



Mid-term evaluation of the USAID Agricultural Extension Support Activity

2015

*This Evaluation Report
Was Prepared by TANGO International*



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Acronyms

Acronym	Definition
AESA	USAID Agricultural Extension Support Activity
AS	Annual Survey
AIS	Agriculture Information Service
BL	Baseline
DAE	Department of Agricultural Extension
DoF	Department of Fisheries
DoL	Department of Livestock Services
DAM	Dhaka Ahsania Mission
DK/DNK	Don't Know/Do Not Know
ET	Evaluation Team
FF	Field Facilitator
FL	Farmer Leader
FPG	Farmer Producer Group
FGD	Focus Group Discussion
HH	Household
ICT	Information Communication Technologies
KII	Key informant interview
LOA	Life of Activity
LF	Logframe
MT	Midterm
MTR	Midterm Review
NGO	Non-government Organization
ODK	Open Data Kit
PPS	Probability Proportional to Size
n	Sample Size
SAAO	Sub Assistant Agriculture Officer
SRS	Simple Random Sample
TANGO	Technical Assistance to NGOs
UAO	Upazila Agriculture Officer
UFO	Upazila Fisheries Officer
ULA	Upazila Livestock Assistant
ULO	Upazila Livestock Officer
VFA	Veterinary Field Assistant

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This study also owes enormous credit to the outstanding work of the DMA survey team. The field team (enumerators, facilitators, and supervisors) successfully completed fieldwork, working through long days, at times difficult logistics, and unexpected challenges with continued patience. Special thanks also go to the AESA colleagues who coordinated the overall logistics for the evaluation, and to all the program field staff who provided excellent support to the TANGO team during fieldwork.

Finally, we are most indebted to the individuals and families who gave freely of their time and company to be interviewed by our teams. Without their generosity and openness in welcoming us into their homes and sharing invaluable information about their lives, this important evaluation would have never happened.

TANGO International

7 April 2016



Executive Summary

The purpose of the USAID Agricultural Extension Support Activity (AESA) mid-term evaluation is to 1) review and analyze the effectiveness of AESA project in achieving the program objectives and 2) analyze if the project is contributing to the improved agricultural service provision which in turn will lead to increased productivity of farmers.

The AESA project is organized into three components that together contribute to the AESA goal: "a strengthened agricultural extension system in southwest and central Bangladesh." Component 1 is premised on the empowerment of smallholder farmers (with an emphasis on women farmers), through development of farmer producer groups (FPGs) around six non-cereal value chains in central and southwest Bangladesh: jute, chili, mung bean, fish farming, beef-fattening and dairy. Component 2 enhances networking, linkages and access to information for farmers and extension agents through development and introduction of new information communication technology (ICT) capacity. Component 3 addresses transformational change within the public and private extension services, so they not only have the capacity to provide the most relevant and up-to-date technical information, but smallholder farmers have equal access to all government and non- government infrastructure and services in their area.

The original design was premised on relevant pro-poor targeting and relevant value chains in central and southwest Bangladesh but exceeded geographic targeting exceeded project resources. In 2015 AESA, in consultation with USAID, made strategic changes to the project design, in part to accommodate an unexpected budget reduction announced by USAID. AESA reduced project geographic scope and the total number of FPG groups targeted. Resource savings were used to intensify activities in four demonstration Upazilas to allow the Department of Agricultural Extension (DAE) to observe the process and outcomes and to adopt the improved practices that are deemed appropriate and valuable. This project realignment will have a positive effect on future project achievements, in particular on establishing a clear proof-of-concept for an implementation model that can be adapted for scale.

Overall, the project made meaningful progress towards the overall goal, and the most essential project results and objectives. Across all 12 districts, there are signs of emerging positive impact. AESA has linked farmers and extension agents through a series of light touch activities. The intensification of agricultural extension delivery in four Upazilas is also showing early signs of success. AESA interventions provide farmers with access to information they did not have before, which will resolve the majority of their agriculture questions and problems. Early market interventions linking farmers to trusted agro-vet services have improved access to, and knowledge about, affordable value chain inputs. These achievements, together with direct project investments in strengthening agriculture capacity among both farmers and extensions agents, have already yielded small but important improvements in farmer productivity in the project value chains. ICT activities and outputs have not yet come to full fruition. The potential benefits of the Agro Knowledge Bank and Agricultural Call Center investments are high, if AESA finds a way to effectively link farmers with these resources. There are also indications of emerging negative impacts attributable to project interventions. There is a risk of unmet expectations among FPG leadership and members as to the future role and sustainability of the groups beyond the project timeframe. Similarly, there is a risk of disappointment among farmers as to the potential of 'new' ICT due to unmet expectations of the distribution of technology within the project.

The ET's recommendations are provided in section V in detail, with a simplified list found in Box 1 below.

Box 1: Summary of midterm review recommendations (for full detail see section V)

1. Clarify with field staff which project value chains the project will promote increased group marketing for.
2. While it is reasonable to assume that not all elements of the demonstration site interventions will be sustainable, the model itself must have some form of adaptation and continuation in the medium term or else the proof-of-concept will have failed. The project must formulate the potential future journey of demonstration sites to ensure continuation of core elements by stakeholders
3. Reduce expected level of efforts of selected ICT Champions. Focus resources on further building capacity of ICT leaders, Field Facilitators and Field Supervisors into a "assistant extension agent" roles.
4. Develop a 1-2 page document on FPG expectations. The document should highlight key talking points for field staff, and be grounded expected results for the end of the project. Supplement this with training on expectation management.
5. Consolidate the FPG leadership functions. Provide the main Farmer Leader the overall training package through a refresher process. Provide farmer leaders with training on communication and adult learning methods, how to organize courtyard sessions, and catalyze collective action. Ensure trainings are provided with FF, FS, SAAOs, present to build the trust between farmer leaders and sources of extension knowledge.
6. Work with FPG groups to identify low risk lenders and provide a series of trainings on input financing options to FPG members. Relative to the cascade training provided for the 5 key practices, AESA should have more of a hands on technical role in these trainings.
7. Increase the utilization of existing visual ICT tools such as videos developed by the project via smart phones. Increase the use of non-text training tools for trainings that go beyond the 5 key practices. This can include picture heavy leaflets, flip cards, posters, and videos.
8. Consider more direct farmer training models involving FFs and private market actors for farming as a business training. This provides an opportunity to further build trust between farmers and the private sector around inputs on credit, or with existing finance institutions
9. Increase information dissemination via FFs and ICT leaders to FPG members on call centers function as a source of reliable extension knowledge. Couple this with targeted support to project partnered call centers to increase volume and content capacity
10. Develop a simple knowledge management framework with select knowledge products that address the AESA advocacy strategy needs. These are short documents, aimed to demonstrate proof of concept project blue prints.
11. Insert specific activities related to strengthening external partnerships into the Year 4 implementation plan. These activities should be linked to the project advocacy and exit strategies.
12. Provide FF, FS, and ICT leaders/champions remaining phones, with the intent for the project to transfer those phones to the most appropriate persons at the end of the project. Demonstrate a proof of concept that capable persons, with limited agriculture knowledge, can provide extension support with appropriate ICT tools and resources.
13. Work with mPower and CARE to develop AESA field staff's ability to provide practical hands-on support to extension agents and farmer members in the final phase of the project.
14. Reformulate indicators for outcome monitoring with a focus on project performance. The system should focus on an evidence base for of adoption, replication, GoB ownership, and learning questions associated with the proof-of-concept investments.

I. Introduction

A. Purpose of the evaluation

The purpose of this mid-term evaluation is to 1) review and analyze the effectiveness of AESA project in achieving the program objectives and 2) analyze if the project is contributing to the improved agricultural service provision which in turn will lead to increased productivity of farmers. In conjunction with these objectives, the evaluation team reflects on implementation challenges and makes recommendations to the project strategy.

B. Audience for and use of the evaluation

The primary audiences for this mid-term evaluation are the AESA partners and the USAID mission in Bangladesh. The AESA partners can use the evaluation to consolidate the implementation approaches and inform allocation of resources for the remaining project timeframe, specifically to inform the Year 4 planning process in Q4 of 2015. The mission can use the evaluation findings to strengthen its strategic guidance to the AESA project team and to support synergies within the mission portfolio. Sector partners, in general, can apply the AESA lessons learned, which have broader application to agriculture, extension service, and ICT applications in Bangladesh, in their own work.

C. Objectives of the evaluation

The objectives of the midterm evaluation are:

1. To review and analyze the effectiveness of AESA project in achieving the program objectives
2. Analyze if the project is contributing to the improved agricultural service provision which in turn will lead to increased productivity of farmers
3. Evaluate major constraints in achieving expected project results and ways of overcoming those
4. Provide recommendations for more efficient and effective future implementation of the project, along with suggested adjustments on the project focus and any corrections required.

D. Evaluation methodology

The evaluation is grounded in OECD-DAC evaluation criteria and guidelines, the USAID Evaluation Policy and associated guidelines. The evaluation was guided by the specific evaluation question in the Terms of Reference issued by AESA. These questions are presented in Appendix B for easy reference, and have been referenced throughout the analysis as footnotes.

The main conceptual approach for this evaluation is Theory of Change (ToC). The ET used the ToC approach to organize the information gathered through a preliminary literature review as the basis to develop the sub-questions around the AESA causal hypothesis and the underlying assumptions.

The evaluation included a structured review of AESA internal documents, including an exhaustive review and validation of program monitoring data. The IET used a mixed-methods approach to collect and analyze primary qualitative and quantitative data, which was triangulated with the results of the structured literature review and the AESA 2015 annual survey results.

Fieldwork by an international team and multiple national teams took place in Dhaka city and the three project regions (Jessore, Khulna, and Barisal) from 5 to 26 November 2015. Primary data was collected through three structured surveys that followed the annual survey sampling strategy. The FPG member survey included 550 sampled respondents, and resulted in 500 completed surveys (9.1 percent non-response) (Table 5). The FPG leadership survey included 50 completed interviews of FPG leadership teams (farmer leader, marketing leader, and ICT leader). The government extension worker survey targeted, and completed, 50 interviews with various government extension workers servicing the groups selected as part of the farmer member sampling frame. This was complemented with qualitative data collection that included 39 focus group discussions of farmer members and extension agents, including over 400 individuals – 272 males and 130 females. Also completed were 97 key informant interviews with extension workers, project and partner staff, public and private extension agents and other key stakeholders. The detailed evaluation methodology can be found in Appendix A.

E. Limitations to the evaluation

1. The midterm evaluation report reflects fieldwork findings from November 2015. The ET provided preliminary recommendations following the initial fieldwork debrief, and as part of the evaluation process there were iterative reviews of draft midterm evaluation reports. The ET views this iteration a key part of the evaluation process, and acknowledges that AESA has begun acting on preliminary recommendations and early draft report findings. AESA actions undertaken since the November 2015 fieldwork are not reflected in this report.
2. Secondary data and documents were not shared in a structured knowledge management system. This had no impact on the content of the midterm review. However, the review of secondary data and documents, and follow up with AESA took more time than allocated in the work plan.
3. The ET took a structured approach to stakeholder listing, in close consultation with AESA, and identified the most appropriate key informants. The ET found a lack of institutional knowledge as a result of turnover of AESA and partner staff. Many key informants who participated in the midterm review were not with AESA at the start of the project, limiting the ETs lines of inquiry around project start-up, and progress/change from the time of project inception.
4. The initial proposed timeline was compacted due to delays in the contracting process. The ET and AESA were flexible to accommodate timeline pressures. Fieldwork was delayed two weeks due to delays in the contracting process. This had knock on effects on the remainder of deliverables. TANGO submitted the draft evaluation report one week late (relative to the inception report). There was a five-week delay in AESA providing feedback on the draft reevaluation report.
5. The ET recognizes there was a misunderstanding between the specific purpose of the fieldwork debriefings and purpose of evaluation draft report. Not all findings presented in the draft report were discussed in depth during the debriefing session. The fieldwork debriefings with ASEA and USAID were to highlight main preliminary findings and were focused on results. The draft report is more extensive and covers a greater depth of analysis, and included the factors that affected results. The purpose of the draft was to stimulate further internal reflection on the findings and analysis, before finalizing the evaluation report with the inputs from the AESA team.
6. The ET recognizes there was a misunderstanding on the ET's behalf between referencing AESA leadership and referencing DAM leadership. In the draft report the ET used the two synonymously which lead to reviewers questioning the ET findings - assuming it was reflective of DAM senior leadership - while it was intended to be reflective of AESA senior leadership. This was corrected in the revised draft.

7. The midterm evaluation fieldwork was undertaken at a time of AESA senior management transition, and right before the Y4 planning process. The ET maintained the evaluation findings based on information collected at the time of the evaluation (Oct-Nov 2015).
8. During the time of fieldwork there were security concerns for foreigners in Bangladesh. As a result the ET, as advised by AESA, took precautionary measures, which were much appreciated by the ET. These measures included staying at designated hotels and having regular escorts of police for all fieldwork. The ET attempted to minimize the effect of police escorts on research participants. However, the impact of a police presence in communities during the time of the evaluation activities must be considered while interpreting midterm findings.

II. The development problem and the project response

Agriculture productivity in Central and Southwest Bangladesh remains low due to persistent poor agricultural practices, limited access to equitable market systems for smallholder farmers, and low capacity (in terms of technical skills, number of staff and required inputs for communication and transportation) of agriculture extension services to effectively reach these farmers with the up-to-date information and services required. This is exacerbated by man-made environmental degradation, increased flooding, changes in seasonality of rains, and salinization of soil and water, causing food and water insecurity. Large-scale economic migration by male household members leaves females to maintain their families with limited economic resources and few opportunities to strengthen livelihood activities.

To address these challenges requires a broad sectoral theory of change, as laid out in the current Five Year Development Plan, the Country Investment Plan, and the associated sector strategies. USAID Feed the Future supports the implementation of this theory of change through a multi-year strategy that aligns with country priorities. One investment that provides immediate benefits to farmers and lays the foundation for longer-term agriculture sector change is the strengthening of the agricultural extension system to reach poor smallholder farmers, especially women. This is the focus of the USAID Agricultural Extension Support Activity (AESAs) project, which is implemented under USAID/Bangladesh's Development Objective 2 (DO2): Food Security Improved. DO2 is the flagship DO for the Feed the Future (FTF) strategy in Bangladesh. The DO2 development hypothesis is: "addressing vulnerable household constraints to food availability, access, and utilization will lead to positive outcomes for health and income security." DO2 incorporates integrated, multi sectoral, interventions promoting diversification to more nutritious and high value crops.

To contribute to DO2, the AESA development hypothesis is: "if vulnerable smallholder farmers can be linked with access to high-quality extension services and information, farmers will apply improved agricultural practices." The logical progression from this is that if the USAID Agricultural Extension Support Activity is successful, in concert with other USAID-supported interventions, vulnerable smallholder farmer productivity will increase and food insecurity will decline. A key dimension of the AESA development hypothesis is that information communication technology (ICT)-enabled solutions will play a key role in overcoming the challenges vulnerable smallholders currently face in accessing high-quality extension services and information.

AESA is implemented by Dhaka Ahsania Mission (DAM) in partnership with CARE Bangladesh and mPower, and is guided by the USAID Forward reform agenda. Under USAID Forward, the responsibility of the lead partner, in this case DAM, to manage the USAID-funded project is increased, as management and operational support from the international partner, in this case CARE, is gradually scaled back throughout the project. In the case of AESA, UNOPS plays an important role in capacity strengthening of the DAM team through direct technical assistance and training.

The project timeframe is October 2012 to September 2017. The original total project value was USD \$23,415,619. This was revised downward to USD \$19,102,419 in May 2015 during a process of

strategic realignment of project strategy and targets, in consultation with the Mission.¹ AESA works in 12 districts in the central and southwest areas of Bangladesh (Barisal, Dhaka, and Khulna divisions) to implement capacity building and support the development of a farmer demand-driven agricultural extension system, synergized by use of ICT.² To help foster farmer demand-driven extension, the project seeks to help improve access to quality agriculture inputs, to information and advice on improved technologies and management practices, access to financing and to increased market opportunities. The focus is on smallholder farmers, with priority given to women farmers. A key emphasis is working closely with the Government of Bangladesh to identify gaps in existing capacities and build on efforts already under way.

The project is organized into three components that together contribute to the AESA goal: "a strengthened agricultural extension system in southwest and central Bangladesh." Component 1 is premised on the empowerment of smallholder farmers (with an emphasis on women farmers), through development of farmer producer groups (FPGs) around six non-cereal value chains in central and southwest Bangladesh: jute, chili, mung bean, fish farming, beef fattening and dairy. This component aims at giving smallholder farmer a voice to demand extension services, to purchase inputs in bulk and to sell their aggregated produce at fair market prices.

Component 2 enhances networking, linkages and access to information for farmers and extension agents through development and introduction of new information communication technology (ICT) capacity: e.g., a combination of smart phones, apps, improved central databases, computers and internet connectivity. This enables farmers to make informed decisions about adopting new agricultural technology and farming practices, purchase of quality inputs, and sale of products.

Component 3 addresses transformational change within the public and private extension services, so they not only have the capacity to provide the most relevant and up-to-date technical information, but smallholder farmers have equal access to all government and non- government infrastructure and services in their area.

1. See section III.A for further information on the strategic realignment in 2015

2. The 12 districts are: Jessore, Magura, Khulna, Shatkhira, Narail, Barisal, Bhola, Pirojpur, Barguna, Patuakhali, Faridpur and Rajbari

III. Main evaluation findings

A. Relevance and appropriateness of project design

A.1. The original design

The ET finds that the overall AESA purpose of strengthened agriculture extension system was, and still is, appropriate and relevant to the needs of smallholder farmers in southwest and central Bangladesh. Smallholder farmers in these areas are not able to regularly access government and market services due to the remoteness of their communities and a general lack of public and private service extension. This is compounded by socio-cultural norms and practices that limit women's mobility, who play a key role in household livelihoods.

The project design is well-aligned with government policy to further develop the agriculture sector and facilitate greater access for smallholder farmers to market and extension services, towards achieving the National Food Policy of dependable and sustained food security for all people of Bangladesh at all times, specifically policy objectives 1 and 2. The AESA project directly supports implementation of the Bangladesh Agriculture, Food Security and Nutrition Country Investment Plan (CIP), the Government of Bangladesh's Sixth and Seventh Five-Year Plans, the National Agriculture Policy, the National Strategy for Accelerated Poverty Reduction II, and the Master Plan for Agricultural Development in Southern Region of Bangladesh for 2012-2021.

The combination of focus on organizing farmers to improve agricultural productivity, and access market and extension services, and focus on strengthening capacity of extension agents to provide improved services to farmers is appropriate. The use of a group approach based on a farmer field school model is appropriate, and has the potential to incorporate the extensive sector knowledge in Bangladesh for this model.

The AESA project provides direct support to the extension agents as a primary project target group. This is highly appropriate and sets the project apart from other projects where extension is organized directly by the project with cursory direct participation of extension agents for sustainability purposes.

Direct project activities to strengthen agriculture productivity and provide a basis for effective extension service to farmers are a small but important part of the project. AESA uses a light agriculture practices training component based on training of group leaders followed by an informal courtyard session to provide information to group members. For this type of knowledge transfer model, the project focus on five basic but key agriculture practices is appropriate, and has potential for adoption by farmers without high levels of follow up support.

The project design makes frequent reference to market systems and value chains. The FPGs are organized around the following value chains: jute, chili, mung bean, fish (farming), beef fattening and dairy. These are appropriate value chains for central and southwest Bangladesh with current and emerging market opportunities. At the same time, there is a need for market investments to incentivize farmers to adopt good-practice production practices promoted in the project value chains through project trainings. The current AESA design lacks such investments and includes only basic information dissemination to farmers on market access. This may be insufficient to incentivize farmers to continue to invest in these value chains, further solidifying the linkage between farmers and agriculture extension workers.

The introduction of ICT to extension agents to provide easy access to up-to-date information on improved farming practices and improve service delivery to farmers is highly relevant due to remoteness of smallholder farmers and the lack of prevailing information sources, such as market intermediaries and media. However, the AESA design indicates a heavy emphasis on high-tech ICT such as apps and smart phone technology. While the IET acknowledges the potential due to a rapid increase in the availability of such technology, high-tech ICT is currently not appropriate in the short term for widespread adoption among farmers and extension agents who primarily use basic phones with call and text functions only. The introduction of high-tech ICT for DAE and farmer beneficiaries in demonstration Upazilas to highlight the potential of this technology is appropriate

As per the project design, the farmers will not be provided smart phones. Farmers with access to their own smart phones are provided the associated program apps to submit queries or access technical knowledge, though this number is low (less than 25 total farmers at the time of the midterm evaluation). The project ICT utilization strategy is based on direct interaction between the farmer and a trained ICT user, e.g., a farmer ICT leader or extension agent. The majority of queries or problems that a farmer will have are seasonal and common to other farmers in the area. In such cases, the trained ICT carrier who the farmer has contact with will very likely be able to troubleshoot these problems or else easily contact someone, i.e., by regular phone call, who can. The relevance of the app model to deal with farmer's problems may be limited if the trained ICT user can help resolve the problem. Linking the farmer with a trained individual, as the project does, is already highly appropriate in the project areas where the majority of farmers have no contact with an extension agent, and this may be sufficient for the majority of cases. For more complex cases, project developed apps might not be sufficient to capture the full problem context and detail, and further referral to a local expert or a field visit to the farmer may be required.

The AESA design addresses strategic impediments to improved extension service provision, but notto food security.³ The model of linking extension agents, currently primarily government extension workers, with farmers producer group (FPGs) increases extension agent reach, and access to extension agents by farmers. The constraint is primarily upon the availability of extension agents.

The project rationale makes appropriate reference to the importance of the role of women in agriculture livelihoods, the socio-cultural constraints women face in accessing information and services, and the need for an agricultural extension system that responds to the needs of poor smallholder women farmers. These are highly relevant issues that require a concerted and sustained development response. However, the project design is not clear on how to address these issues, and includes limited provisions to make a meaningful contribution to the stated gender inequalities - beyond increasing the number of female project beneficiaries and general awareness raising. There is no structured targeting of female farmers, but of persons who engage in specific value chains - which include women. The ET acknowledges that by recognizing female farmers the project is improving the cultural acceptance of female value chain actors as farmers.

The project problem statement and rationale makes specific reference to weather and climate variability and change, which are highly relevant factors that affect livelihoods and general wellbeing in the project areas. Climate change and adaption were incorporated in project value chain identification, however, the design does not include sufficient provisions for strengthening livelihood resilience to the climate-related shocks and stresses. Notably, meaningful reference to climate change trends and risk reduction strategies are missing, i.e., to address seasonal recurring floods.

³. *Reference to evaluation question 4, see Appendix B*

A.2. 2015 strategic realignment

In 2015, AESA, in consultation with the Mission, made strategic changes to the project design. It was acknowledged that under the original design the project resources were spread too thin. There was a risk that no meaningful or observable change would be achieved within the project timeframe. At the same time, the project was asked by the Mission to reduce the total AESA project budget by approximately 20 percent. To address this, it was decided to reduce project geographic scope and to reduce the total number of FPG groups targeted. Resource savings were used to intensify component 3 activities in 4 demonstration Upazilas (one per region).⁴ In practice, the increased focus on these 4 Upazilas entailed the establishment of "one-stop" Agricultural Extension Service Centers (AESCs) at the block level as a base for education and outreach activities by Sub Assistant Agriculture Officers (SAAOs), and as a drop-in center for farmers. There was also additional support to the SAAOs in the demo Upazilas, including motorbikes and fuel allowance, a smartphone and additional training to use the component 2 ICT apps, and technical equipment such as a moisture meter, pH meter and soil testing kit.

The ET finds that this realignment will have a positive effect on future project achievements.⁵ It will allow AESA to demonstrate utilization of the improved extension service delivery model in its entirety, which would not have been possible under the original design. At the same time, the revised project design indicates that the continued work with FPGs (component 1) and the light-touch support to extension agents (component 3) in the remaining project areas will build a foundation for enhanced access to agricultural extension services by smallholder farmers in the future. The aim of the four demonstration Upazilas is to allow the Department of Agricultural Extension (DAE) to observe the process and outcomes in the demo Upazilas, and to adopt the improved practices that are deemed appropriate and valuable for roll out in the other project areas and beyond.

The strategic realignment has strengthened the overall relevance of the AESA project and its sector contribution.⁶ The sector value of the AESA development approach lies in the basic linking of farmers who have low historical access to extension services, to extension agents using upstream and downstream incentives. This is an irreversible change that will enable increased demand and drive increased supply of agriculture information and services. However, under the original design, the potential for a continued pathway of positive change for project beneficiaries (farmers and extension agents) remained small due to project resources being spread too thin.

With the realignment, the project has an opportunity to have a more meaningful effect on the sector over the next two years by demonstrating the utilization and benefits of the newly formed relationships. The four demo Upazilas, currently functioning as a proof of concept for a more intensive extension development program, have the potential to provide significant learnings to the sector and development sector.

A.3. Targeting and coverage

The project proposal indicates that geographic targeting of the original design was premised on relevant pro-poor targeting and relevant value chains in central and southwest Bangladesh. However, as discussed in section A.2, geographic targeting was not appropriate as it exceeded project resources. This was partially addressed during the 2015 strategic alignment. While the concentration of project resources in the demonstration Upazilas is appropriate to achieve the expected project results, the ET still has questions regarding the geographic scale of coverage in the

4. Regions include Barisal Sadar, Faridpur Sadar, Jessore, and Narail.

5. Reference to evaluation question 5, see Appendix B

6. Reference to evaluation question 2, see Appendix B

remaining project areas. At the time of the evaluation, it was evident that project focus was mainly on the demonstration Upazilas. The project has not clearly identified the project expectations for FPGs and extension agents outside of demonstration sites beyond Year 3 progress, i.e., farmers are organized, farmers and extension agents have received basic capacity building in improved practices, and FPGs have been linked with extension agents. The IET acknowledges that the year 4 work planning process does focus specifically on setting out these next steps.

Project value chains were selected based on a value chain assessment in the pre-determined 12 project districts, conducted by AESA in 2013. Upazila and village targeting appears to be largely determined through the value chain assessment, existing social and resource mapping data, and informed opinion by project staff. Effort was made to identify villages where no prior farmer groups had been established and extension agents did not reach. Qualitative data collection validates that project villages were historically underserved by agricultural extension. However, the exact criteria used by project staff for Upazila village selection based on the information collected remain unclear.

Guidelines for farmer selection are clearly set out in the Year 3 FPG Formation Guidelines and focus specifically on landless and smallholder farmers (0 – 247 decimals of land) and women farmers. The ET finds that in many cases there was low interest to join project groups due to a limited understanding of the group purpose and early indications that no inputs would be provided. As a result, project staff accepted any interested farmers. This is reflected in FGDs with farmer groups, and key informant interviews with FPG leadership which discussed group size and membership inclusion. In addition the data on group composition, which shows 26.2 percent of FPG members are not considered smallholder farmers (per the project definition of less than 248 decimals), and hold more than 247 decimals of land. The project did target 15 percent of its beneficiaries with more than 247 decimals (1 hectare) of land - however, project documentation primarily refers to all beneficiaries as 'smallholder farmers.' The deliberate inclusion of women group members has been more successful, with close to half of FPG member's female. Around 90 percent of FPG members, male or female, are married (Table 9).

Identification of public extension agents followed directly from the final Upazila selection. Criteria for selection of private extension agents are not clear, as this had just been initiated in 2015. The ET acknowledges that the private sector extension agent definition, selection, and capacity building strategy was being developed at the time of the mid-term evaluation. Early indications are that identification of private extension agents will be primarily opportunity based, and will include those willing and able to invest time in project activities with farmers.

B. Project Component 1: Enhanced access to and utilization of extension services by farmers

Project component 1 is to enhance access to, and utilization of, agricultural extension services by smallholder farmers (including women). Under component 1, the project target group is smallholder farmers in the six project value chains. The key project approaches under component 1 are to organize farmers into Farmer Producer Groups (FPGs), and to work through these groups to mobilize and strengthen farmer capacity to expand agriculture productivity and market opportunities in one of the six value chains. The organization and project support to the FPGs is intended to give the farmers a collective voice to demand improved extension services, higher quality agriculture inputs, and access to affordable financing. In addition, the development of the FPGs is intended to provide extension officers with a more organized and accessible platform to provide effective extension services to farmers.

To accomplish component 1, the project aimed to achieve the following main outputs:

1. Establish 4,160 FPGs with access to extension services (Table 39)
2. Provide training to 100,851 FPG members (Table 39)
3. Facilitate access to affordable/formal finance for 66,965 farmers (Table 39)
4. Enhance access to quality affordable inputs and expand market opportunities to sell outputs

B.1. Outputs achieved component 1

B.1.1. FPGs established and operating

The AESA IPTT shows that 2,159 out of the planned 4,160 FPGs were established and reported as operational, as of October 2015 (Table 39). The majority of these groups were established in 2014-15, after initial startup delays. This is a significant achievement, and the project is on track to achieve the LOA target. Despite the progress and on-track achievement in establishing groups, AESA has an opportunity to strengthen leadership and operation of the groups beyond immediate project needs.

Operationally, all FPGs have a group action plan. A review of these plans indicates action plans are primarily a list of AESA project activities, informed through consultation with the FF. The plans are updated annually to reflect group priorities against the available AESA training program. Qualitative findings indicate that once the plans are developed FPG members and leadership have limited ownership over action plans and consider them project work plans. This was demonstrated routinely in qualitative interviews with FPG leaders, which routinely cited action plans were used by the AESA FFs, but not by the FPG group. AESA staff encourages the organization of weekly courtyard sessions, commonly organized in a village clearing and attended by more than half of FPG members. These sessions serve a specific function to disseminate information to FPG members as part of the training model, especially immediately after the formal training of FPG leadership by AESA. The training model is effective.

In general, there was too much time between establishment of the leadership positions, upon group formation, and the provision of content to these roles. For example, the market activities had only started in a small number of FPGs in 2015, and ICT activities designed to reach the groups had only been initiated during the third quarter of FY 2015 due to delays as a result of the year 3 ICT strategy change. This left the majority of FPG leaders disappointed in their roles.

The role of the ICT leader remains unclear.⁷ At the time of the MTR, the ICT leader had received no substantive ICT-related project support, in the form of training or otherwise. Qualitative findings indicate that all ICT leaders, including outside of the demonstration sites, expected some type of material support. Again, respondents indicated that project staff raised these expectations.

The overall assessment of the ET is that the FPGs are an extension of AESA field staff; an efficient modality to reach large numbers of farmers with information and to facilitate a convenient central contact point for the link up with the extension agents. However, it is important to note that qualitative findings clearly indicate that groups expect to continue beyond the project timeframe. As per the targeting criteria, the FPGs are the first community-based organization in these villages. FPG members and leadership appreciate the convening function of these groups to discuss a wide range of community issues, ranging from planning community events or collective action, informal welfare provision, and general information sharing. There is also a clear expectation among FPG members and leadership that the AESA project will in some way support group growth, with indication that

⁷. A detailed reflection on the proposed role of the ICT leader in the ICT roll-out strategy is presented in Section III.C

these expectations were raised by project staff. Qualitative findings show that while groups have an expectation to continue beyond the project timeframe, the groups lack the capacity to drive their own growth. Groups are closed to new members or to replace old members, as there is a fear of diluting current and future benefits of being a group member. The ET found a need to develop a clear strategy outlining which project components AESA will, and will not, support to further the sustainability and growth of groups.

The ET finds that the composition and division of labor of FPG leadership is not effective or efficient. Farmer Leaders were not elected, they were selected by the FPG members based on farmer leader selection criteria. Qualitative findings indicate no intention to change leadership in the near future. Qualitative findings further indicate that functionality of FPG leadership is not in alignment with their expected role. In practice, the farmer leader is an appointed natural leader and in many groups considered the primary group leader. The farmer leader is commonly the main channel of information dissemination to members, including for training content that the market leader should be responsible for. FPGs received limited project support of group operation and governance after initial group establishment. The limited group operation support provided was included with intensive technical training to farmer leaders and FFs at initial group formation. The ET found that groups were not clear on AESA's lack of expectation of FPG sustainability. There is no group charter and documented guidelines for group operation have not been effectively communicated and explained to project FFs and group leaders.

B.1.2. Training of farmers through FPGs

As a whole, the TOT-courtyard session model is effectively reaching FPG member farmers. AESA IPTT shows that in 2015, 71,770 out of 100,851 farmers received agriculture productivity training. Survey findings show almost all FPG members have received information from FPG leadership, mainly through in-person contact with almost half of members also reporting phone contact, which has helped them improve their production (Table 31).⁸

The main training for farmers is on 'five-key agricultural practices' associated with each of the six specific project value chains through courtyard sessions. The purpose of the sessions is to convey sufficient information on the five key practices and other topical areas provided to the farmer leader and marketing leader in the TOT so that farmers can put this knowledge into practice. Starting in 2015, additional training content was also provided around markets, ICT, nutrition, and gender. The estimated time to conduct the training during the courtyard sessions is approximately two hours, and the timing of the courtyard sessions is selected by group members to encourage maximum attendance, taking into account limiting factors such as female household responsibilities.

The AESA training model for farmers is based on a three-step approach. First, project technical staff train the FFs, a classroom training without practical session. This is followed by hands on practical sessions with relevant government department experts. The majority of FFs have an agriculture background and indicated the training content was easy to absorb. Second, FFs with support from local experts and extension agents provide three to five days training to the FPG farmer leader and marketing leader. The FPG ICT leaders do not participate in TOT training, and only receive the same orientation as the other FPG member, from the farmer leader and marketing leader, during the designated courtyard sessions. FPG farmers and marketing leaders from up to 10 FPGs are trained at once, at a convenient location. Third, FPG farmer leader and marketing leader train FPG group members during five courtyard sessions with some support from the FF and government extension agent.

⁸. Reference to evaluation question 21, see Appendix B

The training model was sufficient to convey basic concepts across the cascaded audiences. The most important agricultural concepts and practices are straightforward enough that key information was effectively transferred for adoption. However, the project needs to acknowledge that the FPG leaders are not teachers or supported in any way to organize adult learning, and that it is difficult to condense and disseminate information from a multiple day formal training into a two-hour courtyard session. This is especially true for more complex social-cultural practices that yield less evident short-term results, such as good nutrition and gender equality. The ET found that the courtyard sessions focused on agriculture practices, and did not include the other training components such as good nutrition and gender equality. This is validated by FPG member's relatively low recall on training topics other than agriculture productivity. The ET acknowledges the project effort to plan non-agricultural trainings during the value chain off-season, and that these trainings had not been provided at the time of the midterm evaluation.

Training was accompanied by training tools, which the ET found to be sufficient for transfer of basic agricultural techniques - but overly reliant upon text narrative. The absence of pictures is notable and inappropriate for the target audience, which has low literacy rates. The program could work to better establish visual, and potentially audio, content for transfer of its key training messages. The utilization of demo plots was limited relative to the number of FPGs and total FPG farmers trained by the project. The ET found that the FPG groups were inward looking and not inclusive to the greater community. Basic practices were shared informally between FPG members and non-member farmers, but there was no training component which encouraged FPG members to share information and knowledge with non-member farmers, limiting potential positive spillover benefits to project non-beneficiaries.

B.1.3. Farmer access to finance

AESA facilitation of access to affordable and formal finance for FPG groups and members is still in its infancy. A mapping of financial service providers in communities where FPGs are established was completed just prior to the midterm evaluation. The mapping exercise is the first in a list of follow on activities, which have not yet been completed. These include verifying appropriate and affordable service providers, building FPG member finance capacity, and informally linking the finance providers to FPG groups. In association with the mapping and linking, there will be activities around strengthening of finance capacity, i.e., financial literacy. At the time of the midterm evaluation, financial management had not been covered in the courtyard sessions.⁹

The ET found that presently 26 percent of FPG leaders cite an informal partnership with a financial service institution (Table 17) and 45.2 percent of households have taken a loan in the previous 24 months, with 22 percent of FPG member households taking loans for AESA supported value chain activities (Table 19). This is low, and highlights the need for the project to work with FPG groups to identify low risk lenders and provide needed financial literacy trainings, especially as the project is not providing any capital or cash inputs to support implementation of promoted practices. FPG members stated that the majority of loans are primarily obtained from NGOs, which are not associated with the FPG group. Loans taken for value chain activities were primarily used for cultivation costs, such as input provisions (Table 19).

B.1.4. Farmer access to markets and inputs

A primary project aim cited by AESA staff, and a key need indicated by FPG members, is increased knowledge of member farmers about the benefits of collective action. This includes access to

⁹ Reference to evaluation question 11, see Appendix B

extension services and information, collective purchase of inputs and sale of production through group marketing strategies.

The midterm FPG member survey found that group marketing was the most cited reason for farmer engagement in the FPG, 42.2 percent of farmers citing they joined the FPG to have increased access to markets. In contrast, relatively few FPG members, 8.8 percent, cited obtaining lower priced inputs was a primary reason for them joining the FPG (Table 16).

As part of the access to markets and inputs, the project facilitated matchmaking workshops designed to introduce farmers to actors in the inputs supply chain and output marketing opportunities. The project provided a one-time opportunity via the matchmaking workshops for FPGs, local and regional input sellers, and buyers to meet, without structured follow up. The ET found that these workshops were not properly facilitated to enable independent follow up among participants. A one-time introduction is insufficient to build long lasting and sustainable linkages. Qualitative findings indicated that FPG members did strengthen market linkages after the workshop, based on their improved understanding of benefits, but that these were based on existing relationships between FPG member farmers and input providers, instead of the new introductions made at the workshop. Regardless of where and when the linkage was established, 70 percent of FPG leadership stated an existing informal partnership between the FPG and agricultural product buyers, and 78 percent stated an informal relationship with input providers (Table 17). This highlights the opportunity for AESA to strengthen such relationships, and further validates the appropriateness of project targeting strategies to agriculturally underserved communities.¹⁰

Beyond the initial linkage between FPGs, and input providers and market buyers, the ET did not find evidence that the project has provided sufficient support to strengthen and grow market relationships. The ET found that access to inputs by FPGs is primarily limited to the benefit of reduced price by purchasing inputs in bulk. FPGs have not yet realized their potential strength in ensuring quality inputs when purchasing in bulk.

No guidance has been provided by AESA to the various value chains on the quality requirements for successful bulk/group marketing, or the basic contractual understanding to ensure FPGs are not taken advantage of by market buyers. FPGs, which do not require a cold chain such as jute, mung bean, beef cattle, aquaculture, and chili, have had the most success with group marketing. The ET found that the project has not sufficiently addressed the difficulties for group marketing for dairy - which is disproportionately practiced by female members (nearly all). In addition, the ET found that for value chains that allow for group marketing, FPG members cited its clear advantages to women FPG members, empowering them economically to engage in the sale of their produce beyond the current culture norms, which do not allow women to go to the market or negotiate prices.

B.2. Progress towards component 1

The ET found that FPG members are adopting the key agricultural practices associated with their specific value chain. The main reasons for adoption were that the practices were very relevant to the low quality of pre-project agriculture practice, and easy to learn and apply without in-depth demonstration (Table 14). This was echoed in many FGDs, with farmers stating the practices were easy to learn and relatively cost effective to implement. Thirty-seven percent of farmers cited access to inputs at a reduced cost because of the FPG, and despite limited linkages established between the FPG and buyers 85.6 percent of farmers indicated receiving a higher price for their agriculture products because of the FPG (Table 17).¹¹

^{10.} Reference to evaluation question 12, see Appendix B

^{11.} Reference to evaluation question 9, see Appendix B

The main source of information dissemination was the in-person training received through courtyard sessions (Table 13).¹² The majority of farmers found the training materials to be sufficient to grasp the key agriculture concepts. However, farmers stated insufficient time for hands-on participation and an inability to see the practices as an obstacle to adoption (Table 14). The ET found the training materials to be too heavily text based given the general education level of the target population, and without the necessary visuals that are especially relevant when there is not practical component to the knowledge transfer. The ET acknowledges that AESA is working to convert text-based narrative training materials to more appropriate and effective flip charts and videos, however these improved mediums were not commonly in use with FPG groups at the time of the mid-term evaluation fieldwork.

The ET found that FPGs are sufficiently empowered to request trainings from extension agents, with 74 percent of FPG leadership citing they have indeed approached extension agents to request training (Table 18). However, extension agents, regardless of the group access modality, are not equipped to provide need-based (unique) services to FPG members and/or groups.¹³ Forty-three percent of FPGs that requested training were not provided the requested training (Table 18). Government extension agents, uniformly across SAAOs, VFAs, FA, ULOs in the extension survey and qualitative interviews cited the usefulness of the project activities in allowing them to reach more farmers with less time, however they also cited the human resource constraint of insufficient extension staff to provide the desired agricultural support in their areas. Regardless of the AESA technical and input support, the insufficient numbers of staff remains the main obstacle to effective extension.

FPG farmers stated the provision of the agricultural training practices for each value chain as the driving factor for increased production of FPG value chain production. Nearly all (92.2 percent) FPG members cited an increase in their production of the FPG supported value chain, and only 2 percent cited a decrease in production (Table 15). The primary reasons cited for the increased production indicate strong attribution to the project. The most cited reason in the FPG member survey, as well as in FGDs with FPG members, was the utilization of new techniques/methods (five key practices), with 95.7 percent of farmers with increased production citing this as a driving reason for the increased production (Table 15). The dissemination and addition of the five key practices has been the most effective, and efficient, assistance provided to FPG members thus far in the project.¹⁴

In addition to the adoption of improved agricultural techniques and practices, improved quality of inputs for the FPG supported value chain is a large driver in increased production. Improved quality of inputs was cited by 78.3 percent of FPG members as a reason for increased production (Table 15); mainly seeds (crop based value chain) and feed (animal based value chain). This was validated by qualitative findings. While the project did not provide these inputs to farmer members, the project facilitated knowledge and access.

C. Project component2: Strengthened application of ICT in agriculture

Project component2 is to expand and strengthen ICT mechanisms to increase access to agricultural market information, knowledge and technologies. This is a key dimension of the AESA development hypothesis, stating that ICT enabled solutions can play a key role in overcoming the challenges vulnerable smallholders currently face in accessing high-quality extension services and information.

Under component 2, the main target group for intervention is public and private service providers, with some direct intervention with selected FPG duty bearers. The key project approaches under

12. Reference to evaluation question 6, see Appendix B

13. Reference to evaluation question 10, see Appendix B

14. Reference to evaluation question 8, see Appendix B

component 2 are to develop a variety of ICT tools that will be introduced and systematically embedded into existing agriculture extension services. The purpose of the new ICT tools is to improve channels for extension agents and farmers to access up-to-date information on improved farming practices and agriculture markets.

To accomplish component 2, the project aimed to achieve the following outputs:

1. Develop a strategy for expanded use of ICT in extension services (Table 40)
2. Utilize ICT tools to increase farmer and extension agent access to agricultural production and market information by:
 - Developing 10 ICT application and make these available to farmers and extension agents (Table 40)
 - Developing 10 audio-visual products and make these available to farmers and extension agents (Table 40)
 - Enabling 200 Agriculture Extension agents to use project-assisted ICT-based applications for assisting farmers (Table 40)
 - Enable 22,000 FPG members to access information through new ICT channels (Table 40)

C.1. Outputs achieved under component 2

C.1.1 Develop a strategy for expanded use of ICT in extension services

The purpose of the ICT strategy is to use ICT to effectively increase access to and utilization of extension services by farmers, as well as improving and expanding extension services offered by both private and public sector extension agents. The ET found that the ICT strategy developed by the AESA project, in partnership with mPower, targeted year 3 as 'rapid prototyping' where multiple agricultural ICT modalities were developed, field-tested, and where appropriate are currently being scaled up. Qualitative findings suggest a strong drive within mPower to hand-over the ICT components to relevant stakeholders, particularly DAE, as soon as these are ready. The ICT strategy is primarily focused on technologically innovative ICT modalities - denoted in this report as 'new' ICT. The AESA project's 'new' ICT strategy has three main pillars:

1. Establishment of an online 'Agro Knowledge Bank'
2. Agricultural Call Center
3. Smart phone applications (including a farmer 'query' system and diagnostic tools)

mPower has worked to develop an Agro Knowledge Bank, a common searchable platform for updating and accessing agricultural product/market information. The platform was developed in consultation with AIS, and AESA intends to transfer it over to AIS to administer and operate once the project concludes. Currently, four of the six AESA supported value chains are populated in the knowledge bank. The knowledge bank functions as a vetted 'clearing house' for agriculture information, mostly obtained from AIS and then subjected to a validation process. Currently the information is only accessible online, however KIIs highlighted the practicality of making this information available in offline applications for farmers as smartphone ownership increases across agricultural households. The largest obstacle to Agro Knowledge Bank sustainability is ensuring AIS has sufficient knowledge and ownership to continue validation and population of information once the system is turned over to AIS. The MOU with AIS was recently signed in project year 3, and the ET found that AIS will need to contribute substantially to the Agro Knowledge Bank in the remaining two years of the project if the project is to expect the knowledge hub to be sustainable.

Agricultural Call Centers are intended to strengthen service provision so information and solutions reach more farmers on a real-time basis. Farmer leaders and extension agents are provided with the call center's hotline number, where they can speak with a specialist regarding a specific field problem. The project currently works with two call centers - one privately-run (MIAKI) and the other operated by government (AIS). Qualitative results highlighted that the existing government call center is under resourced. In response to this, the project has entered into an agreement to use the services of the privately-run call center administered by MIAKI Company to provide responses to queries submitted on behalf of AESA farmers. Farmer queries are supported by the Farmer Query smartphone app developed by mPower. The ET found that the farmers who had utilized one the project supported/linked call centers were provided with accurate and prompt responses - however many farmers were either un-aware of the call center, or felt more comfortable reaching out to their farmer leaders and/or agricultural extension agent than placing the phone call.

The ET found that project staff, government extension agents, and FPG members have less awareness of the first pillar of the ICT strategy, the Agro Knowledge Bank and Agricultural Call Center, than the second and third modalities - smartphone applications. This is unfortunate, as the ET finds the greatest sectoral benefit from project's 'new' ICT investments may derive from the Agro Knowledge Bank and promotion and strengthening of agricultural call centers. An increased effort on information dissemination on the Agro Knowledge Bank and call center ICT modalities needs to be made. Equally, the Agro Knowledge Bank and Agricultural Call Center have the greatest potential of reaching AESA FPG members; smart phone applications are primarily utilized in the four demo Upazilas, and by select ICT champions in non-demo Upazilas.

The ET found that ICT, when referenced by project staff, FPG leaders, members and government extension workers, was primarily referencing smart phone applications. ICT and 'apps' have become synonymous reference for project stakeholders, particularly reflective of extension agents and FPG members in demo areas, where smart phones were provided by the project. The utilization of smart phones has help raise project awareness and engagement within the demo Upazilas, were extension workers and ICT Champions are provided training and a smart phone equipped with agricultural apps. In this system the ICT Champion functions as a basic agricultural agent responsible for fielding questions from ICT leaders in neighboring FPGs. The ICT Champion is also responsible with providing assistance to his/her own FPG members.

The ICT Champion system is largely dependent on the capacity of ICT Champions. ICT Champions are selected by project staff from among ICT leaders, based interest and affinity with the technology demonstrated during the general ICT orientation. Each Champion is provided with a smartphone device, and training on the ICT tools associated with the devices such as agricultural apps and the farmer query system. The ICT Champion training system is reliant upon highly engaged ICT Champions. KIIs and FGDs suggest that ICT Champions received greater influence and respect in the community, however time demands were often described to be greater than the offered incentives (smartphone and respect). ICT Champions did not participate in the key practice trainings provided to the other FPG leaders (Farmer leader and Marketing leader), highlighting a gap in expected knowledge transfer between AESA, and FPG members. FPG members are informed to go their ICT leader, who in turn is to reach out to the ICT Champion to submit Farmer Queries when needed. Not providing ICT leaders with the same trainings as farmer leaders and marketing leaders was a missed opportunity as they are the designated first point of contact for agricultural extension questions.

C.1.2 Develop user-friendly ICT tools to increase farmer and extension agent access to agricultural production and market information

AESA targeted 22,000 farmers to access information through 'new' ICT channels such as the farmer query app, Agricultural Call Center, or via diagnostic apps in conjunction with extension agents

and/or ICT champions. The project output indicators show that 32,126 farmers have utilized 'new' ICT through the various channels. In FGDs and KIIs with FPG leadership, FPG members, and extension agents ICT was regularly mentioned as a key component of the project, however the ET found that the adoption of key and improved practices was attributed to courtyard in-person sessions, and not through information obtained via 'new' ICT sources.

The program targeted 300 extension agents utilizing project-assisted ICT-based applications, specifically diagnostic tools and the farmer query system. To date 202 extension agents (114 in in demo Upazilas and 88 in other Upazilas) are equipped with smartphones to utilize diagnostic apps and the farmer query system. The ET found the ICT apps were not appropriate for extension agents. The apps do not contain information that ICT literate extension agents do not already possess, and qualitative research found extension agents questioned the appropriateness of the applications for their level of knowledge - regardless of their level of ICT literacy. The ET found that once extension agents have sufficient exposure to new ICT technology that they prefer to use internet search tools, such as Google, to troubleshoot questions which they do not have a solution for, or to simply ask a colleague or supervisor. The ET acknowledges that AESA is providing this basic technology literacy to select extension agents.

Smart phone applications are an easy-to-use method to access improved practices and knowledge around various value chains. The program targeted 10 applications for 2015, and achieved 6 applications. Qualitative findings identified that extension agents preferred in-person training as the primary modality for information transfer; this is also supported by quantitative survey findings (Table 22).¹⁵ FPG members also placed low emphasis on 'new' ICT such as smart phones apps or query system as key channels of information provision, and much more emphasis on in person trainings (Table 22).¹⁶

While smartphone applications have a visual component, which guides the users through various diagnostic tools, the ET found that traditional ICT modalities such as paper-based visual and village loudspeaker audio tools for courtyard sessions were underutilized - and in many cases overlooked in an effort to promote more 'exciting' ICT modalities such as smartphones. The tools developed by the project for the five key practice courtyard sessions were sufficient, but very clearly text heavy. The project could have better utilized audio and/or visual (video and photo) features particularly given the focus of the project on smartphones, and the availability of established visual resources for basic agricultural practices (i.e., videos of agriculture demonstrations) in Bangladesh that could be applied in small-groups settings using smart phone technology.

C.2. Progress towards component 2

Overall adoption of 'new' ICT tools is primarily contained to demo Upazilas and is not currently accessible to all extension agents or FPG members across the various value chains. The ET found the ICT component functions as a marketing tool to engage and excite farmers - but its effectiveness significantly trails that of traditional in-person trainings and courtyard sessions.

Nearly one in five (18.0 percent) of extension agents cite using project provided smart phone apps, however in qualitative interview extension agents questioned the appropriateness of the applications for their level of knowledge. Extension agents have more education and experience than FPG members, and as a result cited a preferred use for Google to find solutions to questions, which they do not already know. The ET finds that the project can better equip government extension agents and FPG leaders with audio-visual tools that would have a greater impact on improved agricultural adoption and practices than the current text heavy diagnostic and query tools.

15. Reference to evaluation question 14, see Appendix B

16. Reference to evaluation question 18, see Appendix B

New ICT modalities such as applications and smart phones function as motivation tools for FPG members and leaders, but currently do not function as the most efficient and/or practical information dissemination device. Table 13 highlights this point well by identifying a dramatic shift in agriculture information channels from pre-AESA project to during the AESA project. In person trainings increased by three-fold; prior to the AESA project 25.4 percent of FPG members cited receiving their agricultural information from in person trainings, compared to 97.6 percent currently. Associated with the increase in the prevalence of in person trainings, there was a significant decrease in new agricultural techniques being learned from neighbor farmers - a change from 92.8 percent to 63.4 percent (Table 13).¹⁷

The ET found that while AIS has provided regular input into the development of the Agro Knowledge Bank, it is not currently sufficiently engaged to ensure it is sustainable for value chains that fall outside of the AESA project. The AIS call center, the MIAKI Agricultural Call Center, and associated farmer query system has significant promise as an information source for FPG members. However, extension agents are not the appropriate modality to directly apply these ICT components. In the short- to medium-term, farmers in general need to be further empowered to access the available information within their technology means, i.e., simply calling the call center number.

D. Project component 3: Strengthened capacity of agriculture extension agents

Project component 3 is to strengthen capacity of agricultural extension service agents (public and private) to proactively respond to the needs of smallholder farmers, with an emphasis on women. Under component 3, the project target group is public and private service providers. The key project approaches under component 3 are capacity strengthening of both public and private extension agents to improve technical knowledge and group facilitation skills, and in designated demo Upazilas the provision of inputs such as motorbikes, laptops, mobile phones and office space to enhance mobility and communications.

To accomplish component 3, the project aimed to achieve the following outputs:

1. Increase skills and capacity of public sector agricultural extension agents in providing extension services by providing training to 450 public and private extension agents to improve their extension service to farmers (training topics detailed below) (Table 41)
2. Increase or develop the capacity of private-sector extension agents in providing extension services
3. Increase capacity of agricultural extension agents in the use of ICT tools
4. Intensive work with public and private extension agents in 4 selected Upazilas to demonstrate improved agriculture extension service delivery through block-level agricultural extension centers by establishing 90 agricultural extension centers to serve 12,045 farmers through visiting new agricultural extension service centers functional (Table 41),¹⁸ and by enhancing the mobility and communication resources of extension workers to better reach smallholder farmers, especially women

^{17.} Reference to evaluation question 6, see Appendix B

^{18.} ToR, Y3 task table

D.1. Outputs achieved under component 3

D.1.1. Increase skills and capacity of public sector agricultural extension agents in providing extension services

The program trained 368 extension agents, less than the 2015 project target of 450 (Table 41). Government extension agents (SAAOs) received three to five days training. AESA staff were not able to clearly describe the selection criteria for extension agent selection in a three day training compared to extension agent selection for a five day training. Nearly all extension agents providing support to FPGs in 2015 had received AESA-supported training (Table 27). Just over half (52 percent), of sampled extension agents, cited that the AESA training was useful (Table 27), which was further validated by qualitative FGDs and KIIs. Extension agents expressed that trainings around improved agricultural techniques were appropriate, but did not find the gender, environment, and ICT training useful for their work.

D.1.2. Increase or develop the capacity of private-sector extension agents in providing extension services

The only evidence of the inclusion of private sector extension agents in the project was participation of a very small number of private sector extension agents in matchmaking workshops and informal linkages between private extension agents and FPGs for input provisions. The ET did not find any evidence of increased capacity of private sector extension agents at this stage in the project. Sufficiently linking communities with a historical lack of access to private service extension has resulted in benefits to the community, but there has been no concerted effort by the project to build the capacity of private sector extension. The ET acknowledges that a private sector extension agent definition, selection, and capacity building strategy was in process of being developed at the time of the mid-term evaluation.

D.1.3. Increase capacity of agricultural extension agents in the use of ICT tools

mPower identified the ICT training needs of extension workers, and worked with AESA to develop an appropriate training strategy and plan. The ICT component of the project was discussed in greater detail in section III.B.1. The training was designed to increase extension agent capacity to train farmers, allow extension agents to access and review critical agriculture knowledge sources, and have regular access to market information.

The ET found that the project placed disproportionate emphasis on 'new' ICT tools relative to traditional ICT components. In KIIs, government extension agents cited the usefulness of ICT tools such as visuals (poster boards and videos) for improved service provision, but admitted these strategies were underutilized in the '5-key practice' trainings. In addition, extension agents cited the importance of mobile phones as a first line of contact between farmers and extension agents. The ET was surprised to discover that of all smartphones provided to extension agents and ICT Champions, none were enabled as a traditional phone for calling purposes - project support was limited to data use only. KIIs further revealed that recipients of smart phones did not like the need to carry two phones (their own and the project provided phone).

The ET found that 'new' ICT, including the ICT apps, are not as valued by extension agents as existing and established ICT tools such as visuals and mobile phones. The applications and query system rarely provide an extension agent with information that s/he did not already know. In addition, nearly all extension agents have sufficient education to utilize the Internet to obtain the appropriate answers to questions they do not current know.

D.1.4. Intensive work with public and private extension agents in four selected Upazilas to demonstrate improved agricultural extension service delivery

The traditional extension model in Bangladesh is that SAAOs are assigned as extension agents to serve farmers in an assigned block and SAAOs do not have a designated office space or receive office supplies or equipment to support their work. In addition to this, they are not provided with reliable access to technical resources disseminated by various MoA units, or receive regular technical training.

The project has focused on a comprehensive agricultural extension model in four target Upazilas to demonstrate improved agricultural extension service delivery. The demo Upazilas place an increased emphasis on extension agent (currently SAAO) capacity building, and resource provision with smart phones equipped with 'new' ICT apps, motor bikes for transportation, and agricultural extension service centers. The provision of smart phones, motor bikes and extension centers began immediately prior to the start of the midterm evaluation, and in some cases all items had not been allocated to extension agents.

The ET found that the intensification of agricultural extension delivery in four Upazilas showed early signs of success. Extension agents (SAAOs) are highly engaged, and as such other government extension offices at the Upazila and block level are interested in participating. In KIIs ULOs and UFOs cited interest in accessing the agricultural extension service center once appropriate MOUs have been signed.

The project has worked to improved extension service delivery in four Upazilas (see D.1.2) by enabling participating SAAO to establish a block-level extension center that contains basic technical resource materials and devices. The establishment of the block extension centers was positively received by SAAOs. SAAOs cited the designation of an office has increased their respect among farmers, provided a designated location for farmers to reach extension agents, and allowed them to limit travel time with farmers coming to them at designated times. Currently 90 block level extension services have been established in the four demo Upazilas (Table 41).

The provision of an agricultural extension service center provides extension agents with an office and implicitly suggests an extension model which brings farmers to extension agents. This may further isolate historically removed communities. In contrast, the provision of motorbikes to extension agents suggests an extension model which bring the extension agent to the communities. Qualitative research identified a high level of satisfaction with both models by extension agents, however a preference was strongly given toward the extension center (a 'farmer to agent' model) by SAAOs interviewed, who feel the office increased their status and respect in the community.

Qualitative research with farmers cited that the centers increased the farmer's ability to locate extension agents at a set time and place, but travel costs and distance were often cited as a limiting factor in accessing the extension agent at the center. FPG members which were more closely located to the block center inherently cited greater utilization and access than more removed FPG groups. Due to the effective targeting strategy of the project, many groups were not conveniently located to the extension center. Notably, many FPG female members cited that the block level extension centers were not accessible by female members due to cultural norms limiting females to go to markets (the de-facto location for most extension centers) on their own.

D.2. Progress towards component 3

The project is on-track to meet the component 3 objective to strengthen capacity of public agricultural extension service agents to proactively respond to the needs of small holder farmers in

the four demo Upazilas through trainings, the establishment of the agricultural extension service center, motorbike provision, and smart phone provision. The project has provided basic training to extension agents in non-demo Upazilas and empowered them to reach a great number of farmers through the group formation model. Based upon findings at the time of the mid-term evaluation, the ET did not find that the project is on track to strengthen the capacity of private agricultural extension agents. However, the ET does acknowledge and finds it encouraging that a private sector extension agent definition, selection, and capacity building strategy was being developed at the time of the mid-term evaluation.

The ET found that government extension agents across the project recognized the benefits of working with FPGs. This was highlighted in multiple key informant interviews and focus group discussions with extension agents. The primary advantage cited by extension agents of working with FPGs relative to individual farmers is the ability of the extension agent to reach an increased number of persons with equal effort. This was specifically beneficial to extension agents with extensive coverage areas, which were under-supported by agricultural extension activities (i.e. not enough extension agents). This was particularly valuable for ULOs, which tended to bear a larger burden of agricultural extension relative to SAAOs. Agricultural extension officers also cited the benefit of 'group training' in ensuring a more equitable access to information and training content.¹⁹

The project's approach of building extension agent capacity has been partially effective. Excluding demo Upazilas, the project provided basic training to extension agents and linked the agents to underserved farmer producer groups, thus increasing the reach of extension agents and increasing information access of farmers. The primary principals promoted by the project for each of the six value chains are established and effective practices proven to increase farm level production and efficiency.²⁰ The ET find the project success around these linkages have had an irreversible, but small, impact on farmer extension access and farm level productivity, in addition extension agents have experienced increased credibility with farmers, and have been able to increase the number of farmers they are able to reach with their work.²¹

E. Progress towards project goal: a strengthened agriculture extension system

The goal of the USAID Agricultural Extension Support Activity is to strengthen the existing agriculture extension system in southwest and central Bangladesh. A strengthened agriculture extension system will sustainably improve food security and nutrition for vulnerable women and smallholder farmers.

Overall, the project made meaningful progress towards the overall goal, and the most essential project results and objectives. Across all 12 districts, there are signs of emerging positive impact. AESA has linked farmers and extension agents through a combination of component 1 and 3 activities. This is an irreversible change and provides farmers with access to information they did not have before, which will resolve the majority of their agriculture questions and problems. In addition, early market interventions linking farmers to trusted agro-vet services have improved access to, and knowledge about, affordable value chain inputs. These achievements, together with direct project investments in strengthening agriculture capacity among both farmers and extensions agents, have already yielded small but important improvements in farmer productivity in the project value chains.²²

19. Reference to evaluation question 13, see Appendix B

20. Reference to evaluation question 17, see Appendix B

21. Reference to evaluation question 7, see Appendix B

22. Reference to evaluation questions 1 and 33, see Appendix B

The component 2 activities and outputs have not yet come to full fruition. The potential benefits of the Agro Knowledge Bank and Agricultural Call Center investments are high, if AESA finds a way to effectively link farmers with these resources. To date, the component 2 ICT investments have not made that linkage, and are not appropriate to the short- and medium term technology means of farmers. That said, the exploratory work undertaken by AEA on the application of 'new' ICT is extremely relevant to the sector as a whole, if the appropriate government support and ownership can be established, but this does little to help the project meet its expected results.²³

There are also indications of emerging negative impacts attributable to project interventions. There is a risk of unmet expectations among FPG leadership and members as to the future role and sustainability of the groups beyond the project timeframe. Similarly, there is a risk of disappointment among farmers as to the potential of 'new' ICT due to unmet expectations of the distribution of technology within the project.²⁴

F. Sustainability of project results

Potential for sustainability of farmer productivity improvements and the linkages with extension agents, at current levels, is high. However, it is not clear to the ET how further improvements will be enabled without additional depth of intervention.

It is not clear to the ET whether the project expects the FPGs to sustain and grow after the project timeframe. Field staff and FPG members indicated that sustainability is expected while technical staff indicated that sustainability is less important than the immediate sharing of their experience by FPG members with other farmers. It is important that the project provides both internal and external clarity on groups sustainability so that expectations can be properly set. In any case, the current group approach in its current form is not sustainable. FPGs have no capacity or vision to grow their groups. In addition, they are closed to new members and do not interact with non-members in a structured manner to enable good practices, like collective buying, to be adopted organically outside of the group. Groups will only get smaller not bigger, which will undermine the collective action purpose of the FPGs. While the project acknowledges a focus on group collective action over the establishment of highly sustainable groups, most groups cite an expectation to continue in one form or another after the project ends. The larger issue is that opportunities to prepare groups for their own expectation of self-governance once AESA is complete are not being made, i.e., by investing in stronger group governance, are not being taken.²⁵ It is too early to assess the sustainability of the market interventions.

The current approach of supplying extension agents with 'new' ICT will not be sustainable without project support. At the time of the project mid-term there are no indications that DAE will adopt and support this model after the project ends. Without support troubleshooting software and hardware problems, and basic purchasing of phone and internet credit, current users will stop using the provided devices and may stop using the software if it isn't available on non-project devices. There are already examples of this in the demonstration sites where a lack of data package credit has terminated use of project provided computers and smart phones by extension workers.²⁶ Qualitative findings show that extension agents are still hesitant about the role new ICT will play in the future. Table 23 shows that only 18 percent of surveyed extension agents feel that apps will be used in 5 years' time, compared to 92% for classroom/in person trainings.

23. Reference to evaluation question 28, see Appendix B

24. Reference to evaluation questions 33 and 35, see Appendix B

25. Reference to evaluation question 42, see Appendix B

26. Reference to evaluation questions 43 and 15, see Appendix B

The project currently does not have the systems, processes and programs in place to ensure that the specific AESA results will be sustained, beyond the inherent sustainability of outcome-level changes described for the farmer productivity and extension linkages.²⁷ It is important to note that the proof-of-concept nature of the demonstration sites should not be used as an argument against sustainability of results. While it is reasonable to assume that not all elements of the demonstration site interventions will be sustainable, the model itself must have some form of adaptation and continuation in the medium term of else the proof-of-concept will have failed. It is important that the project is able to demonstrate the potential for this by year 5.

At the time of the mid-term evaluation, the project does not have an exit strategy in place that details specific activities to ensure continuation of key project outputs and outcomes. However, the ET acknowledges that this will be developed in Year 4.²⁸ At a minimum, the exit strategy needs to be grounded in a knowledge management strategy (to generate the evidence) and an advocacy strategy (to focus the argument that is based on the evidence). This is especially relevant after the project shifted from a solution at scale to a more focused proof-of-concept project. In fact, the ET finds that the lack of a knowledge management strategy and associated advocacy strategy are the main obstacles to sustainability, or better said, continuation of the project investments beyond its financial and timeframe limitations.²⁹

Strengthened institutional capacity among AESA partners around the specific AESA results is another key element of sustainability and further growth of the project results. The ET finds that the institutional and technical capacity of DAM in the AESA program areas has improved due to the technical support from CARE and mPower in their respective domains, and the institutional capacity building received under the USAID Forward initiative. The knowledge transfer from CARE to DAM is clearer than from mPower to DAM. CARE and DAM work more closely together than DAM with mPower. For example, CARE has several staff situated in the main AESA office, whereas mPower does not. Only in 2015, has the necessary institutional arrangement been made for DAM to internalize the ICT activities by establishing a project ICT unit, instead of outsourcing component 2 oversight to mPower alone.

It is not clear whether CARE has experienced institutional growth due to the AESA partnership. The ET finds that the majority of CARE responsibilities were already well within its competencies. The main innovative element of the project, namely the ICT component, is still under direct purview of mPower with limited opportunity for institutionalizing the learning around component 2 by either DAM or CARE. This may change with the establishment of the AESA ICT unit.

The AESA partner that has experienced the greatest institutional benefit from the AESA project is mPower. The innovative work undertaken to date on ICT in agriculture under component 2 may not directly benefit project beneficiaries at scale, and may not directly contribute to achieving the project goal, but it has positioned mPower at the forefront of this domain in Bangladesh.³⁰

Qualitative findings indicate no evidence to date of government ownership over AESA results. However, the ET did find a very high interest by the Government of Bangladesh, specifically DAE, in the results of the demonstration site activities. DAE interview findings highlighted the potential of the farmer-extension linkages to be rolled out as scale, due the relative simplicity of the linking activity. The main requirement, as indicated by DAE, is organizing farmers into groups and strengthening capacity of extension workers to engage with groups. This is an existing model that DAE already applies and it sees the benefits of more investment into this for improved scale and

27. Reference to evaluation question 36, see Appendix B

28. Reference to evaluation question 37, see Appendix B

29. Reference to evaluation questions 3 and 40, see Appendix B

30. Reference to evaluation question 38, see Appendix B

results. DAE interviews also indicated that extension agents require more material support to perform their duties effectively, and acknowledges that there are likely lessons to be drawn from the AESA project on which material support should be prioritized within limited government resources; in this case, block extension centers, phones or motorbikes. However, at the same time it is not clear to DAE how the AESA project is facilitating government attention and potential ownership over these results and the broader sector learning. DAE further indicates that AESA is not tackling, and in fact has itself fallen victim to, the scale of the capacity gap in agriculture extension. This is the main obstacle the government faces in taking any potential solution forward, which is not being addressed by a high-cost material and technical support package as AESA is proffering.³¹

The ET finds no specific evidence of the replication of the AESA approach. However, this is not to be expected at mid-term, especially without a knowledge management strategy and investment to enable such replication. Furthermore, it is important to acknowledge that the AESA design is, in fact, itself a replication or further iteration of broad-based sector knowledge in strengthening agriculture productivity, i.e., the focus on key practices that are easily adopted, the direct technical support in extension agents and the facilitating of direct in-person linkages between extension agents and farmers.³²

G. Factors that contributed to results

Internal partnerships

Qualitative findings indicate that DAM, CARE and mPower staff is generally satisfied with the internal partnership. Coordination among AESA partners takes place through formal steering committee meetings, bi-lateral and tripartite partner meetings at senior management level, and informal coordination at staff level in Dhaka. At the time of the mid-term review, there was one CARE staff member embedded with field staff in the project sites, and this was a recent development in 2015. There are three junior-level field-based mPower staff members.

CARE is primarily responsible for developing the technical materials and guidance to the AESA team for components 1 and 3. The timelines for the deliverables produced by CARE have not properly aligned with the implementation needs due to delays in the Government stakeholder validation process. For example, development of training material for farmers was delayed and delivered long after the groups were established, which negatively affected farmer participation and overall engagement in AESA activities. This was further complicated by the responsibilities allocated for roll out of training. The subject matter and capacity building expertise under AESA was mainly with CARE, but DAM staff were responsible for conducting training with light support from CARE technical staff. In practice, this meant that any problems during roll out, or opportunities for improvement, were identified too late or left unaddressed.³³ An example is the lack of visuals in the training material. In addition, AESA field officers indicated that their limited experience with the materials contributed to inefficiencies in training roll out, especially in the early phases.

Similar to the case with CARE, mPower develops the technical outputs and guidance for roll out under component 2 with limited responsibilities during the actual field-based implementation. Timing and quality of the mPower deliverables, such as the apps, are in line with contract obligations and have been largely on track. mPower has had limited engagement on management or implementation issues, which has led to some delays in applying the outputs generated by mPower

^{31.} Reference to evaluation question 39, see Appendix B

^{32.} Reference to evaluation question 41, see Appendix B

^{33.} Reference to evaluation question 23, see Appendix B

^{34.} Reference to evaluation question 27, see Appendix B

to the AESA field activities.³⁴ Progress reviews are provided and received by the technical partners CARE and mPower through written reports and senior management meetings. Practical recommendations to adjust implementation strategies and activities are mainly developed through day-to-day interaction among AESA staff in Dhaka and in field sites. Qualitative findings indicate that within the tripartite project partnership, AESA management and technical staff have sufficient awareness and understanding of the project implementation status.³⁵

External partnerships

At the project mid-term a large number of MOUs have been signed but no meaningful external partnership has yet been initiated. The design explicitly references coherency with other USAID Feed the Future programs focusing on cereal grains, fisheries, policy support, value chains, and agro-inputs. AESA is currently engaged with several Feed the Future programs to access improved inputs, identify private sector service providers and linking with output buyers, and has signed an MoU for formal cooperation with the Feed the Future Agro Input project. While the ET acknowledges the efforts by AESA to strengthen coherency with its sector partner programs, the project implementation does not reflect these efforts. There is a risk that without concrete project guidance, the expected coherency may not come to fruition in a meaningful manner.³⁶

The design is premised on a meaningful collaboration with DAE, AIS and DoF and DLS. While meaningful progress has been made in generating DAE interest for the AESA project model and results, this can yet be titled as effective coordination. Qualitative findings show that very little progress has been made with DoF and DLS, and to date these institutions have only a basic awareness of the project scope and potential. Qualitative findings indicate that AESA senior management is aware of the need to strengthen external partnerships and is seeking to identify ways to do this in Year 4.

Staffing and management

The ET finds that current staffing levels are appropriate to meet project needs and acknowledges that it took AESA time to build staff numbers and capacity up to current levels. Staff turnover is acceptable and qualitative findings show that staff is generally satisfied with their scope of work and terms of employment. There is, however, a need for more hands on support by technical staff from CARE and mPower to field implementation staff in the final phase of the project to consolidate AESA learning and strengthen capacity for project continuation. CARE intends to extend its direct support to field staff during the second half of the project.

Staff orientation on the AESA technical domains meets a minimum standard but should be improved.³⁷ Staff capacity strengthening can only just keep up with the pace of project roll out. Staff struggles to meet information demands from beneficiaries and target groups beyond the immediate scope of the activity they are involved in. For example, extension workers have apps on their project smartphone that project staff have not been properly familiarized with. This limits opportunities for driving project growth by staff and beneficiaries. More time needs to be allocated by CARE and mPower to increase the number of training days on technical issues and coaching in the field to ensure consistency and quality are integrated in the intervention roll out, in particular for components 1 and 2.

35. Reference to evaluation question 22, 30 and 25, see Appendix B

36. Reference to evaluation question 45, see Appendix B

37. Reference to evaluation question 29, see Appendix BCon

38. Reference to evaluation question 46, see Appendix B

Monitoring, evaluation and knowledge management

The AESA project has a good activity and output monitoring system, and is considered a good practice among sector partners.³⁸ This information is used on an ongoing basis to track progress against work plans. However, there are still some challenges to effective decision-making by management based on the output monitoring. This is largely a management capacity issue, which needs to properly formulate the information demands it requires for its decisions. There is limited information available on the quality of the activities and outputs, and much of this is anecdotal. Reliable and valid information on quality is especially important for a project that has such a strong proof-of-concept objective as AESA.

There is no effective outcome monitoring system in place.³⁹ The main reason for this is that outcome-level indicators, i.e., utilization and adoption, for the AESA project have not been properly formulated.⁴⁰ The project has not formulated the performance, in terms of replication, adoption (policy change, directives, guidance), GoB ownership etc, or learning questions associated with the proof-of-concept investments; so there is no way to measure whether these investments were effective.

The majority of project indicators (Table 39, Table 40, and Table 41), while designated as outcome indicators, are actually output indicators, with few focused on measuring utilization or adoption of project practices. In addition the initial project baseline was completed in year 2 - thus surveys for outcome measurement were not conducted during Year 2. The year 3 annual survey was completed at the time of the midterm evaluation. The monitoring system utilized by project staff is a bottom up system, with monitoring data not being reported back to field-staff for decision making purposes. This creates a negative reporting incentive for project staff, including from implementing partners.⁴¹ The ET acknowledges that AESA management was in the process of a major indicator overhaul, and review of its reporting and feedback system at the time of the mid-term evaluation.

Gender equality and women's empowerment

Climate change and natural disasters Table 29 provides basic information on women farmer's perceptions regarding gender equality. As discussed in section III.A.I, the design does not include meaningful interventions beyond basic awareness raising. Any perceptions, or change in perceptions, at the time of the mid-term review are very unlikely to be attributable to project interventions.⁴²

Climate change and natural disasters

Project documents and staff interviews indicate that value chain selection took into account climate adaptation opportunities and challenges. Beyond this, the AESA design does not include any meaningful assessment or associated interventions to address climate-related shocks and stresses. There have been no interventions implemented to date that address this issue.

39. Reference to evaluation question 46, see Appendix B

40. Reference to evaluation question 47, see Appendix B

41. Reference to evaluation question 48, see Appendix B

42. Reference to evaluation question 19, 20, 24, see Appendix B

IV. Conclusions and Lessons Learned

A. Relevance and appropriateness of design

1. The overall AESA purpose of strengthened agriculture extension system is appropriate and relevant to the needs of smallholder farmers in southwest and central Bangladesh. The AESA project design is well-aligned with government policy to further develop the agriculture sector and facilitate greater access for smallholder farmers to market and extension services. The combination of focus on organizing farmers to improve agricultural productivity, and access market and extension services, and focus on strengthening capacity of extension agents to provide improved services to farmers is appropriate. *[No associated practical recommendation]*
2. AESA project value chains are appropriate for central and southwest Bangladesh with current and emerging market opportunities. There is a need for increased market investments to incentivize farmers to adopt good-practice production practices promoted through project trainings. *[See recommendation 1]*
3. The introduction of ICT to extension agents to provide easy access to up-to-date information on improved farming practices and improve service delivery to farmers is highly relevant due to remoteness of smallholder farmers and the lack of prevailing information sources, such as market intermediaries and media. The AESA design indicates a heavy emphasis on high-tech ICT such as apps and smart phone technology, which is currently not appropriate in the short term for widespread adoption among farmers and extension agents who primarily use basic phones with call and text functions only. The introduction of high-tech ICT for DAE and farmer beneficiaries in demonstration Upazilas to highlight the potential of the technology is appropriate. *[No associated practical recommendation]*
4. The project rationale makes appropriate reference to the importance of the role of women in agriculture livelihoods, the socio-cultural constraints women face in accessing information and services, and the need for an agricultural extension system that responds to the needs of poor smallholder women farmers. The project design is not clear on how to address these issues, and includes limited provisions to make a meaningful contribution to the stated gender inequalities - beyond increasing the number of female project beneficiaries and general awareness raising. The ET acknowledges that by recognizing female farmers the project is improving the cultural acceptance of female value chain actors as farmers. *[No associated practical recommendation]*
5. The project realignment allows AESA to demonstrate utilization of the improved extension service delivery model in its entirety, which would not have been possible under the original design. At the same time, the revised project design indicates that the continued work with FPGs (component 1) and the light-touch support to extension agents (component 3) in the remaining project areas will build a foundation for enhanced access to agricultural extension services by smallholder farmers in the future. The aim of the four demonstration Upazilas is to allow the Department of Agricultural Extension (DAE) to observe the process and outcomes in the demo Upazilas, and to adopt the improved practices that are deemed appropriate and valuable for roll out in the other project areas and beyond. *[See recommendations 2 and 3]*

B. Effectiveness

6. The ET found that the FPGs function as an extension of AESA field staff; an efficient modality to reach large numbers of farmers with information and to facilitate a convenient central contact point for the link with the extension agents. Midterm findings clearly indicate that groups expect to continue beyond the project timeframe, and there is an expectation among FPG membership that the AESA project will support group growth. While groups have an expectation to continue beyond the project timeframe, the groups lack the capacity to drive their own growth. *[See recommendation 4]*
7. The ET finds that the composition and division of labor of leadership is not effective or efficient. FPG leadership was selected not elected by group members. Qualitative findings indicate no intention to change leadership in the near future. Qualitative findings indicate that functionality of FPG leadership is not in alignment with their expected role. In practice, the farmer leader is an appointed natural leader and in many groups considered the primary group leader. *[See recommendation 5]*
8. The ET found that, at the time of the midterm evaluation, FPGs were not linked with existing financial service institutions or provide financial literacy training. The ET found that FPG member households are currently taking loans for AESA supported value chain activities. *[See recommendation 6]*
9. The TOT-courtyard session model is effectively reaching FPG member farmers. The training model is sufficient to convey basic concepts across the cascaded audiences. However, FPG leaders are not teachers or supported in any way to organize adult learning, and it is difficult to condense and disseminate information from a multiple day formal training into a two-hour courtyard session. This likely contributed to the limited uptake of the nutrition and gender trainings, and may potentially have a similar effect on the capacity building for markets. *[See recommendations 5 and 7]*
10. Beyond the initial linkage between FPGs, and input providers and market buyers, the ET did not find evidence that the project has provided sufficient support to strengthen and grow the relationships. The ET found that improved access to inputs by FPGs is focused on the benefit of reduced price by purchasing inputs in bulk. FPGs have not yet realized their potential strength in ensuring quality inputs when purchasing in bulk. Similarly the ET did not find evidence of increased capacity of private sector extension agents at this stage in the project. *[See recommendation 8]*
11. The ET found that FPG members are adopting the key agricultural practices associated with their specific value chain. The main reasons for adoption were that the practices were relevant to the low quality of pre-project agriculture practice, and easy to learn and apply without in-depth demonstration. FPG farmers stated the provision of the agricultural training practices for each value chain as the driving factor for increased production of FPG value chain production. *[No associated practical recommendation]*
12. The ET found that project staff, government extension agents, and FPG members have less awareness of the first pillar of the ICT strategy, the Agro Knowledge Bank and Agricultural Call Center, than the second and third modalities - smartphone applications. The ET finds the greatest sectoral benefit from the project's investment in 'new' ICT may derive from the Agro Knowledge Bank and promotion and strengthening of agricultural call centers. In the short- to medium-term, farmers in general need to be further empowered to access the available information within their technology means, i.e., simply calling the call center number. *[See recommendation 9]*

13. The ET found that the intensification of agricultural extension delivery in four Upazilas showed early signs of success. Extension agents (SAAOs) are highly engaged, and as such other government extension offices at the Upazila and block level are interested in participating. *[See recommendation 10]*
14. The ET found that government extension agents across the project recognized the benefits of working with FPGs. This was highlighted in multiple key informant interviews and focus group discussions with extension agents. The primary advantage cited by extension agents of working with FPGs relative to individual farmers is the ability of the extension agent to reach an increased number of persons with equal effort. This was specifically beneficial to extension agents with extensive coverage areas who, prior to the project, were extremely overstretched. *[No associated practical recommendation]*
15. Strengthened institutional capacity among AESA partners around the specific AESA results is another key element of sustainability and further growth of the project results. The ET finds that the institutional and technical capacity of DAM in the AESA program areas has improved due to the technical support from CARE and mPower in their respective domains, and the institutional capacity building received under the USAID Forward initiative. The knowledge transfer from CARE to DAM is clearer than from mPower to DAM. *[No associated practical recommendation]*

C. Sustainability

16. The ET finds that the potential for sustainability of farmer productivity improvements and the linkages with extension agents, at current levels, is high. However, the project has not clearly identified how further productivity improvements will be enabled without additional depth of intervention. *[No associated practical recommendation]*
17. The group approach in its current form is not sustainable. FPGs have no capacity of vision to grow their groups. FPGs are closed to new members and do not interact with non-members in a structured manner to enable good practices, like collective buying, to be adopted organically outside of the group. Groups will only get smaller, not larger, which will undermine the collective action purpose of the FPGs. While the project acknowledges a focus on group collective action over the establishment of highly sustainable groups, most groups cite an expectation to continue in one form or another after the project ends. *[See recommendation 4]*
18. The current approach of supplying extension agents with 'new' ICT will not be sustainable without continued project support troubleshooting software and hardware problems, and basic purchasing of phone and internet credit, current users will stop using the provided devices and may stop using the software if it isn't available on non-project devices. *[See recommendation 12]*
19. The project currently does not have the systems, processes and programs in place to ensure that the specific AESA results will be sustained, beyond the inherent sustainability of outcome-level changes described for the farmer productivity and extension linkages. *[No associated practical recommendation]*
20. The project exit strategy needs to be grounded in a knowledge management strategy (to generate the evidence) and an advocacy strategy (to focus the argument that is based on the evidence). This is especially relevant after the project shifted from a solution at scale to a more focused proof-of-concept project. The ET finds that the lack of a knowledge

management strategy and associated advocacy strategy are the main obstacles to sustainability, or better said, continuation of the project investments beyond their financial and timeframe limitations. *[See recommendation 10]*

21. Qualitative findings indicate insufficient government ownership over AESA results. However, the ET did find a very high interest by the Government of Bangladesh, specifically DAE, in the results of the demonstration site activities. DAE interview findings highlighted the potential of the farmer-extension linkages to be rolled out as scale, due the relative simplicity of the linking activity. The main requirement, as indicated by DAE, is organizing farmers into groups and strengthening capacity of extension workers to engage with groups. *[No associated practical recommendation]*

D. Factors that contributed to results

22. CARE and mPower developed the technical outputs and guidance for roll out under component 2 with limited responsibilities during the actual field-based implementation. In practice, this meant that any problems during roll out, or opportunities for improvement, were identified too late or left unaddressed. AESA senior management is aware of this and has taken steps to enable more active field support by the technical partners. *[No associated practical recommendation]*
23. External partnerships with other USAID Feed the Future programs focusing on cereal grains, fisheries, policy support, value chains, and agro-inputs; and with DAE, DoF and DLS need to be strengthened. *[See recommendation 11]*
24. Staff orientation on the AESA technical domains meets a minimum standard but should be improved. Staff capacity strengthening can only just keep up with the pace of project roll out. Staff struggles to meet information demands from beneficiaries and target groups beyond the immediate scope of the activity they are involved in. *[See recommendation 13]*
25. The AESA project has an appropriate activity and output monitoring system, and is considered a good practice among sector partners. This information is used on an ongoing basis to track progress against work plans. There is no effective AESA project outcome monitoring system in place. *[See recommendation 14]*

V. Recommendations

Table 2: Recommendations (continued)

Recommendation 1
<p>Clarify with field staff which project value chains the project will promote increased group marketing for. If it is not practical to expect group marketing in year 4 and 5 for a given value chain, develop a communication strategy for FF, FS, and SAAO/VFA/ULO to share this with FPGs</p> <p>Associated conclusion: Conclusion 2 Timeframe and responsibility: 2017 AESA leadership</p>
Recommendation 2
<p>While it is reasonable to assume that not all elements of the demonstration site interventions will be sustainable, the model itself must have some form of adaptation and continuation in the medium term or the proof-of-concept will have failed. It is important that the project is able to demonstrate the potential for this by year 5. The project should work to formulate the potential future journey of demonstration sites to ensure continuation of core elements. This process must be based on a facilitated process of cross learning among extension agents and government officials at multiple levels. Project learning must focus on the cost effectiveness at the Upazila level for any of the core demo site components (agricultural extension service center, motorbike provision, or smart phone provision).</p> <p>Associated conclusion: Conclusion 5 Timeframe and responsibility: 2017 AESA leadership</p>
Recommendation 3
<p>Reduce expected level of efforts of selected ICT Champions. Focus resources on further building capacity of ICT leaders, Field Facilitators, and Field Supervisors into an "assistant extension agent" role, with the support of (offline and online) pocket tools such as the existing apps, the query system, and google search training.</p> <p>Associated conclusion: Conclusion 5 Timeframe and responsibility: Jan - Dec 2016 AESA leadership & AESA field staff</p>
Recommendation 4
<p>Develop a 1-2 page document on FPG expectations. This strategy will outline which project components AESA will, and will not, support to further the sustainability and growth of groups. The document should highlight key talking points for field staff, and be grounded expected results for the end of the project. Supplement this with a training on expectation management. Roll this out in the short term for groups and ICT leaders.</p> <p>Associated conclusion: Conclusion 6 & Conclusion 17 Timeframe and responsibility: Jan - June 2016 AESA leadership & AESA field staff</p>

Recommendation 5
<p>Consolidate the FPG leadership functions. Provide the main Farmer Leader with the overall training package through a refresher process. Provide farmer leaders with training on communication and adult learning methods, how to organize courtyard sessions, and catalyze collective action. Ensure trainings are provided with FF, FS, SAAOs, present to build the trust between farmer leaders and sources of extension knowledge.</p> <p>Associated conclusion: Conclusion 7 & Conclusion 9 Timeframe and responsibility: Jan - Dec 2016 AESA leadership & AESA field staff</p>

Table 3: Recommendations (continued)

Recommendation 6
<p>Work with FPG groups to identify low-risk lenders and provide a series of trainings on input financing options to FPG members. Relative to the cascade training provided for the 5 key practices, AESA should have more of a hands on technical role in these trainings. All FPG members should be trained by AESA, not by famer leaders. This can be incorporated with a farming as business and/or finance literacy training.</p> <p>Associated conclusion: Conclusion 8 Timeframe and responsibility: Jan - Dec 2016 AESA leadership & AESA field staff</p>

Recommendation 7
<p>Increase the utilization of existing visual ICT tools such as videos developed by the project as (offline) smart phone tools. Increase the use of non-text training tools for trainings that go beyond the 5 key practices. This can include picture heave leaflets, flip cards, posters, and videos, and the use of community radio to further disseminate messages to underserved communities.</p> <p>Associated conclusion: Conclusion 9 Timeframe and responsibility: Jan - Dec 2016 AESA field staff mPower</p>

Recommendation 8
<p>Consider more direct farmer training models involving FFs and private market actors for farming as a business training. This also provides an opportunity to further build trust between farmers and the private sector around inputs on credit, or with existing (vetted) finance institutions</p> <p>Associated conclusion: Conclusion 10 Timeframe and responsibility: 2016 and 2017 AESA leadership & AESA field staff</p>

Recommendation 9
<p>Increase information dissemination via FFs and ICT leaders to FPG members on call centers function as a source of reliable extension knowledge. Couple this with targeted support to project-partnered call centers to increase volume and content capacity</p> <p>Associated conclusion: Conclusion 12 Timeframe and responsibility: 2016 and 2017 AESA leadership & AESA field staff</p>

Recommendation 10
<p>Develop a simple knowledge management framework with select knowledge products that address the AESA advocacy strategy needs. These are short documents, aimed to demonstrate proof of concept project blue prints. One potential document series would be a 1-2 page report each month on 'key program' decisions, the reasons each decision was made, and information the decision was based on. Based on the knowledge management documents, go/ no-go decisions can be made on the relevance of partner activities in Y4 plan. If a reviewed activity does not meet specific implementation or strategic needs, then revisions are required.</p> <p>Associated conclusion: Conclusion 13 & Conclusion 20 Timeframe and responsibility: 2016 and 2017 AESA M&E Staff</p>

Table 4: Recommendations (continued)

Recommendation 11
<p>Insert specific activities related to strengthening external partnerships into the Year 4 implementation plan. These activities should be linked to the project advocacy and exit strategies.</p> <p>Associated conclusion: Conclusion 23 Timeframe and responsibility: Jan - Dec 2016 AESA, CARE, mPower</p>

Recommendation 12
<p>Provide FF, FS, and ICT leaders/champions with the remaining phones, with the intent for the project to transfer those phones to the most appropriate persons at the end of the project. Have these persons fill the current void for extension staff as a proof-of-concept that capable persons, with limited agriculture knowledge, can provide this support with appropriate tools (ICT) and resources (ability to contact existing DAE, DoF and DLS extension staff and volunteers)</p> <p>Associated conclusion: Conclusion 18 Timeframe and responsibility: Jan - Dec 2016 AESA leadership & AESA field staff</p>

Recommendation 13
<p>Work with mPower and CARE to develop AESA field staff's ability to provide practical hands-on support to extension agents and farmer members in the final phase of the project. This is an opportunity for AESA to consolidate learnings and strengthen capacity for project continuation. This will require more time be allocated by CARE and mPower to increase the number of training days on technical issues and coaching in the field to ensure consistency and quality are integrated in the intervention roll out</p> <p>Associated conclusion: Conclusion 24 Timeframe and responsibility: 2016 and 2017 AESA, CARE, mPower</p>

Recommendation 14
<p>As part of the current indicator overhaul, reformulate indicators for outcome monitoring with a focus on project performance. The system should focus on an evidence base for adoption (policy change, directives, and guidance), replication, GoB ownership etc, and learning questions associated with the proof-of-concept investments. This will allow the project to further demonstrate that investments were effective.</p> <p>Associated conclusion: Conclusion 25 Timeframe and responsibility: Jan - June 2016 AESA M&E Staff</p>

Appendixes

Appendix A: Evaluation methodology

Quantitative Survey

There were three levels of inter-related quantitative surveys:

1. A quantitative survey tool administered to randomly selected farmer producer group leadership, with required participation of the group chairperson and ICT leader.
2. Farmer producer members from the selected groups were randomly selected to participate in a member survey.
3. Extension workers servicing the selected groups were purposefully selected based on availability and access.

Participant farmer producer groups in the midterm quantitative surveys were randomly sampled from the thirteen Upazilas in six districts included in the 2015 annual survey fieldwork activity sample frame to ensure comparability and triangulation across midterm findings and annual survey findings.⁴³ Equally the midterm survey did not force an overlap of selected groups, members, or extension workers. Selection of groups within the thirteen Upazilas were completed using equal probability random sampling.

The midterm evaluation quantitative survey is designed to be representative of the annual survey sample frame population

The following sample size estimation is for farmer members, and is not intended to compare across various populations.⁴⁴ The minimum sample size is not sufficient in size to measure change over time or across regions/groups at a reasonable level of precision, however the sample size is sufficient to provide a representative point estimate value at six percent precision.

Formula for sample size calculations to estimate a single point estimate:⁴⁵

$$\text{Required Strata Sample Size} = D \left[\frac{[Z^2 * P(1 - P)]}{\epsilon^2} \right]$$

where:

D = design effect for complex surveys (1.7)

P = Estimated prevalence (%) of an indicator at the time of first survey. This is currently unknown so estimated at 50 percent (50%)

Z = Z-score corresponding to the degree of confidence ($\alpha = 0.05$)

ϵ = The relative precision required (10% for each division and 5.8% for project level)

43. The six districts include Jessore, Faridpur, Satkhira, Bhola, Patuakhali, Pirojpur. The thirteen Upazilla's include Bhola Sadar, Char Fasson, Char Bhadrason, Faridpur Sadar, Chaugachha, Jessore Sadar, Keshabpur, Mirzaganj, Patuakhali Sadar, Bhandaria, Pirojpur Sadar, Kaliganj, Satkhira Sadar (from Survey Design Annual Performance 2015 word document).

44. To compare across populations would require a significantly larger sample populations size, and is typically not utilized for mid-term evaluation.

45. Glenn D. Israel, *Determining Sample Sizes*, University of Florida IFAS Extension.

The quantitative sample size suggested for the mid-term evaluation is sufficient to provide a single point estimate for the program at a six percent precision level. The sample size is *not sufficient* to compare proportions across two groups.

Assume that the estimated level of the key indicator to be measured as a proportion is .5 (P = 50%)⁴⁶. A relative precision of 6 percent is required, using a degree of confidence level of 95% (Z α = 1.96). A design effect of 1.7 is used assuming reliable beneficiary lists are available. Using the sample size formula above, these parameter values result in a sample size of 454 respondents, assuming a 10 percent non-response rate, results in a target sample size of 499, rounded to 500 respondents.

A total of 50 farmer group responses is not sufficient to provide statistically representative information about groups as a whole, but will provide useful information for the ET to triangulate farmer group member responses, qualitative FGD information, and annual survey result information.

For the sample selection farmer producer groups were the cluster unit. The number of clusters utilized was a total 50, based on available resources and time. This resulted in 550 interviews (50 groups * 11 farmer interviews per group = 550). In addition, within each randomly selected cluster (farmer producer group), the farmer producer group leadership underwent structured quantitative survey exercise with the group chairperson and ICT leader and marketing leader. Simultaneously to the interview of group leadership, enumerators also interviewed one purposefully selected government extension agent servicing the group.

Table 5: Sample Size Endline Analysis

	<i>Target Sample Size</i>	<i>Achieved Sample Size</i>	<i>Non-response Rate</i>
FPG Members	550	500	9.1%
Extension Agents	50	50	0.0%
FPG Leadership	50	50	0.0%

Farmer producer groups did not vary meaningfully in the number of farmer producer group members, and farmer producer groups were selected using simple random sample. Based on the assumption the groups were equal in size, a simple random sample of groups results in the same probability of selection as a probability proportional to size. From within each selected group eleven member farmers were randomly selected using simple random sampling. This sampling strategy results in farmer groups having an equal probability of being selected and members from producer groups having an equal probability of selection. This is reflected in the below equation based on the assumption of equal group size across all FPGs:

$$w_{i,design} = \frac{1}{p_i}$$

where p_i is the probability of selection

⁴⁶. The key indicator is unknown, and current prevalence is unknown based on AESA Annual Report Year 2, therefore 50% is used as an estimate.

FPG Leadership Level MT Quantitative Survey Topics

The group-level quantitative survey was a structured interview with group leadership (explicit or implicit leadership). The purpose of this survey is to capture comparative information from the group on how it engages with farmers, extension workers, program staff, and other key stakeholders. The survey was conducted by a trained researcher, and took between 30 and 45 minutes. The survey covered the below module components:

Group Quantitative Module Components⁴⁷

- Strategic Direction, Structure, Governance
- Internal and external communication strategies
- Member engagement
- Linkages to extension workers/services
- Utilization of ICT strategies
- Input provision access
- Group marketeering strategies

Farmer Level MT Quantitative Survey Topics

The farmer-level quantitative survey was a structured survey conducted with farmer producer group members (non-member household members will not be interviewed in the quantitative survey format). The purpose of this survey is to capture information from group members on how they engage with groups and extension workers - and how farmer members are accessing and applying improved agricultural techniques obtained via these channels. The survey was conducted by a trained enumerator, and took between 15 and 20 minutes. The survey covered the below module components:

Farmer Quantitative Module Components

- Farm level characteristics (Value chain, farm size, household size)
- Producer farmer group engagement
- Extension agent engagement
- Extension information (appropriateness, usability, application, and adoption of improved technologies/information)
- Use of ICT applications (mode, type, modality)
- Engagement/sharing with non-member farmers
- Access to credit services

Extension worker MT Quantitative Survey Topics

The extension worker quantitative survey was a structured survey conducted with a purposefully selected government extension agent (based on availability and access), who services the randomly selected farmer producer group. The purpose of this survey is to capture information extension agents regarding how they engage with groups, group members, other extension workers, and other sources of agriculture and ICT knowledge. The survey also covered support extension workers receive and provide. The survey was conducted by a trained enumerator, and took between 15 and 20 minutes. The survey will cover the below module components:

⁴⁷. Final versions of implemented tools is found in Annex 2.

Extension worker topical outline components

- Extension agent mobilization and training
- Appropriateness/effectiveness of project support
- Extension information (appropriateness, usability, application)
- Use of ICT applications (mode, type, modality)
- Engagement with program, groups, farmers
- Enabling environment for extension activities
- Dependency on project support for extension
- Continuation of extension after project ends: opportunities, challenges

Qualitative Data Collection

The qualitative sampling for FGDs with farmer producer group members, as well as with agricultural extension workers was proximity-based relative to the quantitative sample, based on logistical ease of fieldwork movement by the ET team to maximize research coverage, and on purposeful selection to cover specific areas of interest, while maintaining a similar contextual and environmental environment to the quantitative sample. The qualitative sampling strategy allowed the ET to capture a greater breadth of information from farmer producer groups, farmer producer group members, and extension workers and ensured that the burden of data collection is not disproportionately shouldered by relatively few farmer producer groups or members (i.e. no group will participate in qualitative and quantitative work). Selection of farmer producer groups for qualitative work followed the below criteria:

1. Did not overlap with groups selected for quantitative midterm evaluation research⁴⁸
2. Included project sites that demonstrate typical and extreme (positive and negative) implementation experiences and results

Group Leadership KII Topics

Sampling for farmer producer groups was based on the above criteria. Group leadership KII participants consisted of a maximum 3 duty bearers of the farmer producer group. The purpose of these KIIs is to capture information on the key functions of the group, namely providing appropriate services and/or linkages to services to farmer group members, and sustainability of the group. This included linkages to extension workers, input providers, and group marketing activities.

The group-level KII topical outlines covered the following components:

Group FGD topical outline components

- Strategic direction and potential for sustainability
- Performance of duty bearers
- Group governance practices (elections, participation, transparency)
- Equity in decision making and resource allocation by leadership
- Vulnerability targeting and social inclusion, including gender equality
- Internal and external communication strategies
- Member engagement

⁴⁸. Final mid-term sample will be provided by Wednesday, September 30th, 2015.

- Linkages to extension workers/services
- Develop trainer skills and train farmers
- Group Action Plan and implementation
- Promotion and utilization of ICT strategies
- Input provision access
- Group marketing strategies
- Adoption of new technologies by farmers
- Spill over effects
- Appropriateness/effectiveness of project support
- Most significant change (economic and social)
- Benefits visible for working as a group
- Possible replication of group approach - by group members, non-members
- Any negative impacts/transaction costs for group leader

Farmer Member FGD Topics

Farmer producer members who participated in FGDs were selected using the above stated criteria. The farmers who were available to participate in the FGDs were asked to participate. The group level FGD topical outlines covered the following components:

Farmer FGD topical outline components

- Farm level characteristics (Value chain, farm size, household size)
- Producer farmer group engagement
- Extension agent engagement
- Extension information (appropriateness, usability, application, and adoption of improved technologies/information)
- Use of ICT applications (mode, type, modality)
- Adoption of new technologies
- Engagement/sharing with non-member farmers
- Access to credit services
- Vulnerability targeting and social inclusion, including gender equality
- Spillover effects
- Appropriateness/effectiveness of project support
- Most significant change (economic and social)
- Any negative impacts/transaction costs to group membership
- Dependency on group for continuation

Extension worker FGDs/KIIs Topics

The ET conducted KII and FGDs (when multiple extension workers are working in one area) with public and private extension workers, operating at Upazila and block level. The ET purposefully selected extension workers covering the groups selected, to maximize triangulation. The extension level topical outlines covered the following components:

Extension worker topical outline components

- Extension agent mobilization and training
- Appropriateness/effectiveness of project support
- Extension information (appropriateness, usability, application)
- Use of ICT applications (mode, type, modality)
- Engagement with program, groups, farmers
- Awareness of gender, nutrition issues
- Enabling environment for extension activities
- Dependency on project support for extension
- Continuation of extension after project ends: opportunities, challenges

AESA Staff and Partner Informant Interviews

Key informant interviews were administered to project staff, partner staff, and central/regional government stakeholders and other individuals who have specific expertise with agricultural extension work in Bangladesh. KIIs were semi-structured individual interviews that focus on project relevance, and project management and implementation processes. These interviews were conducted by TANGO consultants - in person and via skype - and lasted between 20 and 90 minutes.

Quality assurance in the evaluation process

The ET ensured that there was extensive quality assurance built into the evaluation. This included establishing regular coordination and communication between AESA and the ET, having semi-structured guidelines and tools for conducting the evaluation data collection activities, and employing structured methods for organizing and triangulating data /information that is received.

The team adopted a strategy of triangulation by examining the same issues through different evaluation lenses and from different perspectives. The ET implemented systematic checks on accuracy, consistency, reliability, and validity of collected data to ensure data quality. The ET analyzed data on a regular basis. Key milestones validated emerging conclusions and recommendations and provide essential direction to ongoing analysis.

TANGO International's quantitative quality control procedures included interview observation, spot checks, on-site and remote questionnaire control, procedures to handle refusals and respondent absences, interviewer and supervisors' guidelines, data management and validation methods. During the field work, data was backed upped and electronically sent to TANGO on a regular basis for review (daily). Data was exported from the CAPI software to SPSS v20.0, for data quality checks, verification, data cleaning and intermittent output of preliminary results. During data collection, TANGO provided regular monitoring reports to field staff.

Appendix B.1: Evaluation Questions

Table 6: Evaluation Questions

RELEVANCE	
Q1	How well is the project performing against stated results and objectives? What is working well and what is not?
Q2	Is the development approach that the project is following benefitting the entire sector (in this case, extension support) or simply a few selected individuals/organizations?
Q3	How can successful project activities or interventions be scaled up to create wider impact?
Q4	Does the current mix of AESA activities address identified strategic impediments to improved extension service provision/ food security?
Q5	How will the recent realignment in project focus affect the future project achievements?
EFFECTIVENESS	
Q6	Has technology dissemination or general technical assistance to farmers motivated them to adopt new technologies and management approaches? (Consider different approaches that the project used: classroom training, practical session, demo plot establishment, exposure visits etc.) If yes, what is the percentage of that?
Q7	What has been the most effective form of technical assistance to the farmers?
Q8	Has adoption of improved technologies correlated to an increase in individual farmer's production?
Q9	Are the farmer producer groups gaining the benefits of collective action for purchasing inputs or selling output?
Q10	Are the farmer producer groups empowered to demand regular and need-based extension service from extension agents?
Q11	Do the farmer producer groups have increased access to financial services?
Q12	Have the farmer producer groups benefitted by the match-making workshops, in gaining access to inputs, financial services and output market opportunities?
Q13	Do the government extension agents recognize the benefits of working with the farmer producer groups?
Q14	Do the government extension agents use the basic ICT and/or ICT apps for improved service provision to the farmers?
Q15	Will they continue using the ICT apps beyond the life of the project?
Q16	What are the constraints to this practice being sustainable?
Q17	Has the project's approach of extension agents' capacity building been effective to enable extension service delivery to meet farmers' information needs?
Q18	Do the farmer leaders recognize the importance of ICT in gaining and disseminating extension knowledge for farmers?
Q19	What has been the effectiveness of the program in targeting women and empowering them?
Q20	How effective has the project been in ensuring better extension services for women farmers? Has it taken into account their needs accordingly?
Q21	How effective are the farmer leaders (two Farmer Leaders and one ICT Leader) in leading the group on specific functions and further disseminating the information/knowledge gained by TOT, to the FPG members?

Evaluation Questions Continued

EFFECTIVENESS – Sub Award: CARE	
Q22	Is the project receiving regular progress reviews and recommended actions from the CARE team?
Q23	Have project field staff received required guidelines and capacity building from CARE team?
Q24	What has been done for ensuring gender sensitivity of the project, as planned in the sub award?
Q25	How are CARE’s activities for the project being monitored to ensure effective partnership?
Q26	Recommendations to improve CARE’s support to ultimately improve project effectiveness and efficiency?
EFFECTIVENESS – Sub Award: mPower	
Q27	Is the project receiving mPower support through the development of appropriate ICT approaches and apps that can be introduced to extension services and farmers?
Q28	Is the ICT strategy adequate for achieving both Component 2 and overall project objectives related to ICT?
Q29	Have project staff received required ICT orientation and capacity building trainings from the mPower team?
Q30	How are mPower’s activities for the project being monitored to ensure effective partnership?
Q31	Recommendations to improve mPower’s support to the project to improve project effectiveness and efficiency?
IMPACT	
Q32	What have been the achievements of activities implemented under AESA to date?
Q33	Are there any early signs of impact visible throughout the project areas ?
Q34	How are gender and nutrition activities contributing to program achievements?
Q35	Are there any externalities or unintended consequences related to implementation of AESA that the project should consider?
SUSTAINABILITY	
Q36	Are the processes, systems, and programs in place to ensure that the results and impact of AESA activities will be sustainable?
Q37	Does AESA have an exit strategy planned and being implemented? Describe for beneficiaries and partners.
Q38	Has AESA been able to develop institutional capacity of its implementing partners?
Q39	What evidence has there been of the Government of Bangladesh and other partners taking ownership of AESA activities?
Q40	What obstacles exist for achieving sustainability and what measures should be taken to increase sustainability?
Q41	Is there evidence of replication of the AESA approach?
Q42	Will smallholder farmers continue using collective action / working in groups as a way to meet ag related needs?
Q43	Will SAAOs, farmers and other stakeholders use ICT apps and approaches to meet some of their technical information needs?
Q44	Will DAE adopt the use of Ag Extension Service Centers to their ag extension service delivery system?
SYNERGY with other USAID and Donor Funded Programs	
Q45	How effectively has AESA coordinated with other donors, USAID/FTF projects, non FtF projects and relevant government ministries and departments– the Ministry of Agriculture (DAE and AIS) and the Ministry of Fisheries and Livestock (DoF, DLS)- and other relevant public and private agencies?
PERFORMANCE MEASUREMENT SYSTEMS	
Q46	Do performance management systems at all levels effectively measure program output/outcome?
Q47	Are the indicators being used by USAID and the project meaningful?
Q48	Do indicators create positive/negative incentives for implementing partners?

Appendix B.2: Evaluation Design Matrix

Table 7: Evaluation Matrix⁴⁹

Midterm Evaluation Questions	Primary Sources of Information	Data Analysis Method(s)
RELEVANCE		
How well is the project performing against stated results and objectives? What is working well and what is not?	1. Annual Survey 2. Program documents 3. KIIs/FGDs	1. AESA to oversee 2. Literature review 3. Primary Data Analysis
Is the development approach that the project is following benefitting the entire sector (in this case, extension support) or simply a few selected individuals/organizations? How can successful project activities or interventions be scaled up to create wider impact?	1. Program documents 2. KIIs/FGDs	1. Literature review 2. Primary Data Analysis
Does the current mix of AESA activities address identified strategic impediments to improved extension service provision/ food security?	1. Program documents 2. KIIs/FGDs	1. Literature review 2. Primary Data Analysis
How will the recent realignment in project focus affect the future project achievements?	1. Program documents 2. KIIs/FGDs	1. Literature review 2. Primary Data Analysis
EFFECTIVENESS		
Has technology dissemination or general technical assistance to farmers motivated them to adopt new technologies and management approaches? (Consider different approaches that the project used: classroom training, practical session, demo plot establishment, exposure visits etc.) If yes, what is the percentage of that?	1. KIIs/FGDs 2. MT Surveys 3. Annual Survey	1. Primary Data Analysis 2. Primary Data Analysis 3. AESA to oversee
What has been the most effective form of technical assistance to the farmers?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Has adoption of improved technologies correlated to an increase in individual farmer's production?	1. Annual Survey 2. KIIs/FGDs 3. MT Surveys	1. AESA to oversee 2. Primary Data Analysis 3. Primary Data Analysis
Are the farmer producer groups gaining the benefits of collective action for purchasing inputs or selling output?	1. Annual Survey 2. KIIs/FGDs 3. MT Surveys	1. AESA to oversee 2. Primary Data Analysis 3. Primary Data Analysis

⁴⁹ Program indicators are being assessed and measured by the AESA program with an annual survey. The mid-term evaluation is designed to conduct research on the quality and the effectiveness of programming towards indicator targets.

Are the farmer producer groups empowered to demand regular and need-based extension service from extension agents?	1. Annual Survey 2. KIIs/FGDs 3. MT Surveys	1. AESA to oversee 2. Primary Data Analysis 3. Primary Data Analysis
Do the farmer producer groups have increased access to financial services?	1. Annual Survey 2. KIIs/FGDs 3. MT Surveys	1. AESA to oversee 2. Primary Data Analysis 3. Primary Data Analysis
Have the farmer producer groups benefitted by the match-making workshops, in gaining access to inputs, financial services and output market opportunities?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Do the government extension agents recognize the benefits of working with the farmer producer groups?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Do the government extension agents use the basic ICT and/or ICT apps for improved service provision to the farmers?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Will they continue using the ICT apps beyond the life of the project?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
What are the constraints to this practice being sustainable?	1. KIIs/FGDs	1. Primary Data Analysis
Has the project's approach of extension agents' capacity building been effective to enable extension service delivery to meet farmers' information needs?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Do the farmer leaders recognize the importance of ICT in gaining and disseminating extension knowledge for farmers?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
What has been the effectiveness of the program in targeting women and empowering them?	1. KIIs/FGDs 2. MT Surveys 3. Program documents	1. Primary Data Analysis 2. Primary Data Analysis 3. Literature Review
How effective has the project been in ensuring better extension services for women farmers? Has it taken into account their needs accordingly?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
How effective are the farmer leaders (two Farmer Leaders and one ICT Leader) in leading the group on specific functions and further disseminating the information/knowledge gained by TOT, to the FPG members?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis

EFFECTIVENESS – Sub Award: CARE		
Is the project receiving regular progress reviews and recommended actions from the CARE team?	1. KIIs/FGDs	1. Primary Data Analysis
Have project field staff received required guidelines and capacity building from CARE team?	1. KIIs/FGDs	1. Primary Data Analysis
What has been done for ensuring gender sensitivity of the project, as planned in the sub award?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
How are CARE's activities for the project being monitored to ensure effective partnership?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Recommendations to improve CARE's support to ultimately improve project effectiveness and efficiency?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
EFFECTIVENESS – Sub Award: mPower		
Is the project receiving mPower support through the development of appropriate ICT approaches and apps that can be introduced to extension services and farmers?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Is the ICT strategy adequate for achieving both Component 2 and overall project objectives related to ICT?	1. KIIs/FGDs 2. Program documents 3. MT Surveys	1. Primary Data Analysis 2. Literature Review 3. Primary Data Analysis
Have project staff received required ICT orientation and capacity building trainings from the mPower team?	1. KIIs/FGDs	1. Primary Data Analysis
How are mPower's activities for the project being monitored to ensure effective partnership?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Recommendations to improve mPower's support to the project to improve project effectiveness and efficiency?	1. KIIs/FGDs	1. Primary Data Analysis
IMPACT		
What have been the achievements of activities implemented under AESA to date?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Are there any early signs of impact visible throughout the project areas?	1. KIIs/FGDs	1. Primary Data Analysis
How are gender and nutrition activities contributing to program achievements?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Are there any externalities or unintended consequences related to implementation of AESA that the project should consider?	1. KIIs/FGDs	1. Primary Data Analysis

SUSTAINABILITY		
Are the processes, systems, and programs in place to ensure that the results and impact of AESA activities will be sustainable?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Does AESA have an exit strategy planned and being implemented? Describe for beneficiaries and partners.	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Has AESA been able to develop institutional capacity of its implementing partners?	1. KIIs/FGDs	1. Primary Data Analysis
What evidence has there been of the Government of Bangladesh and other partners taking ownership of AESA activities?	1. KIIs/FGDs	1. Primary Data Analysis
What obstacles exist for achieving sustainability and what measures should be taken to increase sustainability?	1. KIIs/FGDs	1. Primary Data Analysis
Is there evidence of replication of the AESA approach?	1. KIIs/FGDs	1. Primary Data Analysis
Will smallholder farmers continue using collective action / working in groups as a way to meet ag related needs?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Will SAAOs, farmers and other stakeholders use ICT apps and approaches to meet some of their technical information needs?	1. KIIs/FGDs 2. MT Surveys	1. Primary Data Analysis 2. Primary Data Analysis
Will DAE adopt the use of Ag Extension Service Centers to their ag extension service delivery system?	1. KIIs/FGDs	1. Primary Data Analysis
SYNERGY with other USAID and Donor Funded Programs		
How effectively has AESA coordinated with other donors, USAID/FTF projects, non FtF projects and relevant government ministries and departments– the Ministry of Agriculture (DAE and AIS) and the Ministry of Fisheries and Livestock (DoF, DLS)- and other relevant public and private agencies?	1. KIIs/FGDs	1. Primary Data Analysis
PERFORMANCE MEASUREMENT SYSTEMS		
Do performance management systems at all levels effectively measure program output/outcome?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Are the indicators being used by USAID and the project meaningful?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review
Do indicators create positive/negative incentives for implementing partners?	1. KIIs/FGDs 2. Program documents	1. Primary Data Analysis 2. Literature Review

Appendix C: Supplemental Tables

The following section contains midterm data to address specific evaluation questions presented in the statement of work. Questions were omitted from this section which could not be addressed by surveys administered to FPG members, FPG leaders, or Government extension agents. These evaluation questions include:

- Relevance Questions
- Effectiveness - Sub Award CARE
- Effectiveness - Sub Award mPower
- Specific impact questions
- Specific sustainability
- Questions on synergy and performance management systems

Sample size

Table 8: Sample Size Endline Analysis

	<i>Target Sample Size</i>	<i>Achieved Sample Size</i>	<i>Non-response Rate</i>
FPG Members	550	500	9.1%
Extension Agents	50	50	0.0%
FPG Leadership	50	50	0.0%

Demographics

Table 9: FPG member respondent demographics

	All FPG Members	Female FPG Members	Male FPG Members
% of female respondents	39.4	100.0	0.0
% of respondents from a female headed household	4.6	12.7	0.0
Mean age of FPG member	43.0	37.6	46.6
Mean number of years of education	4.1	4.3	5.6
Mean size of agricultural land (% of respondents):			
0-49 decimals	10.8	21.3	4.0
50-247 decimals	63.0	67.0	60.4
248+ decimals	26.2	11.7	35.6
Mean household size (total members)	5.0	4.8	5.2
Marital status of head of member			
Single	5.0	1.5	7.3
Married	91.0	89.8	91.7
Divorced	0.2	0.6	0.0
Separated	1.0	2.5	0.0
Widow/Widower	2.8	5.6	1.0
n	500	197	303

Table 10: Respondent value chain

	All FPG Members	Female FPG Members	Male FPG Members
Value Chain Type:			
Jute	38.0	18.3	34.3
Mung Bean	33.8	28.9	37.0
Aquaculture	14.2	8.1	18.2
Chili	7.6	7.1	7.9
Beef Cattle	4.0	10.2	0.0
Dairy	12.4	27.4	2.6
n	500	197	303

Table 11: Leadership respondent demographics (up to three leader respondents per interview)

	Group Leadership
Mean number of leadership respondents per interview	
All leadership respondents	3.0
Male leadership respondents	2.1
Female leadership respondents	0.9
Leadership Roles Represented (% of respondents):	
Group Leader	96.0
Marketing Leader	98.0
ICT Leader	80.0
Member only (no official title)	24.0
n	50

Table 12: Extension agent respondent demographics

	Extension Agents
% of female extension agent respondents	12.0
Mean age of extension agent	44.2
Mean number of years of education of extension agent	14.9
AESA Value Chains supported by Agents (% of respondents):	
Jute	38.0
Mung Bean	44.0
Aquaculture	10.0
Chili	22.0
Beef Cattle	10.0
Dairy	14.0
Other	2.0
Extension Agent Title (% of respondents):	
SAAO	80.0
AFO	4.0
VFA	14.0
Other	2.0
n	50

Evaluation Q:

Has technology dissemination or general technical assistance to farmers motivated them to adopt new technologies and management approaches? (Consider different approaches that the project used: classroom training, practical session, demo plot establishment, exposure visits etc.) If yes, what is the percentage of that?

Table 13: FPG member agricultural technique information sources

Indicator	Current Sources	Sources Prior to joining FPG
Sources of FPG member information on new agricultural techniques:		
In person trainings	97.6	25.4
Farmer to farmer/neighbor farmers	63.4	92.8
Phone calls (landline or mobile)	33.8	2.0
Demo Plots	31.4	0.8
Television	8.8	1.8
Text Messages (Mobile)	8.0	0.2
Farmer specific 'apps' (via smartphone)	1.8	0.0
Newspaper	1.2	0.0
Radio	0.6	0.2
Internet (via computer or smartphone)	0.6	0.2
Other	0.6	12.0
n	500	500

Table 14: Extension agents estimated adoption of 5 key practices by farmers (improved agricultural practices)

Indicator	MTE Point Estimate
Estimated level of adoption of 5 key practices by FPG members (% of extension agents)	
All farmer members	2.0
Most farmer members	82.0
Some farmer members	10.0
Few farmer member	4.0
Don't know	2.0
Reasons farmer members adopting 5 key practices (% of extension agents)	
Quality practices	61.9
Easy to use	66.7
Easy to learn	54.8
Quality training materials	57.1
Other	2.4
n	50

Evaluation Q:

What has been the most effective form of technical assistance to the farmers?

Has adoption of improved technologies correlated to an increase in individual farmer's production?

Table 15: Members change productivity

Indicator	MTE Point Estimate
Change in farm level production of FPG supported value chain (% of FPG members)	
Increased	92.2
Stayed the same	5.8
Decreased	2.0
n	500
Reasons for increased production (% of FPG members)	
New techniques/methods	95.7
Improved inputs (fertilizer, pesticide, feed, etc)	78.3
Increased heard/plot size	28.2
More productive beef/cows/cattle	27.5
Positive weather	5.9
Lower cost of inputs	3.5
Other	2.0
n	461

Evaluation Q:

Are the farmer producer groups gaining the benefits of collective action for purchasing inputs or selling output?

Table 16: FPG member reasons for membership and member benefits

Indicator	MTE Point Estimate
Reasons for joining AESA supported FPG group (% of member respondents)	
Access to trainings	98.6
Access to information	64.8
Access to market	42.2
Access to farmer network	18.8
Obtain cheaper inputs	8.8
Family/friend was member	8.8
Access to credit	5.2
% of farmers with access to inputs at a reduced cost because of FPG	37.2
% of farmers to receive higher price for value chain production because of FPG	85.6
n	500

Table 17: FPG leadership partnerships

Indicator	MTE Point Estimate
% of FPG leadership to state informal partnerships with the following:	
Input Providers	78.0
Financial Service Institutions	26.0
Agricultural product buyers	70.0
Other informal partnerships	30.0
n	50

Evaluation Q:

Are the farmer producer groups empowered to demand regular and need-based extension service from extension agents?

Table 18: FPG leadership training access

Indicator	MTE Point Estimate
% of FPG leadership to request trainings from extension agents	74.0
n	50
% of FPG leadership to receive requested training	
Yes	32.4
Yes - but only some	24.3
None	43.2
n	37

Evaluation Q:

Do the farmer producer groups have increased access to financial services?

Table 19: FPG members access to financial services

Indicator	MTE Point Estimate
% of FPG member HHs to take any loan in previous 24 months	45.2
% of FPG member HHs to take loan for FPG value chain in previous 24 months	22.0
n	500
Reasons for value chain loan (% of FPG members):	
Cultivation costs	80.9
Used for non-value chain purpose	32.7
Purchase seed/cows/cattle	30.0
Purchase inputs	27.3
Pay for value addition	13.6
Pay for storage	6.4
Pay for transportation	1.8
Other	1.8

Sources of value chain loan (% of FPG members):	
NGOs (not via group)	59.1
Banks (not via group)	17.3
NGOs (via group)	17.3
Moneylenders (not via group)	5.5
Other (not via group)	3.6
Other (via group)	1.8
Banks (via group)	0.9
n	110

Evaluation Q:

Have the farmer producer groups benefitted by the match-making workshops, in gaining access to inputs, financial

Table 20: External interest in AESA supported extension services

Indicator	MTE Point Estimate
% of extension agents citing increased interest in AESA supported extension services	98.0
n	50

Evaluation Q:

Do the government extension agents recognize the benefits of working with the farmer producer groups?

Table 21: Farmer interest in 'new' ICT technologies

Indicator	MTE Point Estimate
% of extension agents to cite interest by AESA FPG farmers in 'new' ICT tools (% of extension agents):	
Interested and trying to use	60.0
Lack phone/internet	20.0
Interested but hesitant to use	14.0
Interested and fully using	6.0
% of extension agents to cite increased interest of 'new' ICT by non-AESA farmers/groups	88.0
n	50

Evaluation Q:

Do the government extension agents use the basic ICT and/or ICT apps for improved service provision to the farmers?

Table 22: Extension agent information sources

Indicator	Prior to AESA group formation	Since AESA group formation
Information sources utilized by extension agents (% of extension agents):		
In Person Training	92.0	94.0
Farmer to Farmer visits	64.0	88.0
Phone Call	52.0	76.0
Demo Plots	28.0	54.0
Practical training sessions (at farm)	18.0	42.0
Print	20.0	36.0
Apps (via smartphone)	0.0	18.0
Texting via mobile phones	0.0	10.0
Web platforms (via computer/smartphone)	0.0	4.0
Radio	2.0	2.0
n	50	50

Evaluation Q:

Will they continue using the ICT apps beyond the life of the project?

Table 23: Extension agent information sources (5 year from now)

Indicator	MTE Point Estimate
Information sources currently being used, which are expected to continue to be utilized by extension agents in 5 years' time (% of extension agents):	
Classroom training	92.0
Farmer to Farmer visits	88.0
Phone call	74.0
Demo Plots	54.0
Practical training sessions (at farm)	42.0
Print	30.0
Apps (via smartphone)	18.0
Texting via mobile phones	6.0
Radio	2.0
Web platforms (via computer/smartphone)	2.0
TV	0.0
n	50

Evaluation Q:

What are the constraints to this practice being sustainable?

Table 24: FPG member access to ICT sources

Indicator	MTE Point Estimate
% of FPG members with access to the following ICT sources:	
Mobile phone (non-smart phone)	94.8
Television	79.2
Newspaper	29.4
Smartphone	16.4
Internet (via smartphone)	8.4
Radio	7.4
Internet (via computer)	1.2
Landline Phone	0.0
n	500

Evaluation Q:

Has the project's approach of extension agents' capacity building been effective to enable extension service delivery to meet farmers' information needs?

Table 25: FPG member information sources

Indicator	Prior to AESA group formation	Since AESA group formation
FPG member information sources (% of FPG members):		
In person trainings	25.4	97.6
Farmer to farmer/neighbor farmers	92.8	63.4
Phone calls (landline or mobile)	2.0	33.8
Demo Plots	0.8	31.4
Television	1.8	8.8
Text Messages (Mobile)	0.2	8.0
Farmer specific 'apps' (via smartphone)	0.0	1.8
Newspaper	0.0	1.2
Radio	0.2	0.6
Internet (via computer or smartphone)	0.2	0.6
Other	12.0	0.6
n	500	500

Table 26: FPG member information sources

Indicator	MTE Point Estimate
Median number of times in the past 12 months FPG members have attended FPG lead trainings	5.0
Median number of times in the past 12 months FPG members have attended extension agent lead trainings	3.0
Median number of times in the past 12 months FPG members have spoken with extension agent on phone	0.0
n	500

Table 27: Extension agent capacity information sources

Indicator	MTE Point Estimate
Median number of groups each extension agent provides support too	8.0
% of extension agents to receive AESA supported training	96.0
n	50
% of extension agents to cite the AESA training was useful	52.0
n	48

Evaluation Q:

Do the farmer leaders recognize the importance of ICT in gaining and disseminating extension knowledge for farmers?

Table 28: FPG leadership perception of member benefits and information sources

Indicator	MTE Point Estimate
Purpose of FPG (% of group leaders)	
Provide training for framers	98.0
Provide information for farmers	88.0
Provide a peer network for farmers	82.0
Link farmers to markets	78.0
Link farmers to extension services	68.0
Link farmers to inputs	66.0
Train farmers on new ICTs	30.0
Provide financial services for farmers	4.0
Other	2.0
n	50

Evaluation Q:

What has been the effectiveness of the program in targeting women and empowering them?

Table 29: FPG female members -- empowerment and targeting

Indicator	MTE Point Estimate
% of female FPG members who feel there are unique constraints to women farmers which still need to be addressed	22.8
% of female FPG members who have spoken with a female extension agent since formation of the FPG	25.4
% of female FPG members who cite the FPG group provides specific services to female members	23.6
n	197

Evaluation Q:

How effective has the project been in ensuring better extension services for women farmers? Has it taken into account their needs accordingly?

Table 30: Extension agent support of female farmers

Indicator	MTE Point Estimate
% of extension agents to provide extension to a female farmer group member in the past 30 days	90.0
Median number of female farmers supported by each extension agent over the past 30 days	68.7
n	50

Evaluation Q:

How effective are the farmer leaders (two Farmer Leaders and one ICT Leader) in leading the group on specific functions and further disseminating the information/knowledge gained by TOT, to the FPG members?

Table 31: FPG member learnings from FPG leadership

Indicator	MTE Point Estimate
% of FPG members to receive information to improve farming techniques from FPG leadership	94.6
Methods of information sharing by FPG leadership (% of FPG members)	
In person	99.6
Phone Calls	42.7
Witten letter	1.7
Other	1.3
Text Message	1.1
Internet (via computer)	0.4
Apps (via smartphone)	0.2
% of FPG members which have improved their production from trainings provided by FPG leadership	93.4
n	500

Evaluation Q:

Are there any externalities or unintended consequences related to implementation of AESA that the project should consider?

Table 32: FPG member relationships

Indicator	MTE Point Estimate
% of FPG members to agree with the following statements:	
Selection of farmers to participate in the AESA group was clear and transparent	99.8
The relationship between you and the extension agents is positive and beneficial to you	95.0
The relationship between you and farmer group/ICT leaders is positive.	99.4
The relationship between you and other farmer group members is positive.	92.4
The relationship between you and other farmer group non-members is positive.	96.4
n	500

Table 33: FPG agent and FPG leader relationships

Indicator	MTE Point Estimate
% of extension agents to have a good relationship with FPG leadership	
Good relationship with all FPG group leaders	88.0
Good relationship with some FPG group leaders	12.0
Not a good relationship with FPG group leaders	0.0
n	50

Evaluation Q:

Is there evidence of replication of the AESA approach?

Table 34: FPG leader and extension agent perceived interested (external to project)

Indicator	MTE Point Estimate
% of FPG leadership to cite interest by non-FPG farmers in the area	100.0
% of extension agents to share 'new' ICT technology tools with non-AESA stakeholders (farmers, groups, other extension agents)	88.0
n	50 (leaders) 50 (extension agents)

Evaluation Q:

Will smallholder farmers continue using collective action / working in groups as a way to meet ag related needs?

Table 35: Group leader expectation of group sustainability

Indicator	MTE Point Estimate
% of FPG leadership to feel the FPG members will remain as a group once AESA support ends	
Remain a group (the same)	78.0
Remain a group (but different)	12.0
Dissolve	10.0
n	50

Appendix D: List of KIIs and FGDs

Table 36: Total Number of FPGs conducted by Mid-term team (International and national)

Total	# of Male Respondents	# of Female Respondents	Total Respondents
Focus Group Discussion Type: ^A			
Jute	64	16	80
Mungbean	58	21	79
Chili	21	3	24
Beef-fattening	3	21	24
Dairy	12	43	55
Fish Farming	54	14	68
Extension (Upazila level)	13	0	13
Extension (Block level)	41	12	53
ICT Leaders	9	0	9
Total	275	130	405
^A A total of 39 FGDs were conducted			

Table 37: Total KIIs completed by National Consultants

Total	# of Male Respondents	# of Female Respondents	Total Respondents
KII Type:			
Leader (Jute)	12	3	15
Leader (Mungbean)	9	0	9
Leader (Chili)	3	0	3
Leader (Beef Fattening)	3	3	6
Leader (Fish Farming)	2	7	9
Extension (Upazila level)	7	2	9
Extension (Block level)	5	0	5
Block level	10	0	10
Total	51	15	66

Table 38: List of KIIs completed by international evaluators

KII Respondent Title	KII's Organization	Sex of Respondent
M&E Coordinator	AESA	Male
M&E Coordinator	AESA	Male
M&E Coordinator	AESA	Male
District Coordinator	AESA	Male
Upazila Extension Agent	VFA (DLS)	Male
Farmer Leader	FPG (Dairy)	Male
ICT Leader	FPG (Dairy)	Female

KII Respondent Title	KII's Organization	Sex of Respondent
ICT Leader	FPG (Jute)	Male
District Manager	AESA	Female
Regional Manager	AESA	Male
Field Facilitator	AESA	Male
Field Supervisor	AESA	Male
Farmer Leader	FPG (Jute)	Male
ICT Leader	FPG (Jute)	Male
Marketing leader	FPG (Jute)	Male
ICT Field Coordinator	mPower	Male
ICT Leader	FPG (Fish)	Female
Marketing leader	FPG (Fish)	Female
ICT Field Coordinator	FPG (Fish)	Female
Field Facilitator	AESA	Female
Agriculture Extension Marketing Officer	AESA	Male
Farmer Leader	FPG (Mung Bean)	Male
ICT Leader	FPG (Mung Bean)	Female
Marketing leader	FPG (Mung Bean)	Female
Field Coordinator	AESA	Male
Field Facilitator	AESA	Female
SAAO	SAAO	Male
Private Dealer (owner)	Service Provider	Male
ICT Officer	AESA	Male
District Manager	AESA	Male
Field Facilitator	AESA	Male
Field facilitator	AESA	Female
Field Supervisor	AESA	Male
ICT Champion	FPG Group (Jute)	Male
ICT Champion	FPG Group (Jute)	Male
ICT Champion	FPG Group (Jute)	Male
Upazila Extension Agent	VFA (DLS)	Male
ICT Leader	FPG (Dairy)	Female
Marketing leader	FPG (Dairy)	Female
ICT Field Coordinator	FPG (Dairy)	Female
Chief of Party (former)	AESA	Male
M&E Director	AESA	Female

KII Respondent Title	KII's Organization	Sex of Respondent
Managing Director	DAM	Male
Field-staff	mPower	Male
Block extension worker	DAE	Male
Upazila extension officer	DAE	Male
Marketing Leader	FPG (jute)	Male
ICT Leader	FPG (jute)	Male
Farmer Leader	FPG (jute)	Male
Marketing Leader	FPG (aquaculture)	Female
ICT Leader	FPG (aquaculture)	Female
Farmer Leader	FPG (aquaculture)	Female
Regional Manager Barisal	AESA	Male
Marketing Leader	FPG (beans)	Male
ICT Leader	FPG (beans)	Male
Farmer Leader	FPG (beans)	Male
Field Facilitator	AESA	Male
M&E Specialist	AESA	Male
Upazila extension officer	DAE	Female
Assistant Upazila extension officer	DAE	Male
FPG (beans)	FPG (beans)	Male
FPG (beans)	FPG (beans)	Male
FPG (beans)	FPG (beans)	Male
Technical Manager - Access to inputs	AESA	Male
Chief of Party (incoming)	AESA	Male
Consultant, Livestock Economics Section	DLS	Male
CEO	mPower	Male
Total KIIs completed by international ET members:		68

Appendix E: Indicator Performance Tables (Shared by project with TANGO)

Table 39: Intermediate result 2 (Project Component 1)

SL NO.	SPS REFERENCE (F)/Custom	INDICATOR NAME	2015 Target	2015 Actual	LOPTarget
IR 2: Smallholder Farmers (men & women) in Agriculture Empowered					
<i>Sub-IR 2.1:Farmer's Knowledge and Capacity in Agriculture Enhanced</i>					
6	4.5.2-2	Number of hectares of land under improved technologies or management practices as a result of USG assistance	31,038	25,581	68,558
7	4.5.2-5	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	80,358	103,718	255,856
5-b	4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	100,851	71,770	10,8220
8	4.5.2(13)	Number of rural households benefiting directly from USG interventions	<i>n/a</i>	96,331	261,057
9	4.5.2-27	Number of members of producer organizations and community based organizations receiving USG assistance (S)	100,000	71,536	105,465
10	4.5.2-30	Number of MSMEs, including farmers, receiving USG assistance to access loans	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Sub-IR 2.2: Producer (Farmer) Groups Strengthened</i>					
11	Custom	Number of producer (farmer) groups accessing extension services	4160	2159	<i>n/a</i>
12	4.5.2-11	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	4128	3854	<i>n/a</i>

Table 40: Intermediate result 3 (Project Component 2)

SL NO.	SPS REFERENCE (F)/Custom	INDICATOR NAME	2015 Target	2015 Actual	LOPTarget
IR 3: Strengthened Application of ICT in Agriculture					
<i>Sub-IR 3.1: Improved National Agriculture Info System</i>					
13	Custom	Capacity of Bangladesh Ministry of Agriculture to produce and disseminate agricultural knowledge enhanced	1	n/a	1
14	Custom	Number of ICT applications developed and made available for farmers and extension agents	10	6	13
15	Custom	Number of audio-visual products made available for farmers and extension agents	10	n/a	6
<i>Sub-IR 3.2: Increased Use of ICT by Ag Extension Agents</i>					
16	Custom	Number of Agriculture Extension agents using project-assisted ICT-based applications for assisting farmers	300	202	402
<i>Sub-IR 3.3: Increased Use of ICT by Farmers</i>					
17	Custom	Number of farmers accessing information through new ICT channels	22,000	32,126	95,126

Table 41: Intermediate result 1 (Project Component 3)

SL NO.	SPS REFERENCE (F)/Custom	INDICATOR NAME	2015 Target	2015 Actual	LOP Target
Project Objective: Increased Farmer Access to Improved Agricultural Extension Service					
1	Custom	Number of farmer producer groups accessing improved extension services	n/a	n/a	n/a
IR 1: Agricultural Extension Service Provision Enhanced					
2	Custom	Number of extension agents (public and private) providing increased extension services to farmers and producer groups	450	368	1227
<i>Sub-IR 1.1 Capacity of Agriculture Extension Agents Enhanced</i>					
3	Custom	Number of farmers served through visiting the new agricultural extension service centers	n/a	12,045	36,414
4	Custom	Number of new Ag Extension Services Centers established and functional	n/a	90	130
5-a	4.5.2-7	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	100,851	71,770	108,220
<i>Sub-IR 1.2: Increased Outreach to Farmers by more equipped Agriculture Extension Agents</i>					

Appendix F: Documents reviewed

Table 42: List of documents reviewed for mid-term evaluation

Document Description	Document File Name (as shared by AESA)
Annual Report	AESA Annual Report Year 1 Oct'12-Sep'13.docx
Annual Report	AESA Annual Report Year 2 Oct'13- Sep'14.pdf
Program Description	AESA Program Description Mod4 2015.docx
Quarterly Report	AESA Quarterly Report Quarter 10 Jan-Mar'15.pdf
Quarterly Report	AESA Quarterly Report Quarter 9 Oct-Dec'14.pdf
Beneficiary List	AESA_List of Beneficiary.xlsx
M&E Plan	Ag Extension M&E Plan - Modified 14 June 2015.docx
Extension Award	Agreement Agricultural Extension Award.pdf
Gender Strategy	Gender Strategy draft AESA 18 feb 15.docx
ICT Needs Assessment	ICT Need Assessment Report by mPower.pdf
ICT Strategy Report	ICT Strategy Report by mPower.pdf
Market Analysis	Input and Output Market Analysis by CARE.docx
Capacity Building MOU	MoU between DAE and AESA for DAE CapBuildg.pdf
Implementation Plan	Project Annual Implementation Plan Year 1 Ag Extension 2013.docx
Implementation Plan	Project Annual Implementation Plan Year 2 Ag Extension 2014.docx
Implementation Plan	Project Annual Implementation Plan Year 3 Ag Extension 2015.pdf
Sub-award (CARE)	Subaward agreement DAM-CARE.docx
Sub-award (mPower)	Subaward Agreement DAM-mPower.docx
Bangladesh Development Strategy	USAID Bangladesh_Country Development Cooperation Strategy 2011-16.pdf
Value Chain Study	Value Chain Selection Study by CARE.docx
Value Chain selection study	AgExtInterventions_InitialAssessment_140612.docx
Concept Model (VC extension)	Concept of Demonstration of a Value Chain Extension Model.docx
Concept Paper on block-wise Ag Extension Committee	Concept Paper on Ag Extension Committee.docx
Farmer Leader Selection Process	FL selection process English draft guideline ,2014 JD.doc
FPG Action Plan	FPG Action Plan_Guideline-ENGLISH_161114(revised_100115).docx
FPG formation guideline	Guideline for FPG formation year 3_KZ ADR 6.11.14 SR.docx

Document Description	Document File Name (as shared by AESA)
Improved Ag Extension Service Demo	Improved Ag Extension Service Demo Upazilas-1.docx
5-days SAAO Training Course for SAAOs	AESC Extension 5 modules summary.docx
Quarterly Report	Q11 Report - final.docx
Results summery (PowerPoint)	Year 3 Results Summary - doc.pptx
Demo-Upazila (PowerPoint)	AESA + 4 demo presentation.pptx

Annexes

The following annexes are included as standalone documents; each is accompanied to this report and contains the same name as the below section title.

Annex 1: Survey Data Files

Annex 2: Evaluation Tools (questionnaires, topical outline)

Annex 3: Photos collected during data collection
Photos consist of photos of FPG group action plans.

Annex 4: Scope of Work

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