FEED THE FUTURE

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

QUARTERLY REPORT

FEED THE FUTURE ASIA INNOVATIVE FARMERS PROJECT

YEAR 2 QUARTER 2 (JANUARY 1 – MARCH 31, 2017)

USAID

FROM THE AMERICAN PEOPLE

WINROCK INTERNATIONAL

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ACRONYMS

AFU	Agriculture and Forestry University (Nepal)
AIFA	Feed the Future Asia Innovative Farmers Activity
ASEAN	Association of South East Asian Nations
APSA	Asia Pacific Seed Association
B2B	Business to Business
BAU	Bangladesh Agriculture University
EMMP	Environmental Mitigation and Monitoring Plan
FTF	Feed the Future
GAP	Good Agricultural / Aquacultural Practice
KU	Kasetsart University
LMI	Lower Mekong Initiative
MOU	Memorandum of Understanding
PEN	Pest Exclusion Nets
PPP	Public Private Partnership
RIH	Regional Innovation Hub
RUA	Royal University of Agriculture (Cambodia)
SAARC	South Asian Association for Regional Cooperation
STIP	Science, Technology, Information and Partnerships
T4FC	Tech4 Farmers Challenge
TOT	Training of Trainers

INTRODUCTION

This report covers the Feed the Future Asia Innovative Farmers Activity (AIFA) for Year 2 Quarter 2 activities implemented between January 1, 2017 and March 31, 2017.

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.

QUARTERLY HIGHLIGHTS

4 Champion Organizations Supported to Form Asia Regional Agricultural Innovation Community

The project awarded grants and facilitated an orientation workshop for organizations from Bangladesh, Cambodia and Nepal to join Kasetsart Univesity in the development of a broad-based regional community that targets 250,000 members across South and South East Asia.

Final Event in the Inaugural Asia Regional Agricultural Innovation Summit Series Held in Bangladesh

172 individuals representing 95 organizations attended the Bangladesh summit – the highest attendance of all the summits. The entire series reached 555 innovation influencers from 306 organizations and 16 countries. 54% of participants were from the private sector, reflecting the project's objective of broadening the conversation around agricultural development.

Tech4Farmers Challenge Achieves Multiple Milestones

eFishery and EnerGaia make initial sales in the Bangladesh market; eFishery begins controlled testing at Kasetsart University; second cropping test cycle completed on Pest Exclusion Nets in Bangladesh; 6 new technologies accepted as finalists in the challenge.

Project Invited to Address the ASEAN Sectoral Working Group on Agricultural Research and Development

This meeting on May 18 will provide an entry into ASEAN activities and allow the project to assess member-state interest in project priority areas. This is an important milestone in project policy support.

Feed the Future Asia Innovative Farmers Project Launches South East Asia Track with FISH 2.0

In conjunction with the Packard and Walton Family Foundations, the project opened the Southeast Asia track for FISH 2.0 2017 with a workshop in Bangkok. 8 regional companies focused on sustainable and innovative business in the aquaculture and seafood industries met to refine their messages for investors at the workshop. The Southeast Asia Track will connect regional businesses to the US impact investment community through a multi-stage competition.

Regional Seed Policy Partnership Developed with the Asia Pacific Seed Association

This important partnership allows the project to support and guide the development of a private sector led initiative to improve the trade in seed technology. Critically, the project will be able to introduce Bangladesh, Cambodia and Nepal into a practical, tightly-focused dialogue including major US corporations (e.g. Dupont Pioneer and Monsanto) and major regional seed producing countries (e.g. India, Thailand, China, etc.).

COMPONENT 1: REGIONAL AGRICULTURE INNOVATION ECOSYSTEM DEVELOPMENT

Two Major Milestones Accomplished

This quarter saw the accomplishment of two major milestones in the development of a broad and engaging regional agricultural innovation community:

- In Bangladesh, the project completed the final meeting in the Asia Regional Agricultural Innovation Summit Series;
- the project selected and began work with the local organizations that will organize and link national and regional agricultural innovation communities across the region.

National and Regional Agricultural Innovation Communities

In this quarter, Winrock announced the winners of the Agricultural Innovation Community Grant Program and held an orientation workshop to frame the beginning of this cooperation. Over the next year and beyond, the Agricultural Innovation Community will reach a broad range of stakeholders, from farmers to technologists, **informing** innovators, businesses and farmers about practical advances that can be applied to their activities and **inspiring** members (especially youth) to think beyond traditional practices and envision a new agriculture that embraces technology and captures the opportunities that a growing population offers. The grantees were selected from a group of 35 regional applicants and their diversity represents the project's goal of broadening the conversation in agriculture. One of the grantees is a diverse

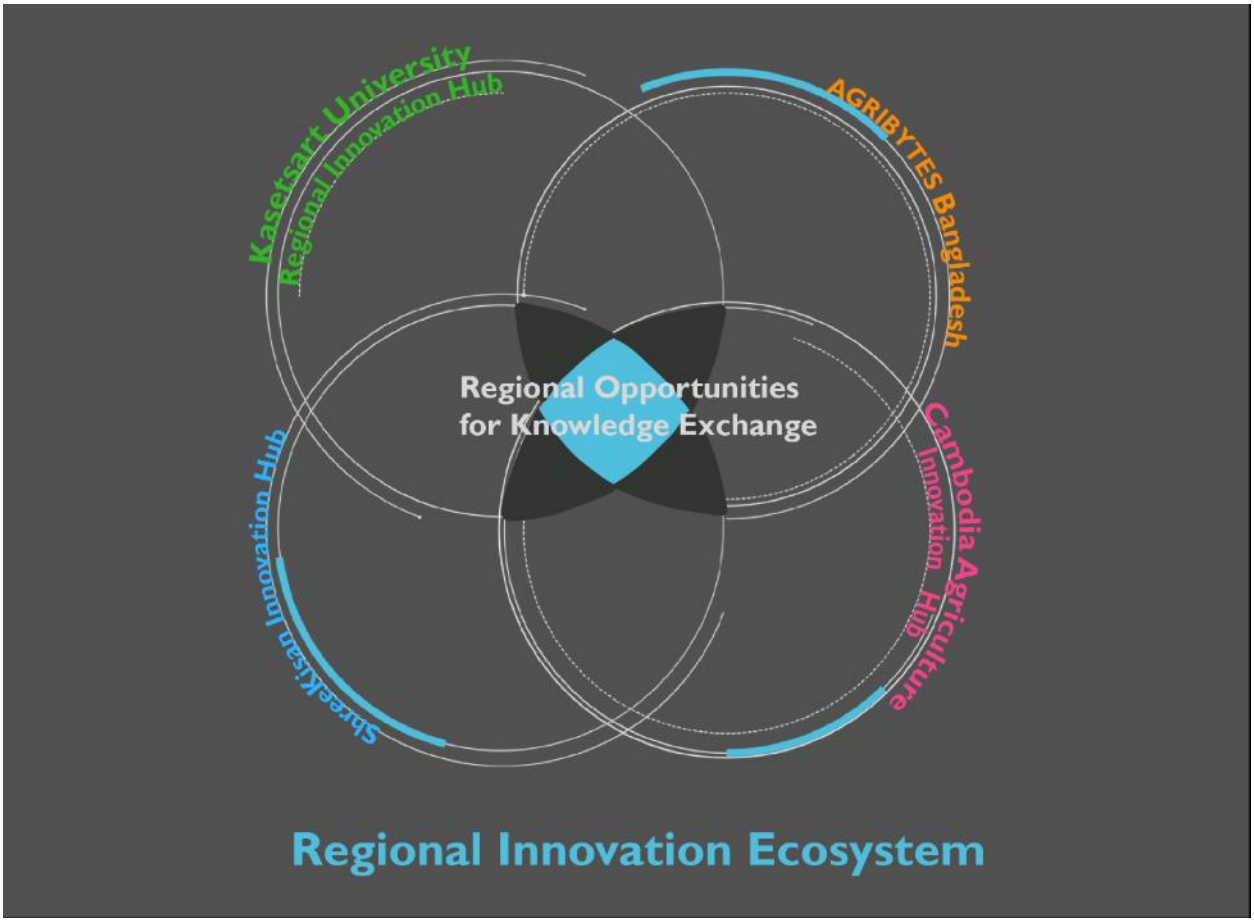
agribusiness in Nepal, one is a mobile solutions developer in Bangladesh and one is a Cambodian NGO focused on rural and agricultural development. Briefly the winners are:

- **mPower** was awarded the grant for the Bangladesh community. Titled, "AgriBytes," this community will serve as a platform for sharing data innovation in agriculture. mPower will use the grant funding to start bringing diverse stakeholders together in-person on key agricultural innovation themes. In the next quarter, mPower will launch its AgriBytes Facebook page that will include daily posts to inspire and inform a Bangladeshi audience on innovations in agriculture.

- **HURREDO** was selected as the champion to startup the Cambodian Agricultural Innovation Community. Based in Siem Reap, HURREDO will build a community focused on improving the knowledge, attitudes, and practices on the utilization of agricultural technology by farmers. HURREDO already has an extensive network of key stakeholders in place at each point along the supply chain along with key contacts at universities and the Department of Agriculture in Cambodia. In the next quarter, HURREDO will revamp its Facebook and website page to provide more relevant content on the 'latest and greatest' agricultural technologies. HURREDO will also launch its community locally during a stakeholder consultation meeting.

- **Shreenagar Agro Farms** along with its consortium partners, Agriculture Forestry University, R&D Innovative Solutions Pvt. Ltd., and Smart Krishi Nepal was awarded a grant for the Nepal Community to implement its proposed Shree Kishan Innovation Hub. This hub will improve agriculture market systems by sharing global best practices and the latest technologies directly to farmers. Shree Kishan Innovation Hub plans to develop a diverse, engaged regional community focused on increasing agricultural innovation in smallholder agriculture. In the next quarter, Shreenagar will host a launch event for local stakeholders and launch its Facebook page with regular posts on how farmers can better utilize technology to improve production and raise their incomes.

The three communities led by these organizations and linked with Kasetsart University will form a regional community that is driven by local interests and incentives (and is in local languages) but which is able to draw on regional diversity, experience and expertise. This locally-driven, regionally-linked approach is represented in the diagram below, created by the communities and Kasetsart University. The communities specifically rejected a hub and spoke model, which would prioritize Kasetsart within the region and rely on Kasetsart to manage information flows. The community respresentatives believe that this model is more sustainable and will be more responsive to members needs and interests across the region by facilitating locally but fostering overlapping knowledge exchange systems for open collaboration across the region.

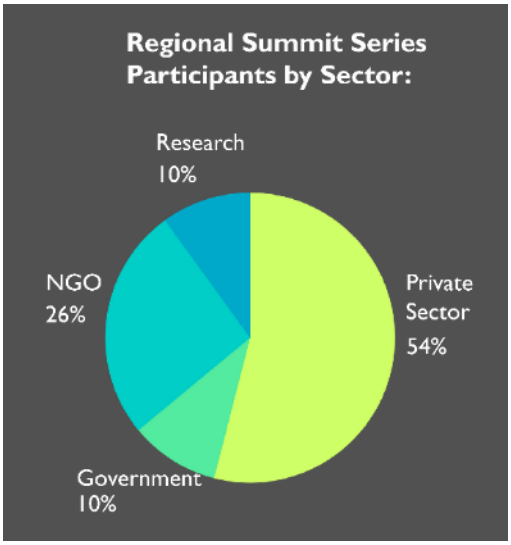


This strategic direction was decided together at the Community Consultation Workshop held in Bangkok on March 13-14. The project invited the three grantees and Kasetsart University to develop country and regional plans to strengthen the agricultural innovation ecosystem in South and Southeast Asia. Over the course of the workshop, participants identified their organizational strengths and value within the regional ecosystem. mPower, for example, realized that they can help the other communities explore digital solutions for collecting and disseminating data important for farming. Similarly, Shreenagar Agro Farms has experience in matching the information needs of farmers with their demands, taking full advantage of both online and offline solutions. Meanwhile, HURREDO offers expertise on the complexities involved in agricultural supply chains. Kasetsart University identified its strength as a knowledge and research leader in testing the efficacy of agricultural technologies. The community representatives agreed to manage initial coordination through a closed Facebook page just for community organizers and the project.

In the next quarter, the project will begin a number of support activities with the communities designed to build their capacity, to generate local awareness and interest and build credibility. Initial capacity building activities will include social media trainings and a multi-day field-training

at Kasetsart University to introduce Kasetsart's resources to the communities and build systems to identify local information demand and link it to relevant Kasetsart resources. The project will also support initial community growth, by channeling regional learning and training opportunities through the new communities. Opportunities in the next quarter will include sponsorships to the International Development Design Summit in Sisaket, Thailand in July 2017 and a regional competition for the upcoming Syngenta-USAID Ag Student Exchange program.

Bangladesh Agricultural Innovation Summit



With the completion of the Bangladesh Agricultural Innovation Summit on January 24, the project completed the Regional Agricultural Innovation Summit Series which had events in Bangkok, Kathmandu, Phnom Penh and Dhaka. The Bangladesh Summit had the highest attendance of all the events with 174 individuals representing 95 organizations. As with all the summits, the private sector dominated in Bangladesh, representing 52% of participant organizations. The summit series was designed to bring greater private sector participation into the agricultural development conversation and to develop a core group of innovation influencers (commercial, governmental, research and NGOs) across the region. This core group has now reached 306 organizations representing the sectors in the graphic. With the establishment of national and regional agricultural innovation communities this quarter, the project will begin to introduce these influencers to the community, helping community organizers to link and engage with them both nationally and regionally.

After the completion of the regional summit series, the project has begun to assess the events and their impact. An important objective of the summit series was to introduce new and exciting innovations and innovators from the region to a larger, varied audience. The project surveyed 8 regional innovators that pitched at events and they reported making 189 useful contacts, 15 of which have already resulted in partnerships or sales. These companies also estimated that they expect a further 37 of the contacts to result in sales or partnerships in the next year. These figures back up the remarkable interest and excitement around the technologies which the project has identified and showcased. It is this excitement and energy developed through the Asia Regional Agricultural Innovation Summit Series that the project will look to share and scale through the Regional Agricultural Innovation Community in the coming quarters.

Partnership with Fish 2.0

Fish 2.0 is a global network that connects investors and entrepreneurs to grow the sustainable seafood sector. Businesses participating in Fish 2.0 grow their ventures, find new partners and gain access to capital. Fish 2.0 uses a competition platform to connect seafood innovators, investors, and industry experts. Project support to bring FISH 2.0 to South East Asia is an important tool in broadening the project's reach into the impact investment community and increasing penetration in non-Feed the Future countries. Equally important, FISH 2.0 affords the project and its beneficiaries access to the US investment community, bringing sustainable business opportunities to US companies and offering young regional companies the opportunity to benefit from US funding and expertise. With at least 6 spots guaranteed for the Southeast Asian track (at least three guaranteed from the Lower Mekong countries) in the Fish 2.0 finals in California in November, this year's group of participants will be interesting to track as they progress through the competition. As of early April, 12 participants have entered a full application into the global Fish 2.0 system, and 10 others have applications in process.

In this quarter, Winrock and Fish 2.0 held an orientation workshop with 8 promising seafood sector entrepreneurs from the region; offering them training and connections to accelerate innovation in the region's seafood sector and supply chains. One of the interesting results of the orientation workshop was the new business relationships that developed between the entrepreneurs themselves. For instance, William Sutioso from PT. AKFI, an Indonesian based fish processor that works to harvest and sell fish from remote communities to sell in the Jakarta markets, established a new business relationship to sell fish to Mako Seafood Company.

Mako Seafood is based in Myanmar and is attempting to sell high quality seafood into the premium markets in Yangon – meeting unmet demand by local consumers. Another example is a potential joint venture arrangement between two Vietnamese companies (NAN Vietnam and Nutrition Technologies) both of whom are working to produce alternative feed ingredients for aquaculture feeds by developing solider fly larvae on waste streams from food processing. Although they work near each other in Vietnam and had met once before, they had never had a chance to get to know one another. After meeting and talking at the Fish 2.0 workshop, they discovered a high degree of synergy between their two companies and hope to be able to move forward collaboratively via a joint venture agreement. This is the sort of value and impact that the project hopes to scale regionally through the development of the regional innovation eco-system.

COMPONENT 2: TECH4FARMERS CHALLENGE

Tech4Farmers Challenge Technologies

This quarter the three current awards made important progress and the project moved six exciting new technologies forward for selection review in the next quarter. The project is very encouraged by the continued interest and excitement around all the Tech4Farmer technologies.

e-Fishery

This quarter saw two important milestones reached in eFishery's T4F award: the start of controlled testing of the technology at Kasetsart University; and the purchase of 54 machines by eFishery's Bangladesh distributor, ACI.

eFishery Controlled Testing at Kasetsart University

Testing was initiated this quarter following a cooperative design process between faculty at Kasetsart University and eFishery's technical staff. KU will manage a three replication trial which will quantify the technologies impact on fish growth, feed conversion, water quality and overall cost/benefit ratio. The testing will be against a control of hand feeding following good aquaculture practice. Thai Union, one of the world's largest seafood companies, has signaled interest in exploring the use of eFishery technology in their shrimp production in Thailand. eFishery and the project are discussing how the Kasetsart trail might be useful in supporting this opportunity.

Another critical milestone was reached when ACI issued a letter of credit for the import of 54 machines from eFishery (totaling $42,892). It is a central tenant of the project that T4F awards will not be used to purchase technology, ensuring that there is thorough commitment to the transfer of technology. The process to issue this LC has been long and has delayed activities in Bangladesh, but the project is confident that allowing companies and investors to make decisions on a commercial basis will pay dividends in increased sustainability and the effectiveness of our development funding. To speed progress going forward, the project has agreed to ship 4 machines to Bangladesh via airfreight in order to complete the calibration process while the larger shipment arrives by sea.

The project is currently translating eFishery apps and manuals and planning initial distributor training in conjunction with eFishery and ACI. In the next quarter, the project will facilitate a join strategy session to formulate testing and promotion plans for the small and medium farmer market in Bangladesh.

EnerGaia

Energaia has made remarkable progress in its first quarter under award. The company has made an initial agreement with a company in Dhaka for a 100-unit system to test large scale commercial production. This contact was made on the sidelines of the Bangladesh Summit in January. While T4F does not provide direct support to large scale commercial expansion, having large scale customers is often an important part of a sustainable business model that can profitably serve smallholders.

The project has also worked closely with Energaia to review options and begin local business registration in Bangladesh. Though two trips, the project has facilitated a number of meetings with NGOs interested in working with Energaia on the organization and training of the farmer communities where the contract production models will be sited. USAID Bangladesh has been very helpful in organizing meetings and making suggestions for potential sitting. In particular, USAID is supporting the development of hygienic market places and they have suggested that Energaia explore taking space in these markets for their labs and collection centers.

After discussions with the project on smallholder strategies, Energaia has decided to introduce a lower-cost locally fabricated unit option using clear plastic bags and wire support structures, rather than the food grade plastic drums that they initially planned to import. This means that costs may be lowered by up to 40% and it may be possible to source the majority of the

materials for the system locally, eliminating delays with shipping and customs. With this in mind, the project hopes that farmer-level testing can begin soon, relying on the local partner for initial implementation while Energaia's registration is processed.

Another interesting highlight is that Energaia has benefited from a connection with another T4F finalist technology, Rhino Research's drying beads. A differentiator of Energaia is that it sells fresh spirulina in a paste form rather than only dry powder. They found that by adapting household washing machines, they could centrifuge fresh spirulina to about 70% and create a product that is shelf stable for at least a couple of weeks. They thought that this shelf life could be further increased if they could get the water percentage lower, but using conventional dryers would damage the fragile product. The project put the two parties together and Energaia has purchased 50kg of beads for further experiments. The drying works perfectly, and they are now trying to find the "sweet spot" where the flavor of the paste is not too strong but the shelf life is maximized.

Pest Exclusion Nets (PEN)

PEN has completed first season testing in all countries and has completed two seasons in Bangladesh and initial reports show excellent results and a great deal of interest from farmers and other actors. A strength of PEN is that its method of action is very clear, and farmers immediately grasp its use, value and critical success factors. In the trials to-date there have been no serious failures and with most crops, farmers and focus groups have been very excited with the results.

Across the region there have been some interesting differences in results. For example, in Bangladesh, eggplant has been the star performer because it has some of the highest pest pressure and it has grown very well under the net without any pesticide. However, in Cambodia, eggplant yields were low, and their primary interest is in using the net to increase the number of crops of leafy green vegetables each year. In Nepal, the use of the net in the winter season in high areas seemed to provide dramatic improvements. The project is exploring options for bringing supported researchers and farmers together from across the region to review results and learn from experience.

Bangladesh

Eggplant grown under PEN. No pesticide use

Eggplant grown outside the PEN

Our partner in Bangladesh, the Bangladesh Agricultural University, has taken up the role of champion for the technology. They have organized two seminars inviting academicians, researchers, government and NGOs and a field day with 100 farmers from the university area. Dr. Rahim reports that "almost each and every day interested persons are coming to see performance of the technology." Additionally, the university has produced a video that will be televised nationally on April 30, 2017. On the private sector side, GME Agro, a Bangladesh integrated agri-business that the project provided PEN training to, has informed us that they are starting a commercial trial of the technology at a 1/3-hectare scale for organic vegetable production.

Cost/Benefit calculations now seem to suggest that, even with a conservative depreciation for netting cost, net production of several crops is roughly as profitable as current practice with high rates of pesticide application. Although farmers understand the personal dangers of using pesticides, the benefit of eliminating pesticides alone will not lead to significant farmer adoption. This is particularly the case because nets require an up-front purchase while credit is widely available for pesticide and it is purchased in small increments over the season. Focus groups suggest that it is the development of premium markets for safe vegetables that would drive adoption. In the next quarter the project will intensify work to demonstrate the potential of PEN technology to nascent safe vegetable markets and support initial partnerships.

Pest-Exclusion Nets Farmer Testing in Siem Reap

COMPONENT 3:
Regional Agricultural Technology Policy Development

Following extensive consultations with regional bodies (ASEAN, SAARC, BIMSTEC), Feed the Future focal country governments, bilateral and regional USAID officers and private sector stakeholders, the project has prioritized initial support in the areas of regional seed policy and regional good agricultural practice standards. These areas have strong overlap with stakeholder priorities at all levels and they are critical issues in terms of the availability, access and encouragement of agricultural technology transfer across South and South East Asia. Based particularly on ASEAN interest, the project is also studying potential support to development of Pubic-Private Partnership(PPP) frameworks for the agriculture sector. PPPs could provide an important tool in accelerating technology transfer across the region, but the project is still evaluating the role the project might play in this area.

Seed Regulation Harmonization

This quarter the project made a key partnership in the regional seed technology area with the Asia Pacific Seed Association (APSA). APSA, headquartered in Bangkok, Thailand, is the voice of the seed industry in South and South East Asia but also offers government memberships as well. As the regional seed industry association, APSA has an objective to "Facilitate and contribute to the harmonization of regulatory procedures for seed and seed related issues toward internationally accepted standards." Through this partnership, the project will be able to support key policy and regulatory stepping stones which move the region and our focal countries toward a harmonized environment where companies are encouraged to invest and seed technology gets to farmers in an efficient manner.

Our initial work with APSA will be to support the expansion of APSA's Phytosanitary Expert Consultation Group. This regulatory training is co-funded by Crop Life Asia (an association including major US plant protection companies Dow, DuPont Pioneer and Monsanto) and

focuses on rationalizing and harmonizing phytosanitary regulations on seed across the region. Many countries in the region do not actually have different SPS requirements for seeds and their products. So in practice, a shipment of cucumber seed would be subject to the same SPS requirements as a shipment of cucumbers. This wastes time with irrelevant inspection and testing and causes confusion and delay at borders.

June 29-30 will be the third meeting of the Phytosanitary Expert Consultation Group. The group currently has seven members: India, Thailand, Vietnam, Indonesia, China, Korea and Taiwan. The project will provide support to prepare and add Bangladesh, Cambodia, Myanmar and Nepal to the group. The meeting is aimed at National Plant Protection Officers (NPPOs). The NPPO is the senior most officer in the Ministry of Agriculture, responsible for overseeing activities related to plant quarantine. The NPPO supervises operations for clearances of seed / plant import / export shipments, following the international guidelines developed by International Plant Protection Convention (IPPC) of FAO. The project is especially pleased at the geographic makeup of the Expert Group. Because it is organized by the private sector rather than ASEAN or SAARC, it crosses those political boundaries and allows us to work with all of our target countries in the same forum.

While Bangladesh and Nepal have national seed associations that are APSA members, the seed industry in Cambodia and Myanmar is in its infancy. As we further develop our partnership with APSA, the project will explore opportunities to work with APSA and bilateral projects to begin the process of establishing a viable national seed trade association in those countries as well.

ASEAN GAP

Across the region, and in each of our target countries, domestic GAP projects are being undertaken. National governments see domestic GAP standards as important tools for incentivizing technology adoption; addressing increasing food safety concerns and preparing for increasingly free intra-regional trade in food. ASEAN has been very active in this space and has developed common standards for many crops but members have struggled to develop incentives and systems that encourage and enable farmers to get GAP certification. ASEAN has invited Winrock to give a presentation on the project at the May 18th meeting of the ASEAN Sectoral Working Group on Agricultural Research and Development. This will provide an opportunity to directly address members and present opportunities for partnership in regional GAP development.

ASEAN is currently undertaking a series of GAP training courses in member countries, including Cambodia and Myanmar. These activities are led by GIZ and Winrock is in discussions with GIZ on possible partnership opportunities. As GAP is improved, market access barriers will be identified and this project can work to find solutions and regulatory improvements.

Public-Private Partnership (PPP)

As mentioned earlier, ASEAN has also asked the project to explore potential support to the development of an ASEAN PPP Framework. Discussions are on-going, but there appear to be significant overlap between project activities and the objectives of the PPP framework. The objectives of the framework are:

1. to increase private sector participation in policy discussions, program and project formulation, R&D, provide incentives and foster an enabling environment for public-private partnerships towards enhancing productivity and quality;

2. to provide institutional mechanisms and appropriate incentives for PPPs in R&D and technology adoption, collaborating with the private sector to identify priorities,

3. to identify and document technology success stories and explore new methods of extension, including enhanced use of information and communications technology (ICT) and other communication facilities for the adoption and dissemination of successful technologies and management systems throughout AMS.

COMPONENT 4:
Technology Transfer to Support USAID Bilateral Mission-Oriented Interventions

This quarter, the project traveled with the AOR Kipp Sutton to meet with the USAID mission to ASEAN in Jakarta and to the missions in Nepal and Bangladesh. These meeting were largely focused on preparations and planning for the new policy component, but also included briefings on progress in other activities.

The USAID mission in Bangladesh provided great assistance in communications around the Bangladesh Summit and several mission officers attended the event. USAID Bangladesh also invited Saumil Shah, CEO and Founder of Energaia, to present to agriculture, economic and nutrition focused staff on Energaia's plans in Bangladesh under their Tech4Farmers Challenge award.

After discussions with the AOR, the project is developing new plans for more regular technology briefings focused on local technologies that will not receive T4F awards, but which may be of interest to missions.

I.MANAGEMENT AND ADMINISTRATION

This quarter Winrock was awarded a regional Countering Trafficking in Persons project from RDMA. Having another project of regional scope allows Winrock to gain some efficiencies and cost savings in support functions (e.g. finance, operations and logistics). To capitalize on these opportunities, the project will be moving to a larger space in our current building to co-locate with the new project. The two project teams have worked together to develop a new organizational chart with a new Director of Operations position overseeing a shared support and operations team. The project will move into the new office in early May.

II.PARTNER ANALYSIS

A.KASETSART UNIVERSITY

Kasetsart University continues to provide excellent service to the project. The university is an integral part of the team and is very responsive to technical requests. This quarter has seen a dramatic increase in Kasetsart's direct involvement with project partners which is an important aspect of the project's facilitation approach. This quarter Kasetsart hired a social media specialist to join the team and support the university in developing engaging social media posts for the regional ag innovation community and to spearhead coordination and support to the national ag innovation communities in Bangladesh, Cambodia and Nepal. KU also begin direct coordination with e-Fishery on the design and implementation of controlled testing of the e-Fishery technology at Kasetsart University. This sort of testing service could become a general service offered to technology producers.

III.INTEGRATION OF STIP, GENDER, RESILIENCE, AND YOUTH

Gender

This year 56% of trainees have been women. This is very close to our 60% target. To date, this training has primarily been related to Pest Exclusion Netting because other T4F technologies are just coming on line. The project is committed to maintaining this target across all technologies and ensuring that women are included in "mainstream" training aimed at understanding, using and providing customer feedback on all technologies. With the selection of Energaia last quarter, the project has 2 "female supportive technologies", Pest Exclusion Netting and Energaia spirulina production.

Youth

Youth support and engagement was a focus of the Agricultural Innovation Community champions who were selected this quarter. These communities will be a cornerstone of project activities going forward, and a youth focused strategy will be a key aspect of all community plans. This quarter also saw the opening of the competition for this year's Syngenta-USAID Student Exchange program. This year, the project and Syngenta have agreed to open the competition to non-ag students, explicitly broadening the program to encourage students in economics, business, computer science, engineering, etc., to consider opportunities in agriculture.

IV.ENVIRONMENTAL COMPLIANCE

Based on the project IIE, all technologies with field level agricultural activities require an EMMP to be submitted for approval. Next quarter, EMMPs will be submitted for e-Fishery and Energaia. The requirements of the EMMPs will be included in the workplan and all sub-agreements and will be monitored regularly by project staff.

Annex 1: 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 custom	Number of farmers and others (direct and indirect beneficiaries) who have applied improved technologies or management practices with USG assistance (Outcome)	600	0	0			0	0	Technologies are not yet through the stage where orgs will adopt. We expect improvement by the end of the fiscal year.
1.1.2 FTF EG.3.2-1	Number of individuals who have received USG-supported short-term agricultural sector productivity or food security training (Output)	Total 1000 Women (600)	88 (57)	407 (234)			363* (206)	36 (34)	Represents training on PEN only – we expect to exceed targets with the field arrival of e-Fishery and Energaia this year. Gender % is on target and will be maintained with new techs.
1.1.3 FTF EG.3.2-20	Number of for-profit private enterprises, producers organizations, water users associations, women's groups, trade and business associations and community-based organizations (CBOs) that applied improved organization-level technologies or management practices with USG assistance (Outcome)	57	0	0			0	0	Technologies are not yet through the stage where orgs will adopt. We expect to reach these targets through PEN, e-Fishery, Energaia and Grameen-Intel adopters this year.
1.1.4 FTF EG.3.2-4	Number of for-profit private enterprises, producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG food security related organizational development assistance (Output)	79	3	42			45	57	Increase this quarter with the addition of Value-Chain Focus Groups and integration into PEN testing.
1.2.1 FTF EG.3.2-7	Number of technologies or management practices under research, under field testing, or made available for transfer as a result of USG assistance (Output)	4	0	1			1	25	Next quarter should see field arrival of energaia, drying beads, grameen-intel along with other potentials.
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 (Output)	2	0	0			0	0	Will be updated as new technologies reach the field.

Indicator Number	Indicator Name	Annual Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Cumulative Actual	Cumulative Actual as % of annual target	Notes
1.2.3 custom	Number of technologies or management practices proposed, accepted or under incubation through USG supported regional challenge initiative (Output)	15	27	2			29	193	Both proposed and accepted have exceeded targets at this point in the year. Selection in April means in the next quarter we expect to meet our annual target for technology awards as well
1.2.4 custom, tracking only	Value of sales of technologies in new markets (Outcome)	n/a	0	42,892			42,892	n/a	This is a tracking indicator and as such we have no target. This amount represents the sale of the initial 54 e-Fishery machines to ACI in Bangladesh
1.2.5 custom	Average percentage of income increase potential of supported technologies (Output)	20	0	0			0	0	Still testing to establish these figures
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 other public or private funders (Outcome)	2	0	0			0	0	Will continue to monitor. Given interest from missions, the annual target is still very much achievable.
2.1.2 custom	Number of case studies and other materials developed and disseminated to facilitate learning, adoption or scale-up (Output)	9	0	0			0	0	Will begin with the completion of testing phase. Expect to fully complete only PEN this fiscal year.
2.1.3 custom	Number of stakeholders in cross border linkages established by the Project (Output)	56	0	0			0	0	We are not monitoring this by quarter and will update following a survey next quarter.
2.1.4 Custom	Number of platforms, networks and organizations participating in a regional or national hub (Output)	165†	0	99			99	60	The Bangladesh Summit was the most attended summit in the series. This number will rise significantly with the recent establishment of national Ag Innovation Communities.
3.1.1 FTF EG.3.2-22	Value of new private sector capital investment in the agriculture sector or food chain leveraged by Feed the Future implementation (Outcome)	$252,000	0	42,892			42,892	17	Represents the first sale of 54 e-Fishery machines to ACI in Bangladesh. We are

Indicator Number	Indicator Name	Annual Target	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Cumulative Actual	Cumulative Actual as % of annual target	Notes
									still confirming sales of Energaia systems as well.
3.1.2 FTF EG.3.2-5	Number of public-private partnerships formed as a result of USG assistance (Output)	5	1	1			2	40	This quarter the policy partnership with Asia Pacific Seed Association was started
3.1.3 custom:	Amount of funding leveraged to support the Project objectives (Output)	$0.8M	0	42,892			42,892	5	Represents the first sale of 54 e-Fishery machines to ACI in Bangladesh. We are still confirming sales of Energaia systems as well. These machines are required for project activities.

Note: During this period, the Project is phasing in the use of a new online database. For that, there may be some minor errors in the calculations, which will be corrected once the database becomes fully operational and contains the complete data from the previous quarters.

*For indicator 1.1.2, the cumulative total counts the number of unique individuals trained within the fiscal year (no double counting) but the quarterly number are the sum of participants from the training events within that quarter (some double counting applied).

† Target for 2.1.4 is being revised and not yet approved

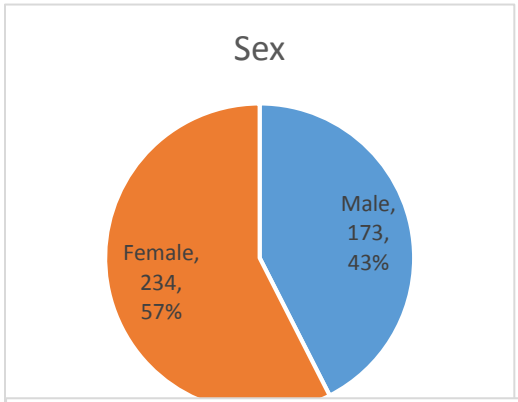
Specific Achievements

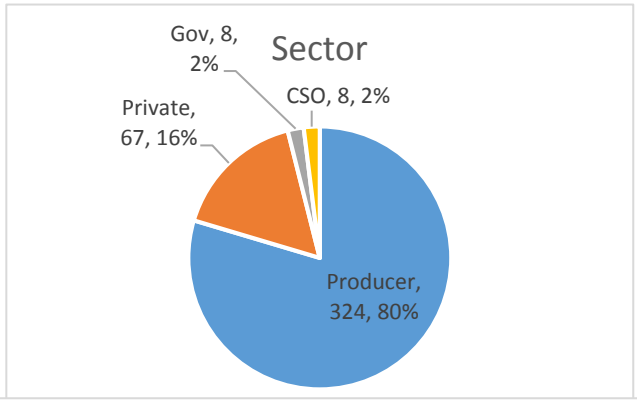
Indicator 1.1.2 Individuals trained

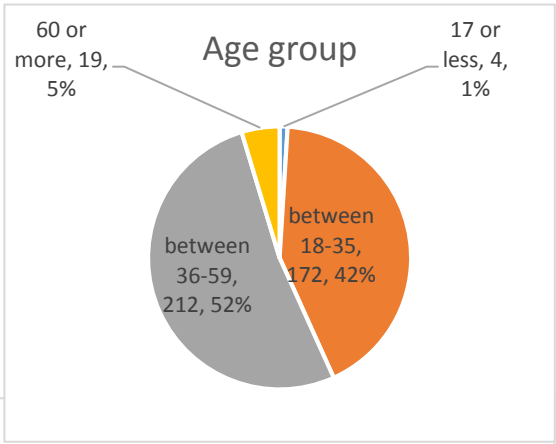
#	Training name	Country	End date	Number of participants
1	Pest Exclusion Net (PEN) Surkhet	NPL	2-Jan-17	32
2	PEN Male Focus Group in Jessore	BGD	3-Jan-17	15
3	PEN Female Focus Group in Jessore	BGD	4-Jan-17	15
4	PEN Value Chain Focus Group in Rangpur	BGD	28-Jan-17	15
5	PEN Male Focus Group in Rangpur	BGD	28-Jan-17	15
6	PEN Female Focus Group in Rangpur	BGD	29-Jan-17	15
7	PEN Value Chain Focus Group in Jessore	BGD	6-Feb-17	15
8	Women second focus group in Battambang	KHM	13-Feb-17	15
9	Men second focus group in Battambang	KHM	14-Feb-17	15

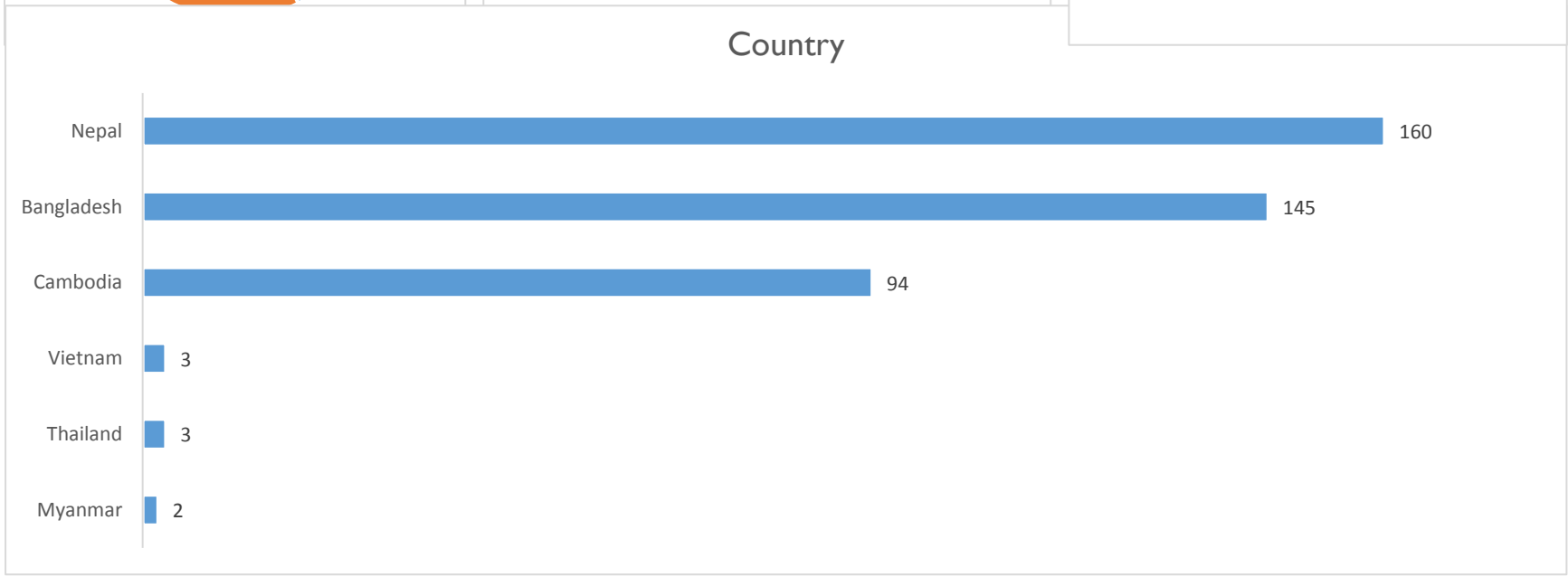
10	Value chain second focus group in Battambang	KHM	14-Feb-17	15
11	Men second focus group in Siem Reap	KHM	15-Feb-17	15
12	Women second focus group in Siem Reap	KHM	15-Feb-17	15
13	Value chain second focus group in Siem Reap	KHM	16-Feb-17	15
14	PEN Farmers Record Keeping in Jessore	BGD	28-Feb-17	4
15	Fish 2.0 Southeast Asia Workshop	THA	2-Mar-17	11
16	Community Consultation Workshop	THA	14-Mar-17	5
17	Intensive training on PEN and field testing (Brinjal and Cucumber), Surkhet	NPL	24-Mar-17	35
18	Insect, pest and disease identification training (Tomato and Cauliflower), Surkhet	NPL	25-Mar-17	31
19	Intensive training on PEN and field testing (Brinjal and Cucumber), Dang	NPL	27-Mar-17	31
20	Insect, pest and disease identification training members (Tomato and Cauliflower), Dang	NPL	28-Mar-17	29
21	PEN Male Focus Group in Rangpur	BGD	28-Mar-17	15
22	PEN Female Focus Group in Rangpur	BGD	28-Mar-17	15
23	PEN Value Chain Focus Group in Rangpur	BGD	29-Mar-17	15
24	PEN Record Keeping in Rangpur	BGD	30-Mar-17	4
	Total Participants (not unique individuals)			**407**

Indicator 1.1.4 Organizations receiving USG Assistance







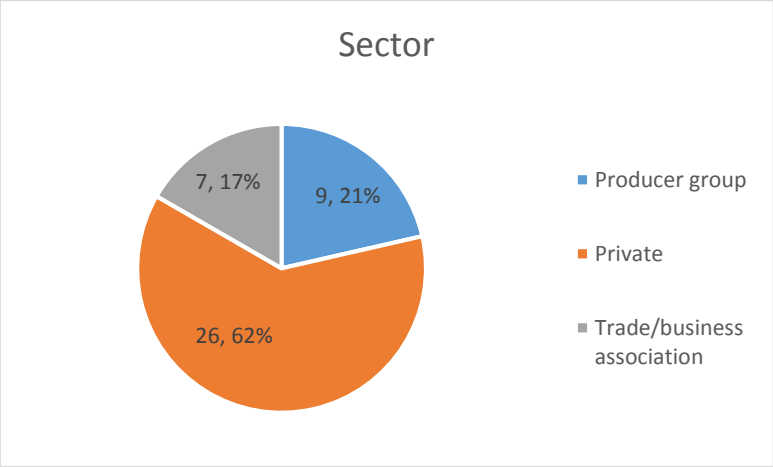


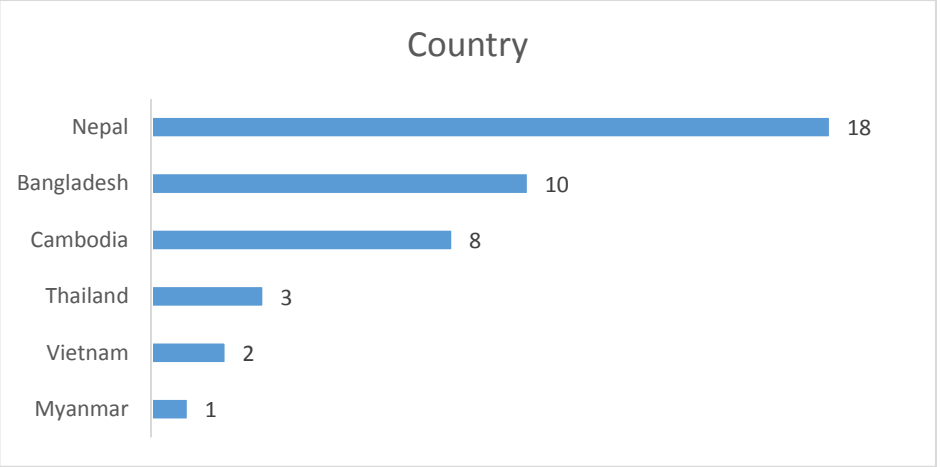
#	Name	Type	Country	Assistance Start Date	Notes
1	Kamalnain Krishak Samuha	Producer group	NPL	31-Mar-17	Producer group that continues to be supported on PEN
2	Dipjyoti Krishak Samuha	Producer group	NPL	31-Mar-17	Producer group that continues to be supported on PEN

3	Indreni Krishak Samuha	Producer group	NPL	31-Mar-17	Producer group that continues to be supported on PEN
4	Bhagwati Krishak Samuha	Producer group	NPL	31-Mar-17	Producer group that continues to be supported on PEN
5	Laligurans Krishak Samuha	Producer group	NPL	31-Mar-17	Producer group that continues to be supported on PEN
6	Battambang Producer Group	Producer group	KHM	31-Mar-17	Producer group that continues to be supported on PEN
7	Siem Reap Producer Group	Producer group	KHM	31-Mar-17	Producer group that continues to be supported on PEN
8	Rangpur Producer Group	Producer group	BGD	31-Mar-17	Producer group that continues to be supported on PEN
9	Jessore Producer Group	Producer group	BGD	31-Mar-17	Producer group that continues to be supported on PEN
10	EnerGaia Co.,Ltd.	Private	THA	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
11	NAN Vietnam	Private	VNM	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
12	Fairagora	Private	THA	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
13	Mako Seafood	Private	MMR	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
14	Unifox Digital	Private	BGD	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
15	Vitamar Cambodia Co.,Ltd.	Private	THA	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
16	Nutrition Technologies Ltd	Private	VNM	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
17	Surya Agrotech Cambodia Co,.Ltd.	Private	KHM	28-Feb-17	Actively engaged in Fish 2.0 Southeast Asia Track
18	Madhya Paschim Agro-vet Centre	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
19	Laxmi Agro-vet Centre	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
20	Bishal Agro-vet	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
21	Binod Agro-vet	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
22	Hamro Kisan Agro-vet Centre	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
23	Nepal Drip Irrigation Pvt. Ltd.	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
24	Sakura Agro-seed and Research Center	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
25	SR Sabji Mandi	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
26	AB Sabji Mandi	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN

27	Om tarkari Suppliers	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
28	Srijanshil Savings and Credit Cooperative Ltd.	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
29	Harit Tara Women Cooperative Ltd.	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
30	Rural Women Development Center	Private	NPL	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
31	Jaigir Kachamal businessman Bazar Banik Somity-Market Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
32	Jaigir Fertilizer/Insecticide Businessman Bazar Banik Somity-Market Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
33	Jaigir seed Businessman Bazar Banik Somity-Market Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
34	Birnarayanpur Krishok Somity-Service delivery Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
35	Khajura bazar Seed businessman Banik Somity-Market Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
36	Khajura Bazar Kachamal businessman Banik Somity-Market Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
37	Khajura Baxar Fertilzer/Insecticide Businessman Banik Somity-Market Association	Trade/business association	BGD	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
38	Sorm Heat Sole Proprietorship	Private	KHM	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
39	Lann Bach Sole Proprietorship	Private	KHM	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
40	Chem Choum Sole Proprietorship	Private	KHM	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN

41	Mek Nuch Sole Proprietorship	Private	KHM	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN
42	Chhoeun Earb Sole Proprietorship	Private	KHM	31-Mar-17	Engaged in PEN trainings and focus groups with potential to supply PEN or buy vegetables grown under PEN

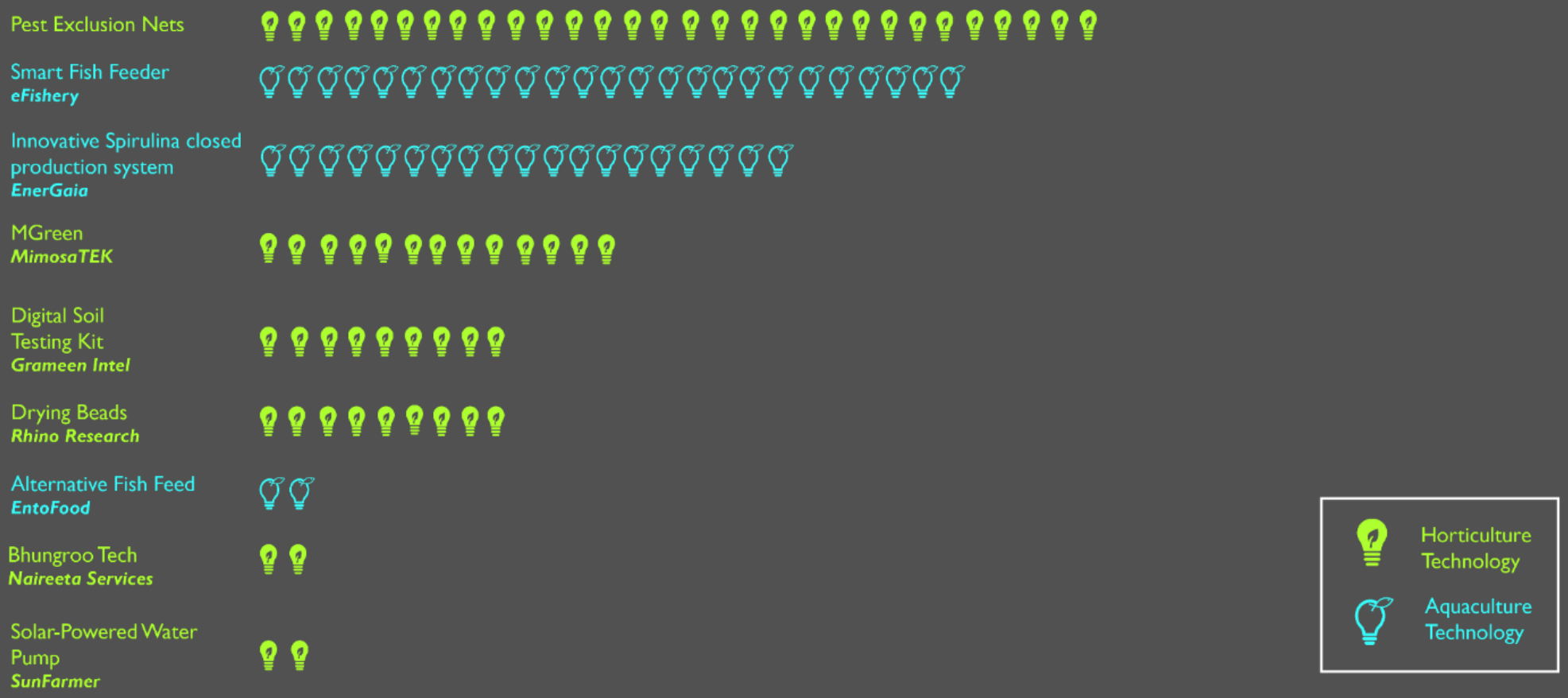




Indicator 1.2.1 Technologies under research, field testing, or made available for transfer

1. eFishery's automatic fish feeder has been under field testing since 17-Mar-2017 at Kasetsart University Kampaengsaen Campus

Technology Partnerships



Indicator 1.2.3 Technologies proposed, accepted or incubated

#	Technology name	Country of Origin	Proposed date	Accepted date	Awarded date
1	Digital Agro-met Advisory Services (DaaS) for Farmers	BGD	15-Jan-17	-	-
2	Disease Identification and Prevention Expert System(DIPES)	NPL	19-Jan-17	-	-

Indicator 1.2.4 Value of sales of technologies

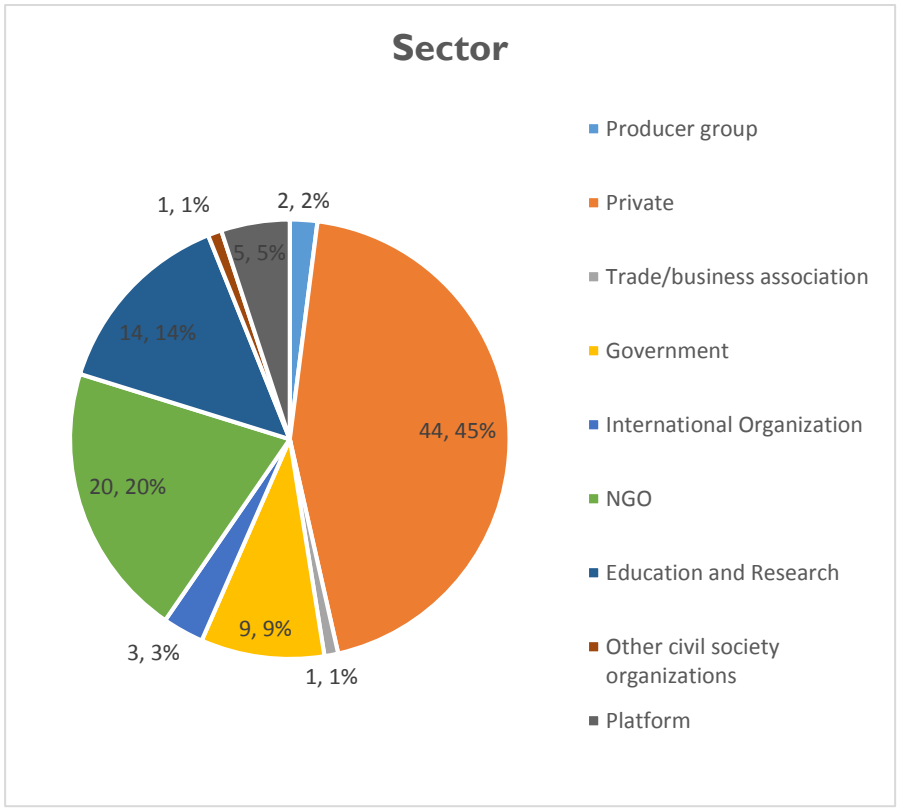
1. eFishery sold 50 units of the automatic fish feeder to ACI in Bangladesh for USD 42,892

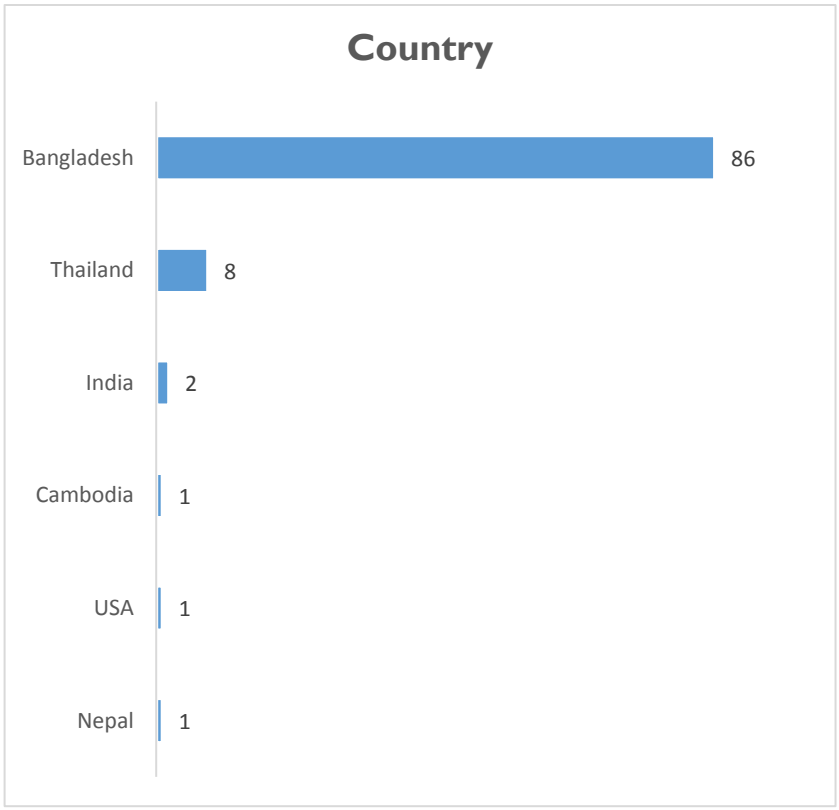
Indicator 2.1.3 Cross border linkages established

1. Energaia was introduced to Rhino Research and is now testing Drying Beads technologies with their spirulina produce (2 private stakeholders in a commercial linkage)

Indicator 2.1.4 Platforms, networks or organizations participating in hubs

#	Event	Level	Date	New participating organizations
1	Asia Agricultural Innovation Summit Bangladesh 2017	National	24-Jan-17	95
2	New platforms established to become the agricultural innovation communities in Bangladesh, Cambodia, Nepal and Asia region	National and Regional	13-Mar-17	4
	TOTAL			**99**





3.1.1 Private sector capital investment

1. ACI invested USD 42,892 through purchasing eFishery automatic feeder for testing in Bangladesh.

Indicator 3.1.2 Public-private partnerships

1. A partnership on policy with the Asia Pacific Seed Association (APSA) was established

Indicator 3.1.3 Funding leveraged

1. USD 42,892 was leveraged from ACI for testing eFishery's product in Bangladesh