FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

QUARTERLY REPORT

FEED THE FUTURE ASIA INNOVATIVE FARMERS ACTIVITY

YEAR 1 QUARTER 3 (APRIL 1, 2016 – JUNE 30, 2016)

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Acronyms

AFU	Agriculture and Forestry University (Nepal)
AIFA	Feed the Future Asia Innovative Farmers Activity
AVC	Agricultural Value Chains Project (Bangladesh)
B2B	Business to Business
BAU	Bangladesh Agriculture University
EMMP	Environmental Mitigation and Monitoring Plan
FTF	Feed the Future
INGENAES	Integrating Gender and Nutrition within Agricultural Extension Services Project
KU	Kasetsart University
LEAF	Lowering Emissions in Asian Forests Project
LMI	Lower Mekong Initiative
MOU	Memorandum of Understanding
PEN	Pest Exclusion Nets
RIH	Regional Innovation Hub
RUA	Royal University of Agriculture (Cambodia)
STIP	Science, Technology, Information and Partnerships
T4FC	Tech4 Farmers Challenge
TOT	Training of Trainers
WEA	Women's Empowerment in Agriculture Project (Bangladesh)
WFLO	World Food Logistics Organization
Y1Q3	Year 1 Quarter 3

INTRODUCTION

This report covers the Feed the Future Asia Innovative Farmers Activity (AIFA) for Year 1 Quarter 3 (Y1Q3) activities implemented between April 1, 2016 and June 30, 2016.

AIFA is a regional project working to facilitate the scaling of critical agricultural technologies through regional partnership and technology transfer. The project works with a range of agricultural technology stakeholders on a regional basis (private sector, research institutions, governments, networks, etc.) to increase food security, reduce poverty, and improve environmental sustainability by facilitating agricultural innovation and technology diffusion in the Asia region.

AIFA is comprised of four components, as follows:

Component 1: Horticulture-focused package of interventions

Component 2: Aquaculture-focused package of interventions

Component 3: Regional demand-driven packages of interventions to address food security

Component 4: Technology transfer to support USAID bilateral mission-oriented interventions

I. QUARTERLY HIGHLIGHTS

- The Asia Regional Agricultural Innovation Summit brought over 140 individuals, representing more than 70 organizations from 15 countries, together to launch the project's regional challenge, define the region's most critical issues and explore innovation in Asian agriculture. The Summit included a technology demo area and live pitches from six regional technology companies.

- Completed joint project design and student selection for the "Syngenta – USAID Ag Student Connections" exchange. The project selected nine regional ag students from seven countries (Feed the Future and Lower Mekong countries) and developed a program to explore smallholder use of pest exclusion nets and MimosaTek sensor-enabled technology that was held from July 5 to 15.

- Signed sub-awards with Kasetsart University in Thailand, the Bangladesh Agriculture University, the Royal University of Agriculture in Cambodia and the Agriculture and Forestry University in Nepal.

- Finalized regional challenge themes, criteria and awards – While the Tech4Farmers challenge website will be launched by Kasetsart University next quarter on its domain, the project has

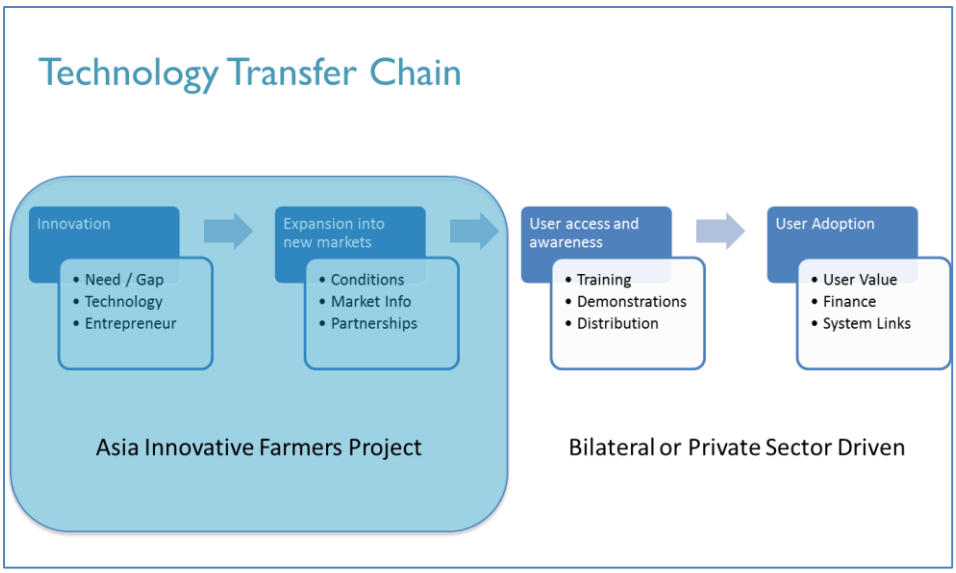
already received 14 technology challenge applications and more than 1,400 views on the temporary landing page.

- Excellent initial cooperation with bi-lateral Feed the Future projects on fast-track technologies (pest exclusion nets and sensor enabled aquaculture). This includes agreement to co-finance testing with: the Agricultural Value Chains project (AVC) and the Women's Empowerment in Agriculture project (WEA) in Bangladesh on pest exclusion nets; the KISAN project in Nepal on pest exclusion nets; and the Aquaculture for Income and Nutrition project (AIN) on sensor enabled aquaculture in Bangladesh. The project has also contacted the INGENAES project to field test a tool specifically designed to assess technologies' impacts on women.

- Bangladesh market introduction tour with e-Fishery CEO and 25 Bangladesh aquaculture stakeholders results in e-Fishery board approval for Bangladesh expansion testing and multiple local companies requesting distribution rights.

II. AIFA Y1Q3 Activities

As a regional project, the Asia Innovative Farmers Project approach is different from many bi-lateral approaches to technology promotion and scaling. While the project has a focus on achieving impact at scale, it is clear that this must be accomplished within the larger USAID framework of regional and bi-lateral resources. The project has developed a simple technology transfer chain graphic to represent how these roles can be understood in terms of the stages of technology transfer and scaling. In brief, the graphic locates the project's activities in the first two stages of transfer, namely identification of innovations (which will be accomplished through the Tech4 Farmers Challenge) and decision support for expansion into new markets (which will be accomplished through Technology, Market and Model testing in the target markets). These activities represent the project's approach to direct technology transfer facilitation.



In addition to this, the project is supporting the strengthening of the regional agricultural innovation system through an integrated approach that includes a Regional Innovation Hub at Kasetsart University,

a series of regional and national level innovation events, and a competitive, grants-based local community development scheme that will encourage grass-roots organization. At this writing, the project is preparing a revision of our project description to better separate these activity areas through a new component structure and more clearly depict the range of our activities and objectives.

A. COMPONENT 1: HORTICULTURE-FOCUSED PACKAGE OF INTERVENTIONS

The project has made important progress this quarter in developing critical local private sector partnerships and identifying key smallholder issues that project supported testing must address. These developments are absolutely vital to getting commercially meaningful results that will support the project's focus on commercial scale. Additionally, a major milestone was achieved at the end of this quarter when Kasetsart University signed its sub-agreement with the project. With Kasetsart's technical leadership now in place and local partners engaged, the project has arranged a TOT at Kasetsart on August 9-13 to prepare all partners for implementation. The project would have preferred to be at this point in June rather than August, but given the interest and value-added partnerships in place, the project is confident that the testing will provide the sort of practical, actionable data needed.

In June the project completed a joint planning and participant selection trip to Jessore district in Bangladesh with the Feed the Future Women's Empowerment in Agriculture project (WEA). The project will work with WEA trained women's groups in Jessore district to conduct Technology, Market and Model testing with a focus on gender issue learning. Interviews with women farmers and WEA staff brought out a number of critical gender issues that the project will explore through testing. Most importantly, staff and farmers confirmed that women in Bangladesh are not allowed to purchase pesticides and agro-chemicals. (Everyone we spoke to reported that the reason for this ban was a famous case of a woman who committed suicide by drinking agricultural pesticide.) While all of the women farmers we spoke to were commercially-minded and did use agro-chemicals, they were forced to rely on their husbands or commercial spraying services for this critical input. Census data for 2015 estimates that 12.5% of Bangladeshi households are female-headed, and this percentage may be higher among the poorest households. Net technology has the potential to significantly reduce or eliminate the need for pesticides on many common vegetable crops in Bangladesh and could help to overcome an obstacle to women's empowerment in agriculture.

Across all countries, the issue of high production costs for high value vegetables (e.g. eggplant and tomato) has also been raised consistently. Farmers mention that pest pressure is very high on these crops and that they feel they have to spray these crops multiple times each week to protect their investment. For this reason, smallholders do not plant these crops as often as they would like and are not able to maximize return on their land. Using net technology for these crops has the potential to reduce pesticide costs, improve food and human health, and also allow smallholders to further diversify their production. Controlled testing has already begun at the Bangladesh Agricultural University (BAU) and initial results agronomic results are very promising. Eggplant (brinjal, locally) in particular is showing excellent vegetative and fruit growth with zero evidence of pest infestation under the net. The

university is also very excited about okra performance. Okra is very susceptible to mosaic virus and they report that incidence of the virus under the net is approximately 50% less than in the open condition. The project expects to have full season agronomic and financial results from BAU in the next quarter.

Farmers we have spoken to are excited by the benefits of nets, but their common concern is with the capital investment required. Although pesticides are expensive, they are a variable cost which can be adjusted and more importantly, credit is generally available for pesticide purchase (either from dealers or on a weekly basis from informal sources). To address this, we will develop and test specific financing options (e.g. seller financed installment, MFI credit, etc.) with private sector partners in each country.

This quarter has seen important progress in development of private sector partnerships for net technology. Following the Summit in May, Angkor Green (www.angkorgreen.biz), an agri-services company in Cambodia, ordered pest exclusion nets from TCT Ltd, a technology presenter at the Summit. Angkor Green has submitted a proposal to partner with the project on farmer testing in Cambodia. In addition, the project is negotiating with the Natural Agricultural Village, a company that is selling safe vegetables through their own outlets and supermarkets in Phnom Penh. This partnership would be based on testing an installment financing model where the buyer provides the net, contracts to buy production and recoups the net investment over an agreed period. In Bangladesh, the project has made an important connection with the Agricultural Value Chains project (AVC) that promises real synergy across projects. AVC has an existing activity supporting two local agri-services companies (Isphani and GME Group) to stock and promote shade netting for the floriculture sector. The Innovative Farmers project focus on pest exclusion netting will allow these companies to expand their offerings within the category (protected agriculture) and expand into vegetable horticulture. The project has arranged for representatives of all partners (private sector, university and NGO) to attend a pest exclusion net TOT at Kasetsart University from August 9-13.

One additional critical element to famer adoption will be the availability of a market for clean, safe vegetables. Although the project expects that for many crops and conditions protected cultivation will reduce production costs, the decision to invest will be limited if there is no market or price advantage. Testing in cooperation with a premium buyer, like Natural Agricultural Village, and projects like AVC that are supporting better markets will provide important data on this, but the larger problem of growing the safe vegetable market is outside the scope of the project. However, the project has received a couple of expressions of interest from regional companies that are using the web and smartphone apps for marketing and verification of safe vegetables. If any of these technologies receive a challenge award there is a strong potential that paring testing with pest exclusion nets could provide mutually enabling support.

B. COMPONENT 2: AQUACULTURE-FOCUSED PACKAGE OF INTERVENTIONS

In the previous quarter the project revised the original plan for this component to focus on sensor-enabled technology in aquaculture rather than alternative feed sources. At the Asia Regional Agriculture Innovation Summit in May, the project invited e-Fishery from Indonesia to present. This technology

combines automatic feeding technology with motion and sound sensors to optimize feed usage and increase the feed conversion ratio for fin fish in pond aquaculture. Following the Summit, two Bangladeshi aquaculture companies contacted the project to facilitate commercial discussions with e-Fishery regarding expansion into the Bangladesh market.

In June the project organized a "Bangladesh market introduction" trip for e-Fishery. The project organized an aquaculture sector meeting of 25 stakeholders representing feed, hatchery, production, marketing, NGO and finance sectors. At this meeting the participants unanimously voiced their interest in the technology and in testing its applicability to the Bangladesh market. The project also arranged a field visit to Jessore district to provide e-Fishery with an insight into the production conditions in Bangladesh. Following the visit the e-Fishery board has approved participation in market testing in Bangladesh and two very reputable and capable Bangladesh companies have requested national distributorships for e-Fishery's technology.

e-Fishery has had sales in Indonesia of approximately 500 units to date. The majority of these early sales were of "hardware", meaning that customers bought the machine (for between $500 to $700 depending on capacity) outright. However, the company expects to put 1,000 units into service in Indonesia before the end of the year driven largely by smallholder demand for subscription/rental services (~$30 USD / month) rather than hardware sales. Effective testing of the technology in Bangladesh will be based on segmenting the market to understand at what scale hardware sales are warranted, at what scale subscription sales are warranted and at what scale the technology is not cost effective for users.

To ensure that the testing results are as meaningful as possible, the project will not pay for the technology and will work through e-Fishery and the local distributor(s). The distributor(s) will identify customers in various market segments and the project will support them and e-Fishery to understand the critical issues related to technology, market and model in Bangladesh. An important aspect of the project's interest in the technology is the potential for real-time data to provide a "window" into individual production businesses and thereby reduce the risk of production credit for financial institutions. To test this aspect, the project will support integration of financial institutions into testing.

Nearly everyone on the market introduction trip in Bangladesh felt that Bangladesh aquaculture was at a crossroads – that the explosive growth of recent years was driven by high margins even on low efficiency, extensive production. With the production growth, however, margins are now tightening. For further growth, it is understood that farmers must intensify and increase their efficiency. The major obstacle to that intensification is seen as high feed costs. A technology like e-Fishery has the potential to reduce feed wastage and optimize feed conversion ratios without extensive training and human capacity building. Project testing will assess the actual performance of the technology in Bangladesh conditions, but will also test different pricing models and service needs based on farm size, capital and farmer experience / education.

Scale (number of machines) and locations of testing will be determined through a collaborative process with e-Fishery, the local distributor(s) and the project. The project and e-Fishery hope to have testing

begin before the end of the fiscal year, but the realities of negotiation of distribution agreements and importation will probably push actual testing into the first quarter of the next fiscal year.

Challenges

The July 1 terrorist attack in Bangladesh could have a significant impact on project activities in the country. The Asia Innovative Farmers Project approach is to encourage regional investment and expansion into Feed the Future countries, including Bangladesh. Because foreigners (in the textile sector) were targeted among the victims, this could have a chilling effect on foreign investment. The e-Fishery model is to name local distributors, rather than set up new country offices, so they do not currently see the security situation as an obstacle. However, there is a potential that a worsening security situation could impact the project's ability to solicit additional interest in Bangladesh expansion.

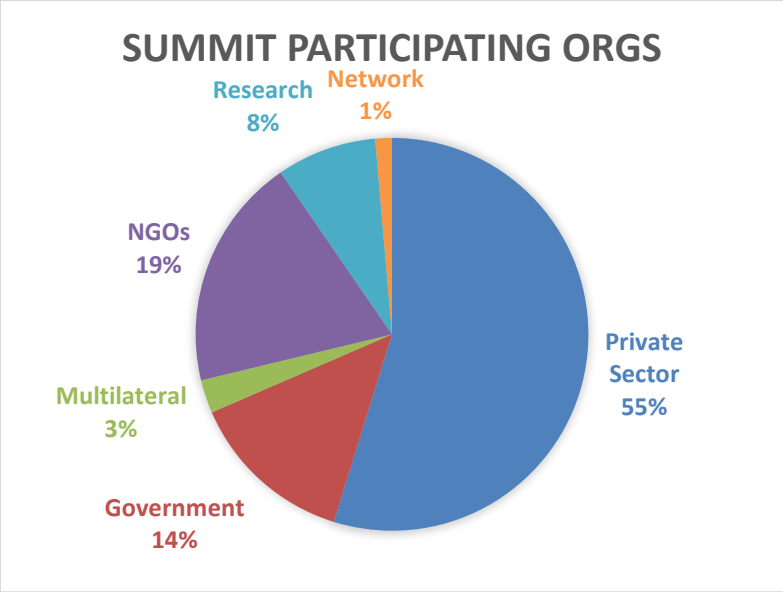
C. COMPONENT 3: REGIONAL DEMAND-DRIVEN PACKAGES OF INTERVENTIONS TO ADDRESS FOOD SECURITY

Asia Regional Agricultural Innovation Summit

This quarter, the majority of project resources were involved in the planning and execution of the first Asia Regional Agricultural Innovation Summit. With the revision of the project approach to develop a regional challenge to identify technologies for project support, this regional summit took on a much more critical aspect. In particular, the project wanted to engage and excite a broad stakeholder base across the region to ensure active support for the challenge beyond the focal countries.

This is a major concern given that the project seeks to source technologies from all of South and South East Asia but can only support testing activities in the Feed the Future focal countries. To better engage the larger region, the project focused on a broad participant base from across the region and sought to directly involve <u>all</u> participants in developing a focus that would take their specific issues into account – not only those specific to the Feed the Future focal countries. In implementing this strategy, the project also felt it was important that the participants represent the range of stakeholders which would partner with the project and would form the basis of a regional innovation community that transcends traditional sector (e.g. private sector, government, research) as well as geographic divisions (e.g. ASEAN, SAARC). As the graph below demonstrates, the project was very successful in drawing a broad sectoral representation and in particular, was able to involve the private sector to an extent which is unusual in development oriented meetings. In total, 142 individuals representing 73 organizations from 15 countries attended the Summit. Of this number, the project provided full financial support to 25 (17%) and partial support to 9 (6%).

In order to engage and involve this broad audience directly, the project had an ambitious strategy to give each participant a single vote in determining the specific constraints that the project would address through the regional challenge. This was done through a two-part process of break-out brainstorming and plenary ranking using on-line polling software. The specific "themes" that were generated through this participatory process have been directly incorporated into the challenge and the project expects that this direct, personal involvement will help to keep participants more engaged throughout the project even on activities outside of their country or specific area of expertise.



On the second day, the Summit focused on innovation both broadly (human centered design approach) and specifically through agriculture and aquaculture technology presentations. This day was meant to educate participants on the potential of innovation in agriculture and the opportunities to encourage and expand it through the project. This day was considered "inspirational" by many participants and a major finding from the day was the excitement and interest generated by bringing "non-traditional" participants together with the "usual suspects" at agriculture focused events. In particular, it was noted that many speakers on day 2 started their presentations by saying "I am not an agriculture specialist" – presenters included designers, engineers, IT professionals and serial entrepreneurs. With this result in mind, the project is making a special effort to build a regional innovation community that reaches beyond the traditional government, ag research, agri-business nexus for membership.

The project was very pleased with the Summit and believes that it was an excellent investment in terms of laying the groundwork for the project's future activities. It must be noted however, that the event would have had a very different character without the financial and management support of Winrock International. Winrock invested more than $100,000 USD of its corporate resources in the Summit; bringing in CWA event management and bringing in key day 2 speakers and themes. Winrock's investment in the Summit represents part of its cost share commitment, but more importantly, it represents a long-term commitment to supporting innovation in the Asia region. The team would also like to note the critical support the USAID RDMA agriculture team played in event design and speaker and participant identification and invitation.

Tech4 Farmers Challenge

This quarter also saw the development of the Tech4 Farmers Challenge (Tech4FarmersChallenge.wordpress.com), which will be the centerpiece of project activities going

forward. The challenge was launched at the Summit by USAID Deputy Assistant Administrator Justin Finnegan. The challenge is open to regional organizations who have solutions which respond to the specific themes which were developed by participants at the Summit:

- Smart Services and Information
- Innovative Financial Services
- Storage and Post-Harvest Technology
- Appropriate Low-Cost Technology

Unlike many challenges, the Tech4 Farmers Challenge (T4FC) does not offer a financial prize, but rather focuses on providing business services to expand solutions that have shown some market acceptance in the region. These services are organized around the Technology, Market and Model approach and are intended to provide the expanding companies and their local partners with the information necessary to assess the feasibility of profitably reaching smallholder farmers in the Feed the Future focal countries of Bangladesh, Cambodia and Nepal.

The project has had initial discussions with a number of regional entrepreneurs and other challenge implementers in the process of developing this challenge. Entrepreneurs mentioned that although funding is absolutely critical, for developed ideas, there are a number of existing channels for getting investment. This investment generally comes with very experienced, high quality advisory services as well. What these investors generally lack, however, is experience in the smallholder market. Therefore, specific assistance in testing and understanding the smallholder markets is a critical need for many young companies in the agriculture sector. It is expected that the lack of award funding may skew applicants towards those that can effectively expand through distributors or licensing and who do not require significant capital investment in a new market. The project will carefully monitor submissions and assess applicants' requirements to evaluate and adjust the approach throughout the project.

Although a temporary challenge website has been established, it will not be formally opened to submissions until it can be permanently housed on the Kasetsart web domain. With the signing of the Kasetsart sub-agreement, the University has agreed to host the site on its domain as an integrated part of its role as the Regional Innovation Hub. Although the current site is temporary, the project has already received 14 submissions. This site will be opened early in the next quarter and the first group of submissions will be reviewed in early September.

Syngenta – USAID Ag Student Connections Program

This quarter the project completed joint planning with Syngenta for the Ag Student Connections Program which will run from July 5 to 15 in Hanoi, Vietnam. The project has cooperated with 7 agricultural universities in Bangladesh, Cambodia, Laos, Nepal, Thailand and Vietnam and selected 9 Asia regional students to participate in the exchange. The students submitted video applications which can be viewed on YouTube.

This exchange program is the start of a 5-year partnership with Syngenta to introduce young agriculture students to the opportunities which technology offers for smallholder agriculture. Syngenta and the project are already exploring how to leverage the capacity and knowledge which these young agricultural leaders will develop through the exchange. Over 5 years, Connections will develop a sizeable alumni group of active, aware, trained youth across the region that can be a voice for change. As a start, the project will utilize exchange students as interns in all of the upcoming National Innovation Summits in order to maintain connections with the students, build their capacity and offer them a platform for youth advocacy.

Challenges

The security situation in Bangladesh has posed some challenges in this component as well. Visa applications for Bangladeshis traveling to Thailand and to Vietnam (for the Connections program) seem to have been more difficult since the attack. Also, the National Innovation Summit in Bangladesh may prove to be a problem if the security situation doesn't improve. At the moment USAID and Winrock security is recommending against any large organized meetings, particularly involving expats, in Bangladesh. The Bangladesh National Summit is tentatively planned for October, so the project will keep a careful eye on the security situation and coordinate with USAID before organizing any meeting.

D. COMPONENT 4: TECHNOLOGY TRANSFER TO SUPPORT USAID BILATERAL MISSION-ORIENTED INTERVENTIONS

This quarter the Asia Regional Agricultural Innovation Summit offered an opportunity to engage broadly with USAID missions across the region, both Feed the Future focal countries and others. With the support of the RDMA agriculture team, 18 USAID staff from the region and from BFS in Washington attended the Summit. Project staff and the RDMA agriculture team also took advantage of the opportunity at the GDO Implementing Partners Meeting to have multiple side conversations with USAID representatives from Bangladesh and Nepal regarding coordination around project activities.

This quarter the project also sent out its first monthly update to USAID stakeholders and set the dates for upcoming National Innovation Summits in each focal country. Project staff will travel to each country in preparation for the National Summits and will coordinate closely with them on agenda, speakers and participants.

III. MANAGEMENT AND ADMINISTRATION

This quarter the project has begun development of an online, interactive M&E database. The database will accommodate all of the project's data that is required for reporting to USAID. The system will allow for data to be entered and queried anywhere in the world. It is expected that the majority of data will be entered in Thailand, Bangladesh, Cambodia and Nepal, and possibly in other countries in Asia and the US. The database application will have provisions for multiple levels of users, instant access queries, real-

time and duration-based (month, quarter, year) reporting. It will employ an ultra-thin client architecture, which supports low-bandwidth (dial-up) connections and is accessible through all major web browsers regardless of operating system. This database will allow the project enter and monitor data on a real-time basis, improving the speed of project learning and adaptation. It will also allow for more nuanced, timely reporting to USAID and other interested stakeholders. The database is currently under construction and is scheduled to be "delivered" in October.

The July 1 attack in Bangladesh has highlighted the need for careful security planning and preparedness. In Bangladesh, Cambodia and Nepal, AIFA staff share space and services with local Winrock offices. AFIA staff in those countries are included in and subject to the security plans and requirements of those Winrock offices. The AIFA COP is copied on all security related messages. The Bangladesh office will be implementing new security measures at the Winrock office, including installing cameras and magnetic door locks. These costs will be allocated to all projects in the office on a cost-sharing basis.

AIFA Bangkok staff have moved into a new office at 208 Wireless Road near the USAID offices.

IV. Partner Analysis

A. Kasetsart University

This quarter Kasetsart University signed the AFIA sub-agreement. It should be noted that Kasetsart has been extremely supportive despite the signing delay and their support this quarter has contributed greatly to Summit planning and implementation as well as facilitating cooperation with regional Universities on the Syngenta—USAID Ag Students Connections program. However, the signing delay has contributed to delays in progress on component one activities because Kasetsart's training and other technical inputs required the use of their sub budget. The project is very pleased to have Kasesart completely on-board now and their training activities have already been scheduled for next quarter. In addition the University has agreed to host the Tech4 Farmers Challenge website and Regional Innovation Hub on-line databases which will also "go live" next quarter.

B. World Food Logistics Organization

WFLO is not expected to begin activities until after technologies have been selected. They will be utilized only as relevant based on selected technologies.

V. Integration of STIP, Gender, Resilience, and Youth

This quarter Winrock International Gender Advisor, Laura Romah traveled to Bangkok and provided a gender awareness and gender sensitive programming training for all AIFA staff. In addition, Laura developed a strategy document to integrate gender into project planning, communications and outreach and monitoring and evaluation. Laura also facilitated contact with the Integrating Gender and Nutrition within Agricultural Extension Services Project (INGENAES). The INGENAES project was very helpful in providing a technology assessment tool they are developing to look specifically at the impact of technology on women. The project will utilize this tool to develop criteria for judging if project supported technologies are "women friendly" and to develop consistent questionnaires and data points for technology field testing.

This quarter project youth programming began with the selection of 9 students from 7 regional countries to participate in the Syngenta-USAID Ag Student Connections program. The program will be held from July 5 – 15 and will be the first step in a larger regional approach to encouraging greater youth engagement in agriculture.

The project was also very excited that a number of technology developers who presented at the Summit were youth entrepreneurs including: Tri Nguyen of MimosaTek; Gibran Huzaifah of e-Fishery and Avishek Malla of SunFarmer.

VI. Environmental Compliance

The project will submit a screening document and EMMP (if required) for all selected technologies.

ANNEX 1: SUCCESS STORY

Embracing Innovation in Agriculture: Asia Ag Tech Summit Draws Bright Talents across Disciplines

May 2016 - Fish Farmer turned entrepreneur, Gibran Huzaifah, strives every day to transform the aquaculture sector with the power of technology. Gibran developed a smart fish feeder that can sense fishes' appetite and dispense feed accordingly. Feed costs represent approximately 80% of fish production costs and Gibran says that this technology can reduce feed usage by up to 20%.

"We believe that technology can be and should be the solution," said Gibran Huzaifah, CEO of eFishery, an Indonesian Internet of Things(IoT) company. "Our technology is not only giving value to the fish farmers, we are trying to disrupt the whole industry and… change the livelihoods of millions of people."

Gibran was one of the many interesting personalities that were present at the Asia Regional Agricultural Innovation Summit in Bangkok, Thailand. Social entrepreneurs, input suppliers, government officials and food security experts from across the region gathered at the summit to identify and prioritize common regional constraints faced by smallholder farmers and explore how technology innovation can help overcome these challenges.

The diverse mix of participants was one of the key elements that made the summit so successful. "It is necessary that we expand beyond aggies talking to aggies," said Rob Turner, Project Director of the USAID Feed the Future Asia Innovative Farmers Project. "People said they found it very energizing and inspiring to have the viewpoints of people they don't normally talk to."

Todd Sorenson, Acting Director of the USAID Regional Mission for Asia, reiterated this point in his opening speech that the participation of these different stakeholders "will support a more effective regional system that encourages and rewards innovation."

Speakers highlights included not only agriculture experts from USAID, FAO, and other international organizations and research institutes but also technology entrepreneurs that introduced low-cost sensors, post-harvest drying technology, alternative aquaculture feed and pest-exclusion nets to the audience.

The summit itself was a promising start to improving the livelihoods of smallholder farmers and achieving food security. Hur Thinearng, Marketing Manager of Angkor Green Investment and Development Cambodia, expressed with optimism that the pest-exclusion nets, that he was introduced to at the summit, is a useful technology applicable to agriculture in Cambodia.

After the summit ended, Angkor Green bought pest-exclusion nets from Thai Charoen Thong Karntor, a Thai company that presented at the Summit, to supply to farmers in Cambodia. Subsequently, Angkor Green traveled to Vietnam to learn more about sensor technology by MimosaTEK, another technology company that also attended the Summit, and its applicability in Cambodia.

Turner emphasized that agriculture has to change. "Agriculture has to embrace technology and our project is helping to make that happen." Through the Tech4Farmers Innovation Challenge, the project will focus on expanding proven, commercially viable technologies into new markets in Bangladesh, Cambodia, and Nepal.

Asia-Pacific Youth Leaders Find Innovative Solutions to Help Feed the Future

July 2016 – A native of Phnom Penh, Muyleang Kim was not familiar with agriculture as she had lived in the city her whole life. When university admission time came, she chose to major in agricultural technology and management because of her wish to learn more about the sector and contribute to the development of Cambodia's agriculture.

"I am from the city but have always been curious about agriculture," said Muyleang Kim, a member of the winning team of the Innovative Solutions for Smallholder Farmers Challenge and student from Royal University of Agriculture in Cambodia. "Thanks to USAID and the Ag Student Connections Program, I am excited that our group's project design on net houses will be implemented in rural Vietnam."

Muyleang is one of the youth leaders of agriculture that participated in the Syngenta-USAID Ag Student Connections Program 2016 in Hanoi, Vietnam with support from the USAID Feed the Future Asia Innovative Farmers Project. As the Asia-Pacific region is home to 60% of the world's youth population, the project saw this as a great opportunity to capitalize on the energy and creativity of young people to transform agriculture.

The Innovative Farmers Project brought students from 6 South and South-east Asian countries to the Connections Program, organized in partnership with Syngenta, to learn more about the current state of agriculture and smallholder farmers' constraints in Vietnam.

This has proven to be a valuable experience for many students as they had the opportunity to do practical work in the field and dialoged with smallholder farmers.

"I'm an agriculture student but never had field work experience outside the classroom until the Connections program," said Phung Ha Trang, a Crop Science student from Vietnam University of Agriculture.

"It was such a fruitful journey of 10 days. Above all, I got to learn about the farming communities in Vietnam, how the farmers have integrated technology in farming and how productive and advanced they are getting," said Shilu Dahal, a student from Agriculture and Forestry University, Nepal.

The students were also introduced to innovative agriculture technologies such as sensor technologies from the Vietnamese startup MimosaTEK and net houses and observed how they were being utilized in the field.

"Tri Nguyen from MimosaTEK is my inspiration. I'm so amazed at how his technology is helping farmers. I will follow his footsteps," said Souay Vongsichaleune, a student from National University of Laos.

After the 10-day learning experience, students were challenged to design innovative solutions to tackle existing smallholder farmer constraints in Vietnam. The winning team of the Innovative Solutions for Smallholder Farmers Challenge introduced multiple pest exclusion net designs that address the challenges of access to finance and inefficient irrigation systems. The solution will be implemented by Syngenta Foundation, Center for Technology Development and Agricultural Extension (CETDAE), and USAID Feed the Future Asia Innovative Farmers Project.

Engaging youth like these in agriculture is integral to feeding the rising global population and ensuring food security. After the Connections program ended, the students formed an Alumni Network on Facebook to keep in touch. This is the strength of exchange programs that create linkage and sharing long after the people have parted.

Annex II: Targets and Actuals by Performance Indicators

Indicator Number	Indicator Name	Annual Target *	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Cumulative Actual	Cumulative Actual as % of annual target	Notes
1.1.1 FTF 4.5.2(5)	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance (tracking only –no targets)	n/a	0	0	0	-	0	n/a	
1.1.2 FTF 5.4.2(7)	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (60% Women)	899 (539)	78 (21)	0	0	-	78	9% (4%)	Details below
1.1.3 FTF 4.5.2(42)	Number of private enterprises, producers organizations, water users associations, women's groups, trade and business associations, and CBOs that applied improved technologies or management practices as a result of USG assistance	33	0	0	0	-	0	0	
1.1.4 FTF 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	45	0	0	6	-	6	13%	Details below
1.2.1	Number of technologies or management practices in one of the following phases of	4	0	0	0	-	0	0	

Indicator Number	Indicator Name	Annual Target *	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Cumulative Actual	Cumulative Actual as % of annual target	Notes
FTF 4.5.2(39)	development: Phase I: under research as a result of USG assistance; Phase II: under field testing as a result of USG assistance; or Phase III: made available for transfer as a result of USG assistance								
1.2.2 Custom	Number of technologies or management practices which are female supportive, youth supportive or designed to reduce risk or improve resilience to climate change in one or more phases of development	2	0	0	0	-	0	0	
1.2.3 Custom	Number of technologies or management practices proposed, accepted or incubated through USG supported regional challenge initiative	20	0	0	14	-	14	70%	Details below
2.1.1 custom RDMA IR S.3	Number of innovative approaches identified by RDMA that are funded or adopted by USAID or bilateral missions or private sector enterprises	0	0	0	0	-	0	0	
2.1.2 custom	Number of case studies or other materials developed and disseminated to improve learning about the process of technology development, adaptation and transfer to accelerate adoption, replication and scale-up	6	0	0	0	-	0	0	
2.1.3 custom	Number of cross border linkages among stakeholders established	48	0	0	6	-	6	13%	Details below

Indicator Number	Indicator Name	Annual Target *	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Cumulative Actual	Cumulative Actual as % of annual target	Notes
2.1.4 Custom	Number of regional or country level platforms, networks and organizations participating in regional or national hub	58	0	0	73	-	73	126%	Details below
3.1.1 FTF 4.5.2(38)	Value (USD) of public-private partnerships formed as a result of FTF assistance	0.2M	0	0	0	-	0	0	
3.1.2 FTF 4.5.3(12)	Number of public-private partnerships formed as a result of FTF assistance	8	0	0	1	-	1	13%	Details below

*Targets represent figures in the submitted Monitoring and Evaluation Plan, which has not yet been officially approved.

Specific Achievements

Indicator 1.1.2 Individuals trained

On the 26th of May 2016, training sessions were held to build the capacity of the participants at the Innovation Summit on "design thinking" and human centered design principles. Sessions on scaling up innovation and social accountability were also included. In total there were 78 participants.

The breakdown by sex include 57 males and 21 females. By sector, there were 43 people belonging to private sector enterprises, 19 government officials and 16 employees of civil society organization.

The breakdown by country include 7 from Bangladesh, 10 from Cambodia, 6 from India, 3 from Indonesia, 1 from Japan, 1 from Kenya, 1 from Malaysia, 1 from Myanmar, 10 from Nepal, 3 from Singapore, 1 from Sri Lanka, 19 from Thailand, 10 from USA and 5 from Vietnam.

Indicator 1.1.4 Organizations receiving USG Assistance

#	Name	Country	Location	Type	Assistance Start Date
1	Entofood	MAL	Kuala Lumpur	Private enterprise	25-May-16

2	Mimosatek Technology	VIE	Ho Chi Min City	Private enterprise	25-May-16
3	eFisheries	INA	Bandung	Private enterprise	25-May-16
4	SunFarmer Nepal	NEP	Lalitpur	Private enterprise	25-May-16
5	Rhino Research	THA	Phichit	Private enterprise	25-May-16
6	Thai Charoen Thong Karntor (TCT)	THA	Samutprakan	Private enterprise	25-May-16

Indicator 1.2.3 Technologies proposed, accepted or incubated

#	TechName	Country of Origin	Type	Proposed
1	ACI Seeds	BAN	Biological	30-Jun-15
2	Basha pump	NEP	Physical	30-Jun-15
3	Farmer Query System	BAN	Management	30-Jun-15
4	Raju Chaudhary Farm Management	NEP	Management	30-Jun-15
5	Sheeji Agro Service Cover and Irrigation	IND	Physical	30-Jun-15
6	Biomass Briquettes	NEP	Management	30-Jun-15
7	Smart Kishi	NEP	Management	30-Jun-15
8	GreenGrowth	NEP	Management	30-Jun-15
9	Solar Powered Pump	NEP	Physical	30-Jun-15
10	Mobile-based Transportation System	BAN	Management	30-Jun-15
11	Sahavagi Production	NEP	Management	30-Jun-15
12	Sana Kishan Sahakari Pipe	NEP	Physical	30-Jun-15
13	S-MART	PHI	Management	30-Jun-15
14	WISH	BAN	Physical	30-Jun-15

Indicator 2.1.3 Cross border linkages established

#	Linkage Name	Partner 1	Partner 2	Target Country	Type	Focus	Date
1	Angkor Green sampled nets from Thai Charoen Thong Kantor	Angkor Green	Thai Charoen Thong Kantor	CAM	private-private	commercial	30-Jun-16

2	Angkor Green bought MimosaTek's products	Angkor Green	MimosaTEK	CAM	private-private	commercial	30-Jun-16
3	Kasetsart and Nepal Agricultural Research Council collaborate on training	Kasetsart U	Nepal Ag Research Council	NEP	public-public	educational	30-Jun-16
4	ACI requested to be distributer for eFisheries in Bangladesh	ACI Limited	eFisheries	BAN	private-private	commercial	30-Jun-16
5	Fishtech requested to be distributer for eFisheries in Bangladesh and placed an order for eFisheries' product	Fishtech	eFisheries	BAN	private-private	commercial	30-Jun-16
6	Worldfish placed an order for eFisheries' product	Worldfish	eFisheries	BAN	private-private	commercial	30-Jun-16

Indicator 2.1.4 Platforms, networks or organizations participating in hubs

There were 73 platforms, networks and organizations represented at the Asia Regional Agricultural Innovation Summit 2016.

The breakdown by type include 40 companies, 10 government organizations, 2 intergovernmental organizations, 14 NGOs, 2 private education or research institutes, 4 public education or research institutes and 1 public network or platform.

The breakdown by country include 7 from Bangladesh, 9 from Cambodia, 1 from Germany, 5 from India, 3 from Indonesia, 1 from Japan, 1 from Kenya, 1 from Malaysia, 1 from Myanmar, 9 from Nepal, 3 from Singapore, 1 from Sri Lanka, 18 from Thailand, 9 from USA and 4 from Vietnam.

Indicator 3.1.2 Public-private partnerships

During this quarter, the Syngenta – Project Collaboration was established. Syngenta funded one of the networking sessions at the Innovation Summit 2016 and will collaborate with the Project on a student exchange program during Q4FY16.