	Met target
5.D4	Progress reports and PMP reviews (quarterly and annual) submitted	Delivery date	Within 15 days of quarter's end	10/15/13; 1/15/13; 4/15/13; 7/15/13	On time
5.D5	Financial reports (quarterly and annual) submitted	Count	4	4	Met target
5.D5	Financial reports (quarterly and annual) submitted	Delivery date	Within 15 days of quarter's end	10/15/13; 1/15/13; 4/15/13; 7/15/13	On time

**5.D1 - Annual Work Plans submitted and approved.** The Annual Work Plan for Year 3 was submitted on 8/30/2013, which was on time.

**5.D2 - Percentage of tasks with an approved scope of work submitted in advance of initiation of work.** Westat and all subcontractor staff continue to submit a scope of work in advance of initiating in-country work. In some instances, aspects of work may have begun as the scope of work is revised according to comments received from BFS, and before the scope of work is approved.

**5.D4 - Progress reports and PMP reviews (quarterly and annual) submitted.** Quarterly reports are due within 15 calendar days of the end of each quarter. In Year 2, four quarterly reports were due: for Year 1, Quarter 4; for Year 2, Quarter 1; for Year 2, Quarter 2; and for Year 2, Quarter 3. (The quarterly report for Year 2, Quarter 4 – this report – is due on October 15, 2013, which is in Year 3.) All of these were submitted on time. The Year 1, Quarter 4 report counted as both a quarterly and annual report.

**5.D5 - Financial reports (quarterly and annual) submitted.** The financial quarterly reports also are due within 15 calendar days of the end of each quarter. In Year 2, four financial quarterly reports were due: for Year 1, Quarter 4; for Year 2, Quarter 1; for Year 2, Quarter 2; and for Year 2, Quarter 3. (The quarterly report for Year 2, Quarter 4 is due on October 15, 2013, which is in Year 3.) All of these were submitted on time. The Year 1, Quarter 4 report counted as both a quarterly and annual financial report.

## **Annex B**

### **Summaries of Feed the Future Baseline Surveys**

## B.1 KENYA FEED THE FUTURE PERFORMANCE MONITORING BASELINE SUMMARY

<b>ZOI</b>	Arid lands of northern Kenya - The ZOI in northern Kenya is comprised of nine counties and approximately two-thirds of Kenya's total land area.	
<b>PBS Sample</b>	1,760 households	
<b>Data Collection Partner</b>	Ronto Research Company in collaboration with the Kenya National Bureau of Statistics – 190 person field team	
<b>PBS Dates</b>	Two week period in January-February 2013	
<b>Data Sources for Baseline</b>		
<b>Indicator</b>	<b>Data Source</b>	<b>Date collected</b>
Prevalence of poverty	FTF FEEDBACK PBS	January 2013
Per capita expenditures (as a proxy for incomes)	FTF FEEDBACK PBS	January 2013
Prevalence of underweight children under 5	FTF FEEDBACK PBS	January 2013
Prevalence of stunting among children under 5	FTF FEEDBACK PBS	January 2013
Prevalence of wasting among children under 5	FTF FEEDBACK PBS	January 2013
Prevalence of underweight women	FTF FEEDBACK PBS	January 2013
Women's empowerment in agriculture index	FTF FEEDBACK PBS	January 2013
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	January 2013
Prevalence of children 6-23 months receiving a minimum acceptable diet	FTF FEEDBACK PBS	January 2013
Women's dietary diversity score	FTF FEEDBACK PBS	January 2013
Prevalence of exclusive breastfeeding among children under 6 months	FTF FEEDBACK PBS	January 2013
Prevalence of anemia among children 6-59 months	Kenya Malaria Indicator Survey 2010	January 2010

## B.2 MALAWI FEED THE FUTURE PERFORMANCE MONITORING BASELINE SUMMARY

<b>ZOI</b>	Seven districts in the Central and Southern Regions: Mchinji, Lilongwe, Dedza, Ntcheu, Balaka, Machinga and Mangochi	
<b>PBS Sample</b>	3,397 households	
<b>Data Collection Partner</b>	Malawi National Statistical Office (NSO)	
<b>PBS Dates</b>	November 14 to December 22, 2012	
<b>Data Sources for Baseline</b>		
<b>Indicator</b>	<b>Data Source</b>	<b>Date collected</b>
Prevalence of poverty	IHS3	March 2010- March 2011
Per capita expenditure	IHS3	March 2010- March 2011
Prevalence of underweight children under five years	DHS	June-Sept 2010
Prevalence of stunted children under five years	DHS	June-Sept 2010
Prevalence of wasted children under five years	DHS	June-Sept 2010
Prevalence of underweight women of reproductive age	DHS	June-Sept 2010
Women's empowerment in agriculture index	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of children 6-23 months receiving a minimum acceptable diet	DHS	June-Sept 2010
Prevalence of exclusive breastfeeding of children 0-6 months	DHS	June-Sept 2010
Prevalence of anemia among children 6-59 months	DHS	June-Sept 2010
Prevalence of anemia among women of reproductive age	DHS	June-Sept 2010

IHS3 = Third Integrated Household Survey

## B.3 NEPAL FEED THE FUTURE PERFORMANCE MONITORING BASELINE SUMMARY

<b>ZOI</b>	20 districts across the western, mid-western and far-western development regions	
<b>PBS Sample</b>	2,000 households	
<b>Data Collection Partner</b>	New ERA	
<b>PBS Dates</b>	April 15 to May 28, 2013	
<b>Data Sources for Baseline</b>		
<b>Indicator</b>	<b>Data Source</b>	<b>Date collected</b>
Prevalence of poverty	Nepal DHS	2011
Per capita expenditures (as a proxy for incomes)	NLSS	2010-2011
Prevalence of underweight children under5	Nepal DHS	2011
Prevalence of stunting among children under 5	Nepal DHS	2011
Prevalence of wasting among children under 5	Nepal DHS	2011
Prevalence of underweight women	Nepal DHS	2011
Women's empowerment in agriculture index	FTF FEEDBACK PBS	January 2013
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	January 2013
Prevalence of children 6-23 months receiving a minimum acceptable diet	Nepal DHS	2011
Women's dietary diversity score	FTF FEEDBACK PBS	January 2013
Prevalence of exclusive breastfeeding among children under 6 months	Nepal DHS	2011
Prevalence of anemia among children 6-59 months	Nepal DHS	2011
Prevalence of anemia among women of reproductive age	Nepal DHS	2011

NLSS = Nepal Living Standards Survey

## B.4 RWANDA FEED THE FUTURE PERFORMANCE MONITORING SUMMARY

<b>ZOI</b>	27 of the 30 districts in Rwanda, with the exception of the three districts of Kigali City		
<b>PBS Sample</b>	2,000 households		
<b>Data Collection Partner</b>	Centre for Economic and Social Studies (CESS)		
<b>PBS Dates</b>	December 22, 2012 to January 11, 2013.		
<b>Data Sources for Baseline</b>			
<b>Indicator</b>	<b>Data Source</b>	<b>Date collected</b>	
Prevalence of poverty	EICV3	Nov 2010-Oct 2011	
Per capita expenditures (as a proxy for incomes) <sup>1</sup>	EICV3	Nov 2010-Oct 2011	
Prevalence of underweight children under five	DHS	Sep 2010-Mar 2011	
Prevalence of stunted children under five years of age	DHS	Sep 2010-Mar 2011	
Prevalence of wasted children under five years of age	DHS	Sep 2010-Mar 2011	
Prevalence of underweight women of reproductive age	DHS	Sep 2010-Mar 2011	
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	Dec 2012-Jan 2013	
Prevalence of children age 6-23 months receiving a MAD	DHS	Sep 2010-Mar 2011	
Women's dietary diversity score among WRA	FTF FEEDBACK PBS	Dec 2012-Jan 2013	
Prevalence of exclusive breastfeeding	DHS	Sep 2010-Mar 2011	
Prevalence of anemia among children age 6-59 months	DHS	Sep 2010-Mar 2011	
Prevalence of anemia among women of reproductive age	DHS	Sep 2010-Mar 2011	
WEAI	FTF FEEDBACK PBS	Dec 2012-Jan 2013	

EICV3 = Integrated Household Living Conditions Survey or *Enquête Intégrale sur les Conditions de Vie des ménages/Round 3*

## B.5 TAJIKISTAN FEED THE FUTURE PERFORMANCE MONITORING BASELINE SUMMARY

<b>ZOI</b>	12 of 24 districts in Khatlon province	
<b>PBS Sample</b>	2,000 households	
<b>Data Collection Partner</b>	Centre for Sociological Research “Zerkalo”	
<b>PBS Dates</b>	December 23, 2012 through January 23, 2013	
<b>Data Sources for Baseline</b>		
<b>Indicator</b>	<b>Data Source</b>	<b>Date collected</b>
Prevalence of poverty: Percentage of people living on less than \$1.25/day	FTF FEEDBACK PBS	2012
Per capita expenditure of USG targeted beneficiaries (2010 USD)	FTF FEEDBACK PBS	2012
Prevalence of underweight children under five	FTF FEEDBACK PBS	2012
Prevalence of stunted children under five	FTF FEEDBACK PBS	2012
Prevalence of wasted children under five	FTF FEEDBACK PBS	2012
Prevalence of underweight women	FTF FEEDBACK PBS	2012
Women’s empowerment in agriculture index	FTF FEEDBACK PBS	2012
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	2012
Prevalence of children 6-23 months receiving a minimum acceptable diet	FTF FEEDBACK PBS	2012
Women’s dietary diversity score	FTF FEEDBACK PBS	2012
Prevalence of exclusive breastfeeding among children under 6 months	FTF FEEDBACK PBS	2012
Prevalence of anemia among children 6-59 months	MSS	2009

MSS = Micronutrient Status Survey

## B.6 UGANDA FEED THE FUTURE PERFORMANCE MONITORING BASELINE SUMMARY

<b>ZOI</b>	38 districts across eight regions	
<b>PBS Sample</b>	2,566 households	
<b>Data Collection Partner</b>	Uganda Bureau of Statistics (UBOS)	
<b>PBS Dates</b>	October 25 to December 30, 2012.	
Data Sources for Baseline		
Indicator	Data Source	Date collected
Prevalence of poverty	UNHS	May 2009 – April 2010
Per capita expenditure (as a proxy for income)	UNHS	May 2009 – April 2010
Prevalence of underweight children under five	FTF FEEDBACK PBS	Dec. 2012
Prevalence of stunted children under five	FTF FEEDBACK PBS	Dec. 2012
Prevalence of wasted children under five	FTF FEEDBACK PBS	Dec. 2012
Prevalence of underweight women	FTF FEEDBACK PBS	Dec. 2012
Women's empowerment in agriculture index	FTF FEEDBACK PBS	Dec. 2012
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	Dec. 2012
Prevalence of children 6–23 months receiving a MAD	DHS	June-Dec. 2011
Women's dietary diversity score	FTF FEEDBACK PBS	Dec. 2012
Prevalence of exclusive breastfeeding	DHS	June-Dec. 2011
Prevalence of anemia among children 6–59 months	DHS	June-Dec. 2011
Prevalence of anemia among women of reproductive age	DHS	June-Dec. 2011

UNHS = Uganda National Household Survey

## B.7 ZAMBIA FEED THE FUTURE PERFORMANCE MONITORING BASELINE SUMMARY

<b>ZOI</b>	Five districts in the Eastern Province: Chipata, Katete, Lundazi, Nyimba and Petauke	
<b>PBS Sample</b>	1,640 households	
<b>Data Collection Partner</b>	Zambia Central Statistics Office (CSO) with technical assistance from the National Food and Nutrition Commission	
<b>PBS Dates</b>	November 19 to December 6, 2012	
<b>Data Sources for Baseline</b>		
<b>Indicator</b>	<b>Data Source</b>	<b>Date collected</b>
Prevalence of underweight children under five years of age	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of poverty	RALS	April 2011-May 2012
Prevalence of stunted children under five years of age	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of wasted children under five years of age	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of underweight women of reproductive age	FTF FEEDBACK PBS	Nov-Dec 2012
Per capita expenditure (income) of USG targeted beneficiaries	RALS	April 2011-May 2012
Women's empowerment in agriculture index	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of households with moderate or severe hunger	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of children 6-23 months receiving a minimum acceptable diet	FTF FEEDBACK PBS	Nov-Dec 2012
Women's dietary diversity score	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of exclusive breastfeeding of children under six months of age	FTF FEEDBACK PBS	Nov-Dec 2012
Prevalence of underweight children under five years of age	FTF FEEDBACK PBS	Nov-Dec 2012

RALS = Rural Agricultural and Livelihood Survey

## **Annex C**

### **Summary of the Feed the Future Agricultural Indicators Guide: Guidance on the Collection and Use of Data for Selected Feed the Future Agricultural Indicators**

# **The Feed the Future Agricultural Indicators Guide: Guidance on the Collection and Use of Data for Selected Feed the Future Agricultural Indicators**

## **Purpose of the Guide**

The Feed the Future Agricultural Indicators Guide: Guidance on the Collection and Use of Data for Selected Feed the Future Agricultural Indicators (the Guide) was developed as additional guidance to the Feed the Future Indicator Handbook.

The purpose of the Guide is to present clear and understandable guidance that will ensure best practices in the definition, collection, and use of key agricultural indicators for the annual performance monitoring of agricultural development activities under the US Government's (USG's) Feed the Future Initiative. The Guide provides clarifying information pertaining to, and examples of best practices for, the collection and use of key indicators to enable adherence to the highest possible technical standards by Feed the Future IPs. Recommendations are based on an understanding of the operational context and practical constraints facing Feed the Future IPs in their monitoring activities, as well as the specific requirements of the FTFMS and the need for greater consistency in data entered into the system, although data collection methods may vary.

The Guide focuses primarily on critical questions regarding a subset of four key indicators that relate directly to agricultural production, comprising:

- Gross margin per hectares, animal, or cage of selected product (Indicators 4.5-16, 17, and 18, respectively);
- Number of hectares under improved technologies or management practices as a result of USG assistance (Indicator 4.5.2-2);
- Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance (Indicator 4.5.2-5); and
- Value of incremental sales (collected at farm level) attributed to Feed the Future implementation (Indicator 4.5.2-23).

The particular indicators listed above were selected for additional guidance because they provide important information on the annual progress of Feed the Future activities in promoting increased productivity and household income from agriculture, and because they present particular challenges in data collection and reporting within the FTFMS.

In particular, these four indicators represent a suite of hierarchically-related outcome indicators, each building on and enhancing the others directly as they contribute to the Intermediate Results (IRs) of improving agricultural productivity and expanding markets and trade and ultimately, the goal of reducing poverty. As the value reported under indicator 4.5.2-5 (number of farmers and others applying improved technologies or practices) increases, more overall acreage comes under improved management practices and technologies that can lead to increased production and productivity, which is tracked through gross margin. Improved market systems, in turn, leads to increased sales from targeted value chain commodities and household revenue, which is tracked through incremental sales. Ultimately, this leads to the overarching Feed the Future goal of reducing poverty, hunger, and undernutrition.

## Methodology for Developing the Guide

To provide a basis for improving the quality of data collected by Feed the Future IPs on these indicators, and to resolve partner questions related primarily to how these indicators are defined and collected, one-on-one consultations and a series of webinars were conducted with IPs and other key informants with a stake in Feed the Future performance monitoring. The consultations and webinars provided: (1) a field-level perspective of the difficulties IPs face in meeting reporting requirements and providing meaningful data for the FTFMS; (2) identification of issues and challenges to be addressed in the Guide; and (3) practical examples of approaches (e.g., survey instruments, beneficiary tracking systems) being implemented. Consultations occurred April – May, 2013 and webinars were held May 29-31 and August 12-13, 2013. A review of primary and secondary literature was conducted on accepted methodologies and best practices for collecting data required by the four indicators. Samples of tools presented in the Guide were adapted from examples provided by Feed the Future partners.

## Contents of the Guide

The guide has three major technical sections, summarized below.

**General Guidance.** This section addresses general challenges identified by Feed the Future partners, USAID Missions, and other stakeholders. Specifically, it addresses annual performance monitoring – its purpose, sources of monitoring data, and costs of performance monitoring. It describes how indicators were selected by Feed the Future, and how IPs should select indicators to be used for their projects. Direct beneficiaries, which are the only beneficiaries measured for these four indicators, are defined. Feed the Future requires disaggregation of indicators, and the Guide describes how sex-disaggregated categories are used on the initiative. A discussion of data collection addresses sources of data, when to collect data, options for collecting data, and how to extrapolate data.

**Measurement Challenges.** This section addresses methodological issues related to collecting indicator data. These include challenges resulting from intercropping, and challenges associated with measuring area, production, technology and management practices, sales volume and value, and agricultural input costs. Subsections discuss the special challenges in measuring these topics, followed by specific suggestions/solutions for addressing them.

**Understanding the Indicators.** This section seeks to provide users with a better understanding of the four indicators. A subsection is devoted to each indicator. Within each subsection, a general discussion of that indicator (e.g., what is measured, FTFMS reporting, interpretation of data) is followed by specific suggestions/solutions for addressing indicator-specific issues. Additional analysis that could be undertaken by IPs to enhance interpretation of performance monitoring results for each indicator is discussed in an appendix.

## **Annex D**

### **Assessment Instrument – Ease in Applying Skills Learned During Enumerator/Supervisor Training**

**Survey to Assess Ease in Applying Skills  
Learned During Enumerator/Supervisor Training**

1. What is your role in data collection? (choose one by marking an X next to the choice)

- A. Enumerator
- B. Supervisor/team lead

2. What is your sex? (choose one by marking an X next to the choice) [NOTE: this question was asked in Nepal only.]

- A. Male
- B. Female

*We would like to ask about some skills that were taught during the FEEDBACK survey training. For each of these, please tell us how difficult it has been to apply that specific skill during your work on this survey.*

3. Obtaining informed consent? (choose one by marking an X under the choice)

- |                      |                    |                |                     |
|----------------------|--------------------|----------------|---------------------|
| 1                    | 2                  | 3              | 4                   |
| Not at all difficult | A little difficult | Very difficult | Extremely difficult |
| _____                | _____              | _____          | _____               |

4. Explaining questions so that respondents understand and are able to respond accurately? (choose one by marking an X under the choice)

- |                      |                    |                |                     |
|----------------------|--------------------|----------------|---------------------|
| 1                    | 2                  | 3              | 4                   |
| Not at all difficult | A little difficult | Very difficult | Extremely difficult |
| _____                | _____              | _____          | _____               |

5. Using tablets for data collection? (choose one by marking an X under the choice)

- |                      |                    |                |                     |
|----------------------|--------------------|----------------|---------------------|
| 1                    | 2                  | 3              | 4                   |
| Not at all difficult | A little difficult | Very difficult | Extremely difficult |
| _____                | _____              | _____          | _____               |

*Next we have a few multiple choice or true/false questions about certain topics covered in the training:*

6. Why is it important to obtain informed consent? (choose all that apply by marking an X next to the choice(s))

- 1. it is required by the survey
- 2. to protect the rights of the respondents
- 3. to ensure that respondents are legally eligible to participate in the survey
- 4. to obtain permission from the husband to interview the spouse

7. What are ways to ensure that you obtain accurate answers from respondents? (choose all that apply by marking an X next to the choice(s))

- 1. do not ask leading questions
- 2. verify all answers with the head of household
- 3. ensure appropriate household member is interviewed for each module
- 4. ensure that questionnaire is completed within one hour

8. For questions designed to test the knowledge of respondents, all possible responses should be read out to the respondent (choose one by marking an X next to the choice)

- 1. true
- 2. false

9. Which areas would you like more training in? (choose all that apply by marking an X next to the choice)

- 1. obtaining informed consent and introducing purpose of survey to respondent
- 2. interviewing techniques
- 3. completing and reviewing the questionnaire on the tablets
- 4. managing the interview data on the tablets
- 5. procedures for getting household listings
- 6. how to explain and translate the questions to respondents
- 7. anthropometric measurement techniques
- 8. other (specify) : \_\_\_\_\_

*Thank you for taking the time to fill out this questionnaire.*

## **Annex E**

### **Summaries of Impact Evaluations Planned to Date**

## Introduction

Each impact evaluation within the FEEDBACK project undertakes to study significant questions raised through specific Feed the Future implementing mechanisms, projects, activities, or other interventions as they operate in a focus country or across focus countries. To develop a useful impact evaluation requires, therefore, a sound grasp of the field reality of the Feed the Future intervention and a clear connection with issues significant for successful Feed the Future work and learning.

Most experts advise designing evaluation (among other things) while designing the intervention. Having plans for activity tracking, monitoring and evaluation (M&E), special studies, and impact evaluation in place before project launch facilitates a true pre-intervention baseline and systematic data collection over time that should be tailored to project stakeholders' information needs. Retrospective impact evaluation designs, while common, are not optimal.

In international development, however, interventions may be significantly reshaped after design, after launch, mid-course, or indeed at any stage. Alterations may occur to correct design flaws or address gaps, or as adaptive responses to changes in the host country, changes in the donor's budget, shifts in political will or exertion of influence, and many other factors – whether new elements or new understanding of the salience of elements that were there all along.

FEEDBACK impact evaluations are being designed in collaboration across these many moving parts, with a broad range of stakeholders engaged to best inform planned questions, methods, and analysis. Each evaluation will thus produce a unique contribution to our understanding of the spectrum of important research questions in the area of food security. Each evaluation ties explicitly into the Feed the Future Learning Agenda, which is organized by six themes:

1. Agricultural productivity,
2. Research and development,
3. Markets and trade,
4. Nutrition and dietary diversity,
5. Gender and women's empowerment, and
6. Resilience of vulnerable populations.<sup>12</sup>

A range of specific questions emerge under each theme when examining any Feed the Future intervention. Impact evaluation teams must sift through the most useful learning opportunities to balance their pros and cons on dimensions of potential feasibility, cost-effectiveness, and rigor – within time and resource constraints. US and host country Institutional Review Boards must vet the study designs, and may require changes. And, as noted, in the meanwhile, the intervention itself may evolve according to new information or changed circumstances.

The following presents the status of current impact evaluation activities as they stand at the end of Year 2.

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<sup>12</sup> Slide 7 of 10, "The Feed the Future Learning Agenda", pdf file date 18 Sept 2012 (USAID Feed the Future presentation). Available at <http://agrilinks.org/sites/default/files/resource/files/Update%20on%20FTF%20Learning%20Agenda.pdf> (accessed 11 Oct 2013).

## Ethiopia

### Resilience Impact Evaluation

**Feed the Future Implementing Mechanism.** The *Pastoralist Areas Resilience Improvement and Market Expansion* (PRIME) operates in three pastoral clusters (Southern, Somali, and Afar Clusters). PRIME aims to increase household incomes and improve climate change resilience and adaptive capacity. Main activities concentrate on climate change adaptation (including livelihoods diversification), pastoralism/livestock market linkages, and needs of food insecure and other chronically vulnerable households. Expected results include improved productivity and competitiveness in the livestock sector, increased diversification of vulnerable households' assets, and improved health service delivery and population HIV/AIDS awareness.

The IE proposes to assess two dimensions of change in two zones, the Jijiga Zone of the Somali Pastoral Cluster and the Borana Zone of the Southern Pastoral Cluster. The evaluation design will focus on livelihoods—the activities of the program intended to improve and expand access to markets and livestock diversity—in Jijiga, and on resilience—activities intended to strengthen natural resource management, safety nets, and institutions—in Borana. Goals in both zones include embedded enumerators, a panel study, and other data collection through community-based sentinel sites.

Research questions of the impact evaluation align with Feed the Future Learning Agenda questions.<sup>13</sup> Related to resilience, the specific questions from the Agenda are:

1. What interventions improve the ability of vulnerable households to withstand common and extreme shocks affecting their economic activities? In what ways?
2. What interventions strengthen the ability of vulnerable households to recover from common and extreme shocks?
3. To what extent do different interventions to promote market access generate the participation of poorer households?
4. What interventions on both the “Push” (social protection) and “Pull” (value chain deepening) sides improve the participation of the poor in value chain activities?

Additional related questions specific to the PRIME context include:

5. What are the relationships between household and community resilience?
6. Have interventions strengthened risk-reduction strategies pursued by men and women to cope with shocks?

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<sup>13</sup> <http://agrilinks.org/library/feed-future-learning-agenda> PDF file published 29 May 2012; accessed 14 October 2013.

## Senegal

### Complementary Component Impact Evaluation

**Feed the Future Implementing Mechanism.** The *Yaajeende Agriculture and Nutrition Development Program for Food Security in Senegal* (Yaajeende) operates in eastern Senegal. Yaajeende aims to promote targeted foods to address nutritional deficiencies, improve health, and increase productivity. Main activities concentrate on private sector markets, diversification, and the most vulnerable households. Expected results include increased consumption and improved use of specific foods, and promoted growth of markets and private sector operations supplying better food and agricultural inputs.

The IE proposes to examine the complementary roles of three activities being implemented in the regions of Matam and Kedougou and the department of Bakel. The three activities are: improved varieties and biofortified crops (“Eat Orange”); educational and nutritional gardening; and behavioral change communications (BCC). The complementary evaluation would examine how impacts of these components differ when introduced in areas where other components do or do not exist. For instance, BCC campaigns will reach areas that have gardens and areas that do not (yet) have gardens, so whether or not promotional messages and media affect the two types of sites differently can be evaluated.

Specific research questions align with these Feed the Future Learning Agenda questions:

1. What are the characteristics of effective, efficient, and sustainable vehicles for promoting adoption of innovation and diffusion of products and new technologies among the poor, women, and socially marginalized?
2. What are the most binding constraints in promoting technology adoption and the most effective interventions for dealing with these constraints?
3. What activities have enabled value chain investments to lead to improved consumption of diverse diets?
4. Does including nutrition education in agriculture extension services lead to reductions in or elimination of household hunger and improved dietary diversity?

The Yaajeende impact evaluation questions include:

- Does the project approach, integrating agribusiness and nutritional interventions, lead to a change in behavior at the level of rural households in the Matam and Bakel areas of Senegal?
- Does the nutritional status among children improve through the adoption/use of orange sweet potatoes or biofortified millet?
- Are improvements in the diet through consumption of the newly produced crop, sales and purchase of healthier food, or other channels that might improve nutritional status?
- Does the effectiveness of BCC depend on availability of nutrient-rich crops?

The following impact evaluations are at earlier stages of building consensus and designing the exact methods and questions for each study, in collaboration with USAID and other stakeholders.

### **Malawi: INVC IE**

Feed the Future Implementing Mechanism: The *Integrating Nutrition in Value Chains* (INVC) project operates in Mchinji, Lilongwe, Dedza, Ntcheu, Balaka, Machinga and Mangochi. INVC is designed to focus on value chains in groundnuts, soya, and dairy, encouraging sector-wide innovations contributing to productivity, income, and household nutritional status.

Research questions will examine the integration of nutrition-related BCC into agricultural value chains and its contribution to reduction in malnutrition, compared to a single intervention implemented independently.

### **Mozambique: Mobile Money Feasibility Evaluation**

The current proposed research question is the effect of simple models of engagement and sustainable incentives on adoption of mobile banking, when combined with USAID/Mozambique agricultural programs. This study would build toward a pilot and impact evaluation of the pilot.

### **Tajikistan: Water Users Associations IE**

Feed the Future Implementing Mechanism: The *Water Users' Associations* (WUA) component of the *Family Farming Project* operates in the Feed the Future zone of influence, which is twelve districts in Khatlon Province. Food security in Tajikistan works across three pillars: income, food production, and public health; local institutions and community-based organizations; and agrarian reforms.

The proposed evaluation will assess the Water Users' Association component's effects on agricultural productivity, natural resource management, and gender.

### **Zambia: Impact Evaluation**

Feed the Future Implementing Mechanism: *Upgrading Groundnut Value Chains and Changing Gender Role*.

The proposed evaluation will assess the effects of integrating gender interventions into value chain strengthening activities on women's decision processes and control of production, marketing, and income.

## **Additional Impact Evaluation Development Notes**

**Concept Notes** have been developed for impact evaluation work in Kenya, Zambia, and Malawi (*Solutions for African Food Enterprises*, or *SAFE* project); Bangladesh (*Bt Eggplant Commercialization*); and Rwanda (*Feeder Roads Program*). Because significant changes to study design continue to occur throughout the early development process, documentation of these studies' questions and methods has not been stabilized at the Concept Note phase. Some illustrative research questions currently under exploration include:

- Does participation in *SAFE* increase the volume of improved nutritious food products sold by *SAFE*- assisted food processing companies?
- What are the effects of agricultural research investments on yields, pesticide use, labor redistribution, and incomes? (*Bt Eggplant*)
- What are the effects of rural feeder roads on the local economy? How sustainable are these impacts?
- What are the measurable benefits of better access to roads for farmers?

## **Annex F**

### **Questions Addressed by the Annotated Bibliographies**

## Questions Addressed by the Annotated Bibliographies

### 1 Improved Agricultural Productivity<sup>14</sup>

This bibliography summarizes existing studies that answer the following Learning Agenda questions:

- What are characteristics of effective, efficient and sustainable vehicles for promoting adoption of innovation (technology, practices, behaviors) and diffusion of products and new technologies among the poor, women, and socially marginalized? What are the most binding constraints in promoting technology adoption and the most effective interventions for dealing with these constraints?
- What are approaches that successfully address long-term natural resources management objectives while effectively increasing productivity and profitability?
- To what extent do agricultural productivity interventions in the staple and non-staple crop value chains lead to the generation or improvement of on-farm and off-farm employment?
- Which agricultural productivity interventions have had the greatest impact on resilience of households and individuals to recover from (regain consumption levels and rebuild assets) or withstand (maintain consumption levels and protect assets) common and extreme shocks?
- Does including nutrition education (social and behavior change communication) in agriculture extension services lead to reductions or elimination of household hunger and improved dietary diversity?

### 2 Improved Research and Development<sup>15</sup>

This bibliography summarizes existing studies that answer the following Learning Agenda questions:

- What partnership mechanisms are most productive, efficient, effective and sustainable for carrying out agricultural research to positively benefit resource-poor farmers and food security?
- Which R&D programs have had an impact on the policy or enabling environment?

### 3 Expanded Markets, Value Chains, and Increased Investments<sup>16</sup>

This bibliography summarizes existing studies that answer the following Learning Agenda questions:

- What types of investments in value chain market led development result in poverty reduction and improved nutrition among even the lower income quintiles in areas where value chain work is taking place? Which kinds of investments and in which value chain functions have generated increases in income and opportunities for employment among the poorest quintile, women, and other vulnerable groups?

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<sup>14</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-agricultural-productivity>.

<sup>15</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-research-development>.

<sup>16</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-expanded-markets-value-chains-and>

- Have interventions in agricultural value chain development led to development of local institutions and systemic behavior change? What are effective pathways for generating that change?
- What types of interventions (policy and regulatory reform; institutional strengthening; market development; public-private partnerships, etc.) have attracted private sector investment in agriculture?
- To what extent do different sources (domestic debt, FDI, guarantees, etc.) of investment in value chains lead to new income and employment opportunities for vulnerable populations?
- What has been the impact of infrastructure interventions on poverty reduction? What is the impact when infrastructure investments are used in combination with more traditional value chain or productivity enhancing interventions?
- To what extent has the expansion of intra-regional trade in staples increased market access and regional availability and reduced price fluctuations and year-to-year local shortages?

#### **4 Improved Nutrition and Dietary Quality<sup>17</sup>**

This bibliography summarizes existing studies that answer the following Learning Agenda questions:

- What have been the impacts of different approaches linking Agriculture, Nutrition and Health (ANH) on dietary diversity and nutritional status (i.e. geographic co-location of programs, integration of interventions, what combination of A, N, and H)? Have programs to increase farmers' incomes resulted in improved nutrition when not coupled with nutrition programming?
- What activities have enabled value chain investments to lead to improved consumption of diverse diets?
- Which agriculture technology interventions have improved diets and nutrition outcomes?
- What investments in human and institutional capacity development have effectively generated large scale nutrition outcomes?

#### **5 Improved Gender Integration and Women's Empowerment<sup>18</sup>**

This bibliography summarizes existing studies that answer the following Learning Agenda questions:

- Have agriculture productivity interventions reduced gender gaps in use of production inputs?
- Have agriculture and nutrition projects or approaches effectively improved women's empowerment, specifically in terms of agricultural production, decision-making over and access to credit, control over income, leadership in the community, and time use?
- Have capacity-building and increased leadership/management opportunities for women led to increased participation of women in leadership roles in the community?

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<sup>17</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-nutrition-and-dietary-quality>.

<sup>18</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improved-gender-integration-and-women%E2%80%99s>.

- Have interventions advancing commercialization in value chains affected access to paid employment or types of employment for men and women? Have they led to increases or decreases in unpaid work for men or women?
- Have programs that emphasize gender equality and the empowerment of women led to reduced poverty and hunger? Does empowering women lead to reduced poverty and hunger?

## 6 Improving Resilience of Vulnerable Populations<sup>19</sup>

This bibliography summarizes existing studies that answer the following Learning Agenda questions:

- What interventions improve the ability of vulnerable households to withstand (stable consumption and protected assets) common and extreme shocks affecting their economic activities? In what ways?
- What interventions strengthen the ability of vulnerable households to recover (regain consumption levels and rebuild lost assets) from common and extreme shocks?
- To what extent do different interventions to promote market access (such as promoting access to markets with lower risks and lower entry barriers) generate the participation of poorer households?
- What interventions on both the “Push” (social protection) and “Pull” (value chain deepening) sides improve the participation of the poor in value chain activities?
- Do safety net programs promote greater participation of poorer households in prudent risk taking and more remunerative economic activities?
- Have interventions changed risk-reduction strategies pursued by men and women to cope with shocks (health-related, agro-climatic, economic, socio-political)?
- Have FTF strategies to generate overall economic growth improved livelihoods of the poorest and most vulnerable populations? What are the most effective economic growth strategies for incorporating the poor and vulnerable?

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<sup>19</sup> <http://agrilinks.org/library/feed-future-learning-agenda-annotated-bibliography-improving-resilience-vulnerable>.

# **Annex G**

## **Summaries of Literature Reviews**

## G.1 IMPROVED AGRICULTURAL PRODUCTIVITY – EXECUTIVE SUMMARY

Agricultural productivity growth is essential for improving the competitiveness of farmers in markets, increasing their incomes, reducing poverty, and helping to keep food prices down. Given that most of the land and water that is economically suitable for agriculture is now fully utilized, continued growth in agricultural productivity on existing farm land will also be crucial for meeting the food and energy needs of a growing world population, projected to reach over 9 billion people by 2050. The need to raise agricultural productivity is especially challenging for many African and South Asian countries that face the highest population growth rates and which already have some of the severest per capita land constraints and the highest rates of rural poverty. Not only must agricultural productivity be increased, but it must be done in ways that are environmentally sustainable, contribute to reducing poverty, food insecurity, and malnutrition, create productive employment, and lead to more resilient farm and rural economies.

While large commercial farms will have to play an important role in feeding rapidly urbanizing populations, investing in the productivity of small farms is still vital. One reason is that small farms are home to and feed a large share of the world's poor and hungry. Another is that they make important, sometimes dominant contributions to feeding urban populations, especially in Asia and Africa. There can be no pretence that all of today's small farms (some 500 million less than 2 ha in size) have viable futures in farming, and in many cases the appropriate emphasis should be on providing assistance in diversifying into a non-farm business or off farm employment, or leaving farming altogether. However, despite the pessimism in recent years about the future of small farms (Collier, 2009), small farms situations are actually very diverse, and there are plenty of viable business opportunities for many to exploit if they receive the rights kinds of assistance (Hazell, 2013b).

The primary driver of productivity growth is new technologies and better ways of doing things and this requires (i) sources of new technologies and improved knowledge, and (ii) their widespread adoption by farmers and rural communities. There are multiple sources of new technologies and knowledge. Indigenous knowledge and farmer experimentation has historically been an important source of technological change, and accounted for slow but steady increases in productivity over generations. But the more dramatic breakthroughs needed to keep pace with rapidly growing and urbanizing populations have come from the application of modern science by agricultural research organizations, both public and private. This has led to a constant stream of new technologies that has enabled sustained and unprecedented rates of growth in agricultural productivity over the past 75 years, though with big regional differences.

This paper takes research and knowledge generation systems for granted, and reviews the evidence base on ways to use new technologies and supporting policies to raise the productivity of smallholders, while making them commercially successful, better environmental managers, more resilient to climate and market risks, and improving their own nutritional wellbeing. Special attention is given to the challenge of transforming the farms of more women and socially marginalized farmers who are among the poorest small farms.

**Promoting Technology Adoption.** The literature on the determinants of technology adoption points to the following constraints that are especially germane to small farm situations, and for poor, women and socially marginalized farmers in particular: the inappropriate design of some technologies for small farms; inadequate information about new technologies; poor access to required purchases inputs, credit and

markets; the higher risks and labor requirements of many new technologies; insecure land tenure; low literacy; and difficulties of organizing collective action.

In the past, governments intervened directly through a range of market and nonmarket interventions to help farmers overcome these constraints. The market liberalization reforms of recent years have led to a greater role for private sector and NGO players and the emergence of more innovative and diverse types of interventions. This paper focuses on some of the more promising types of new approaches rather than reviewing the efficacy of past government policies.

Participatory research methods and farmer field schools have been developed as ways of engaging small farmers more directly in the design and testing of new technologies so as to better meet their needs, and in providing information and training on an interactive basis. They seem especially promising for meeting the needs of many women and poor farmers. However, questions remain about their costs and whether their impacts can be scaled up beyond the relatively small numbers of farmers directly involved. New developments in decentralizing the management of public extension systems and engaging with new partners from the private and NGO sectors also look promising, but there is still a weak evidence base about their effectiveness, especially in reaching women and poor farmers.

There have been a lot of interesting developments in ways of linking small farms to high value chains, either through contract farming arrangements with agribusiness partners or through membership of a producer group or other intermediary organization. These kinds of linkages show promise for enabling more women and poor farmers to sell into high value markets, although evidence on this is still inadequate. So far, the number of small farms benefiting from these types of linkages remains relatively small, and more work is needed on ways of scaling up from successes.

The reforms of rural financial markets have led to a situation where many small farms are too big to rely on microfinance for their farm credit needs, and too small to be served by commercial lenders. Linking to value chains can be a source of credit as well as a market outlet, but for those who cannot then new innovations like warehouse receipt systems, credit guarantees, and IT banking look more promising. Filling this credit gap for small farms remains an important issue for future research.

A similar gap has arisen in policies for helping small farmers manage risk. Many governments have turned away from direct public interventions like crop insurance and price stabilisation and are looking to market mediated approaches such as weather index insurance and futures markets to help small farmers manage risk. Weather index insurance shows promise but common problems have arisen in pilot programs, such as low farmer demand because of high basis risk and perceived low benefits, and the difficulty and cost of setting up an effective delivery network. These problems are more easily overcome if the insurance is linked to credit and a technology package that offers the farmer a real value-adding proposition that goes beyond simple risk management. Apart from a few export crops, relevant futures markets do not exist for most developing country farmers. Most small farmers anyway need intermediaries to access the futures markets that do exist on their behalf. The few opportunities that arise involve traditional export crops. Given the limited reach of index insurance and futures markets, most small farmers must rely on themselves and their communities to manage risk, and on public relief programs when catastrophic losses arise.

Many small farms and women farmers do not have secure access to their land and this is an impediment to investing in some types of technology. Formal land titling is a more effective approach in Asia than Africa, partly because land rights are already secure at community levels within Africa's customary land tenure systems. The bigger problem in Africa is that the customary tenure systems are biased against

women and other socially marginalized groups, so solutions often have to lie in changing cultural norms at community levels through legal and educational means. In all areas of land policy, there is growing evidence to show that transparent and easy access to land records, such as is now possible through digitization and the internet, can facilitate more secure rights for small farmers, improve the efficiency of land markets and enhance the value of land for collateral purposes.

Many productivity enhancing investments or technologies must be taken up by groups of farmers or even whole communities (e.g. land terracing, watershed development), and organizing and governing collective action is difficult and costly and subject to elite capture. More research is needed to identify the conditions under which local organizations emerge and succeed in collective action, and of ways of ensuring that the interests of women and poor farmers are adequately represented.

Much of the literature on adoption treats constraints independently of each other, whereas in reality there may be important linkages amongst subsets of constraints that arise from a common underlying factor. For example, the adoption of many technologies requires a package of complementary inputs (e.g. seeds, fertilizer, pesticides, credit and a market outlet) and farmers may choose not to acquire individual inputs until they can obtain the entire package. These kinds of complementarities are very common for green revolution technologies. On the supply side, specialized suppliers of modern inputs, credit and the like may also be hesitant to supply their input to farmers who do not have access to other complementary inputs. This is known as the coordination problem and is a form of market failure that can lead to sub-optimal levels of technology adoption from an aggregate economic perspective. Another type of constraint linkage can arise for farmers who live in remote areas where poor infrastructure and high transport costs may act as a common factor that make it too costly for input suppliers, credit and insurance institutions, market traders and extension agents to service the area. Women may also face linkages among constraints because of social and other barriers that discriminate against them in the supply of many of the key inputs and services needed for technology adoption

When linkages arise, policy interventions that remove a common underlying factor might be more effective than interventions that target one constraint at a time. Three promising areas are building rural roads to better connect lagging regions, empowering women farmers, and resolving the coordination problem, though all warrant further study.

While there are many successful examples of project interventions to overcome adoption constraints, much less is known about how to scale these successes up. In fact, the whole methodology of scaling up seems rather fuzzy, with little guidance on the kinds of data and analysis that would be required to enable inferences about scaling up to be made from a pilot project. Rigorous impact assessments are needed to determine if a pilot is a success, but scaling up also requires attention to the causal factors underlying that success, and an ability to identify, even map, other places where the same conditions for success might exist.

**Combining Long-Term Natural Resource Management (NRM) with Increasing Productivity and Profitability.** Environmental problems and the types of improved NRM needed to resolve them differ across farming systems, and particularly between intensive (often irrigated) farming systems and extensive farming systems, often located in low potential areas. Many suitable technologies and improved NRM practices have been developed for both types of farming system, but a compelling observation from a large literature is that few are adopted at sufficient scale to resolve the major environmental problems associated with agriculture.

Most of the constraints considered above as part of the more general technology adoption problem apply to the adoption of improved NRM practices, but the literature highlights the particular importance of their high labor requirements, knowledge intensity, capital requirements, and need for secure long term property rights and collective action. Even when NRM practices increase productivity or reduce costs and have the potential to be win-win, their adoption can be undermined by perverse policies that make unsustainable practices more profitable than they should be (e.g. subsidies on groundwater pumping and irrigation water), and by the off-site nature of some of the benefits they generate (i.e. externalities), implying that the farmer or community that bears the costs of the improvement does not capture all the benefits. There is widespread evidence that women farmers and poor farmers are less likely to adopt improved NRM practices than other farmers.

Many governments have attempted to resolve these problems by reforming pricing and subsidy policies and devolving more responsibility for NRM back to local communities. This has led to a veritable explosion in the formation of community and user based organizations for improved NRM, assisted by central and local government agencies, environmental and development oriented NGOs active at grass roots levels, and donors. Despite a great deal of research, there is still little rigorous evidence on what determines the successful formation of local organizations for NRM. Another literature focuses on the links between community organization for NRM and gender and poverty outcomes. To avoid elite capture and to be able to resolve local disputes, broad representation is needed in their governance, and this is particularly important if the poor and women farmers are to be empowered within such organizations. A number of studies have found that collaboration, solidarity, and conflict resolution increase among all program group members when women are members of groups.

Better management of externalities in agriculture is also a priority issue for NRM that remains largely unresolved. The emergence of markets and programs for payment for environmental services (PES) is a promising development that should be pursued by the international community. More research is needed on the best methods of managing environmental externalities, including evaluative studies of markets and programs for PES. Improved methods and case studies are also needed to better evaluate environmental outcomes so as to better inform environmental policies, and to be able to rank NRM projects against alternative investments that have more measurable impacts.

**Impact of Agricultural Value Chain Interventions on Employment.** Agricultural growth, especially high value agriculture, can generate significant additional employment in farming and along commodity value chains in a myriad of production, trading, processing, storing, wholesaling and retailing functions. Also, productivity increases that raise farm incomes lead to additional employment in the rural nonfarm services and informal manufacturing sectors that cater to local consumer demands. Overall, each dollar of additional income generated in agriculture has a multiplier effect on non-farm income, generating an additional \$0.40 to \$0.50 of income for rural regions, and \$0.75 to \$1.00 for national economies. Employment multipliers are much harder to estimate because lots of rural nonfarm employment is seasonal and part time, and is not reported in census data, but appear to be large because of the employment-intensive nature of the service and informal manufacturing sectors. These are also sectors in which women and poor people play important roles.

Given the increasingly integrated nature of many value chains, more research is needed to determine the implications for employment. If, as Reardon and colleagues have recently found (Reardon et al., 2012), small scale traders and processors using low-tech facilities are being squeezed out of value chains for food staples by larger and more modernized firms, then research is needed to determine the net impact on employment and on the employment opportunities for the poor. Similarly, given the preference of many agribusinesses to source from large farms, important questions arise about how much employment

large farms create. Some studies have shown that the employment effects may be quite favourable in the case of some high value crops, but this is still a hotly disputed issue.

**Impact of Agricultural Productivity Interventions on Resilience.** Some interventions that raise agricultural productivity also reduce downside risks and hence contribute to greater resilience. These include (i) breeding new crops and livestock that are tolerant or resistant to drought and other stresses, (ii) building irrigation systems, (iii) investing in water harvesting, (iv) conservation farming, and (v) building rural roads. Resilience can also be strengthened by interventions that help farmers cope with losses when they occur. These include credit and insurance, early warning systems and safety net programs. Mechanisms that help farmers cope with losses can also have an indirect impact on average productivity. This arises from the fact that once farmers know they can rely on such assistance they may be willing to increase their risk exposure by investing in technologies and land improvements that raise average levels of productivity, even when these are more risky. However, difficulties can arise when risk coping interventions are heavily subsidized, because farmers may be encouraged to take on too much risk, inadvertently increasing their dependence on future government assistance. For example, compensation for crop or livestock losses in flood prone areas may lead to an expansion of livestock and cropping in those areas, with the potential for even greater losses during future floods. Subsidies need to be used smartly to avoid these kinds of problems, and that is something that still needs further research.

While it is relatively straightforward to evaluate the average productivity impacts of interventions that also improve resilience, evaluating their impact on resilience depends on observing outcomes in extreme years, and this may require collection of panel data over longish periods of time at carefully chosen benchmark sites.

**Inclusion of Nutrition Education in Agricultural Extension Programs.** It is now reasonably well established that if nutrition education is incorporated into nutrition-oriented agricultural interventions then this increases the likelihood that programs will have a positive impact on dietary diversity and nutrition. What is less clear is how nutrition education works, and further research is needed on this issue if better guidance is to be provided on the best types of nutrition education to provide, and how to link this education with other complementary activities such as health care initiatives, women's empowerment training, women's control of income, and/or women's land rights.

Who should provide nutrition education also remains an important question. A recent study of agricultural extension programs around the world, found that many farm extension agents are already providing advice and training at community and farmer levels on ways to increase the physical availability of nutritious food, including growing nutrition-rich crops, linking farmers to markets to sell and buy nutritious foods, and better utilization of foods grown and purchased (Fanzo et al., 2013). Many extension agents have also received training for these purposes. With that said, the scale of the nutrition advice and training being provided by agricultural extension agents is still small. Nor does an increased availability of nutritious foods necessarily translate into greater nutritional wellbeing. It also depends on access, diet choice and intra-household distribution issues that affect food intake, and health issues that impact on the effective conversion of food into nutritional outcomes, and agricultural extension agents are not much involved in providing training and advice on these issues. Nor apparently are they widely covered by health extension agents, so there is an important gap that may require specially trained nutritional workers to fill.

Further research is needed at the national level to better understand which agencies or sectors are currently providing nutrition education and the extent to which multi-sectoral collaboration can improve the efficiency and cost-effectiveness of service delivery. In many countries, the Ministry of Health provides

nutrition education but is not well-coordinated with the Ministry of Agriculture, and nutrition professionals and agricultural extension workers are not delivering a coordinated message.

**Small Farm Diversity.** A noticeable shortcoming of much of the literature reviewed for this paper is that insufficient consideration is given to the diversity of small farm situations when drawing conclusions about appropriate interventions for raising agricultural productivity. Distinctions are frequently made between small and non-small farms, between men and women farmers, and between poor and non-poor farms, but without recognizing that for targeting purposes there may be more relevant variation within these groupings than between them. Particularly relevant here is a growing literature showing that farms are becoming more widely differentiated by size and livelihood strategy, and by market forces and locational factors that have an important bearing on their prospects as farmers, and hence the kinds of support they need. Recent trends have been towards an ever greater number of small farms, while on average their holding size has shrunk and they have become more diversified into off-farm sources of income. There has also been a widening gap between farming opportunities in dynamic regions and more stagnant or lagging regions. This has created a more diverse and polarized set of smallholder farming situations which needs to be considered when targeting agricultural investments. This is especially important when the objective (as with Feed the Future) is to help more small farms become successful and profitable farm businesses.

Typologies for small farms based on location and market orientation have been developed and these could aid in designing agricultural interventions. Further research is needed to develop and test the relevance of smallholder typologies, and to assess the most effective forms of agricultural interventions for each type of smallholder. This should also include analysis of the best ways to integrate agricultural interventions with complementary policies and investments, such as safety nets and assistance with migration and off-farm diversification. Another challenge is developing practical ways of identifying the different groups on the ground.

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## G.2 IMPROVING RESEARCH AND DEVELOPMENT (R&D) – EXECUTIVE SUMMARY

The stated aim of Feed the Future is to tackle the root causes of global hunger and poverty through inclusive agriculture sector growth and improved nutritional status. This paper summarizes available evidence that relates to key questions for the Feed the Future Learning Agenda theme on improving research and development (R&D).

The paper examines available evidence on the impact of investing in agricultural R&D as a means of fostering agricultural growth, reducing poverty and enhancing food security and nutrition. It also highlights areas where evidence gaps on impacts of investing in R&D are most visible.

The two key questions addressed are:

1. What partnership mechanisms are most productive, efficient, effective and sustainable for carrying out agricultural research to positively benefit resource-poor farmers and food security?
2. Which R&D programs have had an impact on the policy or enabling environment?

After reviewing evidence and gaps relating to these two questions, other major evidence gaps on impacts of investing in agricultural R&D are briefly discussed.

**Productive, Efficient, Effective, and Sustainable Partnership Mechanisms.** Despite a burgeoning literature on partnerships and on innovation systems more generally, there has been very little in-depth evaluation of the extent to which they are achieving their expressed objectives. It is also clear that appropriate partnerships need to be designed to fit the specific institutional landscape and the objectives of the R&D. Thus, no definitive response on which partnership is “best” can be provided.

Only two studies were identified that evaluated the impacts of a specific partnership arrangement against an explicit counterfactual. Both evaluated multi-stakeholder innovation platforms. One study assessed impacts on location-specific problems at the community level and the other assessed impacts on specific value chain constraints. The evidence from these studies was broadly positive although costs were not considered and challenges of scaling up these highly participatory approaches have to be addressed.

Other impact studies provide evidence of successful R&D in which specific partnerships appear to have been central to this success. The review indicates that partnerships with a good evidence base on impacts are (i) those between the Consultative Group on International Agricultural Research (CGIAR) and National Agricultural Research Systems (NARS), (ii) some of the Innovation Labs for Collaborative Research that partner U.S. universities and developing country research and development organizations, and (iii) partnerships between Australian agricultural research organizations and NARS that have been funded by Australian Center for International Agricultural Research (ACIAR). Even so, the evidence base for these partnerships could be enriched by evaluation of a wider range of technologies and by deeper evaluation of impacts on poverty reduction, food security, nutrition and sustainability.

For other partnerships, the evidence base is generally modest to weak (Annex 1). Partnerships with farmers and their organizations seem to be generally effective in improving the demand orientation of research. For partnerships with the private sector and non-governmental organizations (NGOs), as well as partnerships in funding R&D, there are few impact evaluations although there are plausible stories of

impacts. These findings of weak evidence but plausible impacts also apply to innovation funds that have proliferated in recent years as a way of incentivizing partnerships. The bulk of the evidence indicates that most partnerships have been less effective in reaching resource-poor farmers than better-resourced farmers.

Going forward, there is a case for evaluating new and innovative partnership arrangements before scaling up, using randomized controlled trial (RCT) and mixed methods to enhance rigor and improve learning. Meanwhile, institutionalization of regular impact evaluation studies of USAID funded R&D would create a database that could be analyzed for successes and failures in partnerships. More qualitative case studies of partnerships followed over time could greatly add to the learning agenda at a relatively low cost. A further major gap that needs to be addressed by impact evaluations relates to the transaction costs of partnerships and the cost effectiveness of different ways of managing them, especially in reaching resource-poor farmers.

**Impact of R&D Programs on Policy.** Only a handful of impact evaluation studies have been carried out for policy oriented research (POR), although these have greatly expanded our understanding of how POR can influence policies and affect welfare. They have highlighted the importance of networks of influence, messaging (dissemination), the importance of context and windows of opportunity, and the key role of participatory processes of designing and implementing POR in close interaction with policy-makers, in realizing impacts.

However, it is clear that impact evaluation of POR is still in its infancy. There is a lack of robust methods, especially for defining a counterfactual and attributing policy changes to POR. Future efforts to evaluate impacts of POR should combine in-depth quantitative studies of POR on welfare where appropriate, with a wider range of qualitative case studies of the influence of policy research. Almost all evidence to date is from international or donor organizations and a new round of evaluations of POR impacts should include national institutions involved in POR. At the same time, international organizations such as the Standing Panel on Impact Assessment (SPIA) of CGIAR and the International Food Policy Research Institute (IFPRI), the lead CGIAR center for POR, should help move the methodology frontier forward, since the development of more robust methods remains the biggest challenge in providing more evidence-based evaluations of POR impacts.

**Other Priority Gaps.** The overwhelming majority of studies to date have focused on estimating impacts in terms of economic returns on investment, leaving a big gap in evidence relating to how improved R&D can meet the goals of Feed the Future—poverty reduction, food security and nutrition, and sustainability. This will require a greater investment in systematic collection of national-level household panel data, including detailed adoption data. Partnerships with other organizations such as the World Bank’s rural Living Standards Measurement Study (LSMS) and its modeling work, and CGIAR’s SPIA to develop methods could be pursued.

As USAID re-engages in capacity building for NARS, a critical issue will be to develop impact evaluation methods relevant to these investments. More and better impact evaluation by NARS would also go a long way to building databases for wider impact evaluation.

Finally, Feed the Future will need to develop more appropriate intermediate outcome measures to monitor its investments in improving R&D. Current measures such as the number of hectares with adopted new technologies risk biasing investments toward research with very short-term payoffs that could have negative implications for investment in more strategic research with much higher payoffs over the longer term. A sensible approach that recognizes the uniqueness of R&D investments would avoid

common indicators and develop specific milestones for each R&D investment. These could be complemented by early adoption and impact evaluations around five to seven years after the research has been initiated to build a database on impacts. Over time, a growing portfolio of such impact evaluations would allow periodic meta-evaluations of the overall impacts of investments in R&D.

In the end, a judicious balance of methods will be needed to fill evidence gaps in evaluating impacts of improving R&D systems. This review shows that relatively low cost case studies and participatory approaches that are well grounded in a theory of change can provide valuable feedback on what works where. At the same time, carefully selected and designed in-depth studies based on RCT methods or time-series household data and preferably conducted by independent evaluators can greatly increase the credibility of the evidence base for investing in R&D. The evidence to date strongly supports such investments as a high payoff activity for development partners in the future.

## **G.3 EXPANDED MARKETS, VALUE CHAINS AND INCREASED INVESTMENT – EXECUTIVE SUMMARY**

This paper provides the assessment for Theme III: “Expanded markets, value chains and increased investment.”

The stated aim of Feed the Future is to tackle the root causes of global hunger and poverty through inclusive agriculture sector growth and improved nutritional status. This paper examines available evidence on the impact of investing in value chain development as a means of reducing poverty and chronic malnutrition.

For multiple reasons, few data exist on which types of value chain investments reduce poverty. Studies of value chain projects are few in number, produce results that can rarely be aggregated, typically lack rigor, and generally fail to measure impacts on poverty. However, the limited data that are available suggest that value chain interventions can significantly contribute to poverty reduction by increasing the competitiveness of specific value chains and their service markets. Some value chain projects have shown impressive results in terms of increased yields, incomes, and job creation. Few value chain projects to date have focused on achieving nutritional outcomes.

Good practices are emerging from value chain programs that are deliberately seeking to target the very poor. These include investing in analysis of markets, poverty and vulnerability; building in mechanisms to mitigate shocks; ensuring complementarity with social protection programs; investing in multiple complementary value chains; and addressing constraints in the enabling environment. But more research is needed to understand the trajectory of impacts on poverty, including the benefits accruing to the poor as producers, laborers, service providers, and consumers; the importance of income diversification outside of value chain engagement; and the role of links to investments in human capital development and consumption smoothing.

In terms of generating lasting change, value chain interventions have successfully developed local institutions and institutional arrangements through a focus on building trust in relationships. Widespread behavior changes have been documented, although the sustainability of these changes can only be inferred until additional *ex-post* research is conducted. The literature indicates that small, low-risk investments to increase quality and yields are the most effective path for generating behaviors that promote value chain competitiveness among the poor.

Interventions most likely to attract private sector investment in agriculture include infrastructure development, policy reform and support for agricultural research and extension. While foreign direct investment (FDI) is increasing, the share flowing into agriculture continues to be very low. Innovative models that bring together multiple public and private stakeholders to drive investment in agriculture should be researched to test their scalability and sustainability.

Although bank lending to agriculture currently constitutes less than 10 percent of total loan portfolio, loan guarantees are proving successful in leveraging additional lending. Innovations such as insurance mechanisms, leasing, capital venture funds, warehouse receipts, and non-traditional service points are currently being piloted and appear promising. FDI raises concerns about “land grabbing” but presents opportunities to transfer skills, introduce standards, and stimulate investments in infrastructure development. Farmers’ own savings, generally accrued from non-farm work, are a source of investment that warrants additional research.

The literature supports claims that investments in roads, water and sanitation, energy, and telecommunications all have impacts on poverty reduction. Mobile phones have the potential to empower farmers with information leading to higher farm-gate prices. Other information and communication technology (ICT)-enabled innovations require more study, especially with regard to their cost-effectiveness *vis-à-vis* more traditional delivery methods.

Intra-regional trade in staples has not significantly increased in recent years because of poor transportation infrastructure and long distances between surplus and deficit areas. Data suggest that increased trade would result in greater price stabilization. However, the dynamics of the food trade are highly complex. For many African countries to compete with grain imports, for example, consistent production volumes would have to be generated at much lower cost than is currently the case. Although good for the urban poor, the impact on rural poor as grain producers would also need to be considered.

## G.4 IMPROVED NUTRITION AND DIETARY QUALITY – EXECUTIVE SUMMARY

This paper summarizes available evidence that relates to key questions for the Feed the Future Learning Agenda theme on nutrition and dietary quality.

The review integrates evidence from clinical, community, and national studies that link agriculture interventions with nutritional status, dietary diversity, and health. Studies included in this review provide data on what is known and, by omission, the gaps in knowledge about what works and why some programs do not work. These studies include survey data and data from various experimental models, evaluation data from national and sub-national interventions, and outcomes from a variety of systematic reviews of interventions. The focus of the review is on what is happening in low and middle income countries (LMICs).

The primary goal for this review is to provide decision makers with information on how to move forward with future policies and interventions. It will identify gaps that need to be filled by basic, applied, and operational research and will help in prioritizing new information that is needed from monitoring and evaluation (M&E) activities.

**Integrated Agriculture, Nutrition, and Health Approaches.** In the last few years, there has been growing recognition that agriculture, nutrition, and health are interrelated, and a convergence of thought on how to use a food systems lens to combine agriculture, health care, and nutrition interventions that have demonstrated individual impact so as to provide for large-scale improvements in nutritional status, particularly for mothers and children. Biofortification, increasing the consumption of animal products, and horticulture interventions are the most common methods that are being used to increase nutrition and dietary diversity of smallholder farmers and the non-farming poor.

Biofortification interventions are starting to show how they can improve health and nutrition. Orange-fleshed sweet potato (OFSP), orange corn, and other plants can significantly increase the  $\beta$ -carotene (which the body converts into vitamin A), iron, and zinc status of target populations. There is also the potential to increase the protein content of diets with high-protein maize. However, there is still insufficient evidence to assess the nutritional impact of biofortification interventions at the community level. In addition, little is known about how well farmers and consumers will accept biofortified crops and limited comparative evidence is available on how these crops impact overall yields and farm profits. Only a few studies report evidence on the nutritional impact of biofortification programs, although these results tend to be positive. There is still a need to conduct additional impact evaluations of biofortification under different climatic and socio-economic conditions in order to assess its acceptance by farmers and its effectiveness in improving nutritional status for at-risk populations within community settings in sustainable ways. Additional studies also need to be done on the consumer response to biofortified foods to determine local factors affecting consumers' willingness to pay for more nutritious foods.

Livestock and aquaculture interventions (including aquaponics) have the potential to improve diet quality and increase micronutrient intake. The range of livestock and aquaculture interventions that have been evaluated with respect to their impacts on nutrition include poultry, milk production from cows and goats, and small fish production. Livestock and aquaculture interventions can impact dietary diversity and nutritional status through smallholder households' consumption of their own production and through new income from sales that is used to purchase a greater variety of foods. There is little information on how decisions are made regarding which pathway is taken.

The livestock and aquaculture interventions associated with marked improvement in dietary intake and nutritional status have several common characteristics: (1) women have a critical role in the intervention, (2) the intervention includes a nutrition education component, (3) the intervention targets the least nourished, and (4) the beneficiaries have some familiarity with the agriculture systems being proposed.

Both livestock and horticulture interventions are more likely to increase food diversity when nutrition is explicitly part of the planned outcomes. Dietary diversity also is more likely to occur when the fruits and vegetables that are planted are already familiar to the targeted populations. Despite the existence of a wide variety of fruit and vegetable production systems, only homestead garden production systems have been implemented and evaluated with explicit nutrition objectives at the household level. These interventions generally have been designed to impact nutrition by producing food for household consumption and, secondarily, from increased income by selling the produce. Small horticulture programs include fruits, vegetables, herbs, condiments, and sometimes secondary staples like legumes and sweet potatoes. The positive nutritional impact of homestead gardens has been well documented, but results have not been consistent. Positive results depend on targeting vulnerable populations with the appropriate intervention.

Many gaps in knowledge still remain about how agriculture and nutrition programs can work together. More studies are needed to determine how to maintain the biodiversity of crops and to incorporate identification and measurement of nutritional outcomes into programs promoting biodiversity. There is a need to determine how to increase the role of women in developing programs and have them be partners in implementing and evaluating interventions.

Water and sanitation interventions need to be planned together with agriculture interventions so as to decrease the incidence of disease and improve nutritional status. Other integrated agriculture and nutrition programs that use multidisciplinary and cross-sector approaches need to be evaluated more systematically to determine which combinations of interventions work best together. Factors associated with farm household decisions about selling versus consuming additional foods produced need to be better described so they can be incorporated into integrated interventions. Finally, more formative and qualitative research with community input is needed to determine how programs can be better disseminated within communities.

Baseline and follow-up measures for any programs that integrate agriculture, health, and nutrition need to include the growth and micronutrient status of children and women's nutrition and health outcomes such as iron status and reproductive health outcomes. Studies need to be long term, over numerous years, and incorporated into the evaluation plans.

**Impact of Value-Chain Investments on Dietary Diversity.** Agriculture value-chain interventions have so far focused on enhancing productivity to improve food security and increase farming income. It is assumed this would lead to improvements in the nutritional status of producers and consumers. To date, however, value-chain concepts and approaches have not been applied in the field of nutrition in a consistent or comprehensive way and most value chain studies do not report on whether farmers and non-farming households are improving their nutritional status. It is not known what production, transportation, processing, or retailing practices related to food will increase nutritional status. Introduction of new, more nutrient-dense, and profitable crops may be one consequence of value-chain development. Dual cropping for human and animal consumption and even for biofuels can increase farm income, with possible beneficial impacts on nutritional status. Both these hypotheses need to be rigorously tested.

Few value-chain projects have examined the economic and biological effects of the pathway from production to consumption. What is known is that the focus on adding value to food often makes products more expensive for consumers. In addition, value chains commonly focus on single food commodities whereas a healthy and high-quality diet consists of a combination of different foods. Value-chain approaches focus on private competitive markets and have given little attention to making nutritious foods available in institutional settings like food aid distribution points or schools, which are potentially important for specific at-risk groups.

Meeting regulatory and certification standards can increase the sale value of products for smallholders. This can be done by providing the required technical assistance, credit, and greater access to the marketplace. Education and training for smallholders on business skills are also needed to get them more involved in the value chain. Infrastructure inputs, especially roads, are needed to enable smallholders to get product to the marketplace. With the advent of urbanization and a consumer-driven market, smallholders can benefit from the growing market for high-value fruits, vegetables, and animal products. Contract farming and formation of marketing cooperatives are two approaches that can help smallholders take advantage of these new market opportunities.

More research is needed to identify opportunities where the nutritional benefits of agriculture interventions can be improved by addressing constraints at various points along the value chain. Although there are examples of local processing by farmers, more research is needed to determine the cost-benefit for farmers of adding value to their products at the farm or local level. An important opportunity to add value to the yields that are already being produced is to increase the use of technologies to decrease post-harvest loss of product before and after food enters the marketplace. In both instances, the nutritional benefits of these forms of value addition still need to be evaluated.

**Impact of Agriculture Technology Interventions on Diet and Nutrition.** Several agricultural technologies have been developed, tested, implemented, and evaluated with regards to crop production, but these have not always been tied to nutritional outcomes for producers. The major efforts have focused on soil and plant health including irrigation, fertilizer, and pesticides. There also has been a growing interest in how to use modern communications systems to provide information and skills to rural farmers. Small-scale irrigation shows promise for breaking the cycle of low productivity that characterizes the persistent poverty found in agricultural communities in LMICs. By enabling year-round cultivation of high-value crops, irrigation can improve incomes and food security, and alleviate both chronic and seasonal malnutrition that is prevalent in food-insecure areas. More environmentally sustainable methods for irrigation, e.g., solar-powered drip irrigation, are now being developed that have been shown to increase food production and dietary diversity.

Small-scale irrigation systems increase agricultural production, mainly through diversification of crops grown. Positive impacts on food security have been documented, e.g., through increasing consumption of irrigated vegetables. Irrigation systems can also contribute to stabilizing and improving intake of food staples and animal-source foods as a result of higher incomes from irrigated crop sales. Enhanced access to fresh vegetables and animal-source foods, in turn, contributes to improvements in nutritional status and health.

On the other hand, irrigation can lead to increased mono-cropping, which may have a negative nutritional impact. Also, irrigation systems may enhance water-related diseases by increasing vector-breeding habitats. There is a need for more studies on the risk of toxicity from pesticides, arsenic, or wastewater that can contaminate irrigation water and affect the health of people exposed. Smallholders who initiate new irrigation projects need to be able to access and use economic and nutrition education so they can

optimize the outcomes from more diverse and increased crop production and prevent unwarranted negative outcomes.

Fertilizers and pesticides are also important inputs that can increase crop production per unit area and increase the quality and nutrient content of crops. However, both inputs need to be accompanied by training at the local level to decrease their potential harm to the environment, agricultural workers, and consumers.

Using new information and communication technologies (ICTs) can aid in disseminating agriculture and nutrition information. Mobile phones and computer centers are the most targeted channels to provide technical and scientific information on crop production and nutrition. They also can be used to support the marketing of products, which can help level the playing field between small producers and traders. Women need to access these new ICTs and a strong institutional infrastructure needs to be created to maintain them. However, there is still a lack of data on how these modern ICT methods are increasing the nutritional status of users.

**Development of Human Capacity for Large-Scale Nutrition Outcomes.** The most common explicit investments to build human capacity for improving nutritional status have revolved around recruiting and training community health workers (CHWs). Each successful capacity-building program has spent significant resources in this area in one form or another, whether the CHWs are part of the paid health care system or volunteers. CHWs are mostly incorporated into community-based programs (CBPs). The most successful plans for building human capital have been those that target the poor, especially women and children, by household income and/or by geographic area. The greatest impact has occurred when programs target the most malnourished who suffer from chronic and acute malnutrition.

Investments in agricultural extension workers are another important avenue that has been used to increase nutrition and dietary diversity. Extension programs enable farmers to increase yields, expand and increase the stewardship of land, prevent losses along the value chain, and increase the adoption of biotechnology. One of the primary ways that extension workers can support nutrition indirectly is by targeting women farmers. Currently, the information given to women farmers is often different than that provided to men; women have more limited access to resources than do men in many LIMCs, and women farmers have less access to extension workers. By supporting the uptake of new technologies by women farmers and potentially decreasing the unbalanced access to resources, extension workers can help women farmers gain the nutritional benefits that accrue from increasing production, consumption, and sale of nutrient-dense foods.

The training of CHWs and extension workers can occur at the local level and be enhanced by creating better training methods at universities for trainers. It is also important that CHWs and extension workers have cultural competency and behavior change communication skills in addition to technical skills.

**Development of Institutional Capacity for Large-Scale Nutrition Outcomes.** Successful programs also build institutional capacity for developing and sustaining national programs that target behavior change through education, micronutrient interventions, and feeding programs to prevent and treat moderate and severe protein-energy malnutrition. These programs are characterized by committed and capable leadership at the national level, and by effective multisector and multilevel coordination across government ministries, various nongovernmental organizations (NGOs), community leaders, and the private sector.

Effective social mobilization strategies at the national and local levels are key inputs for building institutional capacity. Using community-based participatory research (CBPR) to develop and implement community-based nutrition programs has been shown to be effective. In all these cases, there was a phased implementation in which the program started in a few provinces or districts and then expanded nationwide.

**Successful Large-Scale Programs.** The most successful large-scale nutrition programs are targeted CBPs and, more recently, the expanding number of conditional cash transfer (CCT) programs. CBPs usually combine a set of inputs at the local level and often use CHWs to deliver these services. Evidence shows that the most successful CBPs with a food and nutrition focus involved food and nutrient supplementation, iodization of salt, other centralized fortification programs that are delivered locally or provided at home, and various education programs including promoting breastfeeding and appropriate complementary feeding practices.

CCTs provide financial incentives to families linked to specific beneficial social behaviors. CCT programs have been most effective when they target women as being responsible for making the behavioral changes that benefit themselves, their families, and their children. Successful CCT programs involve a sequence of activities that require human and institutional capacity.

The implementation of programs needs to be done carefully and with clear goals and objectives. Starting small and expanding has allowed for proper scaling up of programs. It is also necessary to include the resources to implement appropriate M&E plans so modifications to programs can be made as needed. Finally, strong leadership and national commitment are critical and need to be in place for the long term if programs are to become sustainable.

## G.5 IMPROVING RESILIENCE OF VULNERABLE POPULATIONS – EXECUTIVE SUMMARY

This paper provides the assessment for Theme VI: “Improving resilience of vulnerable populations.”

The stated aim of Feed the Future is to tackle the root causes of global hunger and poverty through inclusive agriculture sector growth and improved nutritional status. This paper examines available evidence on the impact of investing in improving the resilience of vulnerable populations as a means of reducing poverty and chronic malnutrition.

International and humanitarian development actors are increasingly adopting resilience as an organizing concept for food security policy and program development. The emergence of this new perspective has coincided with increases in the frequency and severity of natural and human-caused disasters resulting from climate change, ecosystem fragility, geopolitical instability, and economic volatility (Constas & Frankenberger, 2013). The new focus on resilience also reflects recognition by the international humanitarian community that while large-scale emergency responses have saved millions of lives, they have not increased the capacity of vulnerable populations to withstand shocks and stresses (USAID, 2011b). Nor have they been the most cost-effective response to the underlying causes of vulnerability.

Multiple studies have demonstrated that the cost of immediate damage to life and property, coupled with the resources spent on emergency response, is several times greater than effective disaster prevention (World Meteorological Organization [WMO], 2010; Venton, Fitzgibbon, Shitarek, Coulter, & Dooley, 2012).

In December 2012, USAID laid the foundation for the agency’s future investments in resilience by issuing policy and program guidance for resilience programming that calls for layering, integrating and sequencing of humanitarian and development assistance (USAID, 2012a). This paper supports that effort by summarizing current learning related to resilience programming and discussing some of the critical evidence gaps that must be addressed in order to inform policy and maximize the impact and sustainability of investments in this emerging area. The paper is structured around four large themes related to resilience, each of which encompasses specific questions outlined in the Feed the Future Learning Agenda.

**Strengthening Household Capacities to Withstand and Recover From Shocks.** Enhancing the capacities of households and communities to withstand and recover from shock entails both *ex ante* and *ex post* aspects of risk management. Likewise, the determination of the most effective risk mitigation strategies depends in part on whether the shock is *covariate* (affecting everyone) or *idiosyncratic* (affecting only certain types of households or communities). In reality, there is considerable overlap and interaction among various types of risk and among strategies for reducing them. Ideally, both *ex ante* and *ex post* strategies will be employed at the household and community levels in preparation for both covariate and idiosyncratic shocks.

Building resilience requires an integrated approach and a long-term commitment to improving three critical capacities: absorptive capacity, adaptive capacity, and transformative capacity (Béné, Wood, Newsham, & Davies, 2012). *Absorptive capacity* is the ability to minimize exposure to shocks and stresses (*ex ante*) where possible and to recover quickly when exposed (*ex post*) (Frankenberger, Langworthy, Spangler, & Nelson, 2012b). *Adaptive capacity* involves making proactive and informed choices about alternative livelihood strategies based on changing conditions. *Transformative capacity* relates to governance mechanisms, policies/regulations, infrastructure, community networks, and formal

safety nets that are part of the wider system in which households and communities are embedded. Although many of the papers in this review do not analyze the evidence on the basis of these capacities, an effort has been made to discuss the findings with these three capacities in mind.

Strategies designed to help vulnerable populations withstand and recover from shock typically fall into one or more of three categories: asset strategies, safety net strategies, and insurance. Asset strategies aim to maximize the use of productive assets to buffer households and communities against periodic shocks and stresses. It is important to note, however, that resilience is not synonymous with asset accumulation and that promotion of assets must carefully consider asset management strategies in light of the particular risk context. There is substantial evidence to suggest that safety nets have a positive effect on *absorptive* capacities by stabilizing consumption and helping households to decrease the use of negative coping strategies during shocks (Hoddinott, 2008; Lustig, 2000). However, the literature also reveals that in order to deliver sustainable benefits, safety net interventions must be integrated with activities that build adaptive and transformative capacities such as conditional cash transfers (CCT), food for work (FFW), and school feeding programs. The evidence suggests that participation in such initiatives can help households maintain minimal living standards while enabling investments in recovery and future livelihoods (Fiszbein, Schady, & Ferreira, 2009; Maluccio, 2005; Skoufias, 2003). Likewise, FFW and weather-indexed crop and livestock insurance are promising means of helping farmers in disaster-prone regions to smooth consumption and avoid distress sales of productive assets. Formal insurance schemes are found to be most helpful when combined with informal risk-sharing mechanisms.

There are several critical evidence gaps for improving the ability of vulnerable households and communities to withstand and recover from shocks. These include: (i) a lack of evidence on effective activities for building social capital, (ii) an incomplete understanding of recovery timeframes, (iii) a need for studies that show differences across livelihood types, (iv) a gap in understanding about the role of local knowledge of climatic conditions and weather, and (v) insufficient consideration of the role of aspirations in shaping household resilience.

**Role of Safety Nets in Risk Management.** Safety nets are properly viewed as one element of an adaptive social protection scheme aimed at ensuring the welfare of vulnerable households while enabling them to participate in and benefit from economic growth (United Nations Development Programme [UNDP], 2011). They can contribute to resilience by helping risk-averse households engage in more diverse and adaptive livelihood strategies within an uncertain or risk-prone context. Safety nets can enable the risk taking necessary to improve adaptive capacity by relaxing the liquidity constraints common among chronically vulnerable households, a key first step to facilitating their engagement in more remunerative economic activities. Despite the promise of safety nets, the benefits of FFW, CCT, and other forms of assistance cannot be over-generalized, particularly in light of key differences in forms of social assistance and methods of social service provision in different parts of the world (Devereux et al., 2008).

In order to effectively contribute to resilience, safety net mechanisms should be closely tailored to a range of influencing factors including: household asset and income levels, the predictability of access to complementary social protection mechanisms, and the size of the transfer. Appropriate tailoring of safety net and other risk management interventions will be aided to the extent that important evidence gaps can be filled. These gaps include: (i) limited insight into the relationship between agricultural productivity and adaptive capacity, (ii) lack of evidence on the main barriers to investing social protection proceeds in consumption smoothing and asset accumulation, (iii) insufficiently robust methodologies for assessing the role of gender dynamics in risk reduction strategies, and (iv) the influence of power inequalities on the ability of vulnerable populations to improve their adaptive capacity.

**Market Access and Value Chains.** Improving market access can make important contributions to greater resilience among vulnerable populations. Direct support for market improvements can enhance the transformative capacity of the wider system while simultaneously strengthening the *adaptive capacity* of vulnerable individuals and households (Frankenberger, Spangler, Nelson, & Langworthy, 2012a; Barrett, 2008).

Maximizing profitable access to markets among the poor entails overcoming market efficiency constraints and poverty-driven constraints. Market inefficiencies typically result from inadequate infrastructure, input/output markets, and economic policies whereas poverty-driven constraints are caused by the deprivation among vulnerable populations in terms of physical, human, and social assets. The inter-related nature of these constraints necessitates emphasis on processes (rather than outputs) and careful consideration of intervention coordination and sequencing. The evidence suggests that value chain activities represent some of the best opportunities for capturing potential benefits of market development for pro-poor growth (Kaaria, Njuki, Abenakyo, Delve, & Sanginga, 2008; Maertens & Swinnen, 2009).

Value chain interventions must consider context when determining the most appropriate means of enhancing the asset bases of the poor, enabling more effective risk mitigation, and reducing market transaction costs (van Haften, Anderson, Caudill, & Kilmartin, 2013; Barrett, 2008; Torero, 2011). The evidence shows that value chain interventions are most successful when they are demand driven, participatory, and incorporate the private sector (Altenburg, 2007; Devaux et al., 2009; Torero, 2011; United Nations Conference on Trade and Development [UNCTAD], 2009).

Several gaps remain in our understanding of the relationship between market access, poverty traps, and resilience. There is a critical need for: (i) empirical evidence on the effectiveness of producer and marketing associations in enhancing market access, (ii) methodologically sound quantitative data on the extent to which value chain interventions are transferable or scalable (Mitchell, Keane, & Coles, 2009), and (iii) better understanding of the diverse underlying causes of vulnerability that determine the most effective sequencing and combination of market interventions to promote pro-poor economic growth in varying economic contexts.

**Incorporating the Poor and Vulnerable Into Economic Growth Strategies.** Ensuring that economic growth strategies are broad-based, inclusive, and effective in reducing poverty is a fundamental challenge. Although considerable research and effort has gone into development of strategies aimed at promoting agricultural intensification, improving access to markets and infrastructure, providing basic services, and promoting enterprise development, there is no consensus on how to implement such strategies in a manner that delivers benefits for all, including the most vulnerable. It has become increasingly clear, however, that the long-run costs of neglecting poverty alleviation in growth strategies may be higher than the cost of incorporating them from the start (The Montpellier Panel, 2012). There is also growing agreement that economic growth strategies aimed at incorporating the poor are most effective when they are microeconomics-based, agriculture-led, equity-focused, institution-centered, and push-pull oriented (Barrett, 2008; Barrett & Carter, 2012; World Bank, 2008). Potential examples include initiatives in support of decentralization and devolution of local land governance, microfinance and microenterprise associations, and formal insurance arrangements for smallholders.

Despite a growing body of literature on the linkages between economic growth and resilience, several critical evidence gaps remain. Much work is needed to: (i) verify empirically the nature of causal relationships between poverty reduction, agricultural productivity, and the existence and avoidance of poverty traps (Barrett & Carter, 2012; Kida, 2011; Levine, Pain, Bailey, & Fan, 2012) and (ii) move beyond traditional indicators such as aggregate statistics on agricultural growth to examine more closely

the economic implications of social protection, insurance, food assistance, and climate change on asset accumulation and livelihood security (Béné, Wood, Newsham, & Davies, 2012; Frankenberger, Langworthy, Spangler, & Nelson, 2012b).

**Other Research Areas.** In addition to the identified gaps for the key questions of interest to USAID, there are a number of other important research areas pertinent to resilience programming that still need further investigation. These include measuring resilience at multiple levels, mainstreaming gender equity, fostering good governance, mitigating internal and cross-border conflicts, and promoting complementarity of public and private sector investment in resource-poor environments.

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## **Annex H**

# **Summary of Community Resilience: Conceptual Framework and Measurement**

## Community Resilience: Conceptual Framework and Measurement – Executive Summary

USAID defines resilience as “the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth” (USAID 2012). As part of the broader USAID Feed the Future Learning Agenda, the agency seeks to operationalize and measure resilience, recognizing that there is ongoing debate over definitions of resilience and measurement approaches. These questions are under examination in a range of academic fields and by the community of development practitioners, as evidenced by initiatives such as the Technical Working Group on Resilience Measurement and the recent Expert Consultation on Resilience Measurement for Food Security (Rome, February 2013).

This paper seeks to advance the discussion by focusing specifically on a conceptual framework for the measurement of community resilience. It is intended for use by USAID staff and implementing partners, non-governmental organizations, multilateral organizations, and government and community stakeholders seeking to apply a resilience measurement framework to policy and programming of development initiatives. It is envisioned as especially relevant in areas with highly vulnerable populations subject to ongoing shocks and stresses, where the effectiveness of past efforts to improve the situation has fallen short.

The focus on community reflects recognition that resilience manifests at several levels: individual, household, community, and higher-level systems (e.g., nations, ecosystems). The authors adopt the following definition of community resilience:

*The general capacity of a community to absorb change, seize opportunity to improve living standards, and to transform livelihood systems while sustaining the natural resource base. It is determined by community capacity for collective action as well as its ability for problem solving and consensus building to negotiate coordinated response. (Walker et al. 2010).*

The authors endorse this definition because it underscores the main types of capital that are collectively managed (e.g., social and natural) and the distinctive aspect of community resilience: *the community’s capacity for collective action*. This concept is at the heart of the proposed conceptual framework for community resilience. The objective of the framework is to provide a comprehensive understanding of the factors and processes influencing vulnerability and resilience at the community level. The main building blocks of community resilience include socio-economic context, shocks, stresses, community livelihood assets, social capital, and community social dimensions. Together, these factors constitute the community’s capacities for collective action that influence community resilience. Ultimately, the framework should help to explain why certain communities are relatively resilient, whereas others are on a descending pathway of vulnerability. The framework enables identification of the key leverage points to focus on as part of a theory of change, and the interventions that should be included in programs aimed at enhancing community resilience.

This conceptual framework identifies several categories of community assets that are essential to community resilience, placing special emphasis on a community’s social capital. Strong social capital is the foundation of collective action, collaboration, and self-organization. The framework borrows from Aldrich (2012) to describe three types of social capital that assist communities to prepare for, cope with, and recover from an array of shocks and stresses such as natural disasters, slow-onset shocks (e.g.,

drought), climate change, market shocks, and violent conflict. **Bonding social capital** is seen in the bonds between community members. It involves principles and norms such as trust, reciprocity, and cooperation, and is often drawn on in the disaster context, where survivors work closely to help each other to cope and recover. **Bridging social capital** connects members of one community or group to other communities/groups. It often crosses ethnic/ racial lines, geographic boundaries and language groups, and can facilitate links to external assets and broader social and economic identities. Bridging social capital makes a direct contribution to community resilience in that those with social ties outside their immediate community can draw on these links when local resources are insufficient or unavailable (Wetterberg 2004). **Linking social capital** is seen in trusted social networks between individuals and groups interacting across explicit, institutionalized, formal boundaries in society. Linked networks are particularly important for economic development and resilience because they provide resources and information that are otherwise unavailable. This type of social capital is often conceived of as a vertical link between a network and some form of authority or power in the social sphere (Szreter 2002). Communities with higher levels of bonding, bridging and linking social capital are inherently more resilient than those with only one type or none (Aldrich 2012; Elliott, Haney, and Sams-Abiodun 2010; Woolcock and Narayan 2000).

Social capital is a driving force behind informal or customary institutions that make collective action possible. The paper describes these institutions in terms of structures, processes, and practices that a community engages in to achieve shared goals in the areas of disaster risk reduction, conflict mitigation, social protection, natural resource management, in managing and maintaining public goods (e.g., schools, health clinics, roads). This may include mutual commitments to sharing food, water, labor, or child care in times of need; informal savings groups; community-based natural resource management; disaster committees; traditional mechanisms for conflict mediation and management; and voluntary initiatives to maintain public infrastructure such as feeder roads, public water pumps and irrigation systems. The community-based collective actions taken by these groups may be supported or constrained by formal or external initiatives. Governments and outside stakeholders must have a solid understanding and valuation of these traditional systems when planning community resilience strategies so as not to displace or hamper their effectiveness; the paper offers a few examples of how informal and formal systems can collaborate successfully.

The conceptual framework for community resilience is a basis for measurement. To gather information on the key indicators related to the community assets, social dimensions, and capacities for collective action described in the framework, a mixed-method approach is needed that combines quantitative and qualitative measures. Given the mix of tangible and intangible assets involved and the dynamic nature of each component, measurement should entail a combination of traditional outcome measures with process measures, as well as others that capture capacity. The paper proposes indicators for five types of collective action, which can be aggregated to create an index that is a proxy measure of community resilience capacity. There is nonetheless some complexity in weighting individual indicators so as to reflect their relative influence on resilience; community-based approaches to defining and measuring resilience can provide important insights here to customize the model to the local context.

To determine how community resilience interacts with household resilience, Hierarchical Linear Modeling (HLM) is introduced. HLM is highly applicable to understanding this inter-scalar dynamic because of the nested relationship between households and communities. The effects of some intervention or set of conditions observed for each level are not independent of one another. HLM is a multi-level quantitative analysis technique that allows data on outcomes and their determinants at all relevant levels of analysis (household, community, and higher-level system) to be included in an integrated analysis. As a result,

estimates of effects are less biased, and recommendations for practice tend to be more accurately targeted.

The authors recognize the wide range of approaches currently used to measure community resilience, and that it is critical to develop a set of harmonized standards, methods, tools, and indicators to guide resilience measurement for practitioners. This paper seeks to contribute to the ongoing collective effort by offering the community resilience conceptual framework and the corresponding measurement approach outlined in this paper. The main value added of these concepts is the emphasis placed on the key distinguishing attribute that differentiates community resilience from household resilience: the capacity for community collective action to manage shocks and stresses. Longer-term, it is envisioned that continued assessment and identification of new indicators to better measure resilience will emerge as evidence accrues.

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