WATER AND ENERGY FOR FOOD

INNOVATOR COMPILATION

WATER and ENERGY for FOOD
german cooperation DEUTSCHE ZUSAMMENARBEIT
Government of the Netherlands
Norad
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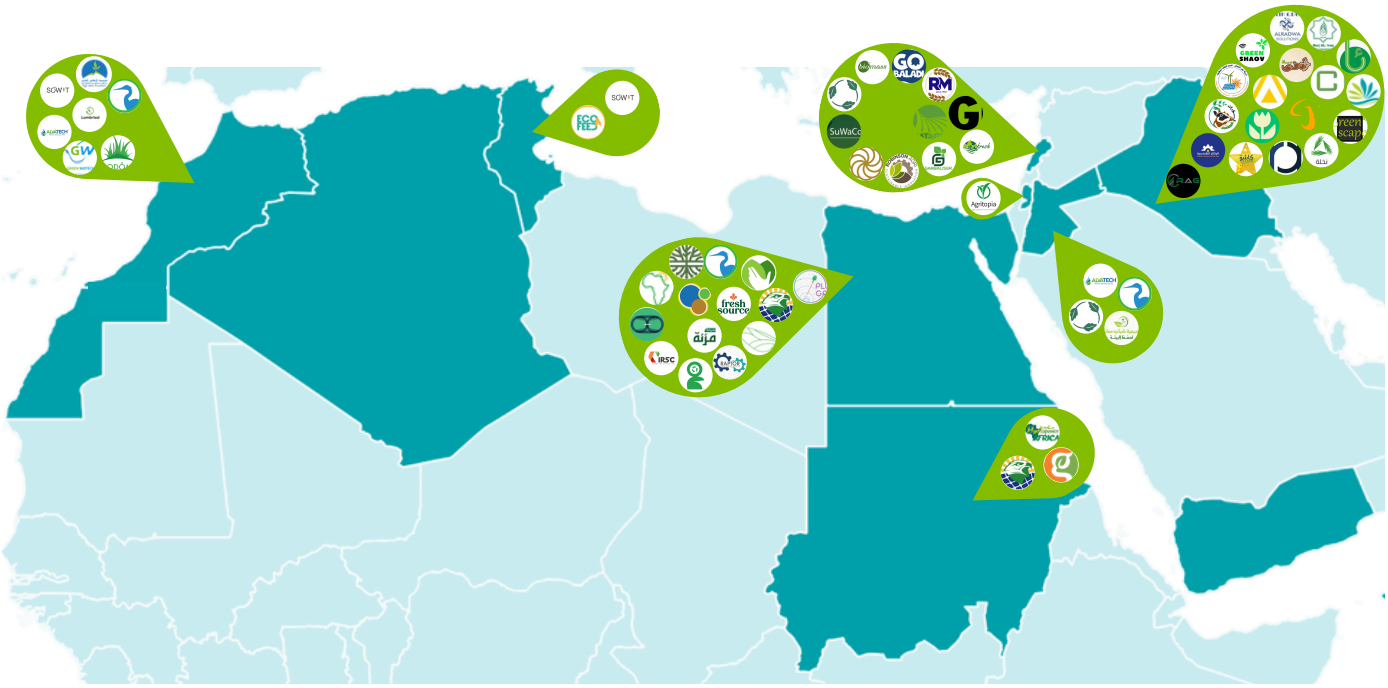
Middle East and North Africa Innovator Profiles and Impacts

Map of Innovators Supported by the Middle East and North Africa Regional Innovation Hub



AbuErdan
Tech solutions for poultry farming

Agrifresh
Grows barley in hydroponic systems in Mosul province to feed livestocks

Agrisolar
Provides easy-to-install solar irrigation systems

AgriTopia
Provides smart greenhouse solutions fully automated system that measures soil moisture, distributes fertilizer, and irrigates crops.

Ainda Agricultural Center
Develops solar-powered smart irrigation systems and poultry watering systems

Al-Reef Mushroom
Produces, stores, and distributes two types of local mushrooms to the Iraqi market

Albu Saif
Grows barley in hydroponic systems in Mosul province to feed livestocks

Alva Tech
Solar-powered water treatment for saline and water scarce areas

Arez Plantation
Planting fruit producing trees, drip irrigation installation, produces soil mixes and organic compost

Bahir al Kamal
Installs solar systems for smallholder farmers

Baramoda Sustainable Solutions
Recycling agricultural waste into organic fertilizers

Biodôme
Provides biogas units to farmers as well as a compost packing and promotion service.

Biomass
Increasing organic food production through sustainable resource use

Biomasr
Produces homegrown organic products for export

Burj al Iraq
reclaim agricultural land through desalinated irrigation with subterranean PVC pipes

Chitosan Egypt
Nature-based shrimp biofertilizer for organic & sustainable farming needs

Compost Baladi
A community-based, user-driven bio waste disposal and composting solution

Cultivision
Leverages advanced satellite remote sensing technology to generate real-time and field-level analysis to enhance crop management, disease detection, and water stress understanding for farmers

Dhiaa al Alamiyah
Uses hydroponics to grow barley in a more sustainable and cost effective manner for sheep

Ecofeed
Solar-assisted Internet of Things drying and production of animal feed

Egymag
Takes waste from vegetable markets to create bio-fertilizers as well as poultry and fish feed from black soldier fly larvae

Faraday
Provides solar-powered agricultural systems that are designed to enhance efficiency, reduce costs, and promote sustainable agricultural practices

Freshsource
Contract farming, bridging the gap between farmers supply and off-takers demand

Garbaliser
Fermentation and conservation of organic materials into high-quality liquid fertilizer

Go Baladi (Hajjar Foods)
Goat dairy for food and nutrition

Green Eagle Tech
Provides farmers with financing for solar irrigation systems

Green Essence Lebanon
Solar-powered energy to rural communities and farmers

Green Shovel
Provides smart AI, monitoring systems, and advisory services for greenhouses as well as pump and irrigation services.

Green Watech
Offers a tested, safe, low-cost, and efficient solution for wastewater treatment and reuse for irrigating vegetables

Greenco
Compost production utilizing innovative solutions to process agricultural waste meterial such as liquid and humid manure into high-quality liquid fertilizer

GreenScape
Provides advanced water-saving, wastewater treatment, and water harvesting solutions.

High Atlas Foundation
Promoting subsidized trees among rural communities in exchange for carbon offsets\

Hydroponics Africa
Manufactures, installs, and promotes customized hydroponic fodder and vegetable systems

Irma & Co
Makes and sells pepper paste made of peppers grown through a drip irrigation technique

IRSC
Desert-friendly, energy-efficient, nano-grid solar pump systems

Kasho Company
Sunflower seed cultivation and processing by utilizing cold-press technology

Lombrisol
Provides bioreactor for automatic waste recycling

LORK
Offers low-cost hydroponic fodder systems for livestock feed production coupled with the integration of associated agricultural products.

Ma'an Youth Society
Uses organic waste to produce organic fertilizer, potting soil, and compost

Mozare3
Through Meeza prepaid cards, the company provides farmers with access to financing and markets, as well as agronomy support

Mozna
Specializes in producing liquid organic fertilizers derived from biogas units and agricultural waste

Natagri
Improving the cherry value chain through water and pest management

Nakhla Company
Provides maintenance and consultation services for date palms owners, which improves production and extends the lives of the palm trees

PlatFarm
Precision-based farming and irrigation

Plug'n'Grow
Design and selling hydroponic technology solutions as products

RAG Company
Supplier of precision irrigation systems, greenhouses, seeds, and organic fertilizers

Raka'ez Al Handasiyah
Intensive fish farming combined with Internet of Things technology

Raptor Solar/Engineering
Provides rural farmers, with reliable and cost-effective solar pumping systems

Ras Al-Ain Sky
Offers renewable energy solutions for sustainable agriculture

Rim Mills
Has the first automated line of moughrabieh to save water and energy

Robinson Agri (The Quinta Group)
Countering resource mismanagement with holistic irrigation and farming solutions

Schaduf
Farming kits for urban produce growers

SOWIT
Optimizing irrigation for sustainable production and market access

SudaGarlic
Provides garlic-producing smallholder farmers with storage, processing, marketing, and distribution services.

SuWaCo
Improving sanitation and water availability for agricultural production

Zhany
Produces organic dried fruits, gluten-free flours, organic wheat flours, eco-friendly edible tableware, and vermicompost

Table of Hub Results by Country

with Ranking of Results within the Context of the Hub and the USAID-Implemented Program

	Egypt	Iraq	Jordan	Lebanon	Morocco	Palestine	South Africa*	Sudan	Tunisia	United Kingdom**
Number of End-Users	317,557	65,779	1,432	232,380	62,687	9,344	N/A	39	7,255	N/A
Hub Rank	1	3	7	2	4	5	N/A	8	6	N/A
Program Rank	5	11	22	7	12	17	N/A	23	19	N/A
Number of Women End-Users	71,398	15,714	N/A	84,058	5,877	4,780	N/A	11	N/A	N/A
Hub Rank	2	3	N/A	1	4	5	N/A	6	N/A	N/A
Program Rank	7	14	N/A	6	16	17	N/A	21	N/A	N/A
Number of BoP End-Users	126,452	19,372	N/A	96,159	29,029	9,344	N/A	16	3,784	N/A
Hub Rank	1	4	N/A	2	3	5	N/A	7	6	N/A
Program Rank	6	15	N/A	7	13	17	N/A	22	19	N/A
Tons of Food Produced	6,458,009	57,172	4,544	1,683,977	2,057,007	N/A	43,138*	25,735	226,731	N/A
Hub Rank	1	5	8	3	2	N/A	6	7	4	N/A
Program Rank	1	13	19	4	3	N/A	14	16	11	N/A
Tons of Food Processed	97	2,535	N/A	2,245	N/A	N/A	N/A	N/A	N/A	N/A
Hub Rank	3	1	N/A	2	N/A	N/A	N/A	N/A	N/A	N/A
Program Rank	9	5	N/A	6	N/A	N/A	N/A	N/A	N/A	N/A
Kilowatt-Hours (kWh) of Energy Saved	3,190,435,673	39,174,449	22,659	187,745,841	318,955,394	N/A	N/A	N/A	N/A	N/A
Hub Rank	1	4	5	3	2	N/A	N/A	N/A	N/A	N/A
Program Rank	1	7	16	4	3	N/A	N/A	N/A	N/A	N/A
Liters Reduced in Water Consumption	5,869,270,195	1,004,783,146	N/A	4,390,165,070	515,571,161	N/A	N/A	3,659,264	1,510,492	N/A
Hub Rank	1	3	N/A	2	4	N/A	N/A	5	6	N/A
Program Rank	2	4	N/A	3	5	N/A	N/A	15	17	N/A

Table of Hub Results by Country

with Ranking of Results within the Context of the Hub and the USAID-Implemented Program

	Egypt	Iraq	Jordan	Lebanon	Morocco	Palestine	South Africa*	Sudan	Tunisia	United Kingdom**
Tons of Carbon Dioxide Equivalent (CO_2e) Greenhouse Gas Emissions Savings	1,138,384	48,590	N/A	88,788	115,658	N/A	N/A	N/A	60,518	N/A
Hub Rank	1	5	N/A	3	2	N/A	N/A	N/A	4	N/A
Program Rank	1	10	N/A	7	5	N/A	N/A	N/A	9	N/A
Number of End-Users with Increased Incomes	202,265	5,140	4	88,714	27,444	N/A	14*	N/A	N/A	N/A
Hub Rank	1	4	6	2	3	N/A	5	N/A	N/A	N/A
Program Rank	5	16	19	6	10	N/A	18	N/A	N/A	N/A
Hectares of Land Under Improved Management Practices	249,106	5,414	N/A	137,672	95,380	253	903*	54	397	N/A
Hub Rank	1	4	N/A	2	3	7	5	8	6	N/A
Program Rank	3	11	N/A	5	6	17	13	18	15	N/A
Number of End-Users Using WE4F-Supported Financing Mechanisms	61,490	6,692	1,431	10,489	34,361	1	25*	640	4,474	N/A
Hub Rank	1	4	6	3	2	9	8	7	5	N/A
Program Rank	3	8	14	6	5	19	18	17	11	N/A
Investment Mobilized by Country of Incorporation	$19,062,434 USD	$721,375 USD	N/A	$3,323,950 USD	$10,281,866 USD	N/A	N/A	N/A	N/A	$1,466,365 USD**
Hub Rank	1	5	N/A	3	2	N/A	N/A	N/A	N/A	4
Program Rank	2	11	N/A	6	3	N/A	N/A	N/A	N/A	8

**The results for "Number of End-Users with Increased Incomes," "Hectares of Land Under Improved Management Practices," and "Number of End-Users Using WE4F-Supported Financing Mechanisms" in South Africa came from Platfarm, who received a technical assistance instance to develop a digital tool for resource monitoring. As a result, the innovator expanded to South Africa along with their expansion in Egypt. They then reported these results as part of their WE4F participation because without the development of the digital platform, they would have not expanded to the country.*

***The result for "Investment Mobilized by Country of Incorporation" for the United Kingdom is due to Alva Tech being incorporated in the country.*

ABU ERDAN

Countries of operation: Egypt
Monitors: Water
Grant amount: $100,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $40,188 USD

Challenge faced by end-users:

Poultry producers lose more than 10% of their revenue due to inefficiencies, internal fraud, and waste. Small producers lack access to genetics best practices, which reduces their overall production and impacts their income.

Innovator's provided solution:

Empowers poultry farmers to have access to affordable technology that helps them increase their production, reduce their waste, and maximize their income. AbuErdan leverages new technologies like artificial intelligence, machine learning, and predictive analytics to offer poultry producers ways to take corrective actions on time. This enables producers to have more control over their resources, reduce their waste, maximize breed potential, and increase their income. AbuErdan also works on a smaller version of the solution that will impact the lives of women, increasing their income by raising chickens and increasing their production by applying the best-in-the-industry poultry practices.

Barriers faced by innovator in reaching end-users:

In order to reach new customers and geographies, Abu Erdan needed to better understand their target end-users as well as develop new outreach materials and strategies.

Technical assistances (TA) received and outcomes:

	Received assistance	Category	Outcome
MARKET RESEARCH	Market study for geographic expansion and an associated marketing plan.	In-house TA Chemonics Egypt	Operationalized their marketing plan and launched an online marketing campaign geared towards their expansion into Morocco, Egypt, and Jordan as well as other countries.
MARKETING & SALES	Marketing and sales strategy that included a pricing and negotiation approach and the launch of a new online marketing campaign.	In-house TA Chemonics Egypt	Helped design AbuErdan's pricing and negotiation strategy and approach as well as design and develop online marketing campaign(s) that further expanded AbuErdan's reach, awareness, and sales in Jordan, Saudi Arabia, the United Arab Emirates, and Egypt.

Impact achieved:

2,337 end-users
2,337 end-users using EUF

41,900 tons food produced

172,000 kWh saved

293 end-users with increased incomes
10% women

4 jobs created
50% of all employees are women

34,500 liters of water saved

2,337 tons of CO2e saved

$249,999 USD in sales

AGRIFRESH

Countries of operation: Lebanon
Monitors: Water
Grant amount: $250,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

The ready-to-eat food industry requires high energy costs as well as large quantities of water. Additionally, in Lebanon the lack of access to a regular energy supply limits companies' abilities to scale. Scaling is also impacted by a lack of financial resources, creating a situation where companies must rely on opening lines of credit or constantly injecting capital into the business.

Innovator's provided solution:

Sells ready-to-eat vegetables that are efficiently washed, sanitized, shredded, and packaged. Consumers no longer need to wash the produce once they have brought it home, therefore saving them water, energy, and time. Additionally, to improve production sustainability, Agrifresh is installing solar panels and investing in efficient equipment that can reduce energy use.

Barriers faced by innovator in reaching end-users:

As an innovator growing and selling ready-to-eat produce, Agrifresh needed to identify within their operations to improve resource efficiency as well an unlock financing to further scale their operations.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ENVIRONMENTAL	Baseline assessment and shortlist of resource efficiency measures with expected CAPEX, simple payback period, and environmental impact.	In-house TA Chemonics Egypt	Results not yet known at the time of program closure.
GENDER INTEGRATION	Received GenderUp training to promote gender-inclusive practices within the innovator's operations and for engaging end-users.	In-house TA IWMI	Identified current efforts on, and new opportunities for, gender inclusion within the innovator's operations.
	Development of an enhanced financial model, including the three key financial statements along with the 2025 budget and a breakdown of revenues by segment.	In-house TA Berytech Foundation	Provided the innovator with the materials necessary to pursue investment.

Impact achieved:

32,800 end-users
98% BoP

1,100 tons food produced

120,000 kWh saved

45 end-users with increased incomes
100% BoP

97 hectares under improved practices

84 tons of CO2e saved

$1.63 million USD in sales

AGRISOLAR

Countries of operation: Egypt
Monitors: Water
Grant amount: $75,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $629,324 USD

Challenge faced by end-users:

In Egypt, irrigation canals are frequently located below ground level, necessitating the use of pumps to lift water to the fields. This pumping is dependent on the use of fossil fuels – directly through diesel generators and indirectly through electricity.
Recently, the agricultural sector is facing an energy crisis, as increasing electricity demand from urban areas results in frequent shortages and blackouts. This results in disrupting farmers' regular irrigation scheduling, which causes missed crop water requirements and, consequently, declining of crop yields.

Innovator's provided solution:

Provides a one-stop shop for solar irrigation systems, providing clients with all parts needed to install a fully functional system. The innovator makes the innovation more affordable by assisting farmers with end-user financing and maintaining very strong relations with downstream firms. Agrisolar also relies on the efficient sourcing of components and supplying it to solar firms while manufacturing selected components locally.

Barriers faced by innovator in reaching end-users:

In order to continue expanding as a solar irrigation provider in a competitive field, Agrisolar needed to unlock investment as well as develop a better understanding of export opportunities in the region. Internally, the innovator needed to advance its level of gender integration as well as its financial management. As monitoring water is critical in Egypt, where resources are already significantly strained, Agrisolar needed to integrate a monitoring solution into its offerings to continue being a one-stop shop.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKET RESEARCH	Market report highlighting profiles of various markets and market assessment results including priorities for countries and market segment.	In-house TA Chemonics Egypt	Explored export opportunities in Morocco, Lebanon, and Jordan for their locally-manufactured mounting structures.
PRODUCT DEVELOPMENT	Presentation of the pros and cons of ready-made/off-shelf solutions and tailored solution and a concept design of the remote monitoring system.	In-house TA Chemonics Egypt	Developed a remote monitoring system for their innovation.
ORG CAPACITY DEV	Amended job descriptions and organized involvement of company human resources manager.	In-house TA Chemonics Egypt	Implemented HR manual and job descriptions to hire across several departments.
GENDER INTEGRATION	Developed a gender-sensitive human resources manual.	In-house TA IWMI	
BUSINESS DEVELOPMENT	Development of a company profile presentation.	In-house TA Chemonics Egypt	Secured crowdfunding from Frankly.green, the first of its kind in the Middle East.
	Development of a tool to compare debt financing institutions across six pre-determined criteria.	In-house TA Chemonics Egypt	
INVESTMENT READINESS	Provided advisory services based on historical financial statements and crafted a 2023 financial budget and financial projection for the next five years.	In-house TA Berytech Foundation	

Impact achieved:

26,300 end-users
38.9% women & 44.5% BoP
54 end-users using EUF

38,500 tons food produced

16.6 million kWh saved

$12 million USD in sales

5 jobs created
19% of all employees are women

34,200 hectares under improved practices

730,000 tons of CO2e saved

AGRITOPIA

Countries of operation: Palestine
Monitors: Water
Grant amount: $75,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $49,762 USD

Challenge faced by end-users:

The exposure of crops to climatic change, and/or to limited or deteriorated water sources has intensified the need to investigate crop water requirements to produce maximum yield. Also, studies reveal that at farm level, water is not only used to fulfill irrigation requirements but also for other purposes, including the distribution of fertilizers and/or pesticides and post-harvest washing.
Due to the fact that many farmers within West Bank/Gaza have limited access to land and restricted access to water, it is essential that they optimize agriculture and use every drop of water efficiently. In some instances, over-irrigation and overuse of fertilizers is common amongst farmers, especially inexperienced farmers.

Innovator's provided solution:

AgriTopia's AutoFarm system helps farmers ensure that they are providing the best environment for each crop. The system calculates exactly how much water and chemicals are needed for each crop and distributes those amounts, while controlling the lighting, humidity, and temperature for growth stimulation. The AutoFarm system automatically controls the greenhouse environment in order to improve productivity, eliminate seasonality of products, and reduce quantity and cost of water. Moreover, AutoFarm is a flexible system and can be applied to any farm size. The system is also attractive for young and women farmers, because its automation requires less effort and gives larger yields all year long.

Barriers faced by innovator in reaching end-users:

In order to expand sales to new customer segments the innovator needed to review their business development operations as well as explore how to connect their products to customers like smallholder farmers.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Received support for their business development strategy, business processes, and business development assessment key performance indicators.	In-house TA Chemonics Egypt	Made many attempts to expand into new cities in the West Bank and in Kurdistan region/Iraq, but production capacity was slowed down due to issues with input material supply, the conflict in Gaza, and unrest in the West Bank.
MARKETING & SALES	Marketing and competition analysis including products' study and analysis report, and customer segmentation.	In-house TA cewas	

Impact achieved:

9,300 end-users
51.1% women & 100% BoP
1 end-user using EUF

4 jobs created
25% of all employees are women

253 hectares under improved practices

$37,700 USD in sales

AINDA

Countries of operation: Iraq
Monitors: Water and Biodiversity
Grant amount: $90,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation and Mitigation
Co-funding provided by innovator: $35,750 USD

Challenge faced by end-users:

As they are situated far away from power stations and main transmission lines, farmers from Penjwen and Halabja in Northern Iraq face many issues related to lack of electricity. This forces the farmers to depend mainly on diesel generators to be able to pull water from rivers and underground water, which increases their expenses and consumes more water resources used for traditional irrigation.

Innovator's provided solution:

Ainda Agricultural Center has developed a new product solution for farm clients – a solar-powered smart-drip root watering system. This system enables farmers to use water more efficiently in agricultural production. Using the root watering system can help farmers reduce their use of water by 60% to 70% based on plant types. Moreover, Ainda Agricultural Center provides farmers with professionally designed solar-powered systems that can help overcome the lack of electricity required for pumping and irrigation distribution. To increase the efficiency of the irrigation system, an automatic watering system is integrated into the design. The innovator also offers a watering system for poultry farmers that minimizes water waste by relying on the chicken's beak hitting the water nipple to trigger water being released into the watering bowl. The system's length is customizable and requires little human intervention to operate.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. To help Ainda move from a small, local business to an organized, more mature organization that can meet the contractual requirements of international funding (either from donors or financial institutions), the innovator needed support in enhancing its product offerings, its environmental monitoring, and its internal operational management. In its second round of participation in Water and Energy for Food (WE4F), the innovator needed support to expand customer awareness and financial management of its poultry watering system business line.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
PRODUCT DEVELOPMENT	Solar irrigation system sizing, technology assessment and selection, feasibility study assessments, and best practices for system implementation.	In-house TA Chemonics Egypt	A guidebook was developed to cover in-house tools and templates for standardized farmer data collection, component selection, commissioning, maintenance checklists, and information on how to conduct feasibility analysis for farmers.
ORG CAPACITY DEVELOPMENT	Development of a project and activity tracker that records key performance indicators by projects/activity.	In-house TA cewas	Supported their involvement in WE4F activities and ability to report towards their MEL indicators.
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.
INVESTMENT READINESS	Received a comprehensive review of their financial model components to support financial analysis, including assessing profitability by business segment.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.
MARKET RESEARCH	Export strategy and action plan showing all needed and required certification, documentation, licenses, trade agreements and procedures needed to be followed by the governmental and customs rules and regulations.	In-house TA cewas	Strengthened the team's capacity on export requirements, including supply chain analysis, regulatory frameworks, and product evaluations.
BoP IMPACT	Development of dynamic spreadsheets for payment schedule for each type of poultry farms.	In-house TA cewas	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.
ORG CAPACITY DEVELOPMENT	Improved their chart of account template, developed inventory procedure and stock movement template, and received a tailored accounting policy that is in line with Ainda financial records.	In-house TA cewas	Upgraded their accounting system.

Impact achieved:

15,000 end-users
27.7% women & 76.8% BoP
6,016 end-users using EUF

32,300 tons food produced

2,000 tons of food processed

$2.14 million USD in sales

47 jobs created
29% of all employees are women

992 hectares under improved practices

4,730 tons of CO2e saved

6.5 million kWh saved

825 end-users with increased incomes
7% women & 76.7% BoP

1.67 million liters of water saved

ALBU SAIF

Countries of operation: Iraq
Monitors: Water
Grant amount: $120,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation and Mitigation

Challenge faced by end-users:

Cultivating barley in cropland requires a large amount of water consumption as well as a high energy consumption to power irrigation. A fully grown barley plant will take one entire season to be ready for harvest, thus the value chain of cultivating barley comes with a high cost that is not suitable for farmers and livestock traders. This also triggers an augmented purchase price of meat for consumers.

Innovator's provided solution:

Albu Saif started growing barley in hydroponic systems in Mosul province. This reduces the production period for 500 kg of fully grown fodder to only 8 days, without compromising on the nutritional value and quality of cropland. Cultivating barley by using Albu Saif's method would cause a huge drop in its price in the market and the price of livestock will decrease accordingly. Another solution explored by the Albu Saif is utilizing progestin-impregnated vaginal sponges for livestock to produce twin offspring and thus increase the number of livestock that can be sold for a lower cost.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. To help Albu Saif expand its two revenue streams (barley production and livestock breeding) the innovator needed support in enhancing its product offerings, its environmental monitoring, and its financial management.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
PRODUCT DEVELOPMENT	Created a detailed training program and training materials.	In-house TA cewas	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.
ORG CAPACITY DEVELOPMENT	Development of ability to record activities with necessary information and link it with key performance indicator and track record for each key performance indicator.	In-house TA cewas	Supported their involvement in WE4F activities and ability to report towards their MEL indicators.
ORG CAPACITY DEVELOPMENT	Development of an organizational structure and line of communication diagram with full job duties for each member; a human resources and inventory management template, policies, and guidelines; and the development of payment, financial, and procurement policies and templates.	In-house TA cewas	Developed their organizational structure to align with their growth strategy as well as to determine needed hires and developed gender-neutral and inclusive job descriptions.
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.
INVESTMENT READINESS	Detailed financial projection for the cow business line over the next five years.	In-house TA Berytech Foundation	Empowered the company to implement effective internal policies, precisely track sales and manufacturing processes, optimize pricing strategies for their products, and enhance their environmental safeguarding practices.
MARKETING & SALES	Development of manufacturing processes as well as inventory and sales management trackers.	In-house TA cewas	
BUSINESS DEVELOPMENT	Development of a dynamic spreadsheet showing 17% of hydroponic barley for sales, applying all fixed, variable and fixed assets cost to evaluate which price per ton will be profitable for 10%.	In-house TA cewas	

Impact achieved:

- **335 end-users** *55.5% BoP*
- **113 tons food produced**
- **617,000 kWh saved**
- **$73,800 USD in sales**
- **1 job created** *30% of all employees are women*
- **12 hectares under improved practices**
- **58 tons of CO2e saved**
- **16.8 million liters of water saved**
- **209 end-users with increased incomes** *88.9% BoP*

AL RAKA'EZ AL HANDASIYAH

Countries of operation: Iraq
Monitors: Water
Grant amount: $75,000 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Open-field fish farming is a conventional practice in Iraq that results in significant waste and water pollution, as the water used to rear fish generally isn't subjected to proper treatment, let alone reuse. Additionally, the technique requires extensive areas of land that could otherwise be utilized for crop cultivation. It is difficult for farmers to switch to more sustainable fish farming methods, as they lack access to the modern technology that would use less space (such as a closed loop system) and less water.

Innovator's provided solution:

Al Raka'ez al Handasiyah's innovation offers an alternative to conventional practices by relying on intensive fish farming in a closed system where the innovator can control the working environment through the use of Internet of Things smart technology. This innovation enables larger quantities to be produced in small spaces (30-50 fish per cubic meter) while conserving significant amounts of water and energy. It also allows for fish to be raised in a clean and healthy environment by providing suitable conditions (e.g., improved water quality and disposing of waste through water filtration systems). The innovator also converts ammonia into protein that fish can feed on, leading to a 25% reduction in feed consumption.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. In order for the innovator to expand its operations, the innovator needed to raise awareness on its product offerings as well as educate potential customers on new, moder fish production practices.

Technical assistances received and outcomes:

Received assistance	Category	Outcome
Creation of a detailed training program and training materials.	In-house TA cewas	Expanded their fish production to 17,000 fish, adding three times the original capacity to their tanks.

Impact achieved:

- **14 end-users**
- **14 end-users with increased incomes**
- **29,200 kWh saved**
- **8 tons of CO2e saved**

AL-REEF MUSHROOM

Countries of operation: Iraq
Monitors: Water and Biodiversity
Grant amount: $150,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation and Mitigation

Challenge faced by end-users:

In Iraq, imported, lower-quality, mushrooms compete with locally produced mushrooms, negatively affecting local producers. Additionally, challenges in mushroom cultivation persist as they are very difficult to produce sustainably and in large enough volumes to be commercially viable. At the same time, the Iraqi food market is facing general instability and uncertainty, especially with meat prices rising dramatically in recent years. This hurts local, low-income consumers who may not be able to afford the higher meat prices.

Innovator's provided solution:

Al-Reef Mushroom provides fresh mushrooms to the Iraqi market at competitive prices, when compared to other local producers and imported varieties. They offer two types of high-quality mushrooms that are available in supermarkets and grocery stores, making them affordable for Iraqi consumers. These mushrooms are not only nutritious but also provide a cost-effective alternative to meat.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. As Al-Reef Mushroom was looking to expand its place in Iraq's mushroom market, the innovator needed to increase its production ability as well as identify opportunities to reduce input costs, thus lowering the overall cost of locally-produced mushrooms and making them competitive with foreign products.

Technical assistances received and outcomes:

Received assistance	Category	Outcome
Provision of mushroom halls design and production advisory.	In-house TA	Signed contracts with construction companies and placed orders for the capital expenditures required for the new mushroom halls.
Provision of a compost factory design.	In-house TA	Signed contracts with construction companies and placed orders for the capital expenditures required for a new compost factory.
Enhanced their standard operating procedures and budgeting processes.	In-house TA	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.

Impact achieved:

- **38,200 end-users**
  24.7% women
- **15 tons food produced**
- **21,300 kWh saved**
- **13 tons of CO2e saved**
- **342,000 liters of water saved**
- **$30,175 USD in sales**

ALVA TECH

Countries of operation: Jordan, Morocco, Palestine, India, Namibia, Kenya

Nexus link: Water-Food
Contributes to: Climate Adaptation and Mitigation

Challenge faced by end-users:

Water is very scarce in much of the Middle East and North Africa. Many countries in the region, including Jordan, struggle with fundamental socio-economic and developmental problems that are directly linked to water and agriculture. Among the most pressing problems are water and soil salinization due to overexploitation of scarce water resources, resulting in major problems such as low food and nutrition security, job security, employment inequalities and mass negative migration. The lack of effective, affordable, and sustainable water management has a devastating impact on the lives and livelihoods of millions of people.

Innovator's provided solution:

Alva Tech developed an affordable solar-powered water treatment technology that effectively mitigates water and soil salinization. The non-chemical, sustainable treatment involves changing the molecule behavior of water as a result of which, high salinity water can be efficiently absorbed by crops. This cutting-edge technology results in both productivity increase and improvements in both the relative and absolute irrigation water use.

Barriers faced by innovator in reaching end-users:

In order for Alva Tech to continue increasing access they needed to ensure that their innovation was affordable for end-users in different countries, the innovator also needed to secure investment that could support upgrading their operations and contribute to the improvement of their products. Additionally, as a business that operates in many countries, market studies were needed to enable better on-the-ground operations.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Received an end-user financing roadmap that was developed to ensure Alva Tech was serving base of the pyramid end-users.	In-house TA Chemonics Egypt	Resulted in meetings between Alva Tech and project consultants responsible for all European Bank for Reconstruction and Development (EBRD) Green Economy Financing Facilities in Egypt. The meetings led to a decision on actions for financing end-users, which are now being implemented. Alva Tech also created partnerships with distributors.
BoP IMPACT	Provision of end-user financing support for pilot testing in the Moroccan market with few financial institutions.	In-house TA Chemonics Egypt	Unknown as their program participation came to a close and they no longer engaged with the MENA RIH.
INVESTMENT READINESS	Provision of company valuation and investor pitch deck.	In-house TA Berytech Foundation	Launched a successful crowdfunding round on Seedrs, reaching over 140% of its target.
MARKET RESEARCH	Jordan market study to define value chain entry points and identifies distributors to partner with and key client leads to serve.	In-house TA cewas	Unknown as their program participation came to a close and they no longer engaged with the MENA RIH.

Impact achieved:

110 end-users
9% women

86.7 million liters of water saved

$236,000 USD in sales

AREZ PLANTATION

Countries of operation: Iraq
Monitors: Water and Biodiversity
Grant amount: $175,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Iraq, crops cultivated on farms often rely on chemical fertilizers and pesticides, which can contribute to lower crop quality and contamination, posing potential health risks to consumers. Furthermore, farmers commonly employ traditional flooding methods for irrigation, leading to significant extraction of groundwater.

Innovator's provided solution:

Arez Plantation Site develops trees and seedlings using locally manufactured compost and offers organically grown trees to farmers to encourage the spread of organic produce in the market. The innovator also sells their competitively-priced compost to farmers, providing them with an alternative to chemical fertilizers and pesticides. To better meet the needs of their client base, Arez is supporting farmers across Sulaymaniyah with drip irrigation systems that help to control water consumption, reducing efforts from farmers and water and energy consumption, when compared to traditional irrigation methods.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. Arez Planation needed to improve its internal monitoring systems to meet donor contractual requirements for grants as well as ensure better management of business activities and planning for future growth.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Developed a tracker for sales, purchases and various operation expenses, and a tracker for key performance indicator measurement, covering results versus targets.	In-house TA cewas	Enhanced the team's ability to establish their own composting facility, transitioning from traditional practices to a modern, more efficient compost production system. Supported their involvement in WE4F activities and ability to report towards their MEL indicators.

Impact achieved:

1,408 end-users
.49% women & 95.5% BoP

165 tons food produced

2.8 million kWh saved

57.7 million liters of water saved

728 end-users with increased incomes
.54% women & 95.6% BoP

738 hectares under improved practices

772 tons of CO2e saved

$624,000 USD in sales

BAHIR AL KAMAL

Countries of operation: Iraq
Grant amount: $80,000 USD
Co-funding provided by innovator: $415,257 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Smallholder farmers in the northern region of Iraq suffer under an unstable power supply. The national line faces frequent shortages and power outages, so most farmers are forced to switch back and forth between the national line and diesel generators to provide a stable power source for irrigation. This increases the monthly expenses that they have to put towards electricity supply, and also has a negative environmental impact due to the pollution caused by the generators.

Innovator's provided solution:

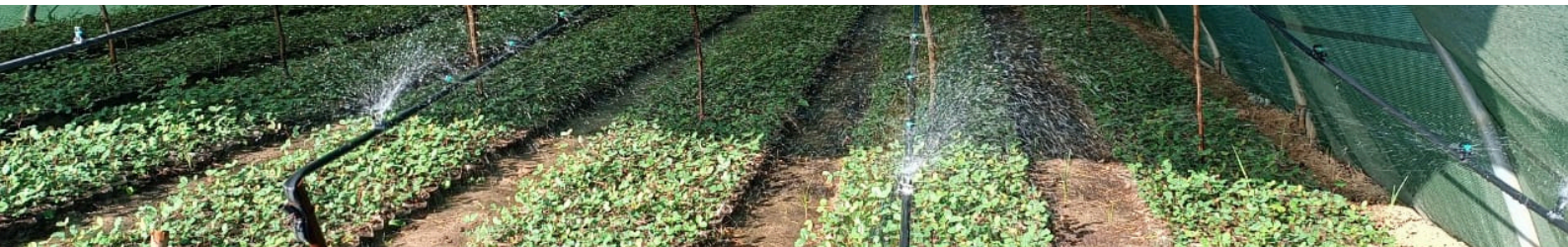
Bahir Al Kamal conducts field studies on farmers' croplands to evaluate the required amount of energy for the field. In addition, The innovator installs solar energy systems and provides free maintenance services for one year following installation. With their innovation, the company helps to reduce costs for farmers on electricity bills, generator fuels and maintenance with an environmentally friendly energy system.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. In order for the innovator to expand its operations, the innovator needed to mature its environmental monitoring ability to meet donor expectations and its management of customer and vendor relationships.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.
MEL/ADVISORY SERVICES	Develop spreadsheets for data analysis and data recording for company transactions and activities with link to KPI targets.	In-house TA cewas	Supported their involvement in WE4F activities and ability to report towards their MEL indicators.
ORG CAPACITY DEVELOPMENT	Organizational capacity improvement for innovation management.	In-house TA Berytech Foundation	Now has multiple options for purchasing solar systems. Strengthened its internal controls and financial management systems. Streamlined the procurement and on-site implementation of PV panels for solar pumps. At the end of participation in WE4F, had a pending Memorandum of Understanding with National Bank of Iraq for end-user financing.
BUSINESS DEVELOPMENT	Link the company with 6 companies in Baghdad who probably could be a future vendors, collect offers for various materials used in the solar systems.	In-house TA cewas	
BUSINESS DEVELOPMENT	Developed a supplier partnership for growth with a focus on fast tracking operations and sales in Iraq.	External TA Protect for Sustainable Solutions	
MARKET RESEARCH	Created a market research tool - Kobo Survey questionnaire for farmers.	In-house TA cewas	



Impact achieved:

345 end-users
53.9% women & 65.2% BoP
131 end-users using EUF

1,445 tons food produced

987,500 kWh saved

$152,000 USD in sales

7 jobs created
33% of all employees are women

110 hectares under improved practices

270 tons of CO2e saved

330 end-users with increased incomes
53.9% women & 63.6% BoP

BARAMODA

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $125,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation and Mitigation
Co-funding provided by innovator: $94,992 USD

Challenge faced by end-users:

The agricultural sector, particularly smallholder farmers, in Egypt face many challenges that impact their ability to produce enough food to support food security and livelihoods: an ongoing water shortage in Egypt; existing agricultural wastes, estimated at about 38 million tons per year with an estimated 12% recycled; excessive use of chemical fertilizers; land degradation and lack of productivity of agricultural soil; and agricultural pests.

Innovator's provided solution:

Baramoda provides an agro-compost increases land fertility and agricultural yield, and helps smallholder farmers increase their profitability by maximizing the efficiency of agri-waste management and reducing excessive use of chemical fertilizers with minimal usage of water resources.

Barriers faced by innovator in reaching end-users:

Baramoda has faced challenges in shifting potential customers' mindsets regarding fertilizers, as many have not realized were unaware of how valuable waste could be for compost creation. To conduct more awareness activities, as well as expand operations to new customers, the innovator needed to unlock investment which required updating their materials, such as their investment deck, financial models, and investment teaser.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Developed financial modeling for cash flow management.	In-house TA Chemonics Egypt	Set up their optimal product mix, pricing, and financing instruments, using the outputs of the TA as decision-making tools for growth planning purposes, specifically in setting their payment terms as well as client and supplier selection.
INVESTMENT READINESS	Reviewed and adjusted their investment pitch deck and investment teaser, and developed a basic financial model.	In-house TA Berytech Foundation	Helped Baramoda optimize their financial activities and build their data room.

Impact achieved:

1,231 end-users
36.7% women & 94.8% BoP
1,121 end-users using EUF

21,793 tons food produced

617,000 kWh saved

$947,000 USD in sales

17 jobs created
44% of all employees are women

2,316 hectares under improved practices

6,416 tons of CO2e saved

636,800 liters of water saved

398 end-users with increased incomes
44.9% women & 100% BoP

BENAA FOUNDATION AND INNOVATIVE GREEN TECHNOLOGIES (SUWACO)

Countries of operation: Egypt
Grant amount: $125,000 USD
Co-funding provided by innovator: $58,806 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Two of the biggest challenges facing Egyptian rural communities are the lack of access to improved sanitation, and water scarcity for food production. Only 6% of Egyptian rural villages are provided with wastewater treatment services. Children in rural households are 8.5 times more likely than those in urban areas to lack toilet facilities. The lack of access to safe water and proper sanitation facilities, as well as poor hygiene contributes to the spreading of diseases, which significantly and negatively impacts children's health and nutrition, and is sometimes even a cause of death.

Innovator's provided solution:

To overcome the water shortage, SuWaCo developed wastewater treatment and reuse techniques, particularly for irrigation, as a solution. Using a systems integration approach that provides a mix of modular and cost effective solutions, which are optimized for the specific water, energy and food challenges faced by vulnerable rural communities. SuWaCo offers resource-poor consumers a full solutions package that links their pressing needs with a chain full of technological, financial, and capacity-building services. SuWaCo empowers local communities, especially youth and women, through an inclusive, well-designed, community-led planning and implementation approach that fulfills local needs and secures additional income sources for low-income households.

Barriers faced by innovator in reaching end-users:

As a newly formed entity made of two partners implementing the innovation, SuWaCo needed to focus on creating an internal structure that would enable successful project management that would benefit their innovation scaling goals.

Technical assistances received and outcomes:

Received assistance	Category	Outcome
Advised on project optimization and standardization.	In-house TA Chemonics Egypt	Helped the innovator improve operations by moving to a proper and effective engineering project management approach.

Impact achieved:

- **1,250 end-users**
  65% women & 100% BoP
  1,041 end-users using EUF
- **16 tons food produced**
- **6,300 kWh saved**
- **$59,000 USD in sales**
- **3 jobs created**
  44% of all employees are women
- **8.7 million liters of water saved**

BIODOME

Countries of operation: Morocco
Grant amount: $215,000 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Morocco, the percentage of organic waste in garbage cans exceeds 75%. Additionally, the cost of transporting waste is increasing for the municipalities, along with increasing air and groundwater pollution. In rural areas, vulnerable populations suffer from a lack of access to energy, and they have no chance to develop their agricultural activities due to lack of fertile soil.

Innovator's provided solution:

Biodôme's biodigester helps customers dispose of organic waste while also helping them produce energy and biofertilizer at home. Their solutions are based on biogas and composting technologies, which in the process ensures a healthy and clean degradation of green and organic residues. Biodôme offers different types and sizes of installations to suit homes and professional settings.

Barriers faced by innovator in reaching end-users:

In order to continue expanding, the innovator needed to work on affordability for end-users, build awareness of their products, and improve their human resources practices. To improve affordability, end-user financing needed to be explored. To improve customer outreach, the innovator needed to explore reginal partnerships and its marketing strategy to create localized connections as well as messaging that resonated with their target customers. Internally, necessary changes in human resources practices centered around their ability to retain staff by identifying opportunities for growth in their skills as well as the provision of support that would enable them to meet Biodome's scaling demands.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Developed an employee retention strategy and an end-user financing model.	In-house TA Chemonics Egypt	Supported the innovator's assessment of farmers to target in its business development and end-user financing activities.
BUSINESS DEVELOPMENT	Explored various possible partners with possible scope of partnership and created a business development guide.	In-house TA Chemonics Egypt	Re-assessed its business model and product offerings to improve pricing competitiveness and explored new partnerships across the regional market.
ORG CAPACITY DEVELOPMENT	Analyzed skills needed by Biodome for the company's current growth phase and developed a skill map indicating existing and missing skills, the level of mastery of the skills by current team members, and training suggestions.	In-house TA Chemonics Egypt	Led to the creation of specific training and development strategies.
MARKETING & SALES	Developed a marketing strategy manual.	External TA Sarah Ghanimeh	Launched a new marketing strategy in 2023.
ENVIRONMENTAL	Provided carbon credit key insights for scaling and requirements needed to effectively enter and benefit from the emerging carbon credits market.	External TA UPM Umwelt-Projekt-Management GmbH	Outcome unknown because of the U.S. Agency for International Development (USAID) Stop Work Order (SWO).

Impact achieved:

6,433 end-users
31.1% women & 57.9% BoP
406 end-users using EUF

2,315 tons food produced

186,800 liters of water saved

4,751 end-users with increased incomes
31.4% women & 56.5% BoP

1 job created
50% of all employees are women

108 hectares under improved practices

$61,000 USD in sales

BIOMASR

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $186,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation and Mitigation
Co-funding provided by innovator: $94,992 USD

Challenge faced by end-users:

In Egypt, economic disruptions and the natural gas crisis have affected the traditional fertilizing systems used in the agriculture sector, inducing chemical fertilizer price instability as well as a scarcity of nitrogen used in fertilizing lands. Additionally, women in Egyptian agricultural communities are facing barriers. They are actively involved in agricultural activities with their husbands, but they face low income and are unable to commute long distances.

Innovator's provided solution:

Biomasr, a leading developer of small biogas systems in Egypt, offers an alternative energy source through their specialization in creating biogas units for small and medium livestock breeders. In August 2023, the innovator launched the Rafik app, a pioneering platform designed to connect biogas unit owners, organic fertilizer producers, farm owners, and women biogas unit operators. This platform facilitates the production of high-quality, handmade organic products for export, by integrating organic fertilizer produced from biogas units into the agricultural process. This fertilizer, which is produced by women within the vicinity of their homes, also leads to an increase in incomes.

Barriers faced by innovator in reaching end-users:

Biomasr's expansion plans are centered on valorizing compost through dehydration, developing new biogas facilities, and expanding the Rafik network to enhance access for smallholders, enabling them to replace chemical fertilizers with organic, water-saving compost. To ensure that the innovator could successfully complete its scaling plans, the innovator needed their internal management and operations to run smoothly.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Received a business model report, organizational structure report, and a gender-sensitive human resources policy.	In-house TA Chemonics Egypt	Developed tailored organizational charts to support current operations and future growth.

Impact achieved:

- **1,098 end-users** *51.2% women & 92.7% BoP*
- **195,000 tons food produced**
- **319,000 kWh saved**
- **902 end-users with increased incomes** *52.1% women & 92.9% BoP*
- **17 jobs created** *44% of all employees are women*
- **4,971 hectares under improved practices**
- **27 tons of CO2e saved**
- **$235,000 USD in sales**

BIOMASS

Countries of operation: Lebanon
Monitors: Water and Biodiversity
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $1,027,234 USD

Challenge faced by end-users:

Lebanon benefits from an ideal climate and terrain for the agricultural production of many crops and products. The opportunity to increase farming capacity and to serve the food industry and the consumers is substantial. The opportunity is accelerated by a critical need to increase local food production and to do it, in more sustainable and responsible ways.

Innovator's provided solution:

Biomass increases the production capacity of organic certified food products in Lebanon by using farming techniques and practices that reduce and optimize agricultural input use and resource use.

Barriers faced by innovator in reaching end-users:

Biomass needed investment to fuel the innovator's export-led growth strategy, helping them build production capacity within farming, post-harvest and packaging. To continue their efforts to expand into European markets, the innovator needed better traceability practices as well as connections to European partners. As the climate changes, MENA farmers are impacted by shifting weather patterns that affect production, the innovator needed to mitigate such climate and market challenges that affect farmers' yields and the innovator's ability to sell products.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Conducted a supplier evaluation audit, providing recommendations for optimizing the innovator's supply chain and traceability.	In-house TA Berytech Foundation	Mitigated climate and market risks for farmers, and supported the selection and onboarding of farming partners.
BUSINESS DEVELOPMENT	Validation of internal governance and strategy.	In-house TA Berytech Foundation	Improved governance and enabled it to manage growth; streamline environmental, social, and governance principles; and improve its capacity to raise funds.
BUSINESS DEVELOPMENT	Facilitation of partnership and market linkages.	In-house TA Berytech Foundation	Exported produce samples to Denmark to successfully test grounds for a partnership, and participated in a trade mission.
INVESTMENT READINESS	Developed and reviewed a basic financial model; supported the selection of a Chief Financial Officer (CFO); and organized a pitching event in front of a large network of potential investors in the region.	In-house TA Berytech Foundation	Raised private cash in the region. Screened, interviewed, and selected a CFO.
ENVIRONMENTAL	Developed a report on risks challenges for various crops; a guide on best practices; and training materials.	In-house TA Berytech Foundation	Developed climate risks and adaptation measures which could be used for training their farming partners.

Impact achieved:

- **29,300 end-users** *43.6% women & 3.1% BoP*
- **2,703 tons food produced**
- **642,000 kWh saved**
- **$5.4 million USD in sales**
- **13 jobs created** *37% of all employees are women*
- **375 hectares under improved practices**
- **1,004 tons of CO2e saved**
- **207,000 liters of water saved**
- **497 end-users with increased incomes** *6% women & 78.4% BoP*

BURJ AL IRAQ

Countries of operation: Iraq
Grant amount: $90,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $24,077 USD

Challenge faced by end-users:

In many parts of Iraq, farmers dilute the high concentration of salinity/salts in the soil by flooding great volumes of water onto the land (an estimated 250 m3 per donum) each season. This is a normal method to prepare land for farming and is a main trigger of water consumption. In addition, salt would accumulate on the terrain after the water evaporated, resulting soil damage leads farmers to neglect their lands.

Innovator's provided solution:

Burj al Iraq helps farmers reclaim agricultural lands through desalination, which is performed by installing perforated PVC pipes under the ground (approx. 3 meters deep) to wash out salinity/salts that accumulated due to wrong/inefficient irrigation and desalination methods. The innovation can also help in some contexts and areas to protect the agricultural land from saline groundwater, as the pipes wash out the saline water whenever the water table rises.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. The innovator needed to improve its internal monitoring systems and environmental sustainability requirements to meet donor contractual requirements for grants as well as ensure better management of business activities and planning for future growth. In order to continue growing, the innovation also needed to improve its financial and physical capital calculations.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Pipes production calculation, showing stock available, raw material, production rate, sales, income, cumulative revenue on a daily basis a long with Target sales to be achieved based on production and stock available calculator.	In-house TA cewas	Helped innovator document and monitor key customer engagement and sales key performance indicators as well as use a production budget management tool and inventory management tool.
ORG CAPACITY DEVELOPMENT	Developed spreadsheets for data analysis and data recording on company transactions and activities, linking them to key performance indicator targets.	In-house TA cewas	
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.

Impact achieved:

- **1,038 end-users**
- **6,032 tons food produced**
- **869,000 liters of water saved**
- **$417,000 USD in sales**
- **8 jobs created**
- **474 hectares under improved practices**
- **976 end-users with increased incomes**

CHITOSAN

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $140,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $438,149 USD

Challenge faced by end-users:

In Egypt, farmers growing food using sustainable, organic practices, or for export, face a conflict between affordability, performance, and quality requirements for export/sale. Usually, they are torn between needing to have zero-residue crops, while combating fatal pests and a fluctuating climate. When farmers consider growing organic crops, there are three problems that come to their mind: (1) it's most likely too expensive; (2) organic produce requires intensive resource use for real results; and (3) at the end of the day, the farmer will be left short of their production or revenue goals.

Innovator's provided solution:

Produces organic pesticides and fertilizers that have a lower cost and higher efficiency than chemical ones. Powered by an in-house laboratory and an advisory team from Egypt's leading EU and ISO-certified laboratories, the innovator designs and manufactures shrimp-derived biofertilizers and biopesticides. Their formulas that utilize 100% EU-approved ingredients for a completely organic experience with a zero preharvest interval period.

Barriers faced by innovator in reaching end-users:

As a business looking to scale within Egypt, Chitosan needed to mature in several ways: increasing the effectiveness of its marketing activities to reach potential customer outreach, developing stronger investment materials, and better offerings (e.g., end-user financing, women inclusive practices) to connect with potential marginalized customers.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Designed an interactive monthly cash flow and return on investment model.	In-house TA Chemonics Egypt	Allowed Chitosan to define future cash gaps and manage them. Also enabled Chitosan to manage and guide sales, improving cash flow management and control.
	Provided support to identify its optimal growth path, including expansion to Saudi Arabia, scaling in Morocco, and/or focusing on the Egyptian market.	In-house TA Chemonics Egypt	Outcome unknown because of the USAID SWO.
MARKETING & SALES	Diagnosis of marketing key performance indicators and recommendation of new ones.	In-house TA Chemonics Egypt	Updated KPIs and marketing incentives, allowing for effective data-driven management of marketing activities and better tie them to the firm's strategic objectives.
	Developed a marketing strategy for an in-house market and product assessment matrix tool.	In-house TA Chemonics Egypt	Helped Chitosan Egypt enter a partnership with Plug'n'Grow for manufacturing specific products for hydroponics and kickstarted its first trade mission to Morocco during the Salon International de l'Agriculture au Maroc "SIAM" in Meknes.
ENVIRONMENTAL	Developed a potential partner database and facilitated connections with banks.	In-house TA Chemonics Egypt	Successfully implemented and integrated end-user financing mechanisms into their solution offerings and marketing strategies.
GENDER INTEGRATION	Developed a gender integration baseline report and a gender inclusion action plan.	In-house TA IWMI	Identified needs of women in the back-end of the supply chain, and ways to address them.

Impact achieved:

57,400 end-users
4.5% women & 44.2% BoP
28,117 end-users using EUF

257,000 tons food produced

89.3 million liters of water saved

17,000 end-users with increased incomes
79.6% BoP

6 jobs created
10% of all employees are women

3,290 hectares under improved practices

$1.2 million USD in sales

COMPOST BALADI

Countries of operation: Lebanon and Jordan
Grant amount: $240,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation and Mitigation
Co-funding provided by innovator: $402,613 USD

Challenge faced by end-users:

In 2015, Lebanon endured the consequences of decades of waste mismanagement. Local municipalities and retailers, such as Antoura and Carrefour, have a direct need for proper waste management, as they each generate around 3,000 tons of biowaste per day. In absence of financial capacity, technical know-how and commitment from the central government, they're bound to be exposed to and partly responsible for, the inevitable waste crises. Customers also face challenges of limited space in urban settings, odor risks, pest attraction, and labor intensity for waste management and composting.

Innovator's provided solution:

Compost Baladi sells the Earth Cube, a user-friendly bio waste disposal enclosed system made of reused intermediate bulk containers, and which later translated into a bigger version, the Container Composter. The innovator's customers include municipalities, retailers, agro-industrialists, and farmers. The Container Composter is a decentralized bio waste solution holding a temporary structure, which is a standardized and modular system for different municipal settings. It's low maintenance, holds an adaptive technology, and ensures continuous monitoring by off-site professionals via remote sensing. Their collection service for generated biowaste g doesn't charge any fees to its generators and in partnership with local municipalities, around 10% of the produced compost is given to the community's most vulnerable populations at a heavily discounted rate.

Barriers faced by innovator in reaching end-users:

As part of the innovator's scaling journey, it needed to explore a better set-up for its different revenue streams as well as receive guidance on its expansion to other MENA countries. To further facilitate their expansion, they needed to mobilize investment that could fund expansion to new countries.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
INVESTMENT FOUNDATION	Developed company valuation and investor pitch deck.	In-house TA Berytech Foundation	Raised private cash investment.
INVESTMENT FOUNDATION	Developed three profit and loss statements reflecting the profitability of each business line, and refined the innovator's joint venture model.	In-house TA Berytech Foundation	Restructured its operations by outsourcing machinery sales, expanding its sales team, and empowering middle management to lead consultancy engagements.
MARKET RESEARCH	Developed a market entry strategy and supported local partnership development in Jordan.	In-house TA cewas	Expanded to Jordan. The plan helped identify and define potential clients, distributors, and value chain entry points. It also facilitated a partnership development visit during which the innovator met clients and developed possible contracts.
BUSINESS DEVELOPMENT	Analysis of the innovator's existing business model and proposed amendments.	In-house TA cewas	Helped them revisit the business model verticals and improve growth through partnerships.

Impact achieved:

- **76,000 end-users**
  19.4% women & 49.1% BoP
  1,122 end-users using EUF
- **90,000 tons food produced**
- **123 million liters of water saved**
- **$1.1 million USD in sales**
- **19 jobs created**
  28% of all employees are women
- **4,694 hectares under improved practices**
- **7,424 tons of CO2e saved**
- **68,000 end-users with increased incomes**
  19.6% women & 49% BoP

CULTIVISION

Countries of operation: Iraq
Monitors: Water and Biodiversity
Grant amount: $80,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In Iraq, the absence of precise agricultural practices among farmers, low adoption of technology, and inadequate monitoring systems contributes significantly to energy and water wastage, as well as crop production losses.

Innovator's provided solution:

Cultivision leverages advanced satellite remote sensing technology – sharing data two times a day – to generate real-time, field-level analysis to enhance crop management, disease detection, and water stress. By providing farmers with actionable insights and advisory, Cultivision supports optimizing irrigation, increasing productivity, and making informed decisions.

Barriers faced by innovator in reaching end-users:

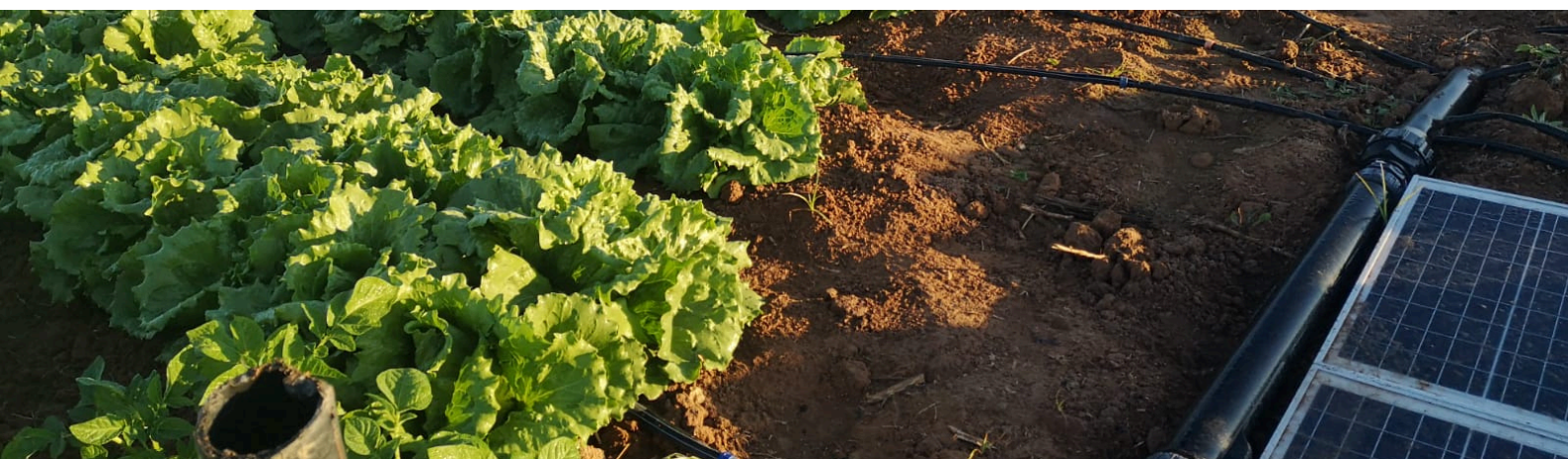
In order to expand operations, the innovator needed to improve internal management and budgeting ability. Externally, the needed to tap into new customer segments by expanding to new markets which could be supported by further developing their digital platforms.

Technical assistances received and outcomes:

In order to expand operations, the innovator needed to improve internal management and budgeting ability. Externally, the needed to tap into new customer segments by expanding to new markets which could be supported by further developing their digital platforms.

Impact achieved:

No documented impact due to the USAID SWO which prevented the collection of the annual data cycle collection.



DHIAA AL-ALAMIYAH

Countries of operation: Iraq
Grant amount: $90,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Cultivating barley in cropland consumes a large amount of water which accordingly leads to a high energy consumption. In fact, a fully grown barley plant will take one entire season to be ready for harvest, so the value chain of cultivating barley comes with a high cost that is not suitable for farmers and livestock traders. Therefore, the price of meat will be affected and becomes excessively high when compared to the purchasing power of the average Iraqi consumer.

Innovator's provided solution:

Produces barley in hydroponic systems that shorten the production period to eight days. Their barley is used to feed sheep and is also sold to other livestock farmers and traders.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent. The innovator needed to improve its internal monitoring systems and environmental sustainability requirements to meet donor contractual requirements for grants as well as ensure better management of business activities and planning for future growth.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Improved innovators' ability to record activities with necessary information, track required information, and link it with each key performance indicator.	In-house TA cewas	Supported their involvement in WE4F activities and ability to report towards their monitoring, evaluation, and learning indicators.
ORG CAPACITY DEVELOPMENT	Organizational capacity development for the innovator's hydroponic advisory service.	In-house TA Berytech Foundation	Enhanced the company's ability to control, monitor, and evaluate their manufacturing processes and hydroponic operations, ensuring maximum productivity and facilitating the cultivation of various fodder types.
MARKETING & SALES	Developed manufacturing processes and trackers for inventory and sales management.	In-house TA cewas	
PRODUCT DEVELOPMENT	Developed farm specifications record sheets; an assessment report on the hydroponic system and its components alongside enhancement recommendations; and onsite training on the best design practices and fodder production.	External TA Greener Crop FZ-LLC	
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.

Impact achieved:

- **257 end-users** *10.1% women & 98.8% BoP*
- **103 tons food produced**
- **139,000 kWh saved**
- **$5,200 USD in sales**
- **1 job created** *20% of all employees are women*
- **13.3 million liters of water saved**
- **114 tons of CO_2e saved**

ECOFEED

Countries of operation: Tunisia
Monitors: Water and Biodiversity
Grant amount: $113,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Tunisia, agricultural inefficiencies, particularly in animal feed production, pose significant challenges as the market mostly relies on costly imports (e.g., the rising price of imported soy-based animal feed), which drives up costs and reduces profitability for farmers. The reliance on imported feed ingredients further highlights these issues, making the sector vulnerable to international market fluctuations. In many agricultural communities, women are actively involved in livestock rearing and animal husbandry activities. However, they often face barriers in accessing affordable technologies and resources that can enhance their productivity and income.

Innovator's provided solution:

Ecofeed's technology utilizes locally-sourced agricultural by-products, such as crab waste and geothermal agriculture waste, to produce high-quality, sustainable, and cost-effective feed ingredients.

Barriers faced by innovator in reaching end-users:

As part of Ecofeed's expansion into new markets, the innovator needed to further explore the engagement of women end-users. From a financial and operational standpoint, the innovator needed to ensure that they were operating sustainably so they could start developing additional feed products and not waste resources that could be leverages elsewhere.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
GENDER INTEGRATION	Received GenderUp training to promote gender-inclusive practices within the innovator's operations and for engaging end-users.	In-house TA IWMI	Outcome unknown because of the USAID SWO.
ENVIRONMENTAL	Supported innovator's improvement of its production and operational systems.	In-house TA Chemonics Egypt	Installed a solar energy system to enhance sustainability and installed advanced production equipment.

Impact achieved:

2,781 end-users
23.7% BoP

43 hectares under improved practices

$61,600 USD in sales

EGYMAG

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $150,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $27,238 USD

Challenge faced by end-users:

Egypt, as the country, is an importer of animal feed and fertilizers. Rising costs of agricultural inputs, the effects of climate change on crop yields, and a growing demand for food are affecting smallholder farmers looking to increase yields without affecting their bottom line. They need to be able to look for – and access – alternative feed and fertilizer sources.

Innovator's provided solution:

Egymag developed a unique technique to produce black soldier fly (BSF) larvae as a protein source for animals, birds and fish and as an organic fertilizer. As part of Egymag's efforts to maintain a circular economy, the BSF larvae are fed vegetable waste from markets. The innovator engages women and the base of the pyramid by including workers who are smallholder farmers, unskilled or low-income workers in their production system and larvae breeding. Also, the innovator's production sites are mostly run by women.

Barriers faced by innovator in reaching end-users:

In order for Egymag to continue scaling, they needed to further invest in their women-focused breeding programs as well as explore the potential of expanding to other countries due to the rising prices of imported fertilizers. To unlock investment that could fund the Egyptian expansion and the regional expansion, the innovator needed to improve its investment materials and explore innovative financing solutions that could have been better suited to the changing economic situations within the region.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKET RESEARCH	Conducted waste mapping and developed a new services proposal.	In-house TA Chemonics Egypt	Mapped organic waste in industrial zones and highlighted leads to top industrial suppliers.
MARKET RESEARCH	Created a market assessment tool and a market assessment report.	In-house TA Chemonics Egypt	Linked to Jordanian Yaraqat El Saghira, resulting in a signed partnership. Worked on expansion to Jordan, Saudi Arabia, Kenya, and Lebanon. Signed a partnership with Raptor Engineering/Solar to provide end-users with fertilizer.
BUSINESS DEVELOPMENT	Developed a business model assessment report and strategic plan.	In-house TA Chemonics Egypt	
GENDER INTEGRATION	Created a concept note to connect with two NGOs in Fayoum and recommendations to refine their business model to attract more women end-users.	In-house TA IWMI	Helped them expand to new locations and reach more women end-users.
INVESTMENT READINESS	Developed a financial budget for 2023, a five-year financial model, and supported investment application development.	In-house TA Berytech Foundation	Submitted application to Bridge fund, but was not selected as a potential candidate for funding.
INVESTMENT READINESS	Enhanced and refined pitch deck presentation and investment teaser; and facilitated an investment session.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO.
ENVIRONMENTAL	Provided carbon credit key insights for scaling and requirements needed to effectively enter and benefit from the emerging carbon credits market.	External TA UPM Umwelt-Projekt-Management GmbH	Outcome unknown because of the USAID SWO.

Impact achieved:

- **18,900 end-users**
  5.93% women & 58.9% BoP
  410 end-users using EUF
- **120,000 tons food produced**
- **85 million liters of water saved**
- **$546,000 USD in sales**
- **15 jobs created**
  68% of all employees are women
- **2,064 hectares under improved practices**
- **5,784 end-users with increased incomes**
  13.9% women & 87.1% BoP

FARADAY

Countries of operation: Iraq
Monitors: Water
Grant amount: $150,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Smallholder farmers in Iraq experience unreliable power supplies from the national grid, which frequently suffers from shortages. To cope with this instability, farmers alternate between the national grid and diesel generators to ensure a steady power supply for irrigation. Consequently, farmers incur extra expenses due to repeated purchases of diesel fuel. For farmers considering the transition to solar energy providers, the cost can be unaffordable. Many companies design projects that exceed farmers' budgets and lack smart controllers or water sensors to efficiently monitor crop water usage.

Innovator's provided solution:

Faraday provides solar-powered agricultural systems that are designed to enhance efficiency, reduce costs, and promote sustainable agricultural practices. Their products and services include: efficient solar panels, advanced monitoring and control systems, and innovative irrigation solutions. The innovator makes their system more farmer-friendly by providing a robust and user-friendly internet-based control system that is accessible through farmers' phones.

Barriers faced by innovator in reaching end-users:

The innovator needed to improve its internal financial management systems and environmental sustainability requirements to meet donor contractual requirements for grants as well as ensure better management of business activities and planning for future growth. In order to continue growing, the innovation also needed to improve its financial and physical capital calculations.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
PRODUCT DEVELOPMENT	Software product development focused on financial and accounting management.	In-house TA Chemonics Egypt	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.
	Organizational capacity support to improve innovators' operations.	In-house TA	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.

Impact achieved:

- **1,905 end-users**
  29.6% women & 99.9% BoP
- **4,180 tons food produced**
- **22 million kWh saved**
- **$343,000 USD in sales**
- **21 million liters of water saved**
- **916 hectares under improved practices**
- **2,061 tons of CO2e saved**

FRESHSOURCE

Countries of operation: Egypt
Monitors: Water
Grant amount: $150,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Egypt's agriculture industry, significant food loss is caused by delays while waiting for middlemen to purchase crops. Other challenges that affect the industry include a lack of transparency in crop pricing and the insufficiency of data and technology integration.

Innovator's provided solution:

FreshSource is a pioneering business-to-business agri-supply chain platform that leverages data and technology to transform Egypt's food industry. By offering a digital platform for sourcing high-quality fresh produce, the innovator aims to enhance efficiency, transparency, and sustainability while empowering farmers and businesses to thrive. Through direct collaboration with producers, inventory management, and optimized logistics, FreshSource achieves a food loss rate of 2%, significantly lower than the national average of 30%.

Barriers faced by innovator in reaching end-users:

As a new WE4F innovator, Freshsource needed to improve internal operations before they could focus on external expansion.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ENVIRONMENTAL	Supported innovator's resource efficiency by assessing water and energy usage, proposing savings measures, providing traceability training, and developing a reduction plan.	In-house TA Chemonics Egypt	Improved their systems to meet high-quality and international market standards.

Impact achieved:

- **371 end-users** *4% women & 72.5% BoP*
- **1,000 tons food produced**
- **97 tons of food processed**
- **$827,000 USD in sales**
- **61 hectares under improved practices**

GARBALISER

Countries of operation: Lebanon
Monitors: Water
Grant amount: $102,500 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Lebanon faces significant challenges with managing its organic waste, the harm caused by chemical fertilizers, and how these issues affect the quality of food and health. The overuse of chemical fertilizers is negatively affecting water and soil, lowering its quality, and harming the environment. Use of non-organic fertilizers leads to more water used as chemical fertilizers do not retain moisture in soil, putting additional pressure on an already scarce resource. Despite women's pivotal role in Lebanon's agriculture and its rural economies, they often face barriers when accessing necessary resources, training, and technology that could advance their careers and build sustainable income bases.

Innovator's provided solution:

Garbaliser's technology addresses the critical issues of organic waste management and chemical pollution and their impacts on food quality and human health. It promotes sustainable practices that positively affect the environment and the community's well-being. By transforming waste into organic fertilizers, the innovator significantly reduces waste, reduces use of harmful chemicals, rejuvenates soil health, and enhances biodiversity. When farmers apply Garbaliser's liquid fertilizer, soil retains moisture which helps reduce water usage.

Barriers faced by innovator in reaching end-users:

Garbaliser joined WE4F in 2024. To expand, they needed to focus on improving their internal management and operations as well as develop better messaging for potential end-users, specifically women end-users.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
GENDER INTEGRATION	Explored ways to tailor messaging to women end-users and began drafting a gender-sensitive human resources manual.	In-house TA IWMI	Outcome unknown because of the USAID SWO.
MARKETING & SALES	Developed plan to boost outreach and improve deal-closing strategies.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO.

Impact achieved:

- **365 end-users** *40% women & 5% BoP*
- **2,464 tons food produced**
- **244,000 liters of water saved**
- **$13,100 USD in sales**
- **330 end-users with increased incomes** *37.8% women & 6% BoP*
- **83 hectares under improved practices**

GOBALADI (HAJJAR FOODS)

Countries of operation: Lebanon
Monitors: Water
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $152,576 USD

Challenge faced by end-users:

Until recently cow milk has dominated the dairy market in Lebanon, but now goat dairy has steadily grown. As the dairy sector has changed, so did the financial situation in Lebanon. Since October 2019, the national currency in Lebanon has lost 80% of its value, and by July 2020, the average price of food products increased by 141% when compared to July 2019. There is an opportunity for local herders to further break into the market, they need support breaking into the local markets, particularly with the processing of goat milk and the creation of goat dairy-based products like yogurt and cheese.

Innovator's provided solution:

GoBaladi's innovation focuses on offering goat dairy as an alternative to cow dairy and on maintaining and growing the productive capacity of milking goat farms. Go Baladi connects the supply chain by selling goat milk from shepherds and family farms located in the Lebanese mountains to consumers.

Barriers faced by innovator in reaching end-users:

To scale their innovation, GoBaladi needed support with improving their energy efficiency as Lebanon's energy supply was unstable and often lacking. To unlock investment, they needed to improve their financial management as well as develop required documentation. Externally, the innovator needed to better connect with potential distributors through retail-focused marketing materials.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Received support to implement cash flow management tools.	In-house TA Berytech Foundation	Prepared loan requests for IM capital and the Bridge Fund.
BUSINESS DEVELOPMENT	Received a contribution margin analysis for all products to document and enhance unit economics and pricing strategies.	In-house TA Berytech Foundation	
ENVIRONMENTAL	Conducted energy efficiency benchmarking and provided efficiency recommendations.	In-house TA Chemonics Egypt	Purchased solar panels from USAID's Agriculture and Rural Empowerment (ARE) program.
MARKETING & SALES	Received support for their expansion to Egypt, identifying potential sales partners and establishing linkages with retailers.	In-house TA Chemonics Egypt	Worked to diversify revenues by signing agreements with restaurants, an online retailer, and several local retailers.
MARKETING & SALES	Reviewed branding and retail marketing content development.	External TA The Amazingfull Circus S.L.	Grew its market presence, reaching dozens of new points of sale.
GENDER INTEGRATION	Updated innovator's human resources manual.	In-house TA IWMI	Human resources manual now include gender-sensitive policies and procedures.
INVESTMENT READINESS	Developed income statement, balance sheet, and cash flow projections for 2023; and developed list of potential investors.	In-house TA Berytech Foundation	Developed their 2023 budget. Laid the foundation for future growth and positioned GoBaladi for stronger engagement with funders and partners.

Impact achieved:

- **24,000 end-users**
  43% women & 48% BoP
  4,600 end-users using EUF
- **313 tons of food processed**
- **2.6 million kWh saved**
- **$299,000 USD in sales**
- **12 jobs created**
  40% of all employees are women
- **2.4 million liters of water saved**
- **1,500 tons of CO_2e saved**
- **3,200 end-users with increased incomes**
  30% women & 23% BoP

GREEN EAGLE TECH

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $125,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $3.6 million USD

Challenge faced by end-users:

Egypt has been suffering from severe water scarcity in recent years. Uneven water distribution, misuse of water resources and inefficient irrigation techniques are some of the major factors playing havoc with water security in the country. At the same time, the country is in the throes of an energy crisis as the country has transformed from an exporter of oil and gas into an importer. These concurrent issues affect smallholder farmers whose irrigation activities can be wasteful due to runoff, wind, and evaporation occurring when the end-users do not have well-maintained, and functional irrigation systems. End-users' systems become environmentally and financially harmful, as they end-users must pay for gas to fuel inefficient irrigation systems. End-users are unable to transition away from these inefficient irrigation systems due to the high, upfront cost of solar-powered, efficient irrigation systems.

Innovator's provided solution:

Green Eagle Tech brings green energy mainstream forces to operate at the forefront of the renewable energy sector. They developed a rain irrigation system to operate automatically, and have an integrated environmentally friendly system, with water and energy savings, and, most importantly sustainable, with local components close to 90%. Green Eagle Tech is able to offset the higher initial capital costs associated with renewable generation by taking advantage of government tariffs and incentives, by strategically aligning itself with key investment banks and financial partners, and by utilizing sophisticated financing structures to raise the capital required to develop a project.

Barriers faced by innovator in reaching end-users:

To address changes in the Egyptian market and the economic downturn as well as maximize profitability, the innovator needed support that could help them adjust their business activities as well as pursue external investment. Internally, the innovator was of intermediate status in terms of gender integration, which could be improved to benefit women employees as well as end-users.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Created a business model assessment report and strategic plan.	In-house TA Chemonics Egypt	Started working on expanding to Yemen, Jordan, Mauritania, Algeria, and Saudi Arabia.
GENDER INTEGRATION	Advised on gender integration into business operations.	In-house TA IWMI	Developed a gender-sensitive human resources manual.
ENVIRONMENTAL	Conducted feasibility study on locally manufacturing rain irrigation components.	In-house TA Chemonics Egypt	USAID SWO prevented the implementation of plans to begin local sprinkler production to reduce the cost of their rain irrigation systems.
MARKETING & SALES	Updated data room and provided recommendations on corporate governance.	In-house TA Berytech Foundation	Supported the development of a business case used to work on the process of funding from Bamboo Capital.
	Updated data room, organized due diligence meetings, and developed site visit report.	In-house TA Berytech Foundation	Facilitated investor meetings, site visits, and term sheet reviews and company secured a $2.5 million loan term sheet from Bamboo Capital, which ultimately, fell through.

Impact achieved:

127,000 end-users
39% women & 35% BoP
9,100 end-users using EUF

2.6 million tons food produced

1 billion kWh saved

$83 million USD in sales

357 jobs created
2% of all employees are women

147,000 hectares under improved practices

320,000 tons of CO_2e saved

907 million liters of water saved

109,000 end-users with increased incomes
39% women & 14% BoP

GREEN ESSENCE LEBANON

Countries of operation: Lebanon
Monitors: Water and Biodiversity
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $106,000 USD

Challenge faced by end-users:

Lebanese smallholder farmers have been affected by the country's growing scarcity of subsidized fuels, and little-to-no access to subsidized electricity from Lebanon's national utility company), especially in rural farming areas. The lack of access to energy is worsened by Lebanese farmers' inability to secure financing due to the ongoing economic situation of high prices and a mostly informal economy. If farmers did have access to financing, they could secure capital-intensive power-generating equipment.

Innovator's provided solution:

Green Essence Lebanon's solution provides farmers with solar systems and uses an innovative financing model to relieve farmers' financial burdens. The company covers the initial investment, maintenance, and operating costs while the farmers pay the company back. Green Essence Lebanon also creates incentives that encourages smallholder farmers to develop additional income opportunities by selling surplus pumped water and generated electricity to neighbors.

Barriers faced by innovator in reaching end-users:

In order to make solar energy affordable for Lebanese farmers in a time of increasing prices and unaffordability, Green Essence needed to development payment facilities to reach end-users' price points as well as unlock investment that could facilitate further access for end-users by providing longer-term payment plan options.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Developed an end-user financing scheme with recommendations on farmer selection and risk assessment.	In-house TA Chemonics Egypt	Facilitated Green Essence Lebanon's linkage with Al Majmoua, a Lebanese microfinance institution (MFI), to support the farmers in the EUF scheme. Offers payment facilities and/or access to financing from banks and consumer financing solutions.
BUSINESS DEVELOPMENT	Conducted and end-user financing analysis and structuring.	In-house TA Berytech Foundation	
INVESTMENT READINESS	Prepared corporate valuation and data room; reviewed and validated investment documentation; and organized fundraising event.	In-house TA Berytech Foundation	Secured investment.
	Conducted market assessment focused on identifying renewable energy technologies suitable for the local agricultural sector.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO.
	Provided carbon credit key insights for scaling and requirements needed to effectively enter and benefit from the emerging carbon credits market.	External TA UPM Umwelt-Projekt-Management GmbH	Outcome unknown because of the USAID SWO.

Impact achieved:

7,000 end-users
17% women & 15% BoP
3,200 end-users using EUF

561,000 tons food produced

184 million kWh saved

$2 million USD in sales

39 jobs created
7% of all employees are women

118,000 hectares under improved practices

78,000 tons of CO2e saved

630 million liters of water saved

7,000 end-users with increased incomes
8.5% women & 15% BoP

GREEN SHOVEL

Countries of operation: Iraq
Monitors: Water
Grant amount: $150,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Many Iraqi farmers face difficulties in ensuring suitable climate conditions for growing crops inside greenhouses. This can trigger an increase in pests which can cause damage to crops. Additionally, the inability to correctly calculate plant watering needs results in excess usage of water and energy, resulting unnecessary spending by the farmers. As farmers may not be aware of the unique needs of each crop being grown in their greenhouses (e.g., appropriate soil make-up, fertilizer needs), the farmers could negatively affect the quality of their crops. Overall, farmers are unable to overcome these knowledge and informational challenges due to a lack of companies in Iraq providing access to agricultural advisory and greenhouse monitoring systems through digital platforms.

Innovator's provided solution:

Green Shovel offers smart, artificial intelligence control and monitoring systems for greenhouses, alongside smart water pumping/irrigation systems for farmers. These systems can be automated or connected/integrated with sensors in the field. The sensors are equipped to measure the pH, temperature, soil saturation, and air humidity, and send the readings to the "controller" component of the system that initiates a certain desired function. The system ensures higher productivity while using less resources, including water and energy. Green Shovel also offers advisory services to farmers that want to purchase/install greenhouses to complement their smart agri-solution.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors, is nascent. The innovator needed to improve its internal monitoring systems and environmental sustainability requirements to meet donor contractual requirements for grants as well as ensure better management of business activities and planning for future growth. To expand sales, the innovator needed to connect with new distributors, vendors, and end-users.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Developed project management tool to document and monitor key operational and sales key performance indicators per project/activity.	In-house TA cewas	Supported their involvement in WE4F activities and ability to report towards their MEL indicators. Supported the development of a demo site and the tracking of the results.
MARKETING & SALES	Developed marketing and partnership strategies with focus on growing customer base and market channels.	In-house TA cewas	A demo site was established and most of the crops harvested were distributed to the market through B2B channels, enabling the innovator to expand and test the customer channels developed in the TA.
BUSINESS DEVELOPMENT	Developed stock-keeping unit pricing documentation, budget template, supplier report, and innovator promotional presentation.	In-house TA cewas	Worked on setting up more stock management and demand planning and expanded to a few new supermarkets where the innovator will be the main fruit and vegetable supplier.
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.

Impact achieved:

- **1,400 end-users** *14% women & 74% BoP*
- **5,300 tons food produced**
- **919,000 kWh saved**
- **$237,000 USD in sales**
- **790 end-users with increased incomes** *19% women & 92% BoP*
- **137 hectares under improved practices**
- **84 tons of CO2e saved**
- **123 million liters of water saved**

GREEN WATECH

Countries of operation: Morocco
Monitors: Water
Grant amount: $225,000 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In Morocco, 91% of the rural population does not have access to safe sanitation services. The absence of adequate sanitation service has a serious impact on health and social development, especially for children and women. The disposal of domestic wastewater without treatment contaminates the potable and agricultural water supplies, along with polluting the environment. Existing solutions are often expensive and consume copious amounts of energy, preventing them from being available to smallholder farmers and other lower income end-users.

Innovator's provided solution:

Green WaTech reduces the degradation of water quality due to discharges and lack in sanitation service through the implementation of the low-cost and efficient wastewater treatment. The innovator minimizes the use of potable water by reusing treated water in irrigation, along with minimizing energy use in its treatment system by relying on gravity-based filtering.

Barriers faced by innovator in reaching end-users:

To scale further, Green WaTech needed to advance its business development strategy and marketing materials, the advancement of these activities was also tied to the innovator developing investment materials that could support the fundraising process.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Crafted business development process and business development strategy.	In-house TA Chemonics Egypt	Accelerated and streamlined the business development process and ensuring its effectiveness and compliance with relevant regulations.
BUSINESS DEVELOPMENT	Developed comprehensive business strategy and guidance on negotiating financial proposals.	In-house TA Chemonics Egypt	Expanded its wastewater treatment projects, particularly the FISO series (a low-tech, solar-powered filtration system) in Dakhla and Marrakech (Dounia Land), and partnered with Azura to deliver sanitation solutions for villa developments.
MARKETING & SALES	Developed marketing strategy manual.	In-house TA Chemonics Egypt	Developed client segmentation, targeted marketing messages, and identification of potential clients, including local agricultural operators as distribution channels.
INVESTMENT READINESS	Enhanced pitch deck presentation and applied to Cartier Women's Initiative.	In-house TA Berytech Foundation	Won First Prize at the Cartier Women's Initiative Ceremony, becoming a 2024 Fellow.

Impact achieved:

11,700 end-users
10,000 end-users using EUF

220,000 tons food produced

135 million liters of water saved

$1 million USD in sales

2 jobs created
38% of all employees are women

453 hectares under improved practices

4,100 end-users with increased incomes

GREENCO

Countries of operation: Lebanon
Monitors: Water and Biodiversity
Grant amount: $175,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Lebanon, farmers and end-users' ability to manage manure faces many challenges: high cost related to equipment rental, labor, and maintenance; the risk of pollution due to untreated manure disposal; and the serious environmental and health risks associated with the pollution of surface and groundwater, agricultural diseases, pests, ands oil quality. Furthermore, the high cost of chemical inputs forces many farmers to resort to low-quality products, leading to reduced competitiveness in the market and hindering farmers' ability to achieve sustainable and profitable agricultural practices. Lastly, local farmers face significant water management challenges due to inefficient water management and poor soil health.

Innovator's provided solution:

Greenco's innovation addresses these challenges through several key strategies: cost-effective manure management, environmental protection, affordable organic inputs, and water conservation. Greenco's manure management solution focuses on composting and liquid manure and also cleaning the farms. This helps farmers improve their farm's financial viability as the innovator reduces the cost of cleaning and disposal. The compost and liquid manure, which is treated to mitigate pollution risks that could affect soil and water quality, is sold as an alternative to chemical inputs, reducing farmers' reliance on expensive pesticides and fertilizers as well as enhancing crop quality and market competitiveness. Greenco's solutions also promote efficient water use, helping farmers optimize irrigation practices and reduce water costs while mitigating the risks of using polluted water sources.

Barriers faced by innovator in reaching end-users:

In order to continue growing, the innovator needed to unlock investment that could fuel its end-user reach that would be directed through improved understanding of local markets, and it needed to improve its gender integration to be able to target women cooperatives operating within the value chain.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
INVESTMENT READINESS	Developed a pitch deck for investor outreach.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO.
GENDER INTEGRATION	Received GenderUp training to promote gender-inclusive practices within the innovator's operations and for engaging end-users.	In-house TA IWMI	Explored ways to engage more women farmers and began drafting a gender-sensitive HR manual. Embedded gender-sensitive policies in innovator's human resources manual. Developed direct linkages between female cooperatives innovator, and additional to linkages with microfinance institutions.
MARKETING & SALES	Created a market study and a go-to-market strategy.	In-house TA Berytech Foundation	

Impact achieved:

10,900 end-users
19% women & .04% BoP

17,000 tons food produced

975 hectares under improved practices

$561,000 USD in sales

400 end-users with increased incomes
2% women & 1% BoP

GREENSCAPE

Countries of operation: Iraq
Grant amount: $90,000 USD
Co-funding provided by innovator: $2,500 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Diminishing water resources in Iraq and unsustainable usage of groundwater has been forcing Iraqi farmers in a position where they either need to pay higher costs to get water from available surface water resources or through the usage of underground water via power pumps. This requires additional power and energy sources to pull water to irrigate their lands. A lack of knowledge on the part of the farmers about modern irrigation technology and methods causes many of them to lose their lands and move to urban areas.

Innovator's provided solution:

GreenScape's solution provides farmers and garden owners with AQUASORB. AQUASORB is a water retainer that, when incorporated into a soil or a substrate, absorbs and retains large quantities of water and nutrients. It can absorb up to four hundred times its weight in distilled water and becomes a gel. The life span for this material is 5 years. AQUASORB only releases water when the surrounding area is dry and there is a need for moisture and nutrients. This innovation is perfectly suited for farmers who continuously suffer from lack of water.

Barriers faced by innovator in reaching end-users:

Iraq's entrepreneurship scene, along with the private sector's engagement in international donors, is nascent. The innovator needed to improve its internal monitoring systems and environmental sustainability requirements to meet donor contractual requirements for grants as well as ensure better management of business activities and planning for future growth.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Developed project and activity tracker for key performance indicators by project/activity.	In-house TA cewas	Supported their involvement in WE4F activities and ability to report towards their MEL indicators.
ORG CAPACITY DEVELOPMENT	Drafted report with recommendations for improving finances, enterprise resource planning, and inventory.	In-house TA cewas	Improved on the efficiency of their internal and financial controls after upgrading their system and adapted an ERP system tailored and designed for GreenScape's needs, which resulted into creating more space for more projects that could run in parallel.
MARKETING & SALES	Developed a market penetration plan with a focus on growing sales and revenues.	In-house TA cewas	Led to a partnership that resulted in testing the production of organic hydrogel for water retention in Kurdistan.
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.

Impact achieved:

- **731 end-users**
  18% women & 67% BoP
  545 end-users using EUF
- **1,500 tons food produced**
- **67,000 kWh saved**
- **56 million liters of water saved**
- **24 jobs created**
  13% of all employees are women
- **45 hectares under improved practices**
- **16 tons of CO2e saved**
- **$177,000 USD in sales**
- **325 end-users with increased incomes**
  72% BoP

HIGH ATLAS FOUNDATION

Countries of operation: Morocco
Monitors: Water and Biodiversity
Grant amount: $160,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Morocco, 70% of agricultural land generates 15% of agricultural revenue, due to the traditional growing of barley and corn. Meanwhile, rural poverty affects 75% of people and transitioning away from this staple-crop growing cycle towards a more profitable crop is an essential step toward alleviating rural poverty. Additionally, value loss along the agricultural chain is also a major cause of systemic, generational rural poverty. By monitoring trees for carbon offsets and commercializing carbon credits, Moroccans can critically benefit from these activities.

Innovator's provided solution:

With community partners, High Atlas Foundation (HAF) grows trees in nurseries at a subsidized rate for farmers, cooperatives, associations, and education centers. HAF's tree monitoring system secures voluntary and credited carbon offsets, integrating and maximizing the benefits from remote sensing and ground-truthing with community engagement. In addition, HAF provides consultancy and capacity-building workshops to achieve value-added processing of agricultural products from the growing communities and their cooperatives.

Barriers faced by innovator in reaching end-users:

A non-profit looking to develop its revenue-generating business line without impacting end-users' access to its tree nursery products, High Atlas Foundation needed to pursue investment that could fund the development of its nurseries and training programs and build out its carbon credit activities to enter global markets with the end focus on returning benefits to end-users.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
INVESTMENT READINESS	Conducted financial model assessment for loan options.	In-house TA Berytech Foundation	Awarded a loan from the United States Small Business Administration to establish eight nurseries and expand the carbon offset program.
BUSINESS DEVELOPMENT	Revision of its business model to include scenarios that adjust who carries the capital burden; various end-user financing schemes; and methods to raise more capital for developing nurseries on a project basis.	In-house TA Chemonics Egypt	
ENVIRONMENTAL	Conducted research on carbon credit certification compliance aspects and standards.	In-house TA Berytech Foundation	Continued the pursuit of carbon credits with a follow-on TA.
PRODUCT DEVELOPMENT	Provision of a management information systems for carbon accounting.	External TA Red Barn Technology Group	Built a data management infrastructure to better serve their carbon credit goals. Engaged in a collaborative effort with Plan Vevo to attain certification and enter the global market for selling carbon credits.
ORG. CAPACITY DEVELOPMENT	Developed business model report and organizational structure and processes report.	In-house TA Chemonics Egypt	Planned to expand their business model to diversify revenue streams and offered services.

Impact achieved:

25,000 end-users
15% women & 71% BoP
14,500 end-users using EUF

63,000 hectares under improved practices

202 million kWh saved

$6 million USD in sales

14 jobs created
39% of all employees are women

11 million liters of water saved

93,000 tons of CO_2e saved

HYDROPONICS AFRICA

Countries of operation: Kenya, Rwanda, Sudan, Tanzania, Uganda
Monitors: Water and Biodiversity
Grant amount: $150,000 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $220,000 USD

Challenge faced by end-users:

Rising population, land fragmentation and the increasing negative effects of climate change put pressure on already scarce resources, such as water and land. Moreover, farmers are faced with soil-borne pests and diseases, high crop failure, unavailable agronomy services, low access to the market and low access to financial agri-based loan facilities. These challenges have resulted in food insecurity, low livelihoods, low economic levels, high rate of unemployment, especially among women and the youth.

Innovator's provided solution:

Hydroponics Africa manufactures and installs, locally-produced affordable and efficient hydroponic solutions. It also provides intelligent plant responsive systems, hydroponic nutrients and provides agronomic crop support and management to customers. The innovator's offered solutions offered do not use any form of energy to irrigate the crops, rather water flows by gravity or is lifted by solar pumps. Additionally, it uses inert growing media to prevent soil borne diseases.

Barriers faced by innovator in reaching end-users:

In starting operations in Sudan, Hydroponics Africa entered a new market which required developing their understanding of local end-user risks, laws and regulations, and key stakeholders in the sector, and how to communicate their innovation to new customers. To ensure that the outcome of the market entry was positive, they also needed to develop financial planning materials. When the Sudan Civil War erupted, the innovator needed to develop pivot plans to ensure their continued support of Sundanese end-users.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Development of an alternative risk matrix and risk mitigation approach for smallholder farmers.	In-house TA Chemonics Egypt	Planned to pilot its end-user financing scheme in Sudan, hire a marketing and sales team in Sudan, and adapt its solution offering and business model. Due to the outbreak of the conflict in Sudan, Hydroponics Africa and the WE4F team were forced to reassess the innovator's strategy and ultimately decided to shift the focus from Khartoum towards Eastern Sudan. This also did not pan out and the innovator shifted its focus to Sudanese refugees in Kenya.
MARKET RESEARCH	Created market study on with key stakeholder mapping and exploration of the legislative environment.	In-house TA cewas	Set-up operations and became incorporated in Sudan. Started the assembly and installation of a demo farm in Soba Agricultural Project in Southern Khartoum.
INVESTMENT READINESS	Development of a financial budget for 2023 and a financial projection over the next three-to-five years.	In-house TA Berytech Foundation	Due to the outbreak of conflict in Sudan, plans needed to be shifted to Eastern Sudan, then Kenya.
MARKETING & SALES	Development of a marketing plan, including payment methods scheme template, a partnerships report, and terms of references.	In-house TA cewas	

Impact achieved:

665 end-users
20% women & 100% BoP
4,800 end-users using EUF

25,000 tons food produced

970 hectares under improved practices

$521,000 USD in sales

24 jobs created
46% of all employees are women

IRMA & CO

Countries of operation: Lebanon
Monitors: Water
Grant amount: $225,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $2.1 million USD

Challenge faced by end-users:

Due to the low market demand and Lebanon's economic situation, each year Lebanese farmers throw out half of their crop yield. Most farmers are also investing in quick-selling crops such as eggplants and tomatoes that have a direct consumer market rather than growing artisanal crops like red peppers. Additionally, smallholder farmers have become inefficient with their irrigation practices due to an abundance of water in remote areas.

Innovator's provided solution:

Irma & Co works with Lebanese farmers to utilize drop irrigation systems to grow red pepper crops that are processed into pepper paste. To encourage the production of local crops, the innovator supports farmers in planting local ethnic crop variations and purchases the yields.

Barriers faced by innovator in reaching end-users:

Irma & Co wanted to expand internationally for the selling of their products, and locally to support more women end-users who were producing their crops. In order to accomplish this goal, they needed to develop their understanding of the Egyptian market, develop a cohesive brand to encourage vendor and distributor engagement, and improve internal gender integration activities and policies.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKET RESEARCH	Developed map of potential vendors and distributors in Egypt; and facilitated linkages with retailers.	In-house TA Chemonics Egypt	Launched new restaurants in Egypt and Lebanon. Penetrated the Egyptian market with their products grown and processed in Lebanon.
MARKET RESEARCH	Developed market entry report for Egypt and conducted team preparation training for market entry.	In-house TA Berytech Foundation	Successfully placed its products in five new retail outlets. Building on this momentum, Irma & Co expanded to the United States through a new partnership that will make its products available on Amazon.
GENDER INTEGRATION	Supported the updating of the innovator's human resources manual; and developed a report on innovator's gender inclusive activities; and provided recommendations on additional interventions and next steps.	In-house TA IWMI	Translated their gender-related efforts into their human resources and procurement manuals.
GENDER INTEGRATION	Advised on streamlining and operationalizing gender into their procurement process.	In-house TA IWMI	
MARKETING & SALES	Development of their branding and marketing strategy, including mission, vision and core values; products and brand architecture; customer and markets segments; and value proposition.	External TA Patricia Kebbé	Defined their marketing position and brand identity. Leveraged digital and e-commerce platforms to enhance its online sales and presence.

Impact achieved:

- **30,000 end-users**
  44% women & 4% BoP
  375 end-users using EUF
- **21 tons of food processed**
- **152 million liters of water saved**
- **$601,000 USD in sales**
- **57 jobs created**
  54% of all employees are women
- **170 hectares under improved practices**
- **1,500 end-users with increased incomes**
  51% women & 56% BoP

IRSC

Countries of operation: Egypt
Grant amount: $120,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Most farms in Egypt rely on diesel generators for their agricultural operations, which leads to an increase in the final product cost and a lack of competitive ability in the market. These diesel generators can be expensive to use, because of a lack of fuel in remote areas and associated high cost. While switching to solar energy could save money, traditional solar energy products are not built to withstand dust and water making them unsuitable for rural desert sites in Egypt. The missing electrical protection and element protection puts the systems at a higher risk for technical defects. In addition, current inverters operate pumps and motors only, and extra energy may be generated is wasted.

Innovator's provided solution:

IRSC is creating a sustainable community based on agriculture. Keeping eye on all the resources needed, they are creating a model based on regenerative agriculture practices that minimize environmental impact and utilize resources to the max. IRSC is working on reaching a balanced ecosystem between the plants, livestock, fisheries and humans that can be replicated easily across rural areas to ensure sustainable food production that can withstand climate change.

Barriers faced by innovator in reaching end-users:

In order for IRSC to scale innovation adoption by Egyptian end-users, the innovator needed to explore financing methods as well as improve their distributor network. To make the technolpgy more compatible with target markets in rural area, the innovator also needed support to produce a better off-grid solar system design.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Reviewed business model and opportunities for access to financing for base of the pyramid end-users and sustainable supply chains.	In-house TA Chemonics Egypt	Meetings were set to pilot the model with large aggregators in the region. Due to the successful results, a Memorandum of Understanding was signed with one of the region's largest agriculture aggregators, NAVIX.
MARKETING & SALES	Development of distributor training.	In-house TA Chemonics Egypt	Expanded its distributor networks and developed a scheme to train distributor to assist farmers in accessing suitable financing schemes.
PRODUCT DEVELOPMENT	Supported the design of an inverter and battery system for off-grid solar systems.	In-house TA Chemonics Egypt	Developed an inverter can cover irrigation and other energy needs and is highly adaptable to climate conditions.
	Created a detailed technical and financial feasibility report, covering technology readiness level and barriers for adoptions of the technology.	In-house TA Chemonics Egypt	Started planning to design a sustainable farm model, build the financial model for BOPs and the required infrastructure, and expand its EUF model.

Impact achieved:

- **7,100 end-users**
  5% women
- **227,000 tons food produced**
- **134 million kWh saved**
- **$330,000 USD in sales**
- **25 jobs created**
  29% of all employees are women
- **14,000 hectares under improved practices**
- **22,000 tons of CO2e saved**
- **636,800 liters of water saved**
- **5,600 end-users with increased incomes**
  5.6% women

KASHO COMPANY

Countries of operation: Iraq
Grant amount: $150,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

In Iraq, most sunflower oils are imported, poorly regulated, and unhealthy – putting consumers at risk of serious health problems. Healthier options, such as olive oil, are available but expensive. Local farmers who could produce sunflower oil don't have a reliable way to obtain seeds, grow them, harvest them, and regularly sell their oil.

Innovator's provided solution:

Kasho Company focuses on sunflower seed cultivation, processing by utilizing cold-press technology, and producing high-quality sunflower seed oil that retains its natural flavors and nutritional value. Their eco-friendly method contributes to reduced energy consumption, when compared to traditional oil extraction processes and water savings as the process doesn't involve water usage. Kasho also supports local farmers by supplying them with sunflower oil seeds and purchasing their harvest.

Barriers faced by innovator in reaching end-users:

To continue growing in Iraq, Kasho Factory needed to improve its marketing strategy so it could develop materials meant to facilitate access to financing, distributor network development, and targeting customer segments in different Iraqi governates.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKETING & SALES	Developed a marketing management report that included a marketing audit report, assessment of their marketing framework, and recommendations for optimization.	In-house TA cewas	Responded to customer feedback by launching a new 3-liter product size.

Impact achieved:

- **534 end-users** *3% women*
- **506 tons of food processed**
- **1,400 kWh saved**
- **$1.9 million USD in sales**
- **1 ton of CO2e saved**

LOMBRISOL

Countries of operation: Morocco
Monitors: Biodiversity
Grant amount: $78,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

According to the Moroccan Ministry of the Environment, the quantity of waste produced in Morocco currently reaches 5.5 million tons of organic waste per year in urban areas. This organic waste presents significant economic potential that is underutilized due to a lack of waste management actions and a lack of a national waste management policy.

Innovator's provided solution:

Lombrisol repurposes local organic waste into compost and fertilizer. The innovator has developed an economical and sustainable ecological solution for the treatment and recovery of organic waste by offering vermicomposting. A decomposition process that involves earthworms and microorganisms, vermicomposting can produce biofertilizers for sustainable and organic agriculture.

Barriers faced by innovator in reaching end-users:

As part of Lombrisol's growth objectives, the innovator needed financial support to establish facilities and pursue new partnerships to distribute their products.

Technical assistances received and outcomes:

The innovator had ongoing, as well as recently completed, TAs that were not documented due to the USAID SWO.

Impact achieved:

- **261 end-users** *28% women & 49% BoP*
- **1,100 hectares under improved practices**
- **$100,000 USD in sales**

LORK

Countries of operation: Iraq
Monitors: Water and Biodiversity
Grant amount: $80,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Cultivating barley in croplands consumes a large amount of water, and due to Iraq's arid climate and the geographical scarcity of water, this in turn leads to high energy consumption (e.g. energy used to transport water to crops using) . Additionally, a fully grown barley plant takes an entire season to be ready for harvest, making barley cultivation expensive and not suitable for farmers and livestock traders. As barley is a feed for livestock, the price of meat is affected, becoming expensive when compared to the purchasing power of the average Iraqi consumer.

Innovator's provided solution:

Lork developed and implemented affordable hydroponic fodder systems for livestock feed production. They cultivate barley without soil, offering a cost-effective alternative to traditional field cultivation. These hydroponic systems are water-efficient, making them more economical compared to open-field barley farming and enabling farmers to produce green, fresh barley fodder for their livestock.

Barriers faced by innovator in reaching end-users:

In order for Lork to continue their expansion in Iraq, they needed to improve internally and externally. Internally, organizational capacity development was needed to strengthen its internal operations. While externally, better marketing and sales activities and awareness of their customer base, would help improve engagement with smallholder farmers for its hydroponic systems.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKETING & SALES	Conducted analysis of the Sulaymaniyah fodder market, including interviews and surveys with potential customers; provided steps for direct sales lead generation.	In-house TA cewas	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.

Impact achieved:

7 end-users
100% women & 100% BoP

1 hectare under improved practices

83,000 liters of water saved

$950 USD in sales

MA'AN YOUTH SOCIETY

Countries of operation: Jordan
Grant amount: $75,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Out of the total amount of waste that is exported from Jordan's Ma'an Governorate (estimated at 90,000 tons per day), 60% is food waste and leftovers. This results in health, social, and economic problems. The waste affects the quality of groundwater and results in high financial cost of disposal. Furthermore, the local community suffers from many problems caused by food waste and leftovers, as getting rid of them through burial in the ground leads to a reduction in soil fertility, environmental pollution, and health damage to humans and animals in the surrounding environment.

Innovator's provided solution:

Ma'an Youth Society for Environmental Conservation contributes to reducing greenhouse gas emissions by recycling food waste and leftovers to produce compost, which provides the nutritional minerals needed by agricultural land to increase yields.

Barriers faced by innovator in reaching end-users:

To expand its operations, the innovator needed to pursue new partnerships and the improvement of its internal operations to support its ability to expand across Jordan.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
PRODUCT DEVELOPMENT	Conducted assessments on quality assurance and quality control, and suppliers.	In-house TA Chemonics Egypt	Unknown as the innovator stopped participating in WE4F due to an inability to meet KPI requirements.

Impact achieved:

There is no documented impact for this innovator because they withdrew from participating in WE4F before the first data collection cycle.

MOZARE3

Countries of operation: Egypt
Monitors: Water
Grant amount: $180,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $2.3 million USD

Challenge faced by end-users:

The main challenges facing small shareholder farmers are lack of: a lack of access to finance, as more than 90% don't have a bank account; they have no access to markets and no visibility into markets' demand; they lack technical support and are never updated with best practices; and they do not receive on-time payments, because they are paid late due to poor cash-flow management.

Innovator's provided solution:

Mozare3 believes that contract farming combined with financing with agronomy support and access to markets, can easily increase farmer's yield and income with a clear cash-flow forecast. Mozare3 aggregates the fragmented smallholder farmers to act as a sizable contract farmer that meets an off-take agreement signed back-to-back with processors and/or exporters. The innovator provides farmers with access to financing (inputs, other agri- and non-agri needs), agronomy support, markets while being paid on time and cashless using Meeza pre-paid cards. Mozare3 offers processor/exporters with access to reliable source of consistent and traceable source of fresh produce that meet the global and local standards.

Barriers faced by innovator in reaching end-users:

To improve the reach of the innovator, they needed to focus on developing their marketing activities and explore new financial models that would reduce the financial burden on the innovator's side. To unlock investment, the innovator needed to develop better documentation of their impact on end-users and natural resources.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
PRODUCT DEVELOPMENT	Conceptualized design of a sustainable demo site, which included recommendations for clean technologies and the development of a financial model for farmers to share the costs of inputs and technologies.	In-house TA Chemonics Egypt	Led to a follow-on TA to continue building of demo site and impact monitoring.
ENVIRONMENTAL	Mapped Mozare3's operations and possible impacted; created report with recommendations on possible measures to improve Mozare3 impact and report on impact monitoring.	In-house TA Chemonics Egypt	Built a sustainable model for the demo farm, including the development of a sustainable financial co-sharing model with smallholding farmers.
ENVIRONMENTAL	Produced a crop water footprint data sheet for water usage and salinity.	In-house TA Chemonics Egypt	Outcome unknown because of the USAID SWO.
BoP IMPACT	Provided description of financial and business models; developed list of possible financiers and relevant programs and facilitated meetings; and developed a training guide for their financial tool.	In-house TA Chemonics Egypt	Supported the innovator during their interactions with the National Bank of Egypt and the Agriculture Bank of Egypt to foster financial inclusion through a lower rate of interest.

Impact achieved:

- **59,000 end-users**
  39% BoP
  15,000 end-users using EUF
- **272,000 tons food produced**
- **41 million kWh saved**
- **$17 million USD in sales**
- **82 jobs created**
  22% of all employees are women
- **8,200 hectares under improved practices**
- **9,800 tons of CO2e saved**
- **1 billion liters of water saved**
- **35,000 end-users with increased incomes**
  45% BoP

MOZNA

Countries of operation: Egypt
Monitors: Biodiversity
Grant amount: $150,096 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

The use of chemical fertilizers contributes to soil degradation and environmental pollution in Egypt. These fertilizers often contain high levels of synthetic nutrients that can lead to nutrient imbalances, soil acidification, and reduced microbial activity, ultimately harming soil health and fertility. Moreover, chemical fertilizers can leach into water bodies, causing water pollution and threatening aquatic ecosystems. At the same time, livestock produces large amounts of organic waste, including manure and bedding materials that are not being used efficiently by farmers.

Innovator's provided solution:

Mozna specializes in producing liquid organic fertilizers derived from biogas units that are fueled agricultural and livestock waste. These fertilizers are designed to meet the needs of various stakeholders in Egypt, including small and medium-sized farmers, cooperatives, as well as companies of all sizes, land reclamation firms, and distributors.

Barriers faced by innovator in reaching end-users:

In order to continue scaling within Egypt and the region, they needed to develop a better growth strategy that could connect them with farmers, companies, partners, and other stakeholders. To fund the growth strategy, they needed to become investment-ready.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKETING & SALES	Development of a comprehensive strategy, supporting growth and market penetration locally and regionally.	In-house TA Chemonics Egypt	Showcased their offerings at the Food Africa and Middle Egypt Expos. Signed a supply agreement with the Sugar and Integrated Industries Company and partnered with PlantFi and Egymag to expand product distribution. Signed partnerships with three cooperatives and a retailer in Beni Suef.
INVESTMENT READINESS	Enhanced and refined pitch deck presentation and investment teaser.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO.

Impact achieved:

2,700 end-users

1,000 hectares under improved practices

$71,000 USD in sales

NAKHLA

Countries of operation: Iraq
Grant amount: $150,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $198,000 USD

Challenge faced by end-users:

Historically, Iraq was one of the main producers and exporters for dates across the region. Since conflict in Iraq exacerbated in 2003, palm trees have suffered from decreasing production rates due to negligence, mismanagement, and/or diseases, leading to no, or low, profits for farmers and poor tree quality in public and private spaces.

Innovator's provided solution:

Nakhla offers comprehensive date palm tree service packages to farmers, households, municipalities, and corporate social responsibility partners. These services include technical caring services (trimming, fertilization, harvesting, etc.) combined with date cleaning and packaging. The innovator's services are offered for a long period of time (e.g., throughout the entire season) and include sustainable and organic input materials such as biofertilizer. The services are usually coupled with consultation to build the capacities of the palm tree owners to learn from and implement best practices.

Barriers faced by innovator in reaching end-users:

To expand its palm date supplier network, the innovator needed to pursue capturing smallholder farmers as well as large-holder farmers. To accomplish this goal, they needed to strengthen their sales and distribution so they could sell their process dates as well as develop a better understanding of the date market. To fund their scaling, the innovator needed to pursue investment which required developing financial and operational management trackers that could support the development of investment documentation. As Iraq's entrepreneurship scene, along with the private sector's engagement in international donors is nascent, Nakhla needed supported with the development of its environmental monitoring requirements to ensure its compliance and ability to receive grant funding.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
INVESTMENT READINESS	Provided loan amortization scheduler to calculate dynamically loan payment, interest and installments for any loan with declining balances, for variable loan period, grace period, interest rate and size of loan.	In-house TA cewas	Received their first round of investment with Euphrates VC.
ORG CAPACITY DEVELOPMENT	Development of trackers for receivables, sales, stock and promotion, supporting the control of company transactions.	In-house TA cewas	Able to manage their cash flows and measure the impact of debt financing on their corporate finances.
BUSINESS DEVELOPMENT	Conducted a market assessment, including a report on the results, business model recommendations, and an action plan.	In-house TA Chemonics Egypt	Opened new market channels, selling through supermarkets, e-commerce, wholesalers, and sub-distributors.
MARKETING & SALES	Development of a sales and distribution strategy.	In-house TA cewas	
	Creation of an implementation plan for the sales and distribution strategy.	In-house TA cewas	
ENVIRONMENTAL	Development of their environmental monitoring and mitigation report.	In-house TA IWMI	Became compliant with USAID environmental requirements and innovator became aware of potential environmental risks.

Impact achieved:

- **767 end-users** *17% women & 22% BoP*
- **396 tons food produced**
- **54 million liters of water saved**
- **$61,000 USD in sales**
- **134 end-users with increased incomes** *17% women & 37% BoP*
- **4 hectares under improved practices**
- **39,000 tons of CO2e saved**

NATAGRI

Countries of operation: Lebanon
Monitors: Biodiversity
Grant amount: $130,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Natagri provides several different services to support smallholder farmers and other end-users. Within the cherry industry, farmers are unable to take advantage of potential exportation and value-adding opportunities due to a lack of knowledge on good agricultural practices, post-harvest procedures, and market accessibility. Within Lebanon, there is an increasing market demand for dried fruit products, but the necessary equipment is unaffordable for most farmers. These same farmers that could potentially break into the dried fruit market are unable to sell their fresh Grade B and Grade C produce due to consumer preferences, so “ugly” fruit is either sold at-cost, or at a loss, in wholesale markets, with unsold fruit being thrown out.

Innovator’s provided solution:

For the cherry industry, Natagri’s solution provides the necessary services and guidance to produce high quality cherries according to international specifications. They improve farmers’ livelihoods by reducing water consumption, optimizing irrigation efficiency, providing water management trainings and pest management trainings, preparing a post-harvest unit certified and ready for packing the products, and exporting them to high value markets. For farmers looking to sell Grade B and Grade C produce, Natagri buys fruit at a fair price from the farmer, then processes it into dried packaged fruits. Micro-, small-, and medium-sized enterprises, as well as farmers, can also use Natagri as a service center to process their produce.

Barriers faced by innovator in reaching end-users:

To expand their innovation’s reach to new geographies and new clients, the innovator needed to unlock investment which required the preparation of investment documentation and pitch materials. Internally, the innovator needed to become more gender-sensitive, so they could further integrate women end-users. Additionally, they needed to improve their internal structure and processes so the business could handle future growth and the development of new products, services, and clientele.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
INVESTMENT READINESS	Revision of financial statements and conducting of a ratio analysis to support the innovator's decision-making on cash flow management.	In-house TA Berytech Foundation	Hired a Chief Finance Officer and submitted a Build Fund application. Natagri was not selected to move forward with the Bridge Fund. Used to accurately forecast their 2023 operations.
	Refinement of their investor pitch and facilitation of a site visit that included a site visit report detailing findings and observations.	In-house TA Berytech Foundation	Outcome unknown because of the USAID SWO.
ORG CAPACITY DEVELOPMENT	Human resources development and organizational strategy to strengthen its team structure, improve internal processes, support long-term growth, improve retention, and introduce compensation based on environmental, social, and governance principles.	In-house TA Berytech Foundation	Streamlined their hiring process, evaluation of team performance, created smart key performance indicators.
GENDER INTEGRATION	Recommendations for gender-sensitive human resources policies and outreach.	In-house TA IWMI	Outcome unknown because of the USAID SWO.

Impact achieved:

5,900 end-users
13% women & 19% BoP

11 tons of food processed

265 million liters of water saved

$1 million USD in sales

16 jobs created
55% of all employees are women

170 end-users with increased incomes
11% women & 100% BoP

26 hectares under improved practices

PLATFARM

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $180,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $159,000 USD

Challenge faced by end-users:

Egyptian innovators are facing a water and fertilizer crisis. Due to mismanagement and climate change, there are limited water resources for farmers to utilize for their crop production. Additionally, the price of imported agricultural inputs has increased over the recent years, putting farmers in a situation where they must spend more money for the same, or smaller crop yields. Due to a lack of existing platforms, as well as reliance on traditional agricultural practices, Egyptian farmers do not have access to the precision and digital irrigation advisory services.

Innovator's provided solution:

Platfarm provides a precision farming platform that utilizes data of Internet of Things ground sensors, weather satellite imagery, and daily farm activity records to enable variable rate irrigation and fertilization. The platform benefits from the help of crops and soil scientific modeling to simulate the plant requirements and behavior, then, throughout the season, the platform sends actionable insights to the farmers. The PlatfarmX product has mobile and web apps to manage farm daily activities. It offers two integrations, one with Internet of Things sensors monitoring soil moisture, environmental parameters, pest's infestation and another integration with satellite imagery to monitor crop growth and health. The second product is CognitiveX, an AI platform that uses soil crop, weather, and farm data to act as agronomist. The platform closely and continuously monitors the farm performance to wisely tune the irrigation and fertilization for specific spots within the farm, maximizing yield profitability with optimized resources.

Barriers faced by innovator in reaching end-users:

To expand the innovator's end-user base, they needed to develop better marketing practices that could increase reach across Egypt and support their expansion in South Africa. To ensure end-users continued to use their digital platform, they needed to improve the user experience and interface so it would engage potential clients and support continued use.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
MARKETING & SALES	Development of a marketing plan to support market expansion.	In-house TA Chemonics Egypt	Used social media heavily to both promote their services and business case as well as create awareness about the benefits of precision agriculture, good agricultural practices, and resource efficiency in agriculture.
PRODUCT DEVELOPMENT	Improvement of user experience and user interface for their digital platform.	In-house TA Chemonics Egypt	Improved product user experience/user interface design also played a role in their client acquisition and product sales. Platfarm also launched "Ask Platfarm" – a GPT-powered AI tool to enable the sustainability and productivity of their farming clients.

Impact achieved:

- **3,900 end-users**
- **1.5 million tons food produced**
- **97 million kWh saved**
- **$232,000 USD in sales**
- **5 jobs created**
  33% of all employees are women
- **26,000 hectares under improved practices**
- **26,000 tons of CO2e saved**
- **1.4 billion liters of water saved**
- **1,500 end-users with increased incomes**
  20% women & 94% BoP

PLUG'N'GROW

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $130,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Egypt, the agricultural sector is dealing with increasing production costs – energy and water expenses have risen by 200% since 2021 and fertilizer costs have risen by 300% to 500% since 2020. Aside from the financial challenges, Egyptian farmers are also feeling the impact of climate change through lower crop yields, reduced crop quality, and frequent pest outbreaks which necessitate heavy pesticide use. Combined together, the above challenges result in financial instability for farmers.

Innovator's provided solution:

Plug'n'Grow supports growers in their transition to sustainable climate resilient agricultural practices by providing economic end-to-end hydroponic products and services, thus helping to meet the rising food demand driven by Egypt and the MENA region's anticipated significant population growth. The innovator's products and services are designed with the environment in mind, reducing water consumption by up to 90% and fertilizer usage by up to 60%, when compared to traditional soil-based agriculture. Their solutions not only minimize the risk of soil-borne diseases, but also prove to be cost-effective by maintaining comparable production costs while delivering higher quality and yield. The controlled environments created by the hydroponic products are scalable and adaptable, eliminating the need for land expansion and reducing CO2 emissions from agriculture.

Barriers faced by innovator in reaching end-users:

The innovator needed support to unlock new end-users through the development of new products. To fund this development, the innovator needed to unlock investment by developing the required documentation.

Technical assistances received and outcomes:

The innovator had ongoing, as well as recently completed, TAs that were not documented due to the USAID SWO.

Impact achieved:

- **216 end-users**
  22% women & 86% BoP
- **10 hectares under improved practices**
- **$14,000 USD in sales**

RAG

Countries of operation: Iraq
Monitors: Water
Grant amount: $140,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The adoption rate and knowledge of modern agricultural technology is still low for Iraqi farmers. They often resort to outdated methods such as flooding, which requires excessive water consumption, puts high stress on groundwater resources, and uses excessive amounts of fertilizers and pesticides without awareness of their deteriorating effect on soil in the long term. In addition, high prices for establishing greenhouses mean that most farmers can only afford to cultivate crops in open fields.

Innovator's provided solution:

RAG is a supplier of precision irrigation systems, greenhouses, seeds, and organic fertilizers. Its technologies help smallholder farmers to increase their crop yields and improve the quality of outputs, allowing them to achieve greater sales volumes and command higher prices for their produce. Drip irrigation systems offered by the company, coupled with rainwater harvesting techniques, help farmers minimize water wastage. Additionally, RAG implements energy-efficient irrigation systems and promotes the use of renewable energy sources.

Barriers faced by innovator in reaching end-users:

The company wanted to expand, opening new branches in different cities. To support the expansion, the innovator needed to pursue investment opportunities which required developing required investment documentation, improving their financial literacy, understanding their customer base to support market selection, and creating pitch materials.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
ORG CAPACITY DEVELOPMENT	Development of a customer analysis report.	In-house TA cewas	Created a new customer segment by approaching poultry farms, opening a new branch in Erbil, and increasing the production capacity of greenhouse and center pivot irrigation systems.
INVESTMENT READINESS	Support for cash flow management.	In-house TA Berytech Foundation	
BUSINESS DEVELOPMENT	Creation of an innovator presentation and reference materials focused on improving financial literacy.	In-house TA Chemonics Egypt	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.

Impact achieved:

- **1,200 end-users** *1% women & 100% BoP*
- **3,900 tons food produced**
- **2.1 million kWh saved**
- **$119,000 USD in sales**
- **592 tons of CO2e saved**
- **1,500 hectares under improved practices**

RAPTOR SOLAR/ENGINEERING

Countries of operation: Egypt
Monitors: Water and Biodiversity
Grant amount: $150,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Egypt faces a leak in its agriculture lands. A lot of desert land could be transformed into an environment that is suitable for agriculture, but the water needed for irrigation has a high cost. The lack of availability of fuels and electricity in these areas presents an additional challenge. Overall, farmers face a lot of issues in financing their projects.

Innovator's provided solution:

Raptor Engineering aims to provide farmers, especially in remote areas, with reliable and cost-effective solar pumping systems to irrigate their lands and produce more food. The innovator offers modern irrigation systems to help reduce the water consumption in irrigation and lower the cost of fertilizers used in farming. And most importantly, they help farmers access financing for their systems.

Barriers faced by innovator in reaching end-users:

To scale the use of their innovation, the end-user needed to develop end-user financing mechanisms for end-users and build a sales pipeline. The former required developing connections and relationships with existing financial institutions that could provide Raptor's end-users with financing. While the latter, required the innovator to develop a position specifically focused on sales.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Developed a list of financial institutions with whom to collaborate as well as a framework against which the innovator could compare the financial institutions.	In-house TA Chemonics Egypt	Connected with the financial institutions ADVA, Belcash, and Halan, to facilitate end-users' access to financing solar systems.
	Developed a list of financial service providers serving Egyptian farmers and validated the innovator's proposed finance modality.	In-house TA Chemonics Egypt	Laid the groundwork for a potential partnership with Commercial International Bank (CIB) Egypt to offer financing solutions for Raptor's clients. Building on the financial models developed through the TA, Raptor secured loans for end-users in collaboration with Crédit Agricole – a development that addresses financing needs for 30–40% of their client base.
MARKET RESEARCH	Developed a financial tool and required guidelines to support the innovator's engagement with end-users; and created a marketing plan.	In-house TA Chemonics Egypt	Helped Raptor maintain contact with their end-users, so when customers needed any systems or spare parts, the demand could be directly communicated to Raptor. This new structure helped generate new orders for complete systems. Used the financial tool to set new sales targets in November 2023 when they decided to implement price changes.
MARKETING & SALES	Supported the development of a sales position, creating a template for sales job description, a template for contract terms, listing possible key performance indicators, and providing recommendations and suggestions about business digital platform applications for efficient usage.	In-house TA Chemonics Egypt	Started expanding their business by offering installation-as-a-service, targeting new customers segments (i.e., large agricultural enterprises, industrial sector actors with on-grid solutions) and integrating outsourced drip irrigation to their solar systems.

Impact achieved:

9,200 end-users
47% women & 19% BoP
2,600 end-users using EUF

116,000 tons food produced

82 million kWh saved

$1 million USD in sales

6 jobs created
33% of all employees are women

5,400 hectares under improved practices

22,000 tons of CO2e saved

193 million liters of water saved

8,700 end-users with increased incomes
54% women & 15% BoP

RAS AL-AIN SKY

Countries of operation: Iraq
Grant amount: $75,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Smallholder farmers in Iraq are experiencing instability with their power supply. The national power grid frequently experiences shortages, leading farmers to alternate between grid-supplied energy and diesel generators to ensure stable power for irrigation. This additional reliance on diesel generators results in increased monthly expenses for farmers.

Innovator's provided solution:

Ras Al-Ain Sky offers renewable energy solutions for sustainable agriculture that provide reliable and affordable energy sources, enabling farmers to increase productivity and reduce reliance on fossil fuels. Among their solutions are solar water pumping, solar systems for irrigation, and inverters. The company provides smallholder farmers with payment facilities and microloans ranging from $3,000 USD to $5,000 USD to purchase these solutions. To make loans more accessible, the interest rate is 8% and payments are made on a quarterly basis.

Barriers faced by innovator in reaching end-users:

To continue scaling, the innovator was looked at pursuing new business models that could enable their expansion. Funding from WE4F was critical for their continued expansion as well as the development of partnerships that could unlock new end-users and provide existing innovators with new products/services.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Developed a proposed business model that included a SWOT analysis, an Excel-based model with a short user manual, and a workshop.	In-house TA Chemonics Egypt	Outcome unknown because of the USAID SWO and Iraqi innovators not participating in MENA RIH bridge contract.

Impact achieved:

1,500 end-users
41% women

1,500 tons food produced

2.7 million kWh saved

$314,000 USD in sales

809 end-users with increased incomes
40% women

385 hectares under improved practices

254 tons of CO2e saved

RIM MILLS

Countries of operation: Lebanon
Monitors: Water
Grant amount: $130,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Moghrabieh – a Lebanese food product made of wheat, semolina, water, and salt – is an affordable dish that is popular in most households in Lebanon, especially in base of the pyramid households. The production of moghrabieh involves boiling water underneath the trays of raw product; the boiling water produces steam which heats the product and solidifies it. A lot of energy is created and lost during this production cycle, as the steam is not often captured and re-used. On the supply side, farmers struggle to afford inputs such as seeds, irrigation, and energy. They also face challenges when trying to sell all their yields, as a high supply of wheat in the country prevents them from selling wheat to a consistent buyer at the consistent price.

Innovator's provided solution:

In order to collect the steam that would otherwise go to waste in the process of making moghrabieh, Rim Mills sets up a collector in their facility to harvest and reuse the water. They're also enhancing their solar energy system to contribute to their sustainability growth plan. To better help farmers, Rim Mills introduced a non-traditional variety of wheat that has a higher yield and monetary value; the variety is also specific to the innovator's production needs. Farmers sell all of their harvest to Rim Mills, assuring the farmer that they have a solid, predetermined revenue.

Barriers faced by innovator in reaching end-users:

To continue scaling, the innovator needed to become to focus on gender integration so they could work with women end-users operating in Lebanon. To further increase end-user reach, the innovator needed to improve financing opportunities, storage capacity, and expand their market through stronger sales and marketing efforts, including a website upgrade and development of their business-to-consumer line.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
GENDER INTEGRATION	Provided recommendations for a gender-sensitive human resources manual and targeted marketing strategies for women end-users.	In-house TA IWMI	Outcome unknown because of the USAID SWO.

Impact achieved:

- **1,000 end-users**
- **745 tons of food processed**
- **111,000 kWh saved**
- **$600,000 USD in sales**
- **67 tons of CO2e saved**

ROBINSON AGRI (THE QUINTA GROUP)

Countries of operation: Lebanon
Grant amount: $240,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $1.5 million USD

Challenge faced by end-users:

In Lebanon, onion crops are irrigated using sprinklers and gravity surface irrigation systems, and crops are grown using pollinated seeds, which consume a high quantity of water and energy, in addition to a lower crop yield. Due to severe mismanagement and misuse of natural resources, Lebanon is highly water stressed. The country grapples with environmental pollution and a growing waste crisis. On the economic side, a lack of financial support and an unfavorable business environment make it challenging for farmers to produce competitively.

Innovator's provided solution:

The Quinta Group provides a complete solution, including a complete irrigation system, hybrid seeds, and technical support and financial support in order to improve quality and yield, ration the use of agriculture inputs and natural resources to reduce costs, and increase end-users' incomes.

Barriers faced by innovator in reaching end-users:

Robinson Agri's expansion plans focused on two different paths that required their own types of support: 1) local expansion which needed the development of end-user financing to increase affordability for Lebanese end-users; and 2) international market expansion throughout Western Africa which needed the support of market analysis, local partnerships, and improved branding to occur.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Development of an alternative risk matrix to assess the benefit farmers receive from the in-house end-user financing program and (2) creating proper cost accounting for accurate system pricing.	In-house TA Chemonics Egypt	Locked in the first 15 end-user financing smallholders. Developed a partnership with Green Essence. Partnered with ARE to support BOP farmers in rural areas with training, provision of seeds, and drip irrigation systems.
BoP IMPACT	Creation a tool that develops specific end-user financing offers.	In-house TA Berytech Foundation	
MARKETING & SALES	Development of their branding and marketing strategy, including mission, vision and core values; products and brand architecture; customer and markets segments; and value proposition.	In-house TA Berytech Foundation	Helped them accurately portray their full operation on paper and disseminate information internally and externally. Launched a holding group, Quinta International, and expanded their services and sales throughout the African market.
MARKET RESEARCH	Development of a report highlighting the verticals that Robinson Agri was planning to expand in select African countries as well as providing relevant information about the identified markets in which Robinson Agri and the hub have connections.	In-house TA Berytech Foundation	Supported the company's presentation of its profile to new partners and the expansion of its regional presence throughout Western Africa.

Impact achieved:

14,000 end-users
11% women & 72% BoP
1,000 end-users using EUF

1 million tons food produced

12,000 hectares under improved practices

$7.2 million USD in sales

20 jobs created
38% of all employees are women

6,800 end-users with increased incomes
11% women & 70% BoP

2.5 billion liters of water saved

SCHADUF

Countries of operation: Egypt
Grant amount: $150,000 USD
Co-funding provided by innovator: $93,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The production of leafy green and herb crops to sustain growing populations in dense cities occurs outside the borders of the cities, primarily on large plots of farmland, and is then transported to the city to be sold to consumers in storefronts and food and beverage outlets. This results in a huge carbon footprint as long distances need to be covered to bring food to the where it is needed. A growing urban population needs local, agricultural innovations to sustainably produce more fresh food, meeting citizens' personal consumption demand and creating a new income generating activity for low- and medium-income residents.

Innovator's provided solution:

Their Urban Farming Kit is a complete farm-in-a-box that fits on top of any building's roof, and can grow a variety of leafy greens and herbs. With the help of a smart farm controller and a mobile application for guidance and support, anyone can easily become an urban farmer and start an agricultural business from the comfort of their own home. The kit allows for the production of fresh produce hydroponically, and within the vicinity of the final market, and the possibility of a true "farm-to-table" experience. This reduces the carbon footprint (exhaust from transportation, excess water used in traditional farming vs hydroponics), makes cities greener by having greenery on the roofs, which also insulates buildings and reduces the energy needed for cooling/heating.

Barriers faced by innovator in reaching end-users:

For Schaduf to grow its market it needs to invest in green roof top farms and either lease it to building owner or continue to operate it. In addition, it needs to be able to assess risks on investing in roofs.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Supported the pivoting of its business model to serve base of the pyramid end-users and provide in-house end-user financing.	In-house TA Chemonics Egypt	Enabled Schaduf to take charge of produce distribution, ensuring profits and proper access to markets by connecting BoP and other marginalized farmers to large supermarkets through the selling of produce.

Impact achieved:

93 end-users
69% women & 100% BoP

$536,000 USD in sales

SOWIT

Countries of operation: Morocco
Monitors: Water
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $441,000 USD

Challenge faced by end-users:

According to the Moroccan Ministry of Agriculture, available water resources have diminished by 35% in the last 30 years. In 2020, Moroccan dam water reserves that used to support water demand declined below the threshold of 20% and major threats are expected in the coming years. The above described situation is expected to be exacerbated in the near future as Morocco transforms part of its low water-consuming wheat agriculture into water-intensive fruit trees (e.g., citrus, olives), putting an additional stress on an already limited water supply.

Innovator's provided solution:

SOWIT's technology is a non-invasive remote-sensing multi-devices solution that enables farmers to optimize water on a daily basis and support young farmers that do not necessarily have the experience or knowledge to face the increasing variability of weather and market, especially women that are already experiencing an information asymmetry.

Barriers faced by innovator in reaching end-users:

For SOWIT to expand its market penetration, for smallholder end-user clients, the innovator needed to explore end-user financing solutions. In general, the innovator needed to improve its user interface and user experience along with the backend of operations to facilitate new end-users' experiences. Increased marketing activities were also needed by the innovator to support its expansion across North and West Africa.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BUSINESS DEVELOPMENT	Conducted analysis to determine barriers SOWIT faces when serving farmers through its digital service. Mapped possible payment collection business models and selected the one most suitable for base of the pyramid end-users and the Moroccan context.	In-house TA Chemonics Egypt	Primary gap was that the payment technology relied on credit cards and smartphones, so SOWIT shifted to this payment model to increase base of the pyramid farmers' ability to gain access to the service rapidly. SOWIT also worked on partnerships with point of sale payment providers. Developed a partnership that enabled financial institutions to offer agri-input loans to farmers using SOWIT's smart agriculture tools.
PRODUCT DEVELOPMENT	Development of the front-end of SOWIT's web and application products to accommodate for its growing user base and to be further tuned to smallholder farmers and women.	In-house TA Chemonics Egypt	Launched revamped app and web solutions. Helped map a potential data collection and monitoring framework.
	Development of the back-end of SOWIT's web and application products to accommodate for its growing user base and to be further tuned to smallholder farmers and women.	In-house TA Chemonics Egypt	
MARKETING & SALES	Development of a digital marketing strategy and manual.	In-house TA Chemonics Egypt	Helped enhance its outreach efforts and strengthen brand visibility across key markets.

Impact achieved:

23,000 end-users
44% BoP
23,000 end-users using EUF

2 million tons food produced

117 million kWh saved

$382,000 USD in sales

7 jobs created
44% of all employees are women

60,000 hectares under improved practices

82,000 tons of CO2e saved

282 million liters of water saved

18,000 end-users with increased incomes
1.3% women & 25% BoP

SPARK RENEWABLES

Countries of operation: Egypt
Contributes to: Climate Mitigation
Nexus link: Energy-food

Challenge faced by end-users:

Farmers in Egypt face a plethora of challenges when trying to access energy sources, including high diesel prices, instability of diesel availability in remote areas, and an increase of grid electricity prices. Also, farmers in remote areas struggle to access water for irrigation.

Innovator's provided solution:

Spark Renewables provides solar-powered pumping for grid-tied or hybrid PV-diesel applications along with automatic and remote control.

Barriers faced by innovator in reaching end-users:

In order to expand its business, Spark Renewables needed to further tap into the Egyptian base of the pyramid end-user market where there was a need for affordable, solar-powered pumping services to reduce reliance on gas-powered technology.

Technical assistances received and outcomes:

	Received assistance	Category	Outcome
BoP IMPACT	Created a marketing model to serve BoP farmers and optimize marketing	In-house TA Chemonics Egypt	No outcome due to business closure.

Impact achieved:

At the beginning of January 2022, the company ceased all operations and as such, left WE4F.

SUDAGARLIC

Countries of operation: Sudan
Grant amount: $75,000 USD
Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Sudanese farmers are facing technological issues because most of them are not aware of new technologies that can increase their productivity, and they lack access to information that would improve their knowledge of planting, cultivation, and irrigation.

Innovator's provided solution:

SudaGarlic used technology to improve garlic seeds and help farmers access regional and international markets. SudaGarlic developed garlic seeds through plant tissue culture, in addition, to helping small farmers access the market through storing, processing, marketing, distributing, and creating opportunities for industries (food industry, pharmaceutical industries, and cosmetics) for garlic.

Barriers faced by innovator in reaching end-users:

The innovator was looking to diversify the company by offering new products, expanding to markets in other states in Sudan, and exporting to Algeria. Following the outbreak of the Sudan Civil War, the innovator shutdown operations and left the country.

Technical assistances received and outcomes:

Did not receive TAs due to the outbreak of the Sudan Civil War.

ZHANY

Countries of operation: Iraq
Monitors: Biodiversity
Grant amount: $100,000 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In Iraq, traditional methods of agriculture and usage of chemical fertilizers pose challenges for farmers looking to, or trying, to maintain soil fertility. Over time, these practices contribute to soil degradation, nutrient depletion, and soil acidification. Moreover, they result in environmental pollution through water runoff and greenhouse gas emissions. Smallholder farmers also face economic impacts, as they must deal with the burden of continually purchasing fertilizers.

Innovator's provided solution:

Zhany converts organic waste into vermicompost, aerated vermicompost tea, and alkaline vermicompost extract using red wiggler worms. Zhany's competitive advantage lies in its low-cost pricing, strong network and market understanding, unique product offerings, and a customer-centric approach. The technology the company offers helps farmers to enhance their soil and crops with rich vermicompost and mitigates the excessive use of pesticides and fertilizers for crops, thus reducing water needed for irrigation for fruits and vegetables.

Barriers faced by innovator in reaching end-users:

In order to expand its business, Zhany needed funding to expand their vermicompost as well as technical export to improve their marketing and sales, production, and vermicompost advisory support.

Technical assistances received and outcomes:

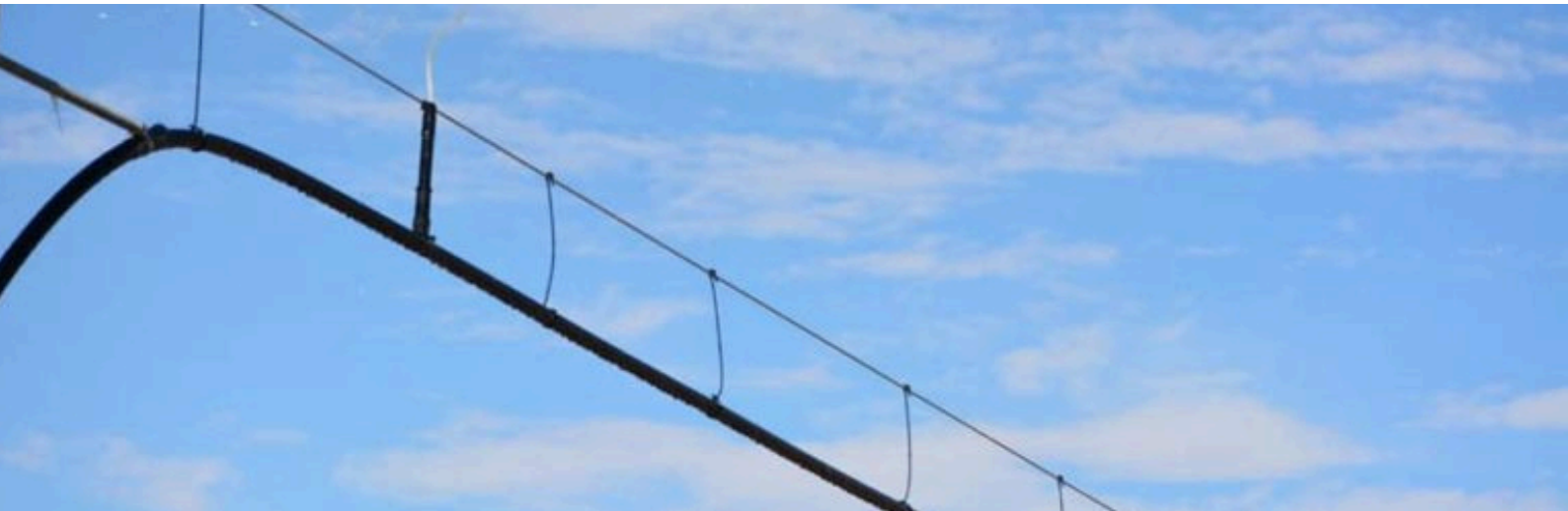
The innovator had ongoing, as well as recently completed TAs that were not documented due to the USAID SWO.

Impact achieved:

836 end-users
41% women & 100% BoP

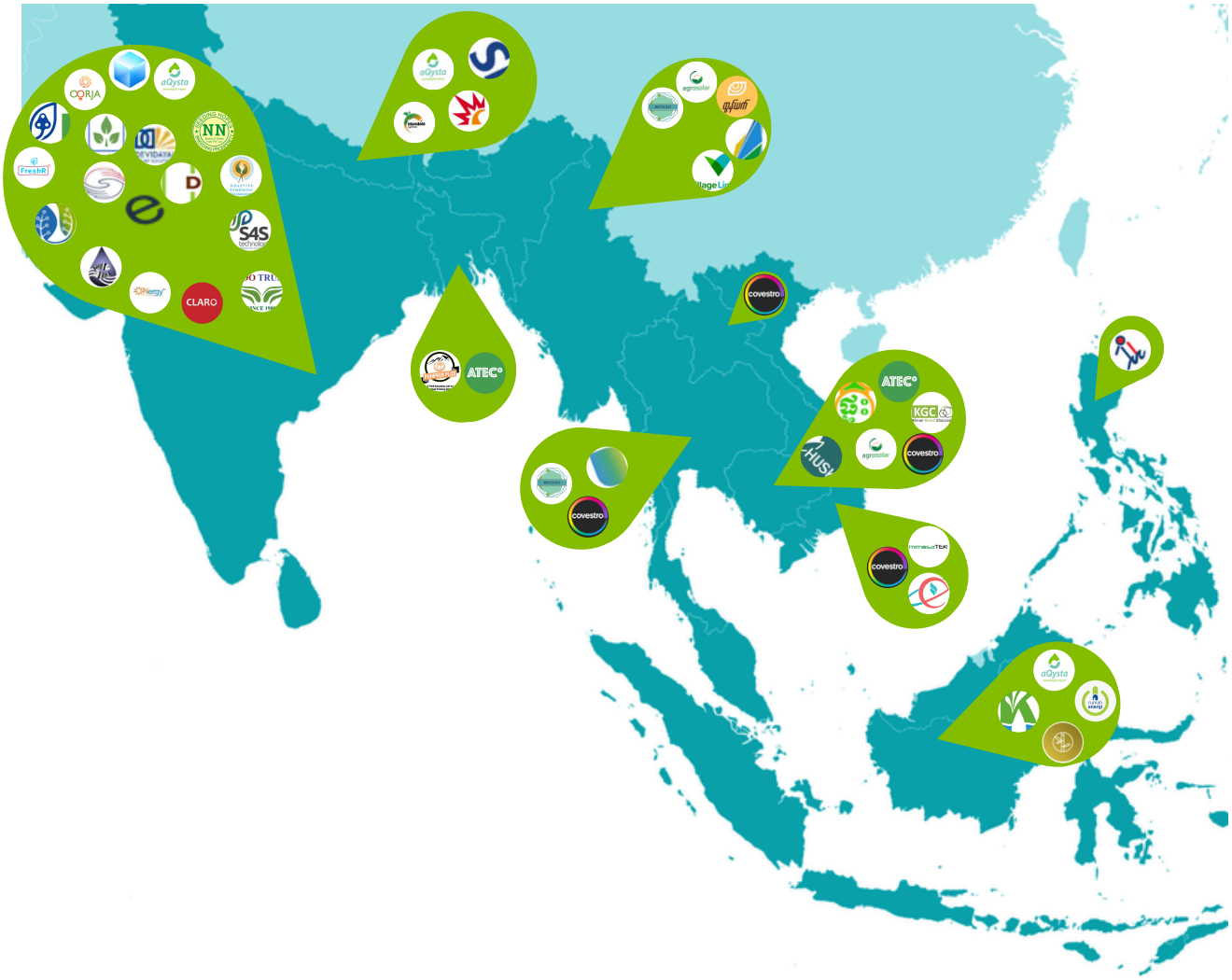
11 hectares under improved practices

$7,300 USD in sales



South and Southeast Asia Innovator Profiles and Impacts

Map of Innovators Supported by the South and Southeast Asia Regional Innovation Hub



Adaptive Symbiotic Technologies
Seed treatment that reduces water consumption, increases drought tolerance, & enhances crop yields

Agrosolar
Solar-powered pumping systems with integrated pay-as-you-go financing plans

aQysta Nepal
Sustainable irrigation with a pay-per-harvest models

ATEC* Australia International
Climate- resilient biodigesters that empowers women & smallholder farmers

Centre for Aquatic Livelihood -Jaljeevika
Provides an IoT sensor-based advisory support system for small-scale fish farmers

Claro Energy
Solar irrigation systems for food security and reduced production costs

Climesverse
Incentivizing farmers to transition to low emissions agriculture through carbon finance

CoolCrop
Business model innovation for enhanced energy and operationally efficient post-harvest management of horticulture crops

Covestro Inclusive Business ASEAN
Tackles the challenges of post-harvest loss in underserved communities with the Solar Dryer Dome technology

Devidayal Solar
Solar-powered preservation empowering the farming community

Dvara E-Registry
Harvesting change by innovating for sustainable agriculture, gender equality, and poverty reduction

Egreen Technology
Supplies efficient biogas digesters & purifiers that allows farmers to generate electricity from farm waste

Entrepreneurs Du Monde Pteah Baitong
Offers solar-powered irrigation systems & additional financing support

FCCT
Expanding and scaling Takakura composting technology for food security at home

FarmConnect Asia
Expanding and scaling Takakura composting technology for food security at home

FreshR (ZooFresh)
Live fish value chain tech

Gham Power
Integrated solar solutions for farmers

Human Ventures
Climate-resilient crop diversification

Husk Power Systems
Biomass and solar PV hybrid minigrids for off-grid farming communities

Husk Ventures
Carbon-based solutions for water and food security

Khmer Green Charcoal
Eco-friendly biomass/ag-waste char-briquettes to improve poultry-raising and cooking

Komodo Water
Offers island and coastal communities sustainable water management and solar-powered ice production for fisheries

Mandala Agrifresh
Helps farmers manage post-harvest food waste through a solar-powered cold storage unit

MimosaTEK
Internet of Things platform for precision agriculture

MyVAS4Agri
Offers farmers a mobile app with location-specific, timely recommendations to reduce water usage

New Leaf Dynamic Technologies
Provides farmer cooperatives with biomass-powered cold storage units

Oorja Development Solutions
Pay-per-use clean energy services for marginalized farmers

Promethean Power Systems
Milk-chilling tech for small scale dairy farmers

Punam Energy Pvt. Ltd. (ONergy Solar)
Integrated solar irrigation systems for vulnerable populations

Pumpkin Plus Agro Innovation
A sandbar cropping method to impact women and transform land

RecyGlo
Turning organic waste into biogas & fertilizer and recycling batteries into solar power sets

RDO Trust
Turning faecal sludge and organic solid waste into nitrogen-rich co-compost.

S4S Technologies
Procures farmers' produce, engages women micro-entrepreneurs for solar-powered drying, and sells the products

Shreenagar Agritech
AquaLink offers innovative low-cost floating fish feed and climate-smart solutions

Sumba Sustainable Solutions
Inclusive and sustainable solar energy solutions for agro-processing in villages

Techno-Hill Engineering
Provides solar-powered dryers, cold storage, and pumps to farmers to reduce post-harvest food waste

The Goat Trust
Aggregative goat-farming services to empower smallholder women farmers

Tun Yat Pte.Ltd
On-demand rental service & online platform for low-cost, high-quality agtech machinery to low-income farmers

Yayasan Rumah Energi
Facilitates small and mid-size enterprises and microfinance organizations to install biodigesters for small livestock farmers

Table of Hub Results by Country

with Ranking of Results within the Context of the Hub and the USAID-Implemented Program

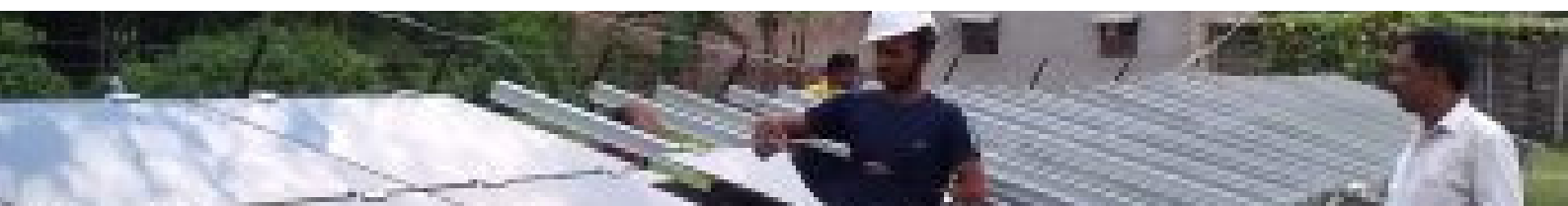
	Australia*	Bangladesh	Cambodia	India	Indonesia	Myanmar	Nepal	Philippines	Singapore*	Thailand	Vietnam
Number of End-Users	N/A	7,707	52,787	833,779	34,311	943,067	48,755	2,950	N/A	4,299	109,288
Hub Rank	N/A	7	4	2	6	1	5	9	N/A	8	3
Program Rank	N/A	18	13	2	16	1	14	21	N/A	20	9
Number of Women End-Users	N/A	3,300	31,081	214,825	12,380	238,104	22,153	1,550	N/A	1,710	50,011
Hub Rank	N/A	7	4	2	6	1	5	9	N/A	8	3
Program Rank	N/A	18	11	4	15	3	13	20	N/A	19	9
Number of BoP End-Users	N/A	3,919	35,047	780,317	33,806	508,202	41,292	2,700	N/A	687	83,983
Hub Rank	N/A	7	5	1	6	2	4	8	N/A	9	3
Program Rank	N/A	18	11	1	12	2	10	20	N/A	21	8
Tons of Food Produced	N/A	16,875	100,699	835,097	103	3,217,530	2,696	570,132	N/A	N/A	402,731
Hub Rank	N/A	6	5	2	8	1	7	3	N/A	N/A	4
Program Rank	N/A	18	12	5	21	2	20	6	N/A	N/A	9
Tons of Food Processed	N/A	N/A	270	101,381	25,830	16	10,737	N/A	N/A	N/A	940
Hub Rank	N/A	N/A	5	1	2	6	3	N/A	N/A	N/A	4
Program Rank	N/A	N/A	8	1	2	11	4	N/A	N/A	N/A	7
Kilowatt-Hours of Energy Saved	N/A	5,124,705	22,093,645	482,907,170	1,121,052	30,507,138	879,833	N/A	N/A	10,400	137,438,865
Hub Rank	N/A	5	4	1	6	3	7	N/A	N/A	8	2
Program Rank	N/A	11	9	2	13	8	14	N/A	N/A	17	6
Liters Reduced in Water Consumption	N/A	N/A	69,024,258	446,727,660	7,924,153	6,039,993,887	40,588,417	2,915,355	N/A	1,737	221,402,112
Hub Rank	N/A	N/A	4	2	6	1	5	7	N/A	8	3
Program Rank	N/A	N/A	10	6	14	1	11	16	N/A	19	7

Table of Hub Results by Country

with Ranking of Results within the Context of the Hub and the USAID-Implemented Program

	Australia*	Bangladesh	Cambodia	India	Indonesia	Myanmar	Nepal	Philippines	Singapore*	Thailand	Vietnam
Tons of Carbon Dioxide Equivalent (CO_2e) Greenhouse Gas Emissions Savings	N/A	3,882	12,198	205,127	1,329	8,211	635	N/A	N/A	4	830,970
Hub Rank	N/A	5	3	2	6	4	7	N/A	N/A	8	1
Program Rank	N/A	14	12	4	15	13	16	N/A	N/A	18	2
Number of End-Users with Increased Incomes	N/A	5,875	25,497	481,831	16,401	619,184	13,392	N/A	N/A	N/A	57,621
Hub Rank	N/A	7	4	2	5	1	6	N/A	N/A	N/A	3
Program Rank	N/A	15	11	2	13	1	14	N/A	N/A	N/A	8
Hectares of Land Under Improved Management Practices	N/A	783	1,956	26,799	28	696,255	259	N/A	N/A	N/A	46
Hub Rank	N/A	4	3	2	7	1	5	N/A	N/A	N/A	6
Program Rank	N/A	14	12	9	20	1	16	N/A	N/A	N/A	19
Number of End-Users Using WE4F-Supported Financing Mechanisms	N/A	3,645	4,704	43,674	1,364	3,632	4,886	N/A	N/A	N/A	731
Hub Rank	N/A	4	3	1	6	5	2	N/A	N/A	N/A	7
Program Rank	N/A	12	10	4	15	13	9	N/A	N/A	N/A	16
Investment Mobilized by Country of Incorporation	$1,313,000 USD*	N/A	$130,004 USD	$141,946,008 USD	$288,269 USD	$400,000 USD	N/A	N/A	$3,564,800 USD*	N/A	$315,131 USD
Hub Rank	3	N/A	7	1	6	4	N/A	N/A	2	N/A	5
Program Rank	9	N/A	15	1	14	12	N/A	N/A	5	N/A	13

The "Investment Mobilized by Country of Incorporation" results for Australia and Singapore are due to ATEC Biodigesters being incorporated in Australia and Agros (previously known as Agrosolar) being incorporated in Singapore.



ADAPTIVE SYMBIOTIC TECHNOLOGIES (AST)

Countries of operation: India
Monitors: Biodiversity
Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In India, warmer temperatures, drought and poor water quality are causing decreased crop yields and crop values. This can be disastrous for farming communities whose subsistence depends on healthy crop income to support their families.

Innovator's provided solution:

Adaptive Symbiotic Technologies discovered a symbiotic fungus that lives naturally -+inside plants that thrive in severe conditions. The fungi increase the plants stress tolerance to some very difficult growing conditions. Based on this symbiotic relationship the innovator started producing a natural fungal seed and plant treatment called BioEnsure to help growers' combat abiotic stress in their crops. When sprayed onto seeds or leaves it can help crops adapt to water-related stress, and crops require up to 50% less water.

Barriers faced by innovator in reaching end-users:

Part of AST's strategy is to work with more women end-users, but to accomplish this, they needed to recruit and train women in remote villages to treat seeds for farmers. Additionally, to expand into a successful business, the innovator needed to demonstrate that their technology could result in productive agriculture on marginal lands and under climate stress.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MARKETING & SALES	Supported innovator develop a marketing and sales strategy to sell through institutional partners and outreach channels.	In-house TA Tetra Tech Cost: $8,000 USD	Increased their outreach and sales to end-users.
PR & COMMS	Video preparation training and execution.	In-house TA Tetra Tech Cost: $8,000 USD	
LEGAL SERVICES	Support for registration in India to sell BioEnsure.	External TA Third Eye Digital Legal and Business Services Cost: $17,667 USD	Helped the innovator in understanding about the registration process, the ultimately decided not to follow the recommended registration process and instead opted to follow a state-based process.

Impact achieved:

2,137 end-users
17% women & 52% BoP

805 hectares under improved practices

353 end-users with increased incomes
11% women & 100% BoP

$2.3 million USD in sales

4 jobs created
10% of all employees are women

AGROS (ORIGINALLY AGROSOLAR)

Countries of operation: Cambodia, Myanmar, and Indonesia
Monitors: Water
Grant amount: $88,750 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $1.4 million USD

Challenge faced by end-users:

Southeast Asia is facing major food and energy challenges. Food production needs to double by 2050 while agriculture contributes 30% of greenhouse gas emissions and soils are degrading. Fuel and fertilizer prices have increased by 40% and 60%, respectively, leaving farmers behind with a huge financial burden. Farmers also don't have access to the technology, services, and financing required to double their yields and become more resilient to climate change.

Innovator's provided solution:

Their flagship solar pumps are co-designed with farmers in the field, and bundled with advisory services on improving water management for higher yields, and flexible financing linked to their cash flows and payback periods. Agros calculates payback periods in terms of how much fuel they spend, calculate, and forecast their cash income over the next one or two years. Their pumps are embedded with Internet of Things so they can track performance, alerting when a pump will potentially breakdown and measuring how much a pump is being used.

Barriers faced by innovator in reaching end-users:

As Agros grew within Southeast Asia, they were continuously looking to improve their sales pipeline, with the goal of developing a more effective model for engaging potential customers as well as their sales teams to be more gender inclusive, better reflecting those involved in farming. Following the coup in Myanmar, the company pivoted to exploring other less risky countries for continued growth and engagement. As with most innovators looking to grow in terms of staff head count and geographic reach, Agros needed to pursue financing to unlock growth opportunities.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MARKETING & SALES	Digital marketing action plan	In-house TA Tetra Tech Cost: $5,571 USD	Strategic plan for digital marketing with gender lens integration focus on existing Facebook and website was developed.
INVESTMENT READINESS	Pre-launch transaction advisory	In-house TA CrossBoundary Cost: $11,142 USD	Strengthened the company's readiness to attract and secure investment by refining the financial model to meet investment standards.
INVESTMENT READINESS	Pre-launch transaction advisory	In-house TA CrossBoundary Cost: $16,713	Fundraised Amount 1: $800,000 USD Fundraised amount 2: $270,000 USD
MARKET RESEARCH	Secondary market research for Vietnam, Indonesia and Bangladesh	In-house TA Tetra Tech Cost: $5,571 USD	Launched operations in Indonesia.
GENDER INTEGRATION	Gender action plan for recruitment of community marketers and a gender action plan for inclusive recruitment.	In-house TA Tetra Tech Cost: $16,713 USD	Mainstreamed gender lens in the recruitment process for officers at Agrosolar's headquarters and for marketing staff in the field.

Impact achieved:

15,000 end-users
8% women & 100% BoP
2,900 end-users using EUF

72,000 tons food produced

48.6 million kWh saved

$3.5 million USD investment raised
100% private funds

91 jobs created
19% of all employees are women

7,700 hectares under improved practices

13,000 tons of CO2e saved

$5.3 million USD in sales

10,000 end-users with increased incomes
14% women & 57% BoP

21.1 million liters of water saved

AQYSTA

Countries of operation: India, Malawi, Nepal, Indonesia, Kenya
Monitors: Water
Grant amount: $311,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $322,000 USD

Challenge faced by end-users:

Making farming profitable for smallholder farmers is one of the agricultural challenges faced by the countries in which aQysta operates. This is due to various factors from a lack of reliable and cost-effective irrigation systems to an unavailability of accurate agricultural knowledge.

Innovator's provided solution:

Sells their water-powered pump, the aQysta Barsha Pump, through regular channels as well as the Enabling Access to Sustainable Irrigation with Pay per Harvest (EASI-Pay) model. In this combination model, hydro-powered pumps are provided to marginal farmers, along with agriculture extension services, critical agri-inputs, and market access for their harvests. Farmers pay for the product and service through a proportion of the harvest they reap from using the pump and services.

Barriers faced by innovator in reaching end-users:

When faced with lockdowns during the COVID-19 pandemic, aQysta in India had difficulty connecting with, and building a pipeline of, potential customers. In the years, following as aQysta joined the S/SEA Hub, the innovator's barriers to growth required a focus on strategy – where to expand operations, how to improve internal management, and the facilitation of investment to fund their expansion.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Value chain analysis and expansion strategy.	In-house TA Tetra Tech Cost: $58,566 USD	Successfully expanded to the select area in India and new geographies in Nepal through a context-specific expansion strategy defining priority crops, partnerships, payment mechanisms, and farmer capacity-building.
	Support aQysta's expansion in both Nepal and India.	In-house TA Tetra Tech Cost: $58,566 USD	Identified and pursued partnership to strengthen the market access for their produce.
ORG CAPACITY DEVELOPMENT	Conducted needs diagnostic survey and workshop and provided customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Identified critical gaps across HR systems including culture, recruitment and onboarding, and compensation and prioritized targeted support aligned with its scale-up strategy.
	Provision of a human resources strategy, organizational design, career progression framework, and compensation strategy.	External TA Sagana GmbH Cost: $15,000 USD	Improved talent retention and execution capacity through structured HR strategy, career pathways, and compensation systems.
INVESTMENT READINESS	Pre-launch transaction advisory.	In-house TA CrossBoundary Cost: $78,088 USD	Fundraised amount: $ 600,000 USD

Impact achieved:

22,000 end-users
57% women & 80% BoP
4,700 end-users using EUF

451 tons food produced

243,000 kWh saved

$600,000 USD investment raised
100% private funds

31 jobs created
30% of all employees are women

164 hectares under improved practices

576 tons of CO2e saved

$1.1 million USD in sales

6,000 end-users with increased incomes
47% women & 75% BoP

25.4 million liters of water saved

ATEC BIODIGESTERS

Countries of operation: Bangladesh, Cambodia
Grant amount: $80,000 USD
Co-funding provided by innovator: $2.6 million USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Traditional cooking methods create multiple health and livelihood issues for families. Harmful smokes from cooking with said wood are estimated to kill over 107,000 Bangladeshi per year. Additionally, Bangladeshi women spend 150 hours per year collecting wood and four hours per day cooking, cleaning pots, and clearing the ashes from wood fuel. Those inefficient daily tasks place a huge burden on the economic situation of the household. Traditional cooking methods also translate into environmental degradation, as wood collection for cooking puts a lot of pressure on forestry resources. Deforestation also increases soil degradation, which is already negatively affecting the country, with an estimated 62% of soil being classified as chemically deteriorated.

Innovator's provided solution:

Utilized human-centered design to create a biodigester system that matches the needs of rural farming families by requiring a limited about of waste (two livestock or 5 kilograms of green waste) to produce enough gas for daily cooking needs); is flood challenging flood resistant up to 1.8 meters; does not crack in high groundwater; can be commercially distributed through retail channels and by households looking to sell it as an asset. ATEC's biodigester has an expected lifespan of 25 years and the innovator offers a pay-as-you-go financing model. In addition to the biogas produced by the system, the by-product bio-slurry is an organic fertilizer that reduces the amount of water needed for food production.

Barriers faced by innovator in reaching end-users:

ATEC faced difficulties in accessing the Government of Bangladesh subsidy programs after it signed a Memorandum of Understanding with IDCOL, a national subsidy scheme aimed at accelerating Access to Clean Energy (ACE) through the sale and distribution of 20,000 biodigesters by 2025. It needed to improve internal operations, pursue private investment, and customer reach in order to expand while not relying on inaccessible programs.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Partnership mapping and partner identification.	In-house TA Tetra Tech Cost: $7,533 USD	Developed a partnership categorization and selection framework and identified 13 prospective partner organizations, establishing a structured pipeline to accelerate strategic partnership development.
BUSINESS DEVELOPMENT	Evaluation framework with explanation on different parameters and their weightage on making the final decision on choosing a vendor for call centers.	In-house TA Tetra Tech Cost: $5,022 USD	Developed and delivered a vendor evaluation framework to strengthen ATEC's capacity to make informed call center procurement decisions, and identified five qualified Cambodia- based vendors capable of providing the recommended services.
INVESTMENT READINESS	Pre-launch transaction advisory.	In-house TA CrossBoundary Cost: $15,065 USD	Enhanced investment readiness by conducting a detailed analysis of the capital structure, refining the business plan, pitch deck, and financial model, and developing a targeted investor outreach list. This support enabled proactive investor engagement through structured outreach and meetings with potential new investors.
INVESTMENT READINESS	Post-launch transaction advisory for Series A equity raise.	In-house TA CrossBoundary Cost: $15,066 USD	Fundraised amount: $ 1,313,000 USD
GENDER INTEGRATION	Digital marketing plan with a gender lens.	In-house TA Tetra Tech Cost: $7,533 USD	Developed and implemented an online marketing strategy and pilot campaign, resulting in an increase in female sales leads in Bangladesh and enabling the innovator to achieve its sales targets.

Impact achieved:

8,100 end-users
43% women & 71% BoP
7,000 end-users using EUF

8,600 tons food produced

8.1 million kWh saved

$1.3 million USD investment raised
100% private funds

33 jobs created
33% of all employees are women

486 hectares under improved practices

6,000 tons of CO2e saved

$396,000 USD in sales

7,100 end-users with increased incomes
43% women & 64% BoP

CENTRE FOR AQUATIC LIVELIHOOD - JALJEEVIKA

Countries of operation: India
Monitors: Water
Grant amount: $44,000 USD
Nexus link: Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $14,295 USD

Challenge faced by end-users:

Despite contributing 70% of fish production in India, freshwater fish farmers are unable to meet livelihood and income security due to the unavailability of timely advisory support and lack of access to quality input, credit and market linkages. Most farmers involved in fish farming are looking for diverse income sources due to smaller land sizes limiting their ability to generate higher incomes. There are a limited number of supply chain-driven startups are working in this aquaculture sector and only a few non-governmental organizations have attempted aquatic livelihood sectoral programs. The fish production takes 8 to 10 months, which reduces learning opportunities for farmers and takes at least 2 to 3 –production cycles for farmers to adopt better management practices. The fishery and aquaculture sector lack access to capital and financial support from the startup sector. Financing for a large infrastructure project in fisheries is available, but funding for small and marginal farmers generally is not. Additionally, fishing is identified as a male activity. Despite women playing a crucial role in the fishing industry, their participation is neither socially acknowledged nor economically remunerated.

Innovator's provided solution:

Jaljeevika's AquaECO model facilitates and strengthens the aquaculture value chain and creates a data-driven decision-making support system in the fisheries and aquaculture sector that uses the Internet of Things sensor-based pond advisory services and sets up networks of micro-entrepreneurs. This model maintains water quality, as fish farming requires the timely cleaning of water bodies and reduces ammonia and nitrogen generation from the pond. Jaljeevika mostly works with smallholder fishermen/women in local ecosystems – so there is minimal impact on biodiversity compared to the commercial fishing industry. The model develops microservices to build an ecosystem that will facilitate value chain development across the aquatic livelihood sector; and also promotes multiple uses of ponds for fish production, azolla, trapa, lotus farming, and makhana. Integrated fish farming allows water from fishing to be reused for agricultural purposes.

Barriers faced by innovator in reaching end-users:

Needed financial and technical support to test their model before bringing it to new markets and new clients, and expand out of the states in which they previously operated. As a less mature company pursing environmental, social, and governance (ESG)-focused growth, they needed to understand the indicator requirements and processes that would enable their partnership and participation in other global and national programs.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ORG CAPACITY DEVELOPMENT	Organizational capacity development needs diagnostic survey, workshop, and customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Helped Jaljeevika to identify critical gaps across HR systems and prioritized strengthening recruitment, onboarding, and performance management to align organizational capacity with its scale-up objectives.
INVESTMENT READINESS	Supported the development of financial cashflows and projections and a pitch deck, and creating an advisory board.	In-house TA Tetra Tech Cost: $27,620 USD	Fundraised amount: $ 1,142,995 USD
BUSINESS DEVELOPMENT	Market research and legal support for expansion to Nepal.	External TA Ennovent Nepal Private Limited Cost: $9,115 USD	Enabled Jaljeevika to make an evidence-based expansion decision, informed by market research and legal and regulatory analysis, resulting in a strategic decision to defer expansion into Nepal.

Impact achieved:

15,900 end-users
11% women & 97% BoP
392 end-users using EUF

4,500 tons food produced

51,000 kWh saved

$786,000 USD investment raised
3.1% public funds

3 jobs created
26% of all employees are women

200 tons of food processed

42 tons of CO2e saved

$708,000 USD in sales

203 end-users with increased incomes

17.2 million liters of water saved

CLARO ENERGY

Countries of operation: India
Monitors: Water
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Rural, off-grid farmers in India rely on diesel generators to pump water for irrigating crops. Diesel fuel is expensive and increases the cost of production for smallholder farmers.

Innovator's provided solution:

Credited with engineering India's first modern battery less solar irrigation system in 2011, Claro Energy designs, installs, and maintains distributed solar irrigation systems in farmers' fields. Typical systems range from 2 kilowatt to 5 kilowatt, can be AC- or DC-powered, and work well with surface or submersible pump operations. The developed design is women-friendly because it uses lightweight solar panels, allowing for the system to easily be carried around as a backpack. Women farmers don't have to rely on manual labor needed to lift heavy diesel pumps; instead, they can carry the irrigation systems themselves. Implemented in a pay-as-you-go business model, Claro facilitates mass adoption among women farmers.

Barriers faced by innovator in reaching end-users:

Claro Energy faced multiple structural barriers to enabling end-user financing for decentralized renewable energy solutions. These include high upfront capital costs for solar technologies, limited availability of affordable and tailored financing products for rural and low-income farmers, and the constrained ability of claro to extend direct credit. In response to these challenges, Claro adapted its business model by extending pay-as-you-go end-user financing for smallholder farmers and leveraging the PM-KUSUM government subsidy scheme to expand access to a broader farmer segment.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Strategy to track and analyze impact indicators commonly assessed by impact investors.	In-house TA Tetra Tech Cost: $7,533 USD	Claro Energy strengthened its impact reporting by establishing credible impact measurement systems, aligning with global impact investor/donor requirements.
INVESTMENT READINESS	Pre-launch transaction advisory.	In-house TA CrossBoundary Cost: $15,065 USD	Helped them with valuation, financial model and term-sheet assessment.
	Provision of a matching capital grant.	In-house TA Tetra Tech Cost: $15,065 USD	Unlocked the at-risk capital of $600,000 USD
PRODUCT DEVELOPMENT	Website redesign and chatbot integration.	External TA Grip Technologies Cost: $14,550 USD	Improved service efficiency and customer responsiveness, reduced reliance on manual support through automation, and strengthened lead generation via customized, real-time interactions contributing to lower operating costs and increased sales.

Impact achieved:

- **262,000 end-users**
  43% women & 100% BoP
- **531,000 tons food produced**
- **374 million kWh saved**
- **$14.2 million USD in sales**
- **43 jobs created**
  16% of all employees are women
- **9,500 hectares under improved practices**
- **104,000 tons of CO2e saved**
- **87,000 end-users with increased incomes**
  48% women & 99.9% BoP

COOLCROP TECHNOLOGIES

Countries of operation: India

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

For end-users looking to enhance energy and operationally efficient post-harvest management of horticulture crops in India, several key issues emerge: limited access to beneficial technologies, a lack of capital, and difficulties in reaching profitable markets.

Innovator's provided solution:

CoolCrop is investing in a comprehensive and localized education and training program aimed at increasing technology literacy among smallholder farmers. This program showcases the benefits of low-cost, cold storage while providing hands-on training and support to ensure farmers to effectively integrate these tools into their daily practices. The company is also fostering community engagement initiatives, collaborating closely with local farming communities to understand their specific needs and preferences.

Barriers faced by innovator in reaching end-users:

CoolCrop faced both systemic and operation barriers that constrain them to scale. High upfront costs and the absence of tailored, last-mile financing costs limits the adoption among farmers and Farmer Producer Organizations, despite clear income-enhancing potential. Low awareness, risk aversion, and limited exposure to storage-led market strategies further reduce demand, particularly in price-volatile and resource-constrained contexts. These challenges are compounded by operational constraints, including the need for reliable after-sales service, energy resilience, and sufficient utilization across seasons to ensure economic viability. Most critically, fragmented value chains and weak market linkages limit farmers' ability to translate storage access into sustained income gains.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and provided recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Strengthened organizational effectiveness by identifying critical gaps across HR systems, including culture, recruitment and onboarding, and compensation, and prioritizing a pay-for-performance approach to improve talent attraction, retention, and performance management.
BUSINESS DEVELOPMENT	Developed market linkage strategies for its cooling-as-a-service business model.	External TA Bhartiya Samruddhi Investments and Consulting Services (BASIX) Cost: $10,410 USD	Improved cold storage utilization and value realization through diversified crops, off-season usage, and integration of near-farm processing, while reducing seasonality risks. Additionally, it also helped creating a prioritized pipeline of partners to enable rapid operationalization.

Impact achieved:

- **100 end-users**
  92% BoP
- **$33,000 USD in sales**

COVESTRO

Countries of operation: Cambodia, Laos, Thailand, and Vietnam

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Missing technical or process knowledge leaves farmers' produce as low-quality dried products. Without knowledge transfer, they only use the solar dryer dome to reduce the moisture in their raw product, rather than further involve it in processing and diversify their products, adding more value and later profit into their agro-products. Solar dryer domes remain new and unpopular to rural populations, due to a lack of information dissemination on media, and in their networks.

Innovator's provided solution:

Promotes solar dryer dome as the farmer–friendly innovation for post–harvest production. The product is cost-effective as it reduces or eliminates fossil fuel costs, has no operating and maintenance costs, and replacement costs remain low. The dryer dome also reduces food losses in post-harvest, enhances food quality by preserving flavor, color, and up to 95% of nutritional value, and provides technical options for further processing and adding value to food by using solar energy. Covestro consolidated and transferred knowledge to farmers, to produce high–value processed products for markets as well as support the pilots of different business and management models.

Barriers faced by innovator in reaching end-users:

Covestro faced financing constraints as solar dryer domes are not accepted by Vietnamese banks as loan collateral, limiting access to finance for both distributors and end-users. The technology also requires direct sales, ongoing maintenance, standard operating procedure and technology coaching, as well as market linkage support for solar-dried products. These requirements increase transportation, after-sales service, capacity-building, and business development costs, thereby constraining geographic expansion. Limited market awareness of the benefits of solar dryer domes and low adoption rates reduce overall demand and hinder nationwide scaling. Covestro also faces growing competition from lower-cost, lower-quality solar dryer domes imported from China, as well as from conventional electric drying technologies.

Technical assistances received and outcomes:

BoP IMPACT

Received assistance	Category & Cost	Outcome
End-user financing for solar dome dryers in Vietnam.	External TA Applied Cross-Cutting Empowerment Strategies and Solutions (ACCESS ADVISORY) Cost: $15,825 USD	Developed a strategic financing report outlining tailored financing products and a long-term roadmap to improve Covestro's access to loans and subsidies, strengthening its financial sustainability and growth prospects. Additionally, developed a knowledge product analyzing key barriers faced by financial institutions and presenting decision factors and practical models to expand lending to smallholder farmers for SDD solutions, contributing to improved access to finance in the sector.

Impact achieved:

28,000 end-users
51% women & 100% BoP

1,200 tons of food processed

191,000 kWh saved

106 tons of CO2e saved

DEVIDAYAL SOLAR

Countries of operation: India
Monitors: Water
Grant amount: $97,900 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Due to inadequate storage, India's fisheries and agriculture sector face high spoilage rates of fish and food produce. Reaching up to 20% of the products, this leads to significant post-harvest losses and economic instability caused by fluctuating incomes. Additionally, the recurring cost of ice and transport exceeds $3 USD per day and waiting in line for ice made by diesel generators further exacerbates the problem. Poor storage not only reduces food availability, impacting nutrition and food security but also limits market access and economic opportunities. Women, who are typically involved in the retailing business, face security risks and labor demands for ice procurement. The use of diesel generators and ice production contributes to environmental degradation. Unstable incomes hinder investments in essential services, and power outages disrupt preservation efforts, affecting resilience to climate impacts.

Innovator's provided solution:

Addresses fisheries and agricultural challenges with innovative solutions, including the installation of a Devidayal Solar 200L freezer set at -5°C and an Internet of Things-based remote monitoring system for data collection. Devidayal Solar's comprehensive approach also includes subsidized solar-powered storage, flexible payment plans, and community-wide awareness campaigns through local influencers. Training programs equip vulnerable groups with new skills, creating additional income opportunities.

Barriers faced by innovator in reaching end-users:

Devidayal Solar faced systemic constraints in scaling access among low-income households, smallholder farmers, and micro-enterprises. High upfront capital requirements, coupled with limited availability of affordable and appropriately structured end-user financing, suppress effective demand among credit-constrained populations. These challenges are compounded by fragmented last-mile markets, weak service infrastructure, and the absence of targeted subsidy support for decentralized solar innovations, all of which increase delivery risk and cost.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Go-to-market strategy to evaluate the best approaches for entering new market segments and expanding its outreach.	External TA KPMG Cost: $12,156 USD	Enabled Devidayal Solar to make data-driven decisions on priority expansion areas in Uttar Pradesh, reducing market entry risk and strengthening the strategic foundation for scalable growth.

Impact achieved:

- **468 end-users** *27% women & 81% BoP*
- **4 tons of food processed**
- **35,000 kWh saved**
- **$83,000 USD in sales**
- **10 jobs created** *6% of all employees are women*
- **130,000 liters of water saved**
- **27 tons of CO2e saved**

DVARA E-REGISTRY

Countries of operation: India
Grant amount: $115,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Indian smallholder farmers face challenges in creating water and energy savings within agriculture. One significant hurdle is traditional rice cultivation methods, which contributes to global methane gas emissions and requires substantial water usage, worsening climate change effects.

Innovator's provided solution:

Dvara E-Registry implements innovative solutions to promote sustainable agricultural practices and mitigate potential negative impacts. Central to their approach is the promotion of direct seeded rice, which saves 4.5 million liters of water per hectare compared to traditional methods. Dvara E-Registry advocates for zero/minimum tillage practices to reduce energy consumption and enhance soil moisture retention. To address weed management challenges associated with the adoption of direct seeded rice, Dvara E-Registry emphasizes integrated weed management strategies, including eco-friendly herbicides, mechanical weeding techniques, and crop rotation.

Barriers faced by innovator in reaching end-users:

Dvara-E-Registry faced key challenges in reaching out its end-users which lack formal land documentation, verifiable credit histories, and digital literacy, limiting their ability to engage with data-driven financial services. Digitalizing fragmented land records and standardizing farm-level data across diverse geographies remains operationally intensive, requiring field facilitation and trusted intermediaries such as Farmer Producer Organizations. Additionally, low awareness of digital agri-finance solutions and limited confidence among financial institutions in alternative data models constrain both demand and scale.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	A mapping of type of partners/customers – startups, non-governmental organizations, and other similar organizations involved in or has a potential to be part of biochar carbon credit projects.	In-house TA Tetra Tech Cost: $20,213 USD	Developed a comprehensive understanding of the biochar market landscape, key stakeholders, and viable partnership pathways, thereby optimizing resource allocation and minimizing strategic risk.
GENDER INTEGRATION	Investment readiness and 2X certification to strengthens its position for blended finance and ESG funding.	External TA Equilo Cost: $16,000 USD (Group TA)	Awarded 2X Certification at the Advanced Level. This award strengthened Dvara's credibility by validating gender-smart business practices, improving visibility and confidence among impact investors and donors.
INVESTMENT READINESS	Pre-transaction advisory.	In-house TA Tetra Tech Cost: $30,319 USD	Improved Dvara's investment readiness through a targeted investor landscape and strengthened term sheet alignment.
PRODUCT DEVELOPMENT	Utilizing Khet Score framework for pricing and managing crop insurance-linked risks.	External TA RJ Actuaries and Consultants (RJAC) Cost: $11,191 USD	Enabled Dvara to apply its proprietary Khet Score framework for data-driven assessment and management of crop-insurance–linked risks.

Impact achieved:

- **13,000 end-users** *2% women & 93% BoP*
- **54,000 tons food produced**
- **10,000 tons of CO2e saved**
- **$281,000 USD in sales**
- **81 jobs created** *12% of all employees are women*
- **59.9 million liters of water saved**

EGREEN TECHNOLOGY

Countries of operation: Vietnam
Grant amount: $125,000 USD
Co-funding provided by innovator: $2.2 million USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

About 70% of commercial Vietnamese livestock farms have invested in backup diesel generators but are unwilling to invest in biogas generators. This is due to: a lack of quality management in the market; a poor reputation caused by several low-quality, poor performing biogas projects over the past decade; and most farm owners having very little access to information about biogas generation and having limited access to financial services. Additionally, the Vietnamese government has not issued any policies that support biogas investments, so farm owners are hesitant to make any biogas investment decisions. For the 41.8% of Vietnamese pig farmers who do have biogas systems, almost all biogas plants produced huge amounts of biogas well above the demand for cooking. As a result, biogas was either flared or released into the atmosphere without burning, increasing greenhouse gas emissions.

Innovator's provided solution:

Promotes the efficient use of biogas through biogas digesters and biogas purifying products applied to biogas generators. The company provides the product through direct sales and an energy service company model. Biogas purifiers promoted by the company improve efficiency and reduce the operating costs for households and pig farms using biogas. Through the energy service company model, Egreen invests in whole biogas genset and then offers electricity at competitive prices to the farm owners. Through the direct sales, farms invest in the biogas genset while Egreen plays the role of technology service provider by installing the biogas generator, and providing training to the farm on operations and maintenance. Additionally, Egreen offers strong climate impacts with the innovation by helping filter impurities and bringing down the carbon footprint of existing commercial pig farms.

Barriers faced by innovator in reaching end-users:

Egreen faced several challenges in scaling its biogas purifier and biogas power generator business and reaching their end-users. The development of a distributor network for biogas purifiers is constrained by strong price competition from lower-cost Chinese products. In addition, Egreen's ability to implement large-scale awareness and marketing campaigns is limited, as its biogas purifiers and biogas power generators have not yet been formally registered for copyright and intellectual property protection. Access to finance remains a further constraint, as neither Egreen nor its end-users cannot use the high-value biogas power generators as collateral for bank loans in Vietnam. Expansion into additional provinces across Vietnam is also challenged by high transportation and maintenance costs associated with the installation and servicing of biogas power generators.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MARKETING & SALES	Biogas purifier marketing research and strategy development.	In-house TA Tetra Tech Cost: $11,770 USD	Developed market research–driven marketing strategy and action plan for biogas purifiers with Egreen, leading to an expanded distributor network and increased adoption among women end-users.
INVESTMENT READINESS	Reviewed and assessed financial documents for investor disclosure and revised the financial forecast. Financial statements management training.	In-house TA CrossBoundary Cost: $19,616 USD	Strengthened investment readiness by ensuring accuracy, credibility, and alignment with investor expectations. Enhanced Egreen's investment readiness by building the capacity of three key staff in financial statement management. Following the training, the team was able to prepare and standardize financial statements and develop more realistic financial projections, strengthening internal financial management and improving the company's credibility with potential investors.
INVESTMENT READINESS	Conducted investor outreach.	In-house TA Tetra Tech Cost: $19,616 USD	Strengthened the company's investment readiness and capital-raising outcomes through a comprehensive capital structure analysis (including financial ratios and debt capacity), refinement of the business plan, pitch deck, and financial model, and development of a targeted investor outreach pipeline. This support enabled structured investor engagement, facilitated term sheet analysis and due diligence processes, and advanced the company toward successful transaction closure.
ORG. CAPACITY DEVELOPMENT	Human resource management capacity building. Development of performance evaluation and competency framework and code of conduct and corporate culture.	External TA Sagana GmbH Cost: $12,330 USD	Strengthened organizational performance and accountability by developing and institutionalizing a performance evaluation and competency framework, including coaching for key management staff. Rolled out code and framework through company-wide training to align all Egreen staff with shared values and performance standards.
ENVIRONMENTAL	Development of a final ESG reporting system for Cambodia and Vietnam, orientation workshop slides, and dissemination workshop slides.	In-house TA Tetra Tech Cost: $7,847 USD	Developed ESG reports and strengthened the company's internal ESG management capacity by coaching the ESG staff identify and review key indicators, establish data collection and documentation systems, and set measurable ESG targets, enhancing compliance, transparency, and performance tracking.

Impact achieved:

- **86,000 end-users**
  45% women & 71% BoP
  731 end-users using EUF
- **386,000 tons food produced**
- **137 million kWh saved**
- **$144,000 USD investment raised**
  100% private funds
- **112 jobs created**
  15% of all employees are women
- **57,000 end-users with increased incomes**
  44% women & 62% BoP
- **830,000 tons of CO2e saved**
- **$555,000 USD in sales**

ENTREPRENEURS DU MONDE (PTEAH BAITONG)

Countries of operation: Cambodia
Monitors: Water
Grant amount: $4,812 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

In rural areas, 30% of Cambodian households are not connected to the electrical grid and use gasoline pumps, polluting and increasing greenhouse gas emissions. Additionally, 41% of farms in Cambodia are less than 1 hectare. These are among the most vulnerable and underserved families in Cambodia because solar-powered irrigation companies do not target this customer segment. Solar-powered water pumps are not a popular technology, so very few farmers have access to this renewable energy irrigation solution. In addition to the lack of access to affordable solar-powered irrigation systems, these farmers also lack affordable financing. Due to Cambodia's centralized credit system between banks, farmers have a limited amount and number of loans they can hold at any given time.

Innovator's provided solution:

Offers solar powered irrigation systems and additional financing support – including a pay-as-you-go model for base of the pyramid farmers. They are the sole distributor of the solar water pump, SF2, and control Cambodia's distribution in partnership with the hardware manufacturer, Futurepump. In addition, they distribute, finance, and provide after-sales services.

Barriers faced by innovator in reaching end-users:

The company faced increasing competition from low-cost, high-flow pumps imported from China. Supply-side constraints persist, as the innovator's pump supplier has experienced stock shortages and delivery delays. The innovator currently sells its solar water pumps directly to smallholder farmers, without leveraging retail resellers or sales partners, which limits market penetration. While all field-level staff are recruited from local communities, the company lacks a lean and scalable field sales and financing structure, restricting outreach to remote farming areas, where 41% of farms in Cambodia are smaller than one hectare. In addition, portfolio quality remains a critical risk: low customer repayment rates could undermine overall business viability and expansion plans. Finally, adoption of solar water pumps in Cambodia remains limited, with low awareness and uptake among smallholder farmers, further constraining market growth.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PR & COMMS	Developed communication collaterals for their business brochure and Facebook ads.	In-house TA Tetra Tech Cost: $3,021 USD	Strengthened the company's marketing effectiveness and outreach by developing targeted Facebook ads and tailored messaging in both English and local languages to engage men and women farmers.

Impact achieved:

- **414 end-users**
  18% women & 100% BoP
- **325 tons food produced**
- **144,000 kWh saved**
- **$120,000 USD investment raised**
  100% private funds
- **1.2 million liters of water saved**
- **118 hectares under improved practices**
- **37 tons of CO2e saved**
- **$72,000 USD in sales**
- **124 end-users with increased incomes**
  17% women & 100% BoP

EQUILIBRIUM (FORMERLY CLIMEVERSE)

Countries of operation: India
Monitors: Water and Biodiversity
Grant amount: $115,000 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Transitioning farmers to low-emissions agriculture is essential for fighting climate change and ensuring sustainable food production. One major hurdle is the upfront capital needed to set up the necessary infrastructure. This includes subsidizing equipment, and inputs and hiring additional labor. Farmers with small land holdings (1 to 2 hectares) face even greater challenges due to erratic weather patterns like unpredictable rainfall and cyclones, which make it hard to achieve consistent crop yields. Many smallholder farmers also find it difficult to learn and implement new agricultural techniques because of limited education. Switching to regenerative agriculture requires a significant behavior change and can initially result in lower yields, causing concerns about both short- and long-term benefits.

Innovator's provided solution:

Equilibrium has developed a comprehensive carbon finance-enabled approach that incentivizes smallholder farmers to transition from chemical-intensive practices to regenerative agriculture. This includes access to finance, subsidies for essential equipment and inputs, and capacity building to educate farmers about climate-smart practices. This approach also promotes the adoption of two water-saving rice cultivation techniques: 1) direct-seeded rice and 2) alternate wetting and drying.

Barriers faced by innovator in reaching end-users:

Equilibrium faced several interlinked barriers in reaching end-users, particularly smallholder farmers and rural communities, while implementing high-integrity, nature-based carbon removal solutions. These include challenges in translating complex carbon finance and long-term outcome-based incentive structures into tangible and easily understood benefits at the user level; affordability constraints and risk aversion among farmers due to delayed carbon revenue flows; dependence on local intermediaries with varying outreach, technical, and monitoring capacities; and limited field-level infrastructure for sustained engagement, data collection, and performance tracking. In addition, low awareness of carbon markets and climate co-benefits, coupled with the need to align interventions with existing livelihood priorities and government schemes, can slow adoption and constrain scale.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
INVESTMENT READINESS	Structuring blended finance vehicles to effectively pitch to investors and commercial businesses.	External TA Vericap Cost: $16,860 USD	Improved Equilibrium's investment readiness and bankability leading to stronger investor confidence and diversified, de-risked capital mobilization.

Impact achieved:

9,400 end-users
5% women & 97% BoP
1,121 end-users using EUF

213 million liters of water saved

4,500 tons of CO2e saved

$199,000 USD in sales

31 jobs created
23% of all employees are women

FARMCONNECT ASIA

Countries of operation: Thailand, Cambodia
Monitors: Water
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The agricultural sector is crucial to Thailand's economic growth, but farmers face challenges in accessing necessary resources and technologies. The situation may worsen due to the impacts of climate change, which may result in a decline in productivity and income. Moreover, traditional farming methods can lead to more human error and high production costs in farm management. While new innovations are available, the initial setup costs of advanced irrigation systems make it difficult for farmers to adopt these solutions. Widespread adoption among diverse agricultural groups, including cooperative members and young farmers, remains a challenge for achieving optimal resource sharing and collaboration.

Innovator's provided solution:

To address these challenges, FarmConnect Asia offers a comprehensive solution for precision agriculture that includes an Internet of Things controller sensor system and high-efficiency irrigation equipment designed to be affordable and effective for smallholder farmers. This provides farmers with insights for informed decision-making and results in a reduction of up to 10% of water consumption. FarmConnect Asia's Internet of Things system is also equipped with a controller, soil sensors, a weather station, irrigation equipment (drip/mini sprinkler), a visual analysis platform, and communication equipment. The system can be monitored and automated through farmers' smartphones to support precision agriculture and crop management. The real-time data analytics platforms allow farmers to monitor crop conditions remotely and make timely adjustments to their management practices. The innovation is suitable for various crops, especially durian, melons, and vegetables. FarmConnect Asia also helps farmers access innovation by facilitating loan processes and partnership with local banks such as Agriculture and Agricultural Co-operatives (BAAC) and the Government Savings Bank (GSB).

Barriers faced by innovator in reaching end-users:

FarmConnect Asia plans to expand its operations within Thailand and Cambodia but faced several operational and institutional barriers. Key challenges include strengthening marketing efforts, expanding and professionalizing the distributor network, improving customer service quality, increasing demonstration sites, and scaling sales and marketing teams. As the user base grows, system performance constraints have emerged, with slow data upload, download, and processing during peak periods, which delays onboarding of new users. The current user interface also lacks user-friendliness, limiting customer acquisition. In addition, the company must carefully manage cloud infrastructure costs to ensure operational efficiency and financial sustainability. Broader institutional challenges include securing impact investment, accessing loans, strengthening monitoring and results evaluation systems, enhancing communication materials, refining organizational structure and management systems, and recruiting qualified staff to support expansion.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PRODUCT DEVELOPMENT	Analysis plan on the current software system, implementation of changes to the application's features with a pilot, and an evaluation report that documents all the changes based on the pilot.	External TA Beehive Company Limited Cost: $11,500 USD	Enhanced product usability and technical scalability by developing bilingual (English and Thai) user interface wireframes based on diagnostic assessment findings, improving alignment with user needs.

Impact achieved:

536 end-users
52% women & 89% BoP

$46,000 USD in sales

FIRST CONSOLIDATED COOPERATIVE ALONG TANON SEABOARDS (FCCT)

Countries of operation: Philippines
Monitors: Water and Biodiversity
Grant amount: $200,000 USD
Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In the Philippines, there is an increasing amount of food and solid waste, especially in households. While technology exists in the Philippines to solve this issue – and it was originally received with enthusiasm – there are several challenges facing wide-scale adoption. Complex composting is a lengthy process, which includes a long maturation period, and, when coupled with a lack of a stable market, hinders the technology's ability to scale as well as become sustainable. Moreover, meeting the diverse needs of end-users, including women, youth, and the elderly, while maintaining their motivation is difficult.

Innovator's provided solution:

FCCT has simplified the composting process with improved technology and better farmer training, making it easier and more efficient. They are also working with partners and using grants to create strong market connections for the compost.

Barriers faced by innovator in reaching end-users:

In order to reach new end-users and revitalize FCCT's composting project, the innovator needed to mature their operations (e.g., new business plans and management) and develop a more recognizable brand.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	A business plan for expansion of Takakura compost sales.	In-house TA Tetra Tech Cost: $39,546 USD	Strengthened business model and sales management was reviewed and improved based on stakeholders and field surveys.
MARKETING & SALES	Training the company to reorganize the sales data through pivot tables.	In-house TA Tetra Tech Cost: $16,948 USD	Strengthened FCCT's data management and reporting capacity by training and coaching key staff to use Pivot Tables for accurate sales data entry and automated report generation, enabling more timely, data-driven sales analysis and decision-making.
	A comprehensive go-to-market strategy for Takakura compost.	External TA Luntiang Republika Ecofarms Corporation Cost: $11,980 USD	Developed actionable market intelligence through a comprehensive market research plan and report, and translated the findings into a results-oriented marketing strategy with a detailed action plan, equipping FCCT with a clear roadmap to strengthen market positioning and drive revenue growth.

Impact achieved:

2,900 end-users
53% women & 92% BoP

570,000 tons food produced

2.9 million liters of water saved

$13,000 USD in sales

9 jobs created
52% of all employees are women

GHAM POWER

Countries of operation: Nepal
Monitors: Water
Grant amount: $129,750 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $38,406 USD

Challenge faced by end-users:

Agriculture employs almost three quarters of Nepal's population and contributes around one-third to the national GDP. However, the agriculture sector relies predominantly traditional practices and has average yields of major crops that are 20-40% less than neighboring India and China. Less than 5% of smallholder farmers have access to on-demand irrigation and most lack the knowledge of modern and commercial farming. Government attempts to promote solar irrigation and modernize agriculture are primarily subsidy driven, lacking adequate participation of private sector and financing institutions.

Innovator's provided solution:

Integrated service for rural smallholder farmers in Nepal. Collectively called "Yield Improvement in a Box," the service combines reliable irrigation with affordable and easy financing, a digital ecosystem to enable data-driven project development, and customized agri-advisory for each farmer. Gham Power also makes irrigation accessible and affordable to rural smallholder farmers by providing them with solar water pumps through a network of local partners and agents and with help from their digital platform – Off Grid Bazaar. This platform uses farmers' data to customize and design optimally-sized solar water pumps with agri-sensors suited to their farm requirements as well as recommend crops. It also displays farmers' agricultural, financial, and demographic data which are reviewed as investment opportunities by local microfinance institutions and cooperatives. The microfinance partners provide collateral-free, easy financing for the systems.

Barriers faced by innovator in reaching end-users:

Gham Power faced market, financing, and policy alignment constraints that limit last-mile adoption of distributed solar solutions in rural Nepal. Demand remains suppressed due to low awareness of long-term economic benefits, high dependence on subsidies, and affordability barriers among smallholder farmers. A key constraint is limited access to suitable financing. Existing microfinance institution products do not align with farmers' seasonal cash flows or the capital intensity of solar water pumps, making upfront investment difficult despite strong long-term returns. Additionally, although the Government of Nepal provides subsidies for Solar Water Pumps, Gham Power's pump models differ from government-approved specifications, reducing farmers' eligibility for subsidy support and limiting competitiveness in a subsidy-driven market.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Framework for selection on financing partners and list of potential microfinance partners.	In-house TA Tetra Tech Cost: $32,579 USD	Helped them build partnerships with organizations operating in the ecosystem and reach more customers.
BoP IMPACT	Microfinance partnership structuring.	External TA Applied Cross-Cutting Empowerment Strategies and Solutions (ACCESS ADVISORY) Cost: $24,342 USD	Assisted Gham Power in working with three financial partners to develop and modify loan products for smallholder farmers to purchase solar water pumps.
ORG CAPACITY DEVELOPMENT	Organizational capacity needs diagnostic survey, workshop, and customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Helped them to improve on compensation and employee retention.
INVESTMENT READINESS	Pre-launch transaction advisory.	In-house TA CrossBoundary Cost: $48,868 USD	Fundraised amount: $8,295 USD

Impact achieved:

- **10,000 end-users**
  21% women & 100% BoP
  316 end-users using EUF
- **1,200 tons food produced**
- **98,000 kWh saved**
- **$8,295 USD investment raised**
  100% private funds
- **8 jobs created**
  23% of all employees are women
- **155 hectares under improved practices**
- **326 tons of CO2e saved**
- **$494,000 USD in sales**
- **4,300 end-users with increased incomes**
  20% women & 100% BoP
- **15.2 million liters of water saved**

HUMAN VENTURES

Countries of operation: India
Grant amount: $97,642 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In India, marginalized farmers often struggle with limited resources such as small landholdings, inadequate water supply, insufficient financial means, and a lack of connection to markets in which to sell their produce. Many of the farmers come from socio-economically disadvantaged backgrounds, which makes it difficult for them to adopt modern agricultural practices. Additionally, the excessive reliance on chemical fertilizers and mono-cropping has degraded soil health, further hindering productivity. Women farmers, in particular, face unique obstacles, including a lack of access to assets and formal credit, which limits their ability to generate income and improve their socio-economic status.

Innovator's provided solution:

To tackle these issues, Human Ventures creates a strong ecosystem that includes access to credit, high-quality farming inputs, expert guidance, and connections to markets. Their main focus is on crop diversification and climate-smart agriculture, which helps improve soil health and reduces the need for chemical fertilizers and pesticides. They have also created a new template to finance farmers with challenging credit scores. Through this innovation, marginalized farmers can experience an increase in income.

Barriers faced by innovator in reaching end-users:

Human Ventures faced barriers in reaching end users primarily due to last-mile delivery challenges in rural areas, limited access to affordable capital for scaling, and the need for sustained trust-building with small and marginal farmers. Additional constraints such as low digital literacy, fragmented market linkages, and regulatory and infrastructure gaps further slow adoption and expansion of its solutions.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
INVESTMENT READINESS	Developed a high-quality investor ready presentation package and prepared a robust and transparent financial model.	External TA Cfosme Corporate Services Private Limited Cost: $5,500 USD	Strengthened investment readiness by improvement of pitch deck and financial model to actively engage and pitch to potential investors.
	Updated business model framework with clear revenue streams, cost drivers, and scale pathway.	In-house TA Tetra Tech Cost: $42,904 USD	Established a targeted investor pipeline and initiated active pitching and engagement, advancing fundraising efforts—while transaction closure remains in progress.

Impact achieved:

- **5,500 end-users**
  60% women & 100% BoP
- **15.5 million liters of water saved**
- **72,000 kWh saved**
- **$23,000 USD in sales**

HUSK POWER

Countries of operation: India, Nigeria, Tanzania

Nexus link: Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Rural, off-grid communities in India, Nigeria, and Tanzania that rely on solar PV systems are limited in their hours of agricultural operations and access to electricity. Diesel generators and battery back-ups are expensive to operate, so operations are limited to a single shift.

Innovator's provided solution:

Builds, owns, operates, and manages a hybrid solution that combines a biomass gasification system with a solar photovoltaic system. Husk Power System's solution allows access to electricity in rural, off-grid communities in India, Nigeria, and Tanzania and extends the hours available for agricultural operations. The biomass plant uses a proprietary downdraft gasification technology that converts abundant agricultural residue, such as maize cobs, rice husks, coffee husks, and cotton stalks, into electricity. The system powers a mini-grid that produces electricity for residential, as well as agricultural, commercial, institutional, and industrial, needs. The electricity is distributed to rural households and micro-enterprises through a mini-grid system, providing a better quality, cheaper way to meet their needs for energy.

Barriers faced by innovator in reaching end-users:

Husk Power faced major challenges in reaching out its customers for its food products as they operate in highly competitive, price-sensitive markets where differentiation is difficult, and consumer trust must be built through quality assurance, certification, and branding. Distribution bottlenecks, working capital constraints, and retailer margin pressures further limit growth.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
INVESTMENT READINESS	Ancillary advisory services	In-house TA CrossBoundary Cost: $30,000 USD	Fundraised amount 1: $4,071,047 USD Fundraised amount 2: $103,000,000 USD
PR & COMMS	Designing marketing materials and build brand recognition of Husk turmeric, begal gram and mustard oil.	In-house TA Tetra Tech Cost: $15,000 USD	Strengthened brand positioning of agricultural products through nutrition-focused messaging and ethical sourcing narratives that spotlight women farmers, resulting in increased customer trust, stronger market differentiation, and enhanced competitive advantage.
MARKET RESEARCH	Identification of a basket of agricultural crops that could be processed at Husk's processing centers.	External TA Arete Advisors Cost: $30,400 USD	Enabled them to select four out of 14 crops and complete a detailed financial and operational analysis.
MARKETING & SALES	Development of a sales strategy to increase sales and customer engagement.	External TA Sattva Media and Consulting Cost: $5,580 USD	Improved sales performance and customer engagement resulting in expanded customer reach, higher revenue realization, and stronger adoption of the products.

Impact achieved:

673 end-users
3% women & 66% BoP

413 jobs created
2.8% of all employees are women

103 tons of food processed

$113.8 million USD investment raised
100% private funds

HUSK VENTURES

Countries of operation: Cambodia
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Cambodia, farmers face challenges with rice husk. They either burn it, use it as fuel, or let it decompose, which creates greenhouse gasses. At the same time, other small farmers lose this resource, which accounts for 20% of their rice production. To cultivate the crop, farmers rely on increasingly-expensive chemical fertilizers and pesticides while common practices like deep plowing, not rotating crops, and using too many chemicals further exacerbate the depletion of soil health. These challenges make farmers more vulnerable to climate change, putting their livelihoods at risk.

Innovator's provided solution:

Pioneers the commercialization of granulated carbon-based fertilizers that are powered by renewable energy. Through long-term off-take agreements with rice mills and pyrolysis technology (a process where organic materials are exposed to high temperatures and no oxygen is present) they convert husk into biochar and thermal energy. In terms of distribution, products reach farmers through partnerships with distributors and agricultural cooperatives. Husk Ventures also empowers farmers, building a network to promote soil health practices.

Barriers faced by innovator in reaching end-users:

Husk's expansion strategy requires scaling production capacity of carbon-based fertilizers in Cambodia, supported by investment to develop and register crop-specific products and conduct third-party verified field trials to validate performance. The company faced challenges in strengthening nationwide distribution in Cambodia and Vietnam, including establishing demonstration farms, expanding marketing campaigns, promoting women soil health ambassadors, and growing its Business Development team to increase provincial coverage. Regionally, Husk seeks to boost export sales through strategic partnerships, product registration, and distributor identification in Thailand, Vietnam, and Laos, while engaging agribusinesses committed to decarbonizing supply chains. Limited digital marketing capacity - both internally and among distributors - further constrains outreach and market penetration.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MEL ADVISORY SERVICES	Developed measurement approach of key indicators and provided a methodology and questionnaire for assessment.	In-house TA Tetra Tech Cost: $10,044 USD	Supported their involvement in WE4F activities and ability to report towards their monitoring, evaluation, and learning indicators.
ENVIRONMENTAL	Developed orientation workshop slides, ESG reporting system and action plan, and dissemination workshop slides.	In-house TA Tetra Tech Cost: $30,131 USD	Developed two ESG reports (Cambodia and Vietnam) and strengthened HUSK's internal ESG management capacity by coaching the ESG Manager to identify and review key indicators, establish data collection and documentation systems, and set measurable ESG targets, enhancing compliance, transparency, and performance tracking.
GENDER INTEGRATION	Investment readiness and 2X certification to strengthens its position for blended finance and ESG funding.	External TA Equilo Cost: $16,000 USD (Group TA)	Concluded in January 2026, so results are unknown at this time.

Impact achieved:

- **10,600 end-users** *50% women*
- **36,000 tons food produced**
- **77,000 kWh saved**
- **$5 million USD investment raised** *100% private funds*
- **64.4 million liters of water saved**
- **1,100 tons of CO2e saved**
- **$629,000 USD in sales**

KHMER GREEN CHARCOAL

Countries of operation: Cambodia
Grant amount: $100,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $86,875 USD

Challenge faced by end-users:

Nearly 80% of Cambodians live in rural areas, and 65% rely on agriculture, fisheries, and forestry for their livelihoods. One-fifth of Cambodians are food deprived, which means they eat less than the minimum daily requirement of calories. Furthermore, Cambodia also has a high rate of deforestation rate. Traditional charcoal, which is produced with wood deriving from illegal logging, is still one of the principal sources of energy in urban and rural areas. While nationwide charcoal is used for cooking purposes, in rural areas Cambodian smallholder farmers (mostly women) use it as a heat source for their poultry-raising activities. Unfortunately, the utilization of traditional charcoal causes problems related to safety and health hazards, in addition to the deforestation of thousands of hectares every year, which has a direct negative impact on climate change.

Innovator's provided solution:

Developed a type of clean energy that provides a safe and sustainable alternative to traditional charcoal, while creating new socially-fair jobs for women and base of the pyramid populations. The innovator manufactures, distributes, and sells high-quality char-briquettes that are made of biomass/agricultural residue. Khmer Green Charcoal's customers, mainly women and those belonging to the base of the pyramid, can use it as a clean cooking fuel, as well as a heat source for a more efficient and productive poultry brooding. Farmers put the burning char-briquettes into a clay jar and then place the jar inside the chick/duck cage. The char-briquettes will release their heat in the surrounding environment for about 6-8 hours, ensuring the minimum heat that the chicks and ducks require to survive.

Barriers faced by innovator in reaching end-users:

In order to continue scaling the innovator needed to present a more mature public brand, along with pursue investment to expand their operations. Khmer Green Charcoal was also struggling with gender-based violence and harassment issues while they were part of WE4F, they needed to improve their internal operations to provide employees with a positive work environment and support their domestic situations.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PR & COMMS	Website development for parent company OTAGO to receive interest from stakeholders and investors.	External TA Foundeast Asia Cost: $8,020 USD	Updated their website, which at the time, was out of date at five years old.
	Designed brand style guide and develop templates for marketing collaterals.	In-house TA Tetra Tech Cost: $12,554 USD	Provided the innovator with evergreen content, minimizing level of effort for collateral develop while also standardizing organizational language and collateral templates.
INVESTMENT READINESS	Pre-launch transaction advisory.	In-house TA CrossBoundary Cost: $37,663 USD	Strengthened fundraising readiness by refining the financial model with comprehensive evaluation analysis, developing a targeted pipeline of potential investors, including gender lens investors, and facilitating investor meetings to advance capital mobilization efforts.
GENDER INTEGRATION	Developed a gender action plan and gender inclusive monitoring, evaluation, and learning plan.	In-house TA Tetra Tech Cost: $12,554 USD	Developed an evidence-based report outlining key findings and actionable recommendations to strengthen women's impact in the poultry sector, along with a defined set of ESG indicators to systematically measure and track women's participation and outcomes across the poultry value chain.

Impact achieved:

- **28,000 end-users** *70% women & 81% BoP*
- **36,000 tons food produced**
- **555,000 kWh saved**
- **$10,024 USD investment raised** *100% private funds*
- **2 jobs created** *42% of all employees are women*
- **20,000 end-users with increased incomes** *69% women & 28% BoP*
- **3,700 tons of CO2e saved**
- **$31,000 USD in sales**

KOMODO WATER

Countries of operation: Indonesia
Monitors: Water
Grant amount: $125,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $35,000 USD

Challenge faced by end-users:

In the fishery sector, the availability of ice blocks is necessary. It can help the fisherman keep their catches fresh and worth selling. In several coastal areas – for instance, in Bari Village, East Nusa Tenggara – they do not have any electricity. Fishermen cannot produce ice blocks and so they must go to Labuan Bajo – a 3-hour boat ride away – to buy ice blocks. This is a costly and greenhouse gas-producing trip. The conventional fish storage systems cause the catch to rot. Current fish production and storage system in Bari is unsustainable as the community relies on a pipeline from a previous charity project that has been negatively impacted by land clearing. Water only flows once every two weeks.

Innovator's provided solution:

Provides integrated water management solutions to remote coastal areas including an ice production system to support the fisheries sector in these areas. Komodo Water uses solar water pumps and solar-powered ice block production machines. They sell ice blocks to traditional fishermen who use small conventional boats that need ice to keep the fish fresh and reduce waste. Additionally, the company distributes ice blocks without the use of plastic for packaging.

Barriers faced by innovator in reaching end-users:

Komodo Water faced persistent human resource constraints, particularly in recruiting and retaining qualified personnel willing to work in remote locations. This has resulted in high staff turnover, which disrupts operational continuity, increases recurrent training and onboarding costs, and weakens long-term relationship building with local communities.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
INVESTMENT READINESS	Gap analysis based on existing financial documentation.	In-house TA Tetra Tech	Helped scope the subsequent support on investment readiness.
	Policy templates and revisions required by investors.	In-house TA Tetra Tech	Strengthened the company's investment readiness by finalizing the pitch deck, financial model, and supporting investment documents, enabling immediate and confident engagement with potential investors.
	Review and update of investment materials.	External TA Sevea Co., Ltd. Cost: $9,038 USD	Strengthened the company's investment readiness by developing fundraising strategy, improving financial model and pitch deck, and supporting investment documents, enabling immediate and confident engagement with potential investors.
ORG CAPACITY DEVELOPMENT	Provision of an organizational capacity needs diagnostic survey, workshop, and customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Developed actionable recommendations on employee retention, performance management, and onboarding, establishing a stronger foundation for talent stability and organizational performance.
	Information on, and options for, a remuneration scheme.	In-house TA Tetra Tech Cost: $15,693 USD	Helped the company in recruitment qualifications and process to get a capable finance manager or Chief Financial Officer who can support current operations as well as enable fundraising efforts.
MARKET RESEARCH	Market research to understand customer profiles in Bari for selling of ice blocks.	In-house TA Tetra Tech Cost: $7,846 USD	Expanded to Bari village and developed a partnership with the village agent to sell fresh water and ice blocks. The innovator also signed a partnership agreement with an investor who will support them on the construction of an ice block production unit in Bari village.
ENVIRONMENTAL	Development of an ESG action plan along with indicators and environmental and social management system report for the innovator.	In-house TA Tetra Tech Cost: $15,693 USD	Developed ESG reports and strengthened the company's internal ESG management capacity by coaching the ESG staff to identify and review key indicators, establish data collection and documentation systems, and set measurable ESG targets, enhancing compliance, transparency, and performance tracking.

Impact achieved:

- **18,000 end-users**
  37% women & 99% BoP
- **25,000 tons of food processed**
- **939,000 kWh saved**
- **$301,503 USD investment raised**
  100% private funds
- **70 jobs created**
  52% of all employees are women
- **7.9 million liters of water saved**
- **568 tons of CO2e saved**
- **$18,600 USD in sales**
- **13,900 end-users with increased incomes**
  34% women & 98% BoP

MANDALA AGRIFRESH

Countries of operation: Nepal
Grant amount: $110,000 USD
Co-funding provided by innovator: $89,473 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Agriculture production in Nepal is currently characterized by scattered production pockets, small landholding size, inconsistent production quantity and quality, unreliable supply, and a long and inefficient supply chain. This, coupled with lack of adoption of modern post-harvest management practices and technologies, has resulted in high post-harvest losses. It has been estimated that post- harvest losses in some commodities are as high as 50%.

Innovator's provided solution:

Developed an innovative business model that is based on the proper implementation of modern post-harvest management practices and technology. The innovator invested in the piloting of modular solar cold storage, modified atmosphere packaging, and ozone-based oxidation technology.Mandala Agrifresh has a supply chain of select commodities (kiwi, fresh lime, apples, carrot, indigenous potatoes, orange and avocado), and they work with smallholder farmers, majority of whom are women, to source quality produce. The company supports the farmers with technical extension services related to production, harvesting and post-harvest management, and eventually procures quality produce from the producers at a comparatively higher farmgate price. Mandala Agrifresh also provides post-harvest technology to the farmers to ensure that the quality of the produce is maintained during aggregation, transportation, and storage.

Barriers faced by innovator in reaching end-users:

Mandala Agrifresh faced several barriers in reaching end users, including high post-harvest food losses of 30–40 % due to poor supply chain management and limited adoption of modern post-harvest practices, which reduces the volume of produce that actually reaches markets and consumers. The lack of awareness and technical knowledge among farmers and farmers cooperatives about effective post-harvest technologies limits uptake of solutions like, cold storage, modified atmosphere packaging, constraining geographic reach beyond local areas. Additionally, uneven production quality, fragmented supply chains, and limited market infrastructure make it difficult to scale operations and connect rural smallholders with broader consumer markets, while demand remains concentrated in urban centers such as Kathmandu.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MEL ADVISORY SERVICES	Support on calculation greenhouse gas emissions, water savings, and energy savings.	In-house TA Tetra Tech Cost: $6,905 USD	Improved its donor-facing impact reporting by adopting a standardized framework that improves consistency and credibility.
BUSINESS DEVELOPMENT	Designed standard operating procedures for 12 identified crop value chains and cold storage technologies.	In-house TA Tetra Tech Cost: $13,810 USD	Improved operational efficiency and consistency across 12 crops value chains through standardized operating procedures and optimized use of cold storage technologies, enabling reduced post-harvest losses and improved quality outcomes.
BUSINESS DEVELOPMENT	Marketing and sales plan to help Mandala Agrifresh expand its operations with new traders and government agencies.	In-house TA Tetra Tech Cost: $13,810 USD	Led to strategy changes as well as increased customers and sales. They also established partnerships with academic institutions, government departments, and market partners such as Himalayan College of Agricultural Science & Technology, Rural Municipalities in Palpa and Dolkha, CASA (SWISSCONTACT), Aloi Fintech, and UB Agro farming.
ORG CAPACITY DEVELOPMENT	Organizational capacity needs diagnostic survey, workshop, and customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Strengthened organizational effectiveness through clearer identification of HR system gaps and prioritization of operating principles and onboarding process.
INVESTMENT READINESS	Conducted financial model review and strengthening, investment collateral development, investor mapping and outreach strategy, business model and strategy advisory, and ongoing advisory and coordination.	In-house TA Tetra Tech Cost: $34,525 USD	Improved Mandala's investment and growth readiness by refining its financial and business models, developing robust investment collateral, and enabling targeted investor mapping and outreach.

Impact achieved:

- **13,000 end-users** *48% women & 85% BoP*
- **10,700 tons of food processed**
- **205,000 kWh saved**
- **$132,000 USD in sales**
- **3 jobs created** *50% of all employees are women*
- **4.1 million liters of water saved**
- **142 tons of CO2e saved**
- **3,100 end-users with increased incomes** *47% women & 85% BoP*

MIMOSATEK

Countries of operation: Vietnam
Monitors: Water
Grant amount: $24,584 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The Vietnamese agricultural market is unstable and fragmented. The agricultural value chain involves many layers of middlemen who collect produce from farmers and sell them to buyers. Hence the middlemen take away the profit from the farmers and the buyers. The farmers often sell their produce at low price and the buyers often buy them at high price. In addition, the logistics is costly, and the quality of produce grown by farmers do not meet the required criteria of the buyers.

Innovator's provided solution:

MimosaTEK solves this problem with a three-phase approach. First, they solve the intermediary issue of the supply chain by connecting the farmers to the wholesale buyers; the innovator uses drone and image analysis for crop yield forecast and supply planning. Second, MimosaTEK optimizes the transportation route and the use of appropriate vehicles to collect the produce from farms to their sorting center, and then delivers the produce from our center to different customers' warehouses. Third, the innovator helps the farmers to increase their yield and quality of produce by applying agricultural technology in their farming practice; Internet of Things technology and agronomists help the farmers to improve farming practices and crop yield. The technology helps farmers use water and energy resources more efficiently by telling the farmers how much water should be applied based on the crop demand.

Barriers faced by innovator in reaching end-users:

MimosaTEK faced multiple barriers in expanding access to its solutions among end users, including limited investment and working capital to scale production capacity. The company's new "precision and successful crop" business model requires substantial upfront investment in Internet of Things-enabled fertigation and irrigation systems. However, these systems are not accepted by Vietnamese banks as collateral, restricting both MimosaTEK's and end-users' access to financing. In addition, the technology requires direct sales and ongoing maintenance services provided by MimosaTEK, which constrains geographic expansion due to high transportation and after-sales service costs. Limited market awareness of the benefits of precision irrigation, combined with low adoption rates, further reduces market demand and constrains MimosaTEK's ability to scale its customer base nationwide.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Business model assessment for market linkages and produce sales business model.	In-house TA Tetra Tech Cost: $9,259 USD	Refined the business model canvas with a strengthened focus on market linkages and revenue optimization, creating a clearer pathway to increased produce sales.
ENVIRONMENTAL	Ferti-water drainage waste resume directly at the farm.	External TA Viet Rural Enterprise Development Center (VietED Center) Cost: $10,725 USD	Delivered a technical wastewater analysis report and recommended costed solutions and technologies for on-farm wastewater reuse, supported by a detailed pilot action plan, enabling resource efficiency, cost savings, and improved environmental sustainability.
PRODUCT DEVELOPMENT	Assessment the potential preservation methods and suggestion of technologies/solutions to increase the shelf life of ready to cook vegetables.	In-house TA Tetra Tech Cost: $6,173 USD	Developed a comprehensive presentation outlining viable technologies and processes for preserving ready-to-eat vegetables, and conducted a cost–benefit analysis of selected solutions, enabling informed investment decisions and strengthening the business case for product quality improvement and shelf-life extension.

Impact achieved:

- **1,200 end-users** *10% women & 46% BoP*
- **16,000 tons food produced**
- **216 million liters of water saved**
- **$170,794 USD investment raised** *100% private funds*
- **7 end-users with increased incomes**
- **46 hectares under improved practices**
- **$3.3 million USD in sales**

NEW LEAF DYNAMIC TECHNOLOGIES

Countries of operation: India
Grant amount: $88,750 USD
Co-funding provided by innovator: $17,600 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Small landholder farmers have little to no leverage in the agri-supply chain. They don't have access to reliable and affordable cold storage infrastructure close to their farm that would give them the option to store, pre-cool, or dehydrate their produce. They are compelled to sell their produce in the nearby mandi, which is highly inefficient. Expensive conventional cold storage is inaccessible due to its high cost of electricity and dependence on diesel during electrical outages – 90% of electricity consumption is from cooling and the cost can run as high as $400 per month.

Innovator's provided solution:

Developed GreenCHILL™— an environmentally sustainable refrigeration technology that relies on renewable energy sources like dry crop waste, biogas, biomass pellets, rice husk, biomass pellets and other farm waste. Additionally, it has zero ozone-depleting potential and no global warming potential. Since the current cost of the systems is high, the organization has partnered with Samunnati and other donors to set up a first loss default guarantee to provide farmer producer organizations with the product at 10% interest.

Barriers faced by innovator in reaching end-users:

New Leaf Dynamic Technologies faces persistent barriers in reaching end users due to structural gaps in rural cold-chain infrastructure and high upfront costs that limit refrigeration adoption among smallholder farmers and micro-enterprises. Low awareness and limited technical capacity to fully appreciate the economic and post-harvest benefits of sustainable cooling solutions further slow demand and uptake. Additionally, gaps in financing mechanisms, service delivery models, and market linkages within agricultural value chains constrain the pace and scale of adoption beyond early pilots and institutional partnerships. In response, New Leaf has begun addressing these challenges by introducing end-user financing models supported by first loss default guarantees for Farmer Producer Organizations, facilitating bank loan documentation, and providing post-harvest management training to strengthen end-user capacity and confidence.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PR & COMMS	Design company brochures and flyers.	In-house TA Tetra Tech Cost: $11,142 USD	Enhanced brand visibility and engagement through clear, professional brochures and flyers that effectively convey the New Leaf's value proposition.
PR & COMMS	Graphic design and branding of fundraising and marketing materials.	External TA Asia Society for Social Improvement and Sustainable Transformation Cost: $10,215 USD (Group TA)	Strengthened market positioning and launch readiness for New Leaf's new cold room and milk refrigeration products, enabling effective engagement with investors, customers, and strategic partners across India. Enhanced and standardized marketing collateral improves brand visibility, clearly communicates the value proposition, and supports investor confidence.
PR & COMMS	Website development.	External TA Unlock Impact Ventures Cost: $5,580 USD	Improved website experience and strengthened search engine optimization, enhancing New Leaf's digital visibility, discoverability by target audiences, and effectiveness of online engagement.
ENABLING ENVIRONMENT	Partnership development and introduction.	In-house TA Tetra Tech Cost: $11,142 USD	Developed the partnership which strengthened outreach and engagement with Farmer Producer Organizations in Maharashtra and Uttar Pradesh, expanding market access and deepening presence in key agricultural regions.
INVESTMENT READINESS	Post-launch transaction advisory support.	In-house TA CrossBoundary Cost: $16,713 USD	Improved investor engagement as the technical assistance enabled New Leaf to reach targeted investors and generate active, inbound responses, strengthening prospects for follow-on fundraising.
ORG CAPACITY DEVELOPMENT	Human resources diagnostic and recommendations.	In-house TA Tetra Tech Cost: $16,713 USD	Improved human resources management practices and strengthened the organizational values.

Impact achieved:

64,000 end-users
19% women & 66% BoP
36,000 end-users using EUF

7,400 tons of food processed

$923,000 USD in sales

$1.4 million USD investment raised
100% private funds

27 jobs created
3.6% of all employees are women

36,000 end-users with increased incomes
21% women & 58% BoP

ONERGY

Countries of operation: India
Monitors: Water
Grant amount: $93,750 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $124,000 USD

Challenge faced by end-users:

Smallholder farmers are affected by climate variability, uneven monsoon seasons creating havoc through floods and droughts, inefficient irrigation, low productivity, and undesirable soil quality. Additionally, due to grid lines not extending to their fields, farmers either rely on rain-fed crops or diesel pumps for irrigation. Agricultures uses 90% of India's groundwater, and the 10 million polluting diesel pumps used for irrigation are accelerating climatic impact. While irrigation plays large role in securing farm incomes, the indiscriminate use of irrigation pumps adversely effects India's groundwater situation. Farmers who pursue an alternative to diesel irrigation pumps face financial barriers. The cost of a solar pump is high; many farmers cannot afford it and there are no financing schemes to support them. Moreover, agtech solutions have primarily focused on serving corporations and large/rich farmers, so the technology benefits have not reached the base of the pyramid and smallholder farmers. Solar irrigation has been a technology considered "expensive" and "risky," as well as highly subsidized. This has resulted in a critical challenge in promoting solar irrigation pumps to farmers that "lack the purchasing power".

Innovator's provided solution:

Promotes solar irrigation pumps among smallholder farmers and vulnerable populations, such as women and base of the pyramid farmers. The model provides a combination of (1) a solar pump with drip and sprinkler irrigation systems and (2) a financing model through first loss default guarantee corpus supported by its sister company, SwitchON, (3) water as a service, and (4) a water-user group model. The solar pumps come with a variable frequency drive control and remote monitoring/controlling system for better service support. ONergy has also created portable solar pump structures suited for marginalized farmers. The blended finance helps leverage commercial capital, where farmers get up to 5-year loans on solar pumps. As the innovation is empaneled under different government subsidy schemes, it reduces the payback on the systems from 3 years to 1 year. These subsidies are back-ended, directly reducing the bank loan payable by the farmer, while ONergy gets paid upfront by the bank. ONergy has also created a dedicated corpus for women farmers. Through the water-as-a-service model, a water entrepreneur operates the solar pump and sells water to other farmers on an hourly/daily/seasonal basis to free poor farmers from capex. Additionally, the water user group model works as a joint liability group of smallholder farmers or as a women self-help group that forms facilitate financing and optimum water usage among the group.

Barriers faced by innovator in reaching end-users:

ONergy encounters multiple challenges in reaching end users such as persistent awareness and adoption gaps, as many potential customers lack information about the value, savings, and reliability of off-grid solar technologies, slowing purchase decisions. Financial barriers, including high upfront costs and limited access to consumer financing, further restrict uptake among households and small enterprises, even when long-term savings are evident. Operational challenges such as complex subsidy processes, limited last-mile distribution infrastructure, and fragmented after-sales support networks in smaller towns and remote areas also hinder broad market penetration beyond early adopters and institutional contracts.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MARKET RESEARCH	Expansion plan and partnership formation in the eastern and northeastern states of India.	In-house TA Tetra Tech Cost: $29,424 USD	Expanded their geographical reach and market presence in operations in Assam, Jharkhand and Odisha.
GENDER INTEGRATION	Strategies for approaching women farmers and their integration across ONergy's operations in the key areas of business.	In-house TA Tetra Tech Cost: $29,424 USD	Improved gender integration within the organization and increased adoption of innovation among women end-users.

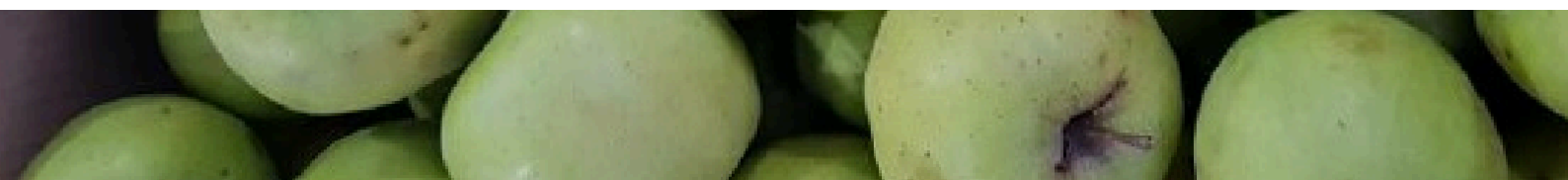
Impact achieved:

- **98,000 end-users**
  24% women & 92% BoP
  667 end-users using EUF
- **30,000 tons food produced**
- **29 million kWh saved**
- **$2.6 million USD in sales**
- **14 jobs created**
  19% of all employees are women
- **13,000 hectares under improved practices**
- **23,000 tons of CO2e saved**
- **98,000 end-users with increased incomes**
  23% women & 92% BoP

OORJA

Countries of operation: India
Monitors: Water
Grant amount: $170,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $228,000 USD



Challenge faced by end-users:

In rural India, activities across the agricultural value chain are powered by expensive and polluting diesel engines. Energy poverty stifles agricultural productivity and farmer income and contributes to the climate emergency. Switching to an alternative energy source is not an option, as around 85% of farmers are small landholders and cannot afford to invest in solar technology.

Innovator's provided solution:

Oorja is a farming-as-a-service company that finances, installs, operates, and maintains decentralized solar energy systems for agricultural use. It sells affordable and reliable irrigation, and agro-processing and refrigeration services to farmers on a pay-per-use basis, without any upfront technology acquisition costs.

Barriers faced by innovator in reaching end-users:

Oorja faced multiple barriers despite removing upfront capital costs through a pay-per-use model, maintaining affordability while ensuring financial viability remained challenging due to high capital and operational expenses. Expansion was further constrained by dependence on blended finance, including grants and impact investments, which affected the pace and consistency of geographic scale-up. Adoption among farmers required sustained community engagement to shift long-standing reliance on diesel-based irrigation and build trust in shared, metered service models. Operational challenges in remote rural locations such as site identification, installation, maintenance, and local capacity building also increased delivery complexity.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Gender action plan for increasing women customers and end-users.	In-house TA Tetra Tech Cost: $16,007 USD	Strengthened women's participation and increased the number of women end users by systematically integrating targeted, gender-responsive strategies into outreach, engagement, and service delivery.
GENDER INTEGRATION	Gender lens integration in farmer advisory services.	In-house TA Tetra Tech Cost: $16,007 USD	This TA improved the inclusivity of farmer advisory services, resulting in increased participation of women farmers.
GENDER INTEGRATION	2X certification for gender lens investment readiness.	External TA Equilo Cost: $16,000 USD (Group TA)	Awarded 2X Certification which strengthened Oorja's credibility by validating gender-smart business practices, improving visibility and confidence among impact investors and donors.
INVESTMENT READINESS	Post-launch transaction advisory and matching capital grant.	In-house TA CrossBoundary Cost: $53,356 USD	Fundraised amount: $461,761 USD
PR & COMMS	Graphic design and branding of fundraising and marketing materials.	In-house TA Tetra Tech Cost: $21,342 USD	Strengthened Oorja's fundraising and marketing effectiveness by producing high-quality materials that clearly communicated the organization's vision and strategy to external stakeholders.

Impact achieved:

- **14,000 end-users** *15% women & 100% BoP*
- **17,000 tons food produced**
- **64,000 kWh saved**
- **$461,000 USD investment raised** *100% private funds*
- **36 jobs created** *9% of all employees are women*
- **811 hectares under improved practices**
- **85 tons of CO2e saved**
- **$110,000 USD in sales**
- **1,400 end-users with increased incomes** *17% women & 100% BoP*
- **19.3 million liters of water saved**

PROMETHEAN POWER SYSTEMS

Countries of operation: India
Monitors: Water
Grant amount: $232,000 USD
Nexus link: Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $452,000 USD

Challenge faced by end-users:

Due to limited power availability in rural villages, the dairy supply chain in India relies heavily on diesel-fueled generators to keep milk cool near the point of production. Diesel fuel is expensive, inefficient, unreliable, and polluting. Farmers in rural areas struggle to supply their surplus milk in an efficient and sustainable manner to formal markets, resulting in a loss of income and opportunity.

Innovator's provided solution:

Provides micro milk chillers as a service by combining (1) thermal storage-based milk chilling technology for areas with limited electricity with (2) village-level refrigeration hubs. These village-level hubs are equipped with small-capacity micro milk chillers, digital milk testing equipment, and direct linkages to dairy processors/buyers to ensure transparency and data-driven decision-making. By including digital milk analyzer equipment at each hub, the milk of every farmer is tested, weighed, and segregated into separate cans and farmers are paid directly into their bank accounts at a transparent rate. The company uses a pay-as-you-go financing option to remove upfront costs for farmers and the thermal-storage refrigerated trucks replace the use of diesel for cooling.

Barriers faced by innovator in reaching end-users:

High upfront costs and limited access to affordable financing constrained uptake among smallholders, and banks and other financial institutions showed limited interest in financing smallholder partners, especially women farmers making last-mile expansion more difficult. The innovator's leasing-based model met resistance from customers preferring asset ownership.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BoP IMPACT	Facilitate access to loans for women dairy farmers.	In-house TA Tetra Tech Cost: $29,126 USD	Enabled partnerships with Women on Wings and introduced to FWWP, Union Bank, NABARD, and IDBI
ORG CAPACITY DEVELOPMENT	Organizational capacity needs diagnostic survey, workshop, and customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Improved recruiting process and performance management.
INVESTMENT READINESS	Pre-launch transaction advisory support.	In-house TA CrossBoundary Cost: $43,689 USD	Developed a comprehensive, investor-ready package, including the pitch deck, financial model, and supporting documentation, enabling immediate, credible engagement with potential investors and accelerating fundraising efforts.
	Post-launch transaction advisory.	In-house TA CrossBoundary Cost: $43,689 USD	Fundraised amount: $718,608 USD
BUSINESS DEVELOPMENT	Assessment of the farmer to business model to identify risks and mitigation strategy.	In-house TA Tetra Tech Cost: $29,126 USD	Developed actionable recommendations for a business-to-farmer-to-business model, providing a scalable pathway to expand market reach, strengthen distribution channels, and accelerate revenue growth.
ENVIRONMENTAL	Carbon credit estimation and registration with VERRA and Gold Standards.	External TA Sculpt Partners Cost: $18,170 USD	Established the foundation for carbon finance by estimating carbon credit potential, developing a project design document, and outlining a structured work plan.

Impact achieved:

14,000 end-users
75% women & 100% BoP
528 end-users using EUF

8,500 tons of food processed

1.6 million kWh saved

$1.2 million USD investment raised
100% private funds

10,000 end-users with increased incomes
75% women & 100% BoP

23,000 tons of CO2e saved

$3.8 million USD in sales

PUMPKIN PLUS

Countries of operation: Bangladesh
Monitors: Water and Biodiversity
Grant amount: $27,200 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

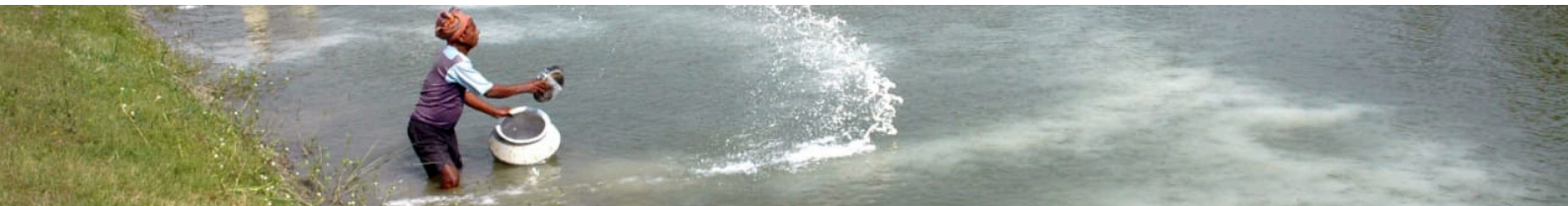
Bangladesh is a deltaic country located within the floodplains of three great rivers: the Ganges, the Brahmaputra, and the Meghna. After each rainy season, large sand islands appear in the main rivers of Northwest Bangladesh. These transitional lands, or char lands are inhabited by people who became landless or were displaced due to river erosion, floods, or other natural disasters. The geographical location makes the area vulnerable to frequent natural disasters, which adversely affects the lives and livelihoods of the people living in these char lands. Women and children are the most vulnerable since in the absence of an alternative livelihood, men often migrate to the cities for employment.

Innovator's provided solution:

Introduced a new growing method called sandbar cropping. An innovative, simple, cost-effective method that transforms silted barren lands created by flooding to large-scale productive fields full of high-demand, high-value crops, and vegetables, with production led by women and youth. Through Pumpkin Plus's "Dealing with the Delta," which uses transitional riverbeds and isolated char lands in the mighty river system in Bangladesh, the innovation demonstrates a widespread adoption in two districts of Northwest Bangladesh.

Barriers faced by innovator in reaching end-users:

Despite its relevance and inclusion in national policy frameworks, expansion has been slower than anticipated due to limited government implementation support. The company faces additional barriers, including constrained access to adequate finance and quality agricultural inputs (such as seeds, plant nutrients, and compost), as well as weak and underdeveloped market systems that limit communities' ability to secure fair prices. Increasingly extreme weather conditions further undermine sandbar cultivation. Moreover, the innovator faces challenges in accessing loans from financial institutions and attracting investment to scale its innovation to outreach more end-users.



Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ENABLING ENVIRONMENT	Mapping of regional and export buyers for the company and facilitation of introductions to suitable partners.	In-house TA Tetra Tech Cost: $4,268 USD	Expanded market access and commercialization opportunities by identifying a pipeline of national and regional import–export buyers, facilitating three buyer engagement meetings, and securing one signed Memorandum of Understanding with a potential buyer.
BUSINESS DEVELOPMENT	Business strategy plan with recommendations to have sustainable operations.	In-house TA Tetra Tech Cost: $4,268 USD	Strengthened long-term business sustainability.
INVESTMENT READINESS	Connected innovator to accelerators and designed a pitch deck.	In-house TA Tetra Tech Cost: $8,537 USD	Facilitated two connection meetings to support growth and partnership opportunities.

Impact achieved:

3,100 end-users
50% women

8,200 tons food produced

297 hectares under improved practices

$18,000 USD in sales

2 jobs created
16% of all employees are women

2,200 end-users with increased incomes
50% women

RECYGLO

Countries of operation: Indonesia, Malaysia, Myanmar, Thailand, Vietnam
Monitors: Biodiversity
Grant amount: $110,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $53,000 USD

Challenge faced by end-users:

The price of food and fertilizer has been increasing more than 50% on average in Southeast Asia and globally. Meanwhile, in Southeast Asia, less than 20% of solid waste is recycled. Solid waste ends up in landfills and waterways, creating environmental problems if it is not properly treated and managed.

Innovator's provided solution:

Offers waste to energy, waste to natural fertilizer, recycling, upcycling and composting solutions, 3PL logistics, data analytics, reporting, certification, accreditation, and carbon offsetting. They use the latest and most cost-efficient consumer technologies to streamline their value chain and, in the food production process, use Internet of Things, machine learning, and artificial intelligence to increase yield and reduce human errors. RecyGlo also targets women entrepreneurs and engages them with women sale agents to help their small- and medium-sized enterprises grow with sustainability products and services in mind. The innovator builds waste-to-energy micro plants for them while it can generate revenue and save cost from mainstream energy grid.

Barriers faced by innovator in reaching end-users:

RecyGlo faced several challenges in reaching its target end-users. Farmer resistance to change remains a key barrier, as many are reluctant to transition from conventional practices—even when trapped in cycles of debt and rising production costs that exceed revenues. Differences in end-user behavior and market dynamics between Thailand and Vietnam further complicate replication and scaling strategies across contexts. As an early-stage agri-tech startup, RecyGlo also encounters talent acquisition constraints, with difficulty attracting and retaining skilled professionals, particularly young talent, to work in the agtech sector. In addition, limited capacity to mobilize equity, debt, and alternative financing instruments poses a significant constraint to business expansion and long-term growth.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MARKET RESEARCH	Primary farmer survey to understand use of organic fertilizers and assess potential market demand.	External TA Custom Asia Co Cost: $18,477 USD	Delivered in-depth organic fertilizer market research reports for Thailand and Vietnam with actionable expansion recommendations, enabling data-driven market entry and growth decisions.
INVESTMENT READINESS	Pre-launch transaction advisory.	In-house TA CrossBoundary Cost: $41,429 USD	Strengthened financial and investment planning by reviewing and refining the financial model, including evaluation analysis, to improve accuracy, viability assessment, and strategic decision-making.
	Support RecyGlo's team with use of appropriate templates and methods for investment collaterals.	In-house TA Tetra Tech Cost: $27,620 USD	Received useful fundraising information for their preparation exercise.

Impact achieved:

- **16,000 end-users** *62% women & 14% BoP*
- **4,000 tons food produced**
- **131,000 kWh saved**
- **$124,000 USD in sales**
- **3,000 end-users with increased incomes** *70% women & 69% BoP*
- **10 hectares under improved practices**
- **169 tons of CO2e saved**
- **5 million liters of water saved**

RURAL DEVELOPMENT ORGANIZATION (RDO) TRUST

Countries of operation: India
Monitors: Biodiversity
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The Indian agricultural sector is facing many challenges, overuse of chemical fertilizers, declining water resources, and the unpredictable impacts of climate change – to name a few. One method of combatting these challenges, waste recycling, faces its own hurtles as organizations move towards adoption by farmers. The main existing challenge is the lack of understanding that waste recycling is a business opportunity where products can be converted into high-demand items.

Innovator's provided solution:

Has a circular economy model that processes two waste streams, fecal sludge and organic solid waste to produce nitrogen-rich co-compost for vegetables and tea cultivation as an effective means for integrated soil fertility management and climate smart agriculture. The use of this co-compost in agriculture improves the soil, enhancing the nutrient value and enabling the soil to retain moisture during dry spells or a reduction in irrigation water use. The entire production process of the co-compost is undertaken by the Women Green Workers. The innovation helps women workers by promoting the production process as a women-led green social enterprise, which is solely owned by them as a business entity.

Barriers faced by innovator in reaching end-users:

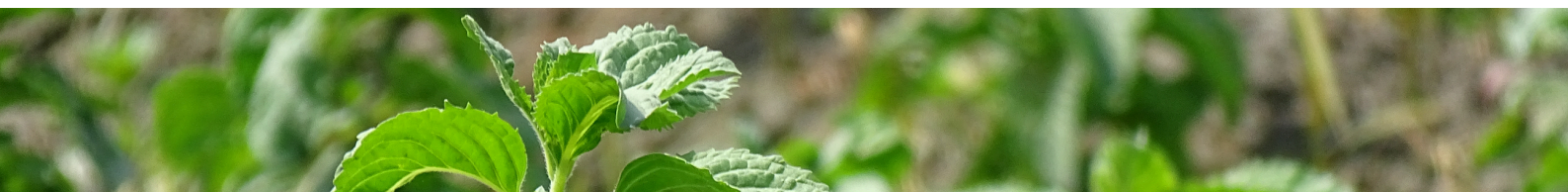
The innovator faced barriers in reaching end users due to the geographic dispersion and remoteness of target communities, which increase logistical complexity and outreach costs. Limited financial and human resources constrain the frequency and depth of community engagement, while socio-cultural factors and low awareness among marginalized and tribal groups require sustained trust-building efforts. Coordination with multiple stakeholders and administrative processes further affects the pace of service delivery and scale-up.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Business plan development for women green workers compost production companies.	In-house TA Tetra Tech Cost: $79,642 USD	Strengthened expansion-readiness organic fertilizer business model, strategically aligned with growth objectives, legal feasibility requirements, and a clearly defined operational and team structure—positioning the company for sustainable scale.
MEL ADVISORY SERVICES	Developed a monitoring and evaluation plan.	In-house TA Tetra Tech Cost: $34,132 USD	Strengthened the innovator's monitoring capacity, enabling more consistent, accurate, and timely donor reporting.
ORG CAPACITY DEVELOPMENT	Organization capacity needs diagnostic survey, workshop, and customized recommendations.	External TA Sagana GmbH Cost: $1,590 USD	Identified major gaps across human resources systems including culture, recruitment and onboarding, and compensation.
GENDER INTEGRATION	Business training women green workers compost production companies.	External TA Sakhi Unique Rural Enterprise Private Limited (SURE Pvt. Ltd.) Cost: $5,600 USD	Improved the business and leadership capacities of green workers compost production companies' staff and management, enabling women green workers to effectively lead, manage, and scale sustainable enterprises.

Impact achieved:

- **20,000 end-users** *63% women*
- **196,000 tons food produced**
- **2.8 million kWh saved**
- **$312,500 USD investment raised** *100% public funds*
- **5,800 end-users with increased incomes** *62% women*
- **2,500 hectares under improved practices**
- **2,500 tons of CO2e saved**
- **121 million liters of water saved**



S4S TECHNOLOGIES

Countries of operation: India
Grant amount: $177,500 USD
Co-funding provided by innovator: $12.6 million USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

India suffers a loss of over 60 million tons of agri-produce in the post-harvest sector. The critical reasons for this loss are a lack of cold storage, processing, and an intermediaries-driven supply chains, resulting in poverty among farmers. Additionally, over 143 million rural women and men farmers in India lack access to employment. They depend on marginal farming and farm labor activities for income, with the earnings mostly going to men and leaving behind women in socio-economic status.

Innovator's provided solution:

The business model of S4S integrates women into the agri-supply chain and converts food losses into processed food. This helps farmers to reduce food loss and save on logistics costs and intermediaries brokerage. S4S Technologies has also created women micro-entrepreneurs in the value chain, who procure agri-produce from smallholder farmers and convert it into value-added processed food using the solar conduction dryer. The solar conduction dryer is an electricity-free, chemical-free, solar-powered food dehydrator that reduces moisture content in agro-produce so that farmers and rural women can preserve their produce for up to one year. The innovator then sells this processed food to fast-moving consumer good companies and the food service industry (restaurants and caterers) to earn its revenue. The supply chain is driven by 100% rural women entrepreneurs with solar-powered food processing setups.

Barriers faced by innovator in reaching end-users:

The innovator's model depends on deploying solar-powered dryers and decentralized processing equipment with women micro-entrepreneurs, but widespread adoption is constrained by access to finance for purchasing or leasing equipment and the need for training and capacity building of rural users to operate and manage the technology effectively. S4S Technologies also faces logistical constraints in sourcing produce from dispersed smallholder farms and aggregating dried outputs for processing and sale, particularly in regions with weak infrastructure, which can slow the onboarding of new entrepreneurs. Additionally, limited awareness among farmers about the value of dehydrated products and the need to establish consistent market linkages with industrial customers also affect the pace of scale.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GHG CAPACITY DEVELOPMENT	Organizational capacity needs diagnostic survey, workshop, customized recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Identified gaps in their human resources systems and started working on improving their ability to attract talent and appropriately compensate them.
INVESTMENT READINESS	Post-launch transaction advisory.	In-house TA CrossBoundary Cost: $111,420 USD	Fundraised $1,142,995 USD
ENVIRONMENTAL	Full spectrum implementation support for accessing carbon markets.	External TA Sculpt Partners Cost: $18,125 USD	Found the support useful but did not register with any carbon standard this year due to their focus on fundraising.
	Development of environmental and social management system manual.	External TA INDUS Environmental Services Cost: $6,250 USD	Innovator became better at identifying, managing, and monitoring their environmental and social risks.

Impact achieved:

- **252,000 end-users** *2% women & 100% BoP*
- **85,000 tons of food processed**
- **74 million kWh saved**
- **$22 million USD investment raised** *100% private funds*
- **15 jobs created** *18% of all employees are women*
- **186,000 end-users with increased incomes** *1.9% women & 100% BoP*
- **36,000 tons of CO2e saved**
- **$33.2 million USD in sales**

SHREENAGAR AGRITECH

Countries of operation: Nepal
Monitors: Water and Biodiversity

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Fish farmers in Nepal continue to rely on traditional farming methods that have been passed down through the generations. Access to innovative services and technologies (i.e., quality fish feed, optimized supply chains, improved farming practices, access to financing and insurance) remains limited for many farmers, hindering their ability to adopt new techniques. For small-scale farmers, the cost of quality fish feed and/or modern equipment may be too expensive. Additionally, the limited infrastructure and transportation networks can prevent product distribution in remote areas. Part of the reason that farmers continue to rely on outdated farming practices is due to a lack of education and awareness about modern farming practices and the availability of new. For farmers who are aware of new technologies and best practices, limited access to financing options and/or credit facilities makes it challenging for farmers to invest in the new solutions.

Innovator's provided solution:

Has several solutions to address these challenges, including low-cost floating fish feed to improve the quality and quantity of feed production. They also developed a low-cost aerator equipped with Internet of Things technology for farm monitoring. To further support farmers, the company is recruiting and training Village Aqua Promoters, a group of young individuals who will serve as local aquaculture resources.

Barriers faced by innovator in reaching end-users:

Shreenagar faced some key challenges that include difficult terrain and weak rural infrastructure in Nepal which increase last-mile distribution costs and limit consistent service delivery to remote smallholders. Farmer adoption of improved practices and formal supply chain models requires continuous extension support, while limited access to affordable finance restricts producers' ability to invest in quality inputs and scale production. Additionally, fragmented farm sizes, cold-chain limitations, and informal market structures complicate aggregation, quality control, and stable market linkages. Expanding branded product penetration beyond urban centers also requires significant investment in distribution and consumer awareness. Internal capacity gaps pose a constraint as staff currently have limited knowledge and skills in climate-smart aquaculture practices, reducing their ability to effectively guide farmers on climate-resilient production techniques.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Market research for projections and formalization of supplier engagement.	External TA Allbeta E.V. Nepal Cost: $9,541 USD	Developed production planning, and connected to new raw materials suppliers.
ORG. CAPACITY DEVELOPMENT	Capacity building on floating fish feed and climate smart aquaculture support.	External TA Shree Kisan Innovation Hub Cost: $7,940 USD	Enhanced Shreenagar's staff capacity to deliver floating fish feed and climate-smart aquaculture training using standardized training-of-trainers and farmer training materials.

Impact achieved:

- **2,400 end-users** *28% women & 62% BoP*
- **1,000 tons food produced**
- **403,000 kWh saved**
- **$485,000 USD in sales**
- **81 jobs created** *25% of all employees are women*
- **11.6 million liters of water saved**

SUMBA SUSTAINABLE SOLUTIONS

Countries of operation: Indonesia
Grant amount: $105,625 USD
Co-funding provided by innovator: $179,259 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Women in rural areas spend many hours each year manually processing of crops, collecting water, washing clothes, collecting firewood and cooking on an open fire. For young women in many cultures around the world, this domestic work and farm labor must be finished before they are able to devote time and energy to education, participate in trainings or community development programs, or develop a micro-enterprise.

Innovator's provided solution:

Provides technology that increases access to electricity, reduces poverty and create decent work for people in rural communities. For the agricultural sector, Sumba Sustainable Solution provides solar power for a range of appliances, including rice mills, corn mills, coconut graters, coffee grinders, water pumps and UV water filters. The solar-powered productive-use centers enable women in rural areas to access labor-saving equipment in their kampung, or village, without upfront investment. The productive use center is managed by a local agent on a lease-purchase agreement with users accessing equipment on a user-pays basis, creating a sustainable business model that enables access to basic infrastructure for the most remote and vulnerable communities.

Barriers faced by innovator in reaching end-users:

Sumba focuses on base of the pyramid end-users with limited access to financial services and limited ability to afford to buy new assets. They needed to develop better marketing materials and communications strategies that would educate target end-users on their innovation model and services as well as mobilize them into usage.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PR & COMMS	Designed a brand style guide and developed templates for marketing collaterals and Canva training.	In-house TA Tetra Tech Cost: $33,151 USD	Improved the current logo and created guidelines for collateral development.
MARKETING & SALES	Developed a BoP- and gender-inclusive marketing strategy.	In-house TA Tetra Tech Cost: $33,151 USD	Integrated gender inclusive marketing strategy and implementation plan.

Impact achieved:

4,900 end-users
47% women & 100% BoP
1,200 end-users using EUF

33 tons of food processed

268 tons of CO2e saved

$59,000 USD in sales

2 jobs created
26% of all employees are women

1,500 end-users with increased incomes
42% women & 100% BoP

TECHNO-HILL ENGINEERING

Countries of operation: Myanmar
Monitors: Water
Grant amount: $81,675 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $69,865 USD

Challenge faced by end-users:

Mini-grid customers in island areas who export fishery products to Thailand must sell their products at the spot market price, which is very low due to the lack of cold storage systems. Additionally, the marine fishing industry relies heavily on the use of fossil fuel. Aqua farmers run diesel generators to operate water pumps that clean all the raw fishery products. Additionally, a lack of relevant infrastructure negatively affects aqua farmers that cannot preserve their catch (lobsters) for longer durations. This is because lobsters obtain oxygen from the seawater in which they live and can only survive out of water for approximately one to two days.

Innovator's provided solution:

Installs solar dryer domes, solar cold storage systems and solar water pumping systems. The solar-powered appliances will allow local entrepreneurs to access services through cleaner sources and replace diesel pumps with solar pumping solutions with automatic sensors to limit water wastage. In addition, Techno-Hill is promoting wastewater treatment methods with an environmental monitoring and mitigation plan in place.

Barriers faced by innovator in reaching end-users:

Techno-Hill faced significant structural and market-related barriers in reaching its target end-users. Ongoing civil conflict severely restricts transportation, limits farmer mobility and safety, and disrupts service delivery by company staff. In addition, strong private-sector monopolies constrain Techno Hill's ability to integrate into existing value chains, limiting opportunities to support farmers in marketing their products after utilizing the company's processing technologies, including solar dryer domes, solar water pumps, and solar cold storage systems. Access to finance presents a further challenge, as the company requires substantial upfront investment in technology and facilities with relatively long payback periods of five to eight years, making it difficult to secure loans or attract investors. To ensure environmental sustainability and customer satisfaction, Techno-Hill must also invest in wastewater treatment for fishery processing; however, customers are generally unwilling to absorb the additional costs, placing further pressure on the company's financial viability.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ENABLING ENVIRONMENT	Partnership development for new buyer identification.	In-house TA Tetra Tech Cost: $51,269 USD	Improved international market access for mung beans by identifying a targeted pipeline of potential import and export partners in Vietnam, India, and Myanmar, and facilitating three strategic partnership meetings in Vietnam and Myanmar to advance trade opportunities and commercial linkages.
BUSINESS DEVELOPMENT	Market research and standard operating procedure development for solar cold storage, dryer and pumps.	External TA Asper Consulting Cost: $28,025 USD	Provided expertise and advice on the standard operating procedure development for solar dryer dome, solar cool storage and solar pumpfor different products such as fish, crabs, lobsters, dried seafood, export markets, certification needs.

Impact achieved:

410 end-users
28% women & 92% BoP

3 tons food produced

16 tons of food processed

$400,000 USD investment raised
100% private funds

5 jobs created
32% of all employees are women

275 end-users with increased incomes
18% women & 64% BoP

$63,000 USD in sales

THE GOAT TRUST

Countries of operation: India
Monitors: Biodiversity
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $25,000 USD

Challenge faced by end-users:

Goats play a key role in food security and income generating activities in India. However, the livestock supply chains are predominantly an informal industry that, due to a lack of knowledge on current best practices, faces high rates of inefficiency and lost hours of productivity due. Most of the revenue generated from the goat diary benefits supply chain intermediaries, not the goat farmers who are left with a low revenue rate. Farmers who wish to grow their business and increase their revenue lack access to the needed financial, technical, and market systems. This is due to the fact that 83% of goats in India belong to landless small-scale farmers in drought prone areas that lack the ability to cope with climate change.

Innovator's provided solution:

Has an aggregative business of support services for profitable goat farming by leveraging remunerative market linkages as well as utilizing partnerships with 100% women-led farmer producer organizations to work on technical innovations (breeding/feed and health), financial innovations (goat bank – leasing of goats, livestock credit card, community-based goat insurance), product innovations (goat milk soap and cosmetics, liquid goat-milk supply chain) and trading innovations (developing live body weight pricing and building digital livestock).

Barriers faced by innovator in reaching end-users:

The Goat Trust faced barriers in reaching end users due to the fragmented and informal nature of the goat value chain, where smallholder producers, particularly women, have limited access to affordable finance, veterinary services, and productivity-enhancing technologies. Geographic dispersion of goat-rearing communities increases the cost and complexity of training, extension, and follow-up support. In addition, the lack of awareness of improved goat rearing practices, organized market opportunities, and institutional support mechanisms among smallholders hinders the adoption and limits the scale and pace of impact.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Gender sensitization training.	In-house TA Tetra Tech Cost: $50,218 USD	Team Leaders chalked out a plan to take more time to understand Pashusakhi level problems and design long term strategy to address the core issues.
PR & COMMS	Presentation of branding strategy and development of marketing collaterals and templates.	In-house TA Tetra Tech Cost: $75,326 USD	Implemented recommendations, updating the Pashubajaar logo and website and implementing a new communication strategy.

Impact achieved:

58,000 end-users
50% women & 100% BoP
5,000 end-users using EUF

463 tons food produced

$449,000 USD in sales

$260,000 USD investment raised
100% private funds

60 jobs created
15% of all employees are women

53,000 end-users with increased incomes
1.9% women & 100% BoP

TUN YAT

Countries of operation: Myanmar
Monitors: Water and Biodiversity

Nexus link: Energy-Food

Challenge faced by end-users:

Despite Myanmar being a country that relies heavily on agriculture, many farmers still cannot afford to buy farming technology they need. Farmers must rent machines or rely on traditional ox-cart equipment. Additionally, many of them harvest crops by hand. This method is not only time consuming, but the production efficiency is also low. Farmers interested in purchasing or renting machinery face challenges when trying to access affordable and reliable farm machinery, as they have to deal with machine brokers and high rental fees.

Innovator's provided solution:

Provides an on-demand farming machinery service – following the "Uber for Tractor" model. The company provides farmers with relatively affordable options of renting farm machinery through matchmaking and a user-friendly online platform and service that helps eliminate the need for farmers to go through unaffordable lenders or rentals. Through Tun Yat's Facebook platform, the company builds a marketplace between tractor owners, tractor dealers and farmers who want to rent and use machinery. Internet of Things sensor devices are attached to the machines to collect more accurate machine utilization data that tractor dealers and banks who lend out for tractor loans want to analyze.

Barriers faced by innovator in reaching end-users:

The company faced challenges in securing specialist talent required for the next phase of growth. As a result, they often end up hiring fresh graduates or managers and staff with limited skills and experience, leading to higher turnover rates.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PRODUCT DEVELOPMENT	Application development for customer bookings and rentals.	External TA Global New Wave Technology Cost: $31,500 USD	Enhanced the marketing of its agricultural equipment.

Impact achieved:

31,000 end-users
9% women & 100% BoP
1,900 end-users using EUF

12,000 end-users with increased incomes
9% women & 100% BoP

11,000 hectares under improved practices

$560,000 USD in sales

5 jobs created
26% of all employees are women

VILLAGE LINK

Countries of operation: Myanmar
Monitors: Water
Grant amount: $150,000 USD

Nexus link: Water-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $244,000 USD

Challenge faced by end-users:

Rice – a water-intensive crop – is currently widely grown in the driest areas of Myanmar, but it is highly dependent on a water supply available through policies and irrigation schemes. Myanmar's dry zone is more suitable for drought-resilient and higher-value crops, but in order to make this change, farmers need climate suitability data to support their decision-making and optimize their profit.

Innovator's provided solution:

The Htwet Toe mobile application provides location-specific crop suitability advice based on their local climatic conditions to support farmers in selecting their area's optimal crop. Their solution increases farmers' climate-based decision-making, resilience to climate change, crop yield, and income. Their advice is based on a large historical data set, an accurate weather forecast, and a seasonal forecast tailored to each location and crop.

Barriers faced by innovator in reaching end-users:

The primary risk to Village Link's expansion and growth strategy was Myanmar's ongoing political instability following the February 2021 coup. Civil unrest, combined with intermittent internet and telecommunications shutdowns, constrained digital outreach and limited user engagement with the innovator's digital app. Travel restrictions further reduced opportunities for field visits and in-person training, slowing the onboarding of new end-users. Additionally, slow policy adaptation delayed the uptake of climate-smart crop recommendations promoted by Village Link. Expanding into the business-to-business segment, including large commercial farmers, traders, banks/financial institutions, big companies and government entities, and investors—remained a relatively new and challenging market for the company, requiring strengthened capacity and strategic positioning.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Business plan to approach private sector business-to-business customers.	In-house TA Tetra Tech Cost: $94,158 USD	Strengthened Village Link's commercial growth strategy by profiling target commercial customers and defining the serviceable market, and translating these insights into a tailored business development plan and client pitch approach, resulting in four signed contracts with private clients and over 10 Memorandums of Understanding with key stakeholders.
PR & COMMS	Adapt, redesign and upgrade marketing collaterals for business-to-business and business-to-customer marketing and conduct basic training courses on communication.	External TA Asia Society for Social Improvement and Sustainable Transformation Cost: $10,215 USD (Group TA)	Enhanced brand positioning and outreach effectiveness and building internal communication capacity.
PRODUCT DEVELOPMENT	Development of artificial intelligence data and model to improve Htwet Toe App.	External TA Viet Rural Enterprise Development Center (VietED Center) Cost: $12,584 USD	Improved Htwet Toe's service innovation by developing an AI data model to improve service delivery, delivering two targeted training courses for Village Link staff, and providing actionable recommendations for integrating artificial intelligence pilots into the existing mobile platform along with a strategic partnership roadmap—strengthening digital capability and long-term scalability.

Impact achieved:

- **885,000 end-users**
  25% women & 52% BoP
- **3.1 million tons food produced**
- **6 billion liters of water saved**
- **$430,000 USD in sales**
- **25 jobs created**
  50% of all employees are women
- **6 billion hectares under improved practices**
- **594,000 end-users with increased incomes**
  23% women & 34% BoP

YAYASAN RUMAH ENERGI

Countries of operation: Indonesia
Grant amount: $93,500 USD
Co-funding provided by innovator: $21,882 USD

Nexus link: Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In Indonesia, there are three pressing concerns: energy, food security, and climate mitigation. According to the Minister of Agriculture, for the past five years the productivity of rice has declined by 1.08%. Furthermore, according to a study done by the R&D Agency of the Agriculture Office, 65% of Indonesia's 5 million hectares of rice fields contain only 2% of organic matter. Productivity in the agricultural sector and soil degradation has been caused by extensive chemical fertilizer application by farmers in Indonesia and lack of access to affordable fertilizer causes productivity to decline in the agricultural sector. Additionally, about 5.3 million farmers do not have access to subsidized fertilizers.

Innovator's provided solution:

Facilitates small and mid-size enterprises and microfinance organizations to install biodigesters for small livestock farmers. The business model enables the development of an ecosystem for a local biogas market from financial arrangements, construction, and operations through to after-sales service support.

Barriers faced by innovator in reaching end-users:

In order to commercialize its bio-slurry as an organic fertilizer, the company requires to get product certification and register their product to get a trading license. The innovator also needed to strengthen its supply chain by improving its relationship with farmers who provide the bio-slurry as well as its potential customers of farmer producer organizations, plantations, and individual farmers.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Business development support across several categories: technology recommendations for drying; cost benefit analysis; marketing plans; and financing plans.	In-house TA Tetra Tech Cost: $29,346 USD	Improved the production practices and relevant technologies on bio slurry process.
ORG. CAPACITY DEVELOPMENT	Provision of human resources diagnostics and recommendations.	External TA Sagana GmbH Cost: $6,000 USD (Group TA)	Improved onboarding process, performance management, and compensation package.
MARKETING & SALES	Marketing strategy to approach institutional clients for sale of bio slurry.	In-house TA Tetra Tech Cost: $29,346 USD	Formed strategic partnerships with organizations on promoting and supplying bio-slurry to its farmers.

Impact achieved:

- **11,000 end-users**
  30% women & 98% BoP
  164 end-users using EUF
- **103 tons food produced**
- **181,000 kWh saved**
- **$3,100 USD in sales**
- **14 jobs created**
  40% of all employees are women
- **28 hectares under improved practices**
- **493 tons of CO2e saved**
- **828 end-users with increased incomes**
  7% women & 73% BoP

ZOOFRESH

Countries of operation: India

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The aquaculture industry in India is worth $18 billion USD and over 16 million people in India are dependent on the sector. While exporters follow basic checks for quality, grades, and supply chain transparency, domestic retailers and distributors have no visibility on product quality and incur massive post-harvest losses and product deterioration due to poor handling, packaging, and malpractices. The challenges faced by domestic retailers has resulted in poor price discovery and minimal quality assurance (of both produce and handling practices), leading to lack of trust in the value chain. This results in unreliable transactions, with product rejections, credit recovery risks, and multiple intermediations being required. It also heavily commoditizes the sector, providing no incentive to farmers to adopt better production practices, or to suppliers to ensure safe handling of produce. This results in 25-40% post-harvest losses and endangers consumer health.

Innovator's provided solution:

Supplies of fresh fish and meat products, managing farm-gate logistics, storage, and distribution in East India through a digital marketplace for aquaculture produce that aggregates all the industry stakeholders (farmers, bulk buyers, traders, distributors) and maximizes the existing capacity of the sector, while solving for price discovery and quality assurance. The innovator also leverages an Internet of Things-enabled, solar powered, live fish value chain management technology to create a zero-water-discharge model. The innovation is a set of products and processes designed to source, transport, store and distribute live freshwater fish in underserved communities for consumption.

Barriers faced by innovator in reaching end-users:

Adoption by micro-entrepreneurs remains constrained due to the required upfront investment. Many micro-entrepreneurs operate with limited capital, making it difficult for them to allocate funds to invest in new equipment or technologies. These combined ecosystem and affordability barriers continue to slow last-mile penetration and sustained adoption.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PRODUCT DEVELOPMENT	Developed a digital marketplace application.	External TA NEOSOFT Private Limited Cost: $6,570 USD	The technical assistance was closed after delivery of the first milestone due to shifting innovator priority. However, also onboarded additional suppliers, strengthened sourcing capacity, and improved product availability.

Impact achieved:

690 end-users
22% women

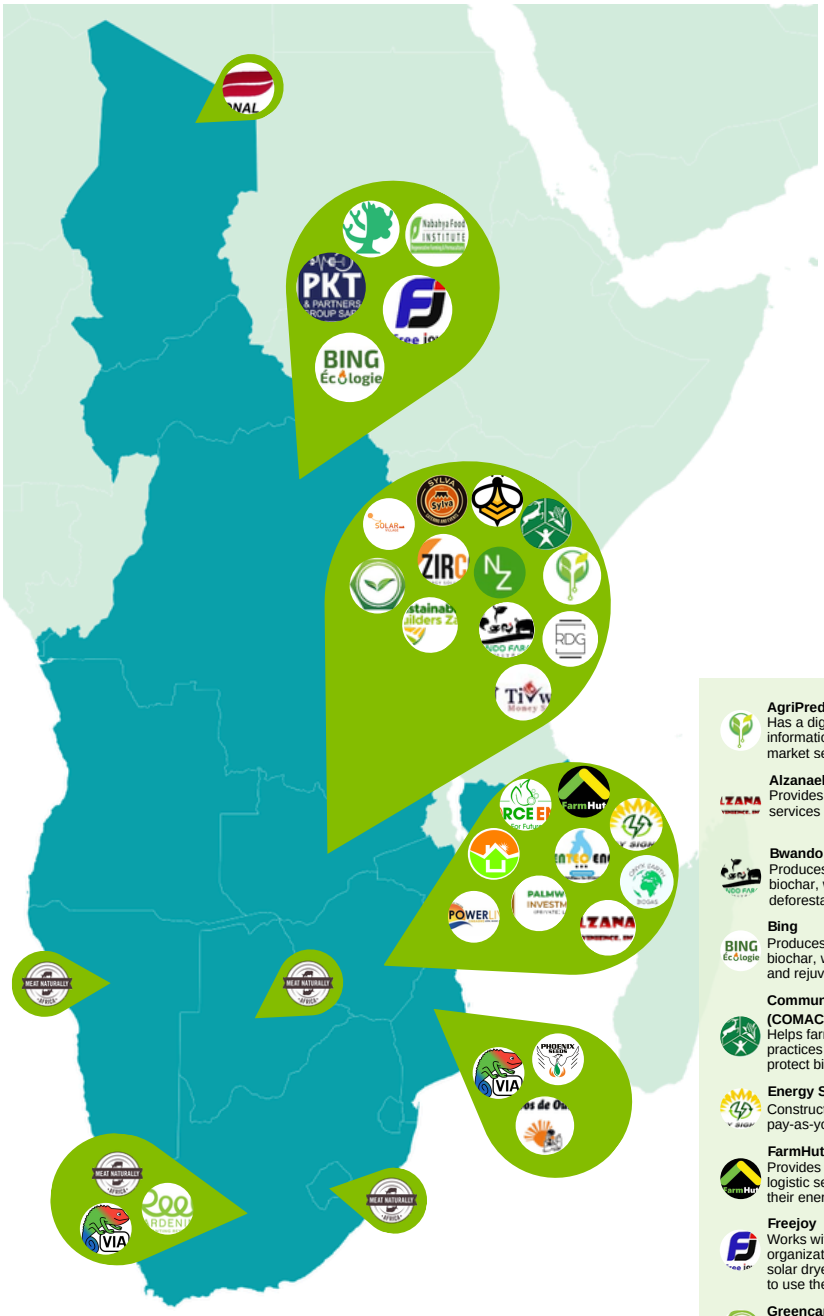
17 jobs created
7% of all employees are women

$4.8 million USD in sales

$1.5 million USD investment raised
100% private funds

Southern and Central Africa Innovator Profiles and Impacts

Map of Innovators Supported by the Southern and Central Africa Regional Innovation Hub



AgriPredict
Has a digital platform that provides weather information, agricultural extension, and market services.

Alzanael Private Limited
Provides farmers with agro-processing services through their solar-powered dryers

Bwando Farms
Produces briquettes from waste and biochar, which helps to reduce deforestation and rejuvenate soil.

Bing
Produces briquettes from waste and biochar, which helps to reduce deforestation and rejuvenate soil

Community Markets for Conservation (COMACO)
Helps farmers use sustainable agricultural practices to produce organic food and protect biodiversity

Energy Signatures
Constructs biogas systems and offers a pay-as-you-go scheme

FarmHut Africa
Provides a digital marketplace and logistic service to farmers, helping reduce their energy consumption

Freejoy
Works with non-governmental organizations to provide end-users with solar dryers for fish and training on how to use the technology

Greencare Eco Solutions
Produces compost-based organic granular fertilizer and liquid organic fertilizer

GreenZim Ventures
Installs biogas digesters at dairy cooperatives' communal milk collection centers

KivuGreen
Provides farmers with weather and extension services through their digital platform

Lanforce Energy
Sells and provides access to biodigesters through a pay-as-you-go system

Meat Naturally
Links smallholder farmers and commercial meat buyers

Nabahya Food Institute
Produces briquettes using loaded biochar-manure-urine to increase agricultural yield and works with smallholder farmer cooperatives, teaching them sustainable tillage practices

Nature's Nectar
Helps farmers use sustainable agricultural practices to produce honey in a manner that protects biodiversity

Ndkay
Provides farmers with solar cold rooms

Onyx Earth
Constructs biogas systems that separate nutrient water from an organic by-product that can be used as fertilizer

Ovos de Ouro
Produces day-old chicks, eggs, layers (chickens that lay eggs), and chicken feed; and they offer extension services and advisory support.

Palmworth Investments
Constructs biogas systems for pig farms; the organic by-product is provided to surrounding communities as an organic fertilizer

Phoenix Seeds Limitada
Provides farmers with drought-tolerant seed varieties to boost agricultural production

PKT and Partners Group
Manufactures charcoal briquettes and organic fertilizer from biodegradable waste

Powerlive
Solar-powered water pump with a pay-as-you-go option

Reel Gardening
Biodegradable seed tape

RDG Collective
Offers pay-as-you-go solar water pumps and micro-irrigation products.

Rural Integrated Engineering
Provides irrigation products and services through their Virtual Irrigation Academy

Solar Village
Sells Micron's highly water-efficient sprayers and the Solar Village Battery Stick to rural smallholder farmers

Sustainable Builders
Focuses on strategies to tackle constraints in the agricultural supply chain through business and agronomic advisory services

Tivwane Money Solutions
Provides financial services to small businesses and small-scale farmers in rural areas in Zambia, with a specific focus on solar water pumps and agricultural inputs.

Zircon Energy Solutions
Sells solar-powered water pumps to base of the pyramid farmers through a pay-as-you-go business model

Zonal
Works with farmers to produce fish by-products that food and nutrition security using sustainable fishing methods

Zonful Energy
Sells affordable solar-powered water pumps using a pay-as-you-go business model

Table of Hub Results by Country

with Ranking of Results within the Context of the Hub and the USAID-Implemented Program

	Chad	Democratic Republic of the Congo (DRC)	Mozambique	South Africa	Zambia	Zimbabwe
Number of End-Users	315,121	364,197	37,400	83,384	713,052	155,525
Hub Rank	3	2	6	5	1	4
Program Rank	6	4	15	10	3	8
Number of Women End-Users	106,864	243,397	22,559	39,258	378,027	65,044
Hub Rank	3	2	6	5	1	4
Program Rank	5	2	12	10	1	8
Number of BoP End-Users	304,617	253,970	9,913	78,894	343,209	23,583
Hub Rank	2	3	6	4	1	5
Program Rank	4	5	16	9	3	14
Tons of Food Produced	N/A	470,351	21,962	25,924	316,096	428,287
Hub Rank	N/A	1	5	4	3	2
Program Rank	N/A	7	17	15	10	8
Tons of Food Processed	33	10,768	N/A	N/A	12	6
Hub Rank	2	1	N/A	N/A	3	4
Program Rank	10	3	N/A	N/A	12	13
Kilowatt-Hours of Energy Saved	214,907	158,811,514	N/A	N/A	3,195,906	5,448,651
Hub Rank	4	1	N/A	N/A	3	2
Program Rank	15	5	N/A	N/A	12	10
Liters Reduced in Water Consumption	N/A	20,607,247	114,669,069	106,099,499	913,149	20,680,750
Hub Rank	N/A	4	1	2	5	3
Program Rank	N/A	13	8	9	18	12

Table of Hub Results by Country

with Ranking of Results within the Context of the Hub and the USAID-Implemented Program

	Chad	Democratic Republic of the Congo (DRC)	Mozambique	South Africa	Zambia	Zimbabwe
Tons of Carbon Dioxide Equivalent (CO2e) Greenhouse Gas Emissions Savings	143	72,713	N/A	261,187	48,403	95,628
Hub Rank	5	3	N/A	1	4	2
Program Rank	17	8	N/A	3	11	6
Number of End-Users with Increased Incomes	43,034	228,293	5,045	21,186	308,811	67,412
Hub Rank	4	2	6	5	1	3
Program Rank	9	4	17	12	3	7
Hectares of Land Under Improved Management Practices	N/A	39,121	6,150	259,855	203,625	50,033
Hub Rank	N/A	4	5	1	2	3
Program Rank	N/A	8	10	2	4	7
Number of End-Users Using WE4F-Supported Financing Mechanisms	N/A	107,739	N/A	N/A	10,256	113,392
Hub Rank	N/A	2	N/A	N/A	3	1
Program Rank	N/A	2	N/A	N/A	7	1
Investment Mobilized by Country of Incorporation	$35,887 USD	$100,000 USD	$934,000 USD	$38,232 USD	$9,333,012 USD	$2,551,214 USD
Hub Rank	6	4	3	5	1	2
Program Rank	18	16	10	17	4	7

AGRIPREDICT

Countries of operation: Zambia
Grant amount: $75,000 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Smallholder farmers in Zambia are increasingly affected by climate variability and unpredictable weather patterns, which disrupt planting schedules, reduce crop productivity, and undermine household incomes. Many farmers still depend on traditional knowledge or receive weather updates too late to guide critical farming decisions. This limits their ability to anticipate droughts, heavy rainfall, or pest outbreaks. Access to timely, localized climate and agronomic information remains especially limited in rural areas, where mobile connectivity and digital literacy are low. Consequently, farmers often lack the information needed for effective land preparation, input management, and harvest planning, leaving them more vulnerable to production risks and climate-related shocks.

Innovator's provided solution:

Developed a user-friendly platform accessible via instant messaging by dialing a short code on any phone and through a mobile application for Android phones. This platform offers tailored services to meet the specific needs of farmers, including weather, market access, early warning system, agro dealers, and extension services. It aims to enhance farmers' productivity while facilitating access to market opportunities.

Barriers faced by innovator in reaching end-users:

In rural farming regions, limited and inconsistent mobile network coverage significantly constrained farmers' ability to access real-time climate and advisory information. This challenge diminished the overall uptake and effective use of digital services among smallholder farmers. Additionally, prevailing gaps in digital literacy required substantial onboarding and user training efforts, which slowed the pace of scaling and increased customer acquisition costs. Moreover, many farmers continued to rely on traditional weather indicators, a practice deeply rooted in local knowledge systems. This reliance reduced early confidence in predictive digital tools, particularly in remote districts where such indigenous forecasting methods remain central to agricultural decision-making. As a result, building trust in digital advisory solutions required sustained engagement and demonstration of their reliability over time.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $10,403 USD	The innovator strengthened its knowledge and capacity to apply gender-lens investment requirements in decision-making, enabling the pursuit of new gender-aligned investment opportunities.
INVESTMENT READINESS	Development of financial models and investor teaser	In-house TA Tetra Tech Cost: $15,604 USD	Strengthened business model and increased awareness of sector-focused investor requirements.

Impact achieved:

No documented impact due to the USAID SWO which prevented the collection of the annual data cycle collection.

ALZANAEL

Countries of operation: Zimbabwe
Monitors: Water
Grant amount: $75,000 USD
Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Zimbabwean farmers face significant challenges when selling fresh produce at major marketplaces. Limited access to cold storage, combined with long travel distances and frequent power outages, prevents them from preserving harvest quality and minimizing post-harvest losses.

Innovator's provided solution:

The solar-powered greenhouse dryer provides an effective solution to reducing post-harvest losses among smallholder farmers. Designed specifically with resource-constrained producers in mind, the service is easily accessible and affordable, enabling even low-income farmers to preserve their harvests. The innovator works primarily with farmers in communal farming areas located far from major markets, areas where fresh produce often spoils before it can be transported and sold. By offering drying and packaging services for fruits, vegetables, and meat products, the innovator helps farmers extend the shelf life of their goods, reduce waste, and improve their overall market prospects.

Barriers faced by innovator in reaching end-users:

Alzanael's primary barriers centered on its limited ability to expand its market footprint, largely due to the absence of halal certification for its dried meat products and packaging that did not meet international standards.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Received a gender readiness assessment and gender lens investment readiness support focused on attracting investment.	In-house TA Tetra Tech Cost: $37,829 USD	Strengthened its knowledge and capacity to apply gender-lens investment requirements in decision-making, enabling the pursuit of new gender-aligned investment opportunities.

Impact achieved:

2,600 end-users
45% women & 37% BoP

$65,000 USD in sales

BING

Countries of operation: Democratic Republic of the Congo
Grant amount: $75,000 USD
Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

According to the Initiative of Central Africa, an estimated 93% of the population in the DRC relies on charcoal and firewood for daily energy needs. The limited availability and accessibility of clean energy alternatives have constrained the country's transition away from these traditional fuels. Environmental pressures are further compounded by the use of chemical fertilizers among smallholder farmers, which contributes to soil degradation and water contamination. Together, these practices exacerbate ecological vulnerability and hinder sustainable land and resource management.

Innovator's provided solution:

The innovator produces briquettes and organic fertilizer from crop residues. Its workforce is composed primarily of women and young people, who collect agricultural waste from a designated waste bank and transport it to the processing facility. The resulting briquettes burn longer and cost approximately 40% less than traditional charcoal, offering both economic and environmental benefits. In addition, the production of biochar contributes to the build-up of organic carbon in the soil and can help reduce nitrous oxide emissions. This process enhances nutrient retention and supports soil regeneration, improving long-term agricultural productivity.

Barriers faced by innovator in reaching end-users:

The innovator operates in the eastern region of the DRC, an area heavily affected by political instability and conflict. Reaching end-users is particularly challenging, as the majority of their clientele consists of smallholder farmers located in red-zone areas with restricted or unsafe access.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $9,457 USD	The innovator enhanced its awareness and understanding of gender-related challenges, including gender-based violence and sexual harassment, which led to the development of policies designed to address the distinct needs of both men and women.
INVESTMENT READINESS	Development of financial model and investor teaser.	In-house TA Tetra Tech Cost: $9,457 USD	Strengthened business model and increased awareness of sector-focused investor requirements.
	Development of financial model and investor teaser.	In-house TA Tetra Tech	
	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA Tetra Tech	Submitted applications to various funding opportunities.
	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Cost: $7,566 USD	
ORG CAPACITY DEVELOPMENT	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.
BUSINESS DEVELOPMENT	Develop investor road map to connect innovators to potential renewable energy investors.	In-house TA Tetra Tech Cost: $7,566 USD	Access to a wide range of best-fit investors to whom the innovator can submit applications for funding.
MEL ADVISORY SERVICES	Rebuilding of monitoring, evaluation, and learning reporting templates and systems following the USAID closure.	In-house TA Tetra Tech Cost: $3,783 USD	This significantly improved the monitoring and reporting process, helping the innovator better track project impact and communicate results to partners and funders.

Impact achieved:

2,000 end-users
55% women & 100% BoP

510 tons of food processed

5.6 million kWh saved

$339,000 USD in sales

1,800 tons of CO2e saved

BWANDO FARM

Countries of operation: Zambia
Monitors: Water
Grant amount: $70,000 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

In Zambia, unpredictable weather patterns, severe climatic conditions, water scarcity, and mounting pressures across the agricultural supply chain expose farmers to significant pricing volatility. Additionally, the widespread use of chemical fertilizers and pesticides is largely driven by the need to meet demand for staple crops such as maize and soybeans. While these inputs can enhance crop yields, their excessive use contributes to greenhouse gas emissions and accelerates nutrient depletion in the soil, undermining long-term soil health and sustainability.

Innovator's provided solution:

The enterprise produces organic fertilizer from pig manure and complements this work by training smallholder farmers in compost production and regenerative land-management practices. These efforts aim to strengthen soil ecosystems, restore biodiversity, and reverse degradation affecting soil, water, and air quality. The adoption of such practices also contributes to improved animal welfare. In addition, Bwando Farms has invested in a meat-processing plant and feed mill designed to more efficiently process safe meats and grains sourced from smallholder farmers. These facilities are expected to reduce transportation needs and lower feed costs, further enhancing the enterprise's operational efficiency and support to local producers.

Barriers faced by innovator in reaching end-users:

Revenue generated from business-to-business sales has not produced substantial income, leading Bwando to conclude that a shift toward a business-to-consumer sales model could significantly improve its revenue stream and promote online product sales. However, long distances between production sites and smallholder customers have increased logistics and transportation costs, particularly for the distribution of organic fertilizer. These challenges are compounded by limited last-mile aggregation mechanisms, which make it difficult to consistently reach dispersed farmers. Additionally, transitioning from a predominantly business-to-business model to a business-to-consumer approach requires new marketing, customer engagement, and mobilization strategies, areas that were initially underdeveloped and slowed the pace of adoption.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $7,257 USD	Enhanced its awareness and understanding of gender-related challenges, including gender-based violence and sexual harassment, which led to the development of policies designed to address the distinct needs of both men and women.
BUSINESS DEVELOPMENT	Strategic market expansion by helping the innovator understand DRC import regulatory requirements and partnership mapping in Zambia.	In-house TA Tetra Tech Cost: $14,515 USD	Increased knowledge on DRC import requirements and access to potential partners database.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $10,886 USD	Strengthened its understanding of circular economy principles and began systematically tracking energy and water savings.
MARKET RESEARCH	Carried out market research and analysis on Bwando Farms expanding from business-to-business to business-to-consumer for distribution of grain and livestock products.	External TA MJB CONSULTING Cost: $3,775 USD	Assisted Bwando to identify where best to expand its business and sell its products directly to the end-users instead of just to suppliers.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored investor database and facilitated introductions to select priority investors.
ORG CAPACITY DEVELOPMENT	Development of a grants and finance tracker.	In-house TA Tetra Tech Cost: $3,629 USD	Savings on time and resources, and increased prospects of success to prioritized funding opportunities.

Impact achieved:

11,400 end-users
55% women & 94% BoP

7 jobs created
43% of all employees are women

$9,000 USD in sales

COMMUNITY MARKETS FOR CONSERVATION (COMACO)

Countries of operation: Zambia
Monitors: Water and Biodiversity
Grant amount: $100,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $38,003 USD

Challenge faced by end-users:

In Zambia, insufficient market incentives and the lack of cost-effective farmer training programs continue to impede the adoption of sustainable, eco-agricultural farming practices. Farmers often lack access to premium markets that could provide the financial returns needed to invest in sustainable land-use methods or purchase higher-quality inputs that would improve crop yields. Farmer organizations, which could otherwise play a central role in capacity building, remain too weak to mobilize local manpower, leadership, and technical expertise. As a result, they are unable to deliver the training and support required to help farmers transition toward more sustainable production systems.

Innovator's provided solution:

The innovator meets the growing market demand for cost-effective, energy-efficient products by promoting agroforestry-based farming systems that reduce dependence on inorganic fertilizers while improving nutrition, food security, and income opportunities. Through its product brand, It's Wild! Products, the enterprise markets a variety of goods produced by smallholder farmers, including peanut butter, rice, honey, dried mango, mushrooms, and other value-added products. Waste generated during food processing is repurposed to strengthen the circular economy; for example, groundnut shells are recycled into briquettes. To further support the operational growth of farmer cooperatives and advance conservation efforts, COMACO provides training, conducts audits linked to conservation dividend payments, and delivers radio broadcasts to maintain a learning platform and facilitate knowledge dissemination.

Barriers faced by innovator in reaching end-users:

Reaching farmers in remote conservation areas proved challenging, requiring sustained mobilization efforts and driving up operational costs due to poor road infrastructure. Coordinating activities across large cooperative structures also introduced delays in the dissemination of information and slowed the adoption of new practices. In addition, seasonal fluctuations in farmers' incomes affected their ability to consistently participate in program activities, creating further variability in engagement and uptake.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MEL ADVISORY SERVICES	Development of an energy-saving and cost calculator for quantifying smallholder farmers' energy savings as a result of using the innovation.	In-house TA Tetra Tech Cost: $15,762 USD	Improved reporting process and submission of higher-quality deliverables.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $31,524 USD	Strengthened its alignment with environmental standards, reducing the risk of adverse environmental impacts. This enhanced compliance with local sustainability requirements increased COMACO's attractiveness to investors, donors, and other stakeholders that prioritize strong environmental and social responsibility.
INVESTMENT READINESS	Investment facilitation support to secure financing from the U.S. International Development Finance Corporation.	In-house TA Tetra Tech Cost: $15,762 USD	Raised $5 million USD.
	Investment facilitation support to secure financing from the U.S. International Development Finance Corporation.	In-house TA Tetra Tech	

Impact achieved:

- **641,000 end-users** *53% women & 45% BoP*
- **305,000 tons food produced**
- **2.9 million kWh saved**
- **$7.1 million USD investment raised** *68% public funds*
- **61 jobs created** *32% of all employees are women*
- **194,000 hectares under improved practices**
- **48,000 tons of CO2e saved**
- **$5.1 million USD in sales**
- **289,000 end-users with increased incomes** *63% women & 28% BoP*

ENERGY SIGNATURES

Countries of operation: Zimbabwe
Monitors: Water
Grant amount: $30,000 USD
Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

A lack of access to clean, sustainable and affordable energy is a major challenge for smallholder farmers and other end-users in Zimbabwe.

Innovator's provided solution:

The innovator supports rural farmers by constructing biogas systems that supply clean cooking energy and produce organic fertilizer for crop production. These systems are offered through a pay-as-you-go model, making them more accessible and affordable for farmers who may otherwise struggle to invest in renewable energy solutions.

Barriers faced by innovator in reaching end-users:

The innovator continued to face challenges in accessing its target market. Many smallholder farmers were still unable to afford the construction of biogas systems, even with the introduction of a pay-as-you-go platform. Additionally, the innovator struggled to expand beyond the WE4F project's target area, limiting its reach into other potential markets.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $18,914 USD	Took deliberate steps to increase women's participation in its workforce, particularly by recruiting more female engineers. The company also developed a gender policy that institutionalized the recruitment of female interns, leading to the establishment of partnerships with tertiary institutions in Bulawayo to support a sustainable talent pipeline.
BUSINESS DEVELOPMENT	Website development to expand innovator's digital footprint.	External TA Bigger Than Me Cost: $3,244 USD	Began selling its products directly to customers through online platforms, expanding its market reach and generating greater interest in its offerings. This increased visibility and access to a broader customer base is expected to support the company's future scaling efforts.

Impact achieved:

No documented impact due to the USAID SWO which prevented the collection of the annual data cycle collection.

FARMHUT

Countries of operation: Zimbabwe
Grant amount: $75,000 USD
Co-funding provided by innovator: $40,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

In Zimbabwe, farmers face significant challenges in bringing their products to market due to poorly developed supply chains, limited distribution networks, and inadequate planning. These constraints are further compounded by insufficient awareness of the potential environmental and social consequences associated with current production and marketing practices.

Innovator's provided solution:

The innovator provides two key solutions that enhance farmers' ability to bring their products to market: a digital marketplace and a logistics service. The logistics service connects rural farmers with transportation providers and aggregates demand for produce collection, which helps reduce greenhouse gas emissions, lower logistics costs for farmers, and ensure more reliable transport services. The digital marketplace, accessible through multiple mobile technologies, offers farmers a dedicated platform to sell their products. It also equips customers with information on water-saving techniques and strategic agricultural practices. FarmHut Africa intentionally targets women for participation in the digital marketplace by engaging them as local aggregators and marketing ambassadors, thereby promoting inclusive market access.

Barriers faced by innovator in reaching end-users:

The primary barriers related to the innovator's need for geographic and operational expansion. Increasing their footprint would enable them to reach a larger number of end-users, so much of the assistance provided focused on supporting the growth of their networks and extending their services into additional regions.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $12,590 USD	Gender-inclusive digital messaging delivered to smallholder farmers and transporters, ensuring that both women and men received relevant, accessible, and equitable information.
GENDER INTEGRATION	Gender inclusive partnership mapping and facilitation.	In-house TA Tetra Tech Cost: $4,197 USD	Increased number of female truck drivers delivering farm produce to the market.
GENDER INTEGRATION	Developed a gender inclusive messaging toolkit.	In-house TA Tetra Tech Cost: $4,197 USD	Gender-inclusive digital messaging to smallholder farmers and transporters.
BUSINESS DEVELOPMENT	Developed an expansion strategy into Zambia, including company registration and partnerships facilitation.	In-house TA Tetra Tech Cost: $16,786 USD	Expanded into Zambia, received full business registration, and got introduced to potential partners.
MEL ADVISORY SERVICES	Development of an end-user data collection and reporting template, as well as training on how to use the template.	In-house TA Tetra Tech Cost: $4,197 USD	Improved reporting process and submission of higher-quality deliverables.

Impact achieved:

141,000 end-users
41% women & 9% BoP
104,000 end-users using EUF

404,000 tons food produced

3.6 million kWh saved

$228,000 USD in sales

66,000 end-users with increased incomes
43% women & 2.8% BoP

43,000 hectares under improved practices

1,300 tons of CO2e saved

FREEJOY

Countries of operation: Democratic Republic of the Congo

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

According to the World Food Programme, more than 23 million people in the DRC face food insecurity, and an estimated 2.8 million children are acutely malnourished. These challenges are exacerbated by limited access to diverse and affordable food products within the country. Although the DRC is home to numerous rivers and lakes with the potential for substantial fish production, fishing activities remain predominantly small-scale, resulting in low catch volumes that are often too expensive for most households. Moreover, the absence of appropriate drying and preservation technologies prevents fishers from storing their catch for lean seasons. End-users typically lack the financial resources to acquire the necessary equipment, and much of the region has little or no access to modern technologies.
For those who are able to dry fish, the quality is generally poor, as the process is done manually without proper drying systems. This limits the availability of safe, affordable, and nutritious fish products, further contributing to widespread food insecurity.

Innovator's provided solution:

The innovator manufactures solar-powered dryers, some of which are donated to community members. Leveraging Memorandums of Understanding with non-governmental organizations, the innovator trains community members on the use of the technology and facilitates their access to the dryers. They purchase fresh fish caught from Lake Tanganyika, dry it using their solar dryers, and sell the finished product in Uvira, DRC. By drying the fish at low temperatures within these controlled solar systems, the nutritional value of the fish is preserved, resulting in a higher-quality and more nutritious product for consumers.

Barriers faced by innovator in reaching end-users:

Freejoy works with base of the pyramid end-users in a region greatly affected by climate change. Locally, they needed to become more aligned with end-users' ability to afford their innovation, while regionally, they needed to consider expanding to other geographies that could support the usage of their innovation. To accomplish both tasks, external investment was needed along with new communications materials, improved women representation within their company, and a stronger understanding of local markets in which their innovation could operate.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $10,000 USD	Strengthened the integration of women within its leadership team. The technical assistance enabled the organization to position itself for opportunities that prioritize gender inclusion in candidate companies.
ORG CAPACITY DEVELOPMENT	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	The process enhanced the innovator's understanding of carbon-credit requirements, enabling them to determine both their eligibility and the steps needed to claim credits effectively. As a result, FreeJoy can now leverage the use of solar dryers to generate carbon credits, creating an additional and sustainable source of income.
BUSINESS DEVELOPMENT	Developing and matching the innovator to investors using the Africa Big Deal Startup Database (2019-2022) for potential connections in renewable energy projects in the DRC.	In-house TA Tetra Tech Cost: $10,000 USD	Access to a tailored investor database and ability to identify investors that matched their requirements.
	Website development to expand innovator's digital footprint.	External TA Bigger Than Me Cost: $3,244 USD	The new website has enabled FreeJoy to significantly expand its digital footprint and more effectively showcase its conservation initiatives and non-governmental organization work. This enhanced online presence has increased the organization's visibility and created a platform where visitors can both learn about FreeJoy's impactful activities and purchase its products. By integrating e-commerce functionality, the website is helping to drive greater traffic to FreeJoy's product offerings, positioning the organization to scale through increased online sales.
INVESTMENT READINESS	Development of financial models and investor teaser.	In-house TA Tetra Tech Cost: $10,000 USD	Increased the innovator's preparedness and chances of raising funding from investors.
	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This TA was provided under the bridge contract, so further outcomes are unknown at this time.
MARKET RESEARCH	Conducted market research and analysis to in preparation for the innovator expanding into new and safer markets/regions.	External TA YOUPENDI GROUP Cost: $4,433.33 USD	Gained clearer insight into priority areas for expansion and strengthened measures that improved staff safety during operations.

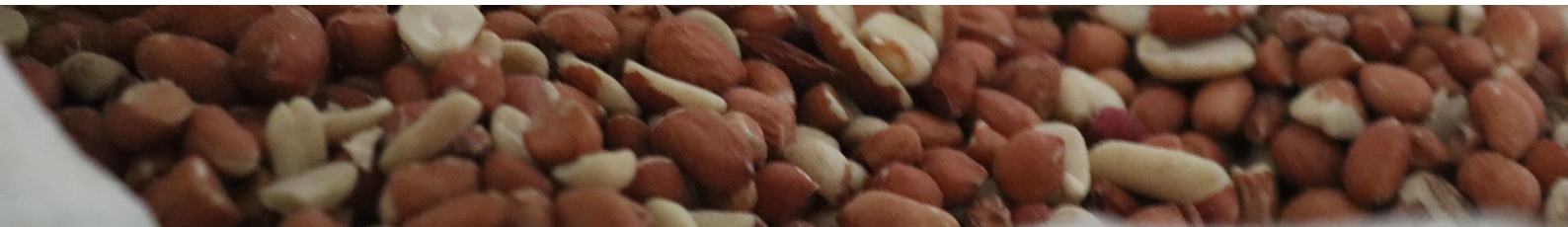
Impact achieved:

18,800 end-users
68% women & 100% BoP

5 jobs created
75% of all employees are women

8,000 tons of food processed

$287,000 USD in sales



GREENCARE ECO SOLUTIONS

Countries of operation: Zambia
Monitors: Water and Biodiversity
Grant amount: $45,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Kabwe, Zambia, is recognized as one of the most polluted cities in the world. Due to its long mining history, the city's approximately 300,000 residents face daily exposure to high levels of lead contamination, which has severely affected both soil and water quality. As soil degradation in Kabwe is extensive, farmers must rely on fertilizers to support crop production. However, the cost of conventional chemical fertilizers is high, and smallholder farmers have limited access to affordable, sustainable alternatives.

Innovator's provided solution:

The innovator produces affordable organic fertilizers using locally sourced organic waste purchased from the surrounding community. Committed to sustainability, Greencare's operations align with ESG principles while promoting climate-smart agricultural practices and improving local livelihoods.

Barriers faced by innovator in reaching end-users:

Adoption of organic fertilizers progressed slowly, largely because many end-users had limited awareness of their benefits, even when those advantages were clearly demonstrated. Distribution costs were also significantly elevated due to poor rural road infrastructure, which made transporting bulky fertilizer products both challenging and expensive. Additionally, farmers' long-standing dependence on subsidized chemical fertilizers reduced their short-term incentives to transition to organic alternatives, further constraining market uptake.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $18,157 USD	Strengthened its knowledge and capacity to apply gender-lens investment requirements in decision-making, enabling it to identify and pursue new gender-aligned investment opportunities.
BUSINESS DEVELOPMENT	Acquisition of international organic certification.	External TA EcoCert Cost: $4,700 USD	Obtained international and national organic certifications for all six of its fertilizer products in the European Union, Japan, and the United States, becoming the only company in Zambia with registered organic fertilizers. This competitive advantage positions the innovator for significant scaling as its certified status gains wider recognition.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This TA was provided under the bridge contract, so further outcomes are unknown at this time.
ORG CAPACITY DEVELOPMENT	Development of a grants management tracker.	In-house TA Tetra Tech Cost: $4,539 USD	Achieved savings in time and resources, while also improving its prospects of success in prioritized funding opportunities.

Impact achieved:

1,600 end-users
37% women & 41% BoP

575 tons food produced

$55,000 USD in sales

GREENZIM VENTURES

Countries of operation: Zimbabwe
Grant amount: $30,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

In Zimbabwe, access to the electrical grid is both limited and unreliable, leaving millions of people dependent on firewood for cooking and heating. For dairy cooperatives operating communal milk collection centers in off-grid areas, this scarcity of energy can result in significant food losses and adversely affect farmers' incomes.

Innovator's provided solution:

The innovator installs biogas digesters at dairy cooperatives' communal milk collection centers, using livestock waste and sewage as feedstock. To meet the diverse needs of its clients, including smallholder farmers, commercial farmers, cooperatives, and institutions. The innovator offers a wide range of appliances and equipment such as biogas stoves and burners, cookers, heaters, refrigerators, and power generators.

Barriers faced by innovator in reaching end-users:

To continue scaling its operations, the innovator needed to unlock access to global donor networks, secure additional funding opportunities, and obtain certifications relevant to biogas digester technologies.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PRODUCT DEVELOPMENT	ISO /TR 19867-3:2018 testing and certification of biogas cookstoves.	External TA Centre for Research in Energy and Energy Conservation (CREEC) Cost: $850 USD	Qualified for $1.5 million USD in grant funding from Modern Cooking Facility for Africa, and their biogas stove became the first locally manufactured stove to receive ISO 19867-1 certification in Zimbabwe.
BUSINESS DEVELOPMENT	Website development to expand innovator's digital footprint.	External TA Bigger Than Me Cost: $3,244 USD	The new website significantly increased GreenZim Ventures' business visibility and customer engagement, resulting in higher inbound business inquiries. This improved digital presence has strengthened the company's position and enhanced its readiness to scale.
	Development of accounting, CAD, and videography tools, and provision of training.	External TA Tutwa Consulting Group Cost: $4,763.75 USD	Modernized key operational systems, including upgrading to the latest AutoCAD for construction design and transitioning to updated QuickBooks accounting software. Also enhanced the innovator's marketing capacity by providing professional video editing tools, resulting in noticeably improved video quality on their website.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $9,457 USD	Developed a formal, documented gender policy and to recruit a more gender-balanced staff. It also strengthened the innovator's performance on Gender and Social Inclusion (GESI) criteria, contributing to high scores in the Modern Cooking Facility for Africa and Energy and Environment Partnership Trust Fund funding applications.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
	Engagements between a voluntary carbon markets project developer, Silver Carbon and the innovator.	In-house TA Tetra Tech Cost: $9,457 USD	Received introductions to potential investors. Secured an Energy and Environment Partnership Trust Fund contract valued at $800,000 USD.
ORG CAPACITY DEVELOPMENT	Developed new standardized templates for full-time, part-time, and consultancy contracts.		This technical assistance occurred under the bridge contract, so outcomes are unknown at this time.

Impact achieved:

392 end-users
54% women & 98% BoP

6 tons of food processed

15,000 kWh saved

4 tons of CO2e saved

3 jobs created
38% of all employees are women

KIVUGREEN

Countries of operation: Democratic Republic of the Congo
Monitors: Water
Grant amount: $100,000 USD
Nexus link: Water-Food
Contributes to: Climate Adaptation
Co-funding provided by innovator: $70,000 USD

Challenge faced by end-users:

The DRC faces growing water and food security challenges driven by rising temperatures, increasingly extreme weather events, and greater variability in both total precipitation and rainfall patterns. These climate impacts are especially critical for the agricultural sector, which is predominantly rainfed, serves as a central pillar of the national economy, and provides the primary source of livelihood for most Congolese households. Addressing the effects of climate change requires access to reliable weather information and practical agricultural guidance. However, more than 80% of smallholder farmers in the DRC lack essential agricultural information, including localized weather data and advice on sustainable, organic, and profitable farming practices. This information gap significantly limits farmers' ability to adapt to changing conditions and build resilience.

Innovator's provided solution:

This web and mobile platform supports efficient water management by connecting smallholder farmers to essential agricultural information and advisory services. The innovation is designed to function with or without an internet connection, ensuring reliable access even in remote areas. To address information gaps across diverse literacy levels and language preferences, the platform delivers content in French, multiple local languages, and audio formats, making it widely accessible to farmers throughout the country.

Barriers faced by innovator in reaching end-users:

Insecurity in the region and widespread poverty continues to limit end-users' ability to access essential services as well as the innovator's ability to expand their operations. Additionally, farmers and other end-users are unfamiliar with the technology offered by the innovator, so they require awareness building. As many end-users are illiterate or only speak local languages, the innovator needed to make their innovation more inclusive.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
INVESTMENT READINESS	Development of an investor roadmap to connect the innovator to renewable energy investors and updated investor teaser and financial models.	In-house TA Tetra Tech Cost: $31,524 USD	Accessed a tailored list of renewable energy investor contacts. Due to the economic and political situation in the DRC, the innovator faces challenges in unlocking investment.
	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
BUSINESS DEVELOPMENT	Website development.	External TA Bigger Than Me Cost: $5,235 USD	The new web presence increased the company's online visibility and strengthened KivuGreen's credibility, making it more attractive to potential partners.
	Mapping and matching the innovator to investors using the Africa Big Deal Startup Database (2019-2022) for potential connections in renewable energy projects in the DRC.	In-house TA Tetra Tech Cost: $12,610 USD	Accessed a tailored list of investor contacts. Due to the economic and political situation in the DRC, the innovator faces challenges in unlocking investment.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $18,914 USD	Strengthened its business model and improved its readiness to secure funding from gender-lens investors.
PRODUCT DEVELOPMENT	Development of a weather forecasting application programming interface.	External TA Ignitia Cost: $2,990 USD	Increased precision and accuracy of weather information. Increased number of end-users.
MARKET RESEARCH	Market research for expansion.	External TA YOUPENDI GROUP Cost: $4,433 USD	Gained clearer insight into priority areas for expansion and strengthened operational measures that improved staff safety.

Impact achieved:

131,000 end-users
54% women & 95% BoP
107,000 end-users using EUF

223,000 tons food produced

30,000 hectares under improved practices

$802,000 USD in sales

27 jobs created
60% of all employees are women

78,000 end-users with increased incomes
55% women & 100% BoP

20.6 million liters of water saved

LANFORCE ENERGY

Countries of operation: Zimbabwe
Monitors: Water and Biodiversity
Grant amount: $100,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $99,317 USD

Challenge faced by end-users:

Approximately 70% of Zimbabwe's population lives in rural areas without access to clean energy. Most households rely on firewood and crop residue as primary cooking fuels, a practice that accelerates deforestation and contributes to widespread environmental degradation. The resulting loss of forest cover exacerbates soil erosion, depletes soil organic matter and nutrients, and diminishes soil biodiversity, further threatening the sustainability of rural livelihoods.

Innovator's provided solution:

Lanforce provides end-users with access to bio-digesters that generate two valuable products: biogas and bio-slurry, the latter of which can be used as an organic fertilizer. For commercial clients, the innovator offers a portable digester capable of powering cold rooms and heating livestock brooders. For farmers, Lanforce constructs fixed biogas digesters fueled by livestock waste. The innovator also integrates Internet of Things technology and sensors to monitor digester performance and overall system health. Meters are attached directly to the digester's outlet pipe and transmit data to the cloud via a cellular network, ensuring reliable connectivity and real-time monitoring, even in remote locations.

Barriers faced by innovator in reaching end-users:

Lanforce Energy experienced several growing pains as it sought to expand its reach to more end-users. Although external investment was essential to support the company's operational scale-up, securing such funding proved challenging, as many investors viewed Zimbabwe as a high-risk environment. Additionally, the innovator needed access to Zimbabwe's renewable energy tax credits to reduce importation fees and lower the final price of its biogas digesters for end-users. However, outdated biogas digester regulations and unclear renewable energy tax guidelines made it difficult for the company to navigate these policies independently. To align operational capacity with its strategic growth ambitions, Lanforce Energy also needed to strengthen its internal management systems, including personnel, operational processes, and financial controls, while improving its external engagement efforts to attract and support potential end-users.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BoP IMPACT	Supported the Renewable Energy Association of Zimbabwe (REAZ)'s facilitation of the updating of the Zimbabwe Biogas Standard by the Standards Association of Zimbabwe.	In-house TA Tetra Tech Cost: $3,000 USD	Submitted an application to the Standards Association of Zimbabwe to update the Zimbabwe Biogas Standard.
BUSINESS DEVELOPMENT	Position paper to lobby the Zimbabwean Government to exempt biodigester components from paying import duty.	In-house TA Tetra Tech Cost: $9,457 USD	Strengthened its knowledge and capacity to properly classify biodigester components.
	Expansion strategy into Mozambique and facilitation of meetings with potential partners.	In-house TA Tetra Tech Cost: $9,457 USD	Introduced to funding partners in Mozambique.
	Renewable energy product classification training and capacity building.	In-house TA Tetra Tech Cost: $3,152 USD	Gained a clear understanding of Zimbabwe's renewable energy tax credit regulations and strengthened its ability to navigate the process for accessing these incentives.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $9,457 USD	Obtained a plug-and-play template that can be easily used for future funding opportunities, significantly reducing the time and effort required to prepare high-quality grant or investment applications.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $9,457 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
	Conducted gender inclusive partnership mapping and facilitation.	In-house TA Tetra Tech Cost: $6,304 USD	Facilitated introductions to aligned gender-inclusive partners.
INVESTMENT READINESS	Completed an investor deck, two-pager, and financial model.	In-house TA Tetra Tech	Raised $1 million in results-based financing from Modern Cooking Facility for Africa.
	Developed 3-statement financial models and investor teaser pitch deck.	In-house TA Tetra Tech Cost: $3,152 USD	Raised hybrid funding.
	Investment facilitation for a debt instrument.	In-house TA Tetra Tech Cost: $6,304 USD	Raised $250,000 USD loan from OPES.
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $6,304 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.
	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.
PR & COMMS	Website development.	External TA Bigger Than Me Cost: $6,975 USD	Increased visibility and brand awareness.

Impact achieved:

9,300 end-users
57% women & 89% BoP
8,000 end-users using EUF

18,000 tons food produced

1.5 million kWh saved

$1.9 million USD investment raised
53% public funds

20 jobs created
71% of all employees are women

5,800 hectares under improved practices

39,000 tons of CO2e saved

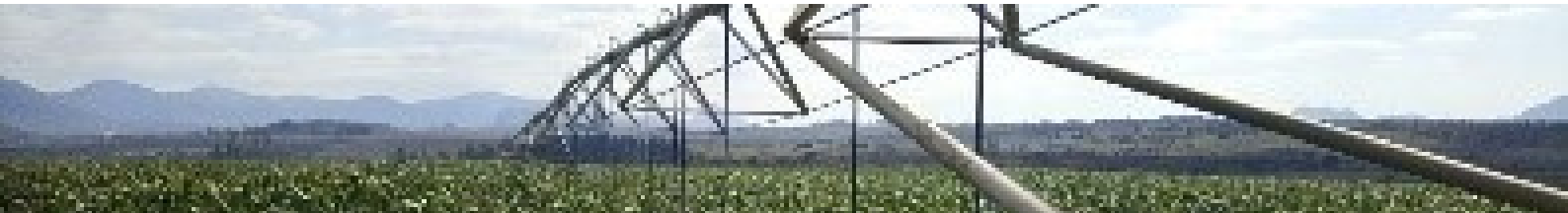
$496,000 USD in sales

584 end-users with increased incomes
23% women

MEAT NATURALLY

Countries of operation: Botswana, Kenya, Lesotho, Namibia, South Africa
Monitors: Biodiversity
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation



Challenge faced by end-users:

Nearly 90% of South Africa's agricultural water supply comes from surface catchment areas that are increasingly vulnerable to the spread of invasive alien plants and bush encroachment, pressures often intensified by communal livestock grazing. Across Africa, the degradation of rangelands is undermining the natural functioning of water catchments and contributing to rising poverty among livestock-dependent farmers.

Innovator's provided solution:

The innovator implements communal grazing systems that enhance water and food availability. Its business model focuses on training herders and strengthening market access in ways that improve livestock condition, croplands, and rangeland ecosystems. By operating at scale, the approach supports long-term sustainability and enables meaningful participation in formal private-sector markets.

Barriers faced by innovator in reaching end-users:

As part of its expansion efforts, Meat Naturally needed to educate potential Eco-Rangers, end-users, and investors about its operational model, engagement processes, and revenue-generation activities. In addition, the innovator sought to explore opportunities to diversify its product line beyond cattle to include other types of livestock.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PR & COMMS	Development of infographics explaining profit share and carbon flow processes.	In-house TA Tetra Tech Cost: $12,609 USD	Streamlined auction process with reduced times, and increased participation by women farmers/community members.
PR & COMMS	Development of a livestock auction process video explainer.	External TA Bigger Than Me Cost: $4,858 USD	Strengthened Meat Naturally's ability to prepare farmers for formal market participation through the development and use of a training video incorporated into all market-readiness sessions. Sharing the video with farmer association members prior to sales improved their awareness of required documentation, particularly government-issued branding certificates. Combined with follow-up support from the Meat Naturally team, it enabled more small-scale farmers to meet formal market entry requirements. The innovator also expanded the impact of the auction video by developing full translations and collaborating with Bigger Than Me to produce two additional educational videos on carbon sequestration.
MARKET RESEARCH	Small livestock market study.	In-house TA Tetra Tech Cost: $37,828 USD	Applied market insights to optimize pricing for farmers using its mobile wool-shearing services. The innovator is now exploring its strategic role in the wool value chain, including establishing Fleece Naturally as a dedicated wool broker for communal farmers practicing regenerative grazing. In addition, Meat Naturally is assessing how to internalize Responsible Wool Standard (RWS) auditing to help communal farmers adopt required practices, improve soil and water conservation outcomes, and secure higher prices for their fleece.
BUSINESS DEVELOPMENT	Development of financial models and a slide deck for the innovator's Eco-Ranger funding business model.	In-house TA Tetra Tech Cost: $37,828 USD	Uses the developed presentation as the foundation for investor pitches, effectively conveying the business model and Eco-Ranger approach. The financial analysis supported an expansion bid in KwaZulu-Natal and the Eastern Cape, resulting in the awarding of $8.6 million to scale operations. The innovator will deploy 1,300 Eco-Rangers across an additional 600,000 hectares of communal land by 2028.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $37,828 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.

Impact achieved:

- **9,900 end-users** *41% women & 82% BoP*
- **605 tons food produced**
- **99,000 liters of water saved**
- **$440,000 USD in sales**
- **18 jobs created** *36% of all employees are women*
- **258,000 hectares under improved practices**
- **261,000 tons of CO2e saved**

NABAHYA FOOD INSTITUTE

Countries of operation: Democratic Republic of the Congo
Monitors: Water
Grant amount: $165,000 USD
Nexus link: Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $78,419 USD

Challenge faced by end-users:

In the DRC, wood and charcoal remain the primary sources of household energy for cooking. In the Uvira and Fizi regions, forest resources have been almost completely depleted, leaving only patches of wooded savannah. Adverse climatic conditions, including declining rainfall and increased variability in rainfall frequency, further reduce agricultural productivity and exacerbate the socio-economic challenges faced by smallholder farmers. Compounding these issues, many communities in the DRC lack awareness or education regarding alternative, sustainable energy sources, limiting their ability to transition away from environmentally destructive practices.

Innovator's provided solution:

The innovator produces briquettes using crop residues and biomass materials such as dead leaves, rice husks, maize stalks, and sorghum stalks. These briquettes burn cleanly without emitting smoke, offering a healthier and more sustainable alternative to traditional fuels. In addition, the innovator works with smallholder farmer cooperatives to promote sustainable tillage practices, helping to improve soil health and agricultural productivity.

Barriers faced by innovator in reaching end-users:

As briquettes are a cost-effective and reliable form of energy, local demand exceeds the innovator's ability to supply their product, so they need investment and matured internal operations to further scale their business. Additionally, the innovator can be affected by political instability and conflict that occurs in the country.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $20,806 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $20,806 USD	Obtained a plug and play template that can be easily adapted for future funding opportunities, significantly reducing the time and effort required to prepare high quality grant or investment applications.
	Development of an energy and carbon saving calculator.	In-house TA Tetra Tech Cost: $20,806 USD	Enhanced the organization's ability to accurately quantify energy-efficiency gains and carbon-reduction impacts across its projects, while simultaneously strengthening its reporting capacity and improving its readiness for climate-focused fundraising efforts.
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $20,806 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.
	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.
BUSINESS DEVELOPMENT	Mapping and matching the innovator to investors using the Africa Big Deal Startup Database (2019-2022) for potential connections in renewable energy projects in the DRC.	In-house TA Tetra Tech Cost: $20,806 USD	Has access to a tailored investor contact book.
	Website development.	In-house TA Tetra Tech Cost: $6,488 USD	Increased its visibility and brand awareness to end-users and customers.
MARKET RESEARCH	Market research and analysis in preparation for the innovator expanding into new and safer markets/regions.	External TA YOUPENDI GROUP Cost: $4,433.33 USD	Gained improved market insights that enable strategic expansion into new areas while ensuring staff safety is not compromised.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
MEL ADVISORY SERVICES	Rebuilding of monitoring, evaluation, and learning reporting templates and systems following the USAID closure.	In-house TA Tetra Tech Cost: $3,783 USD	This significantly improved the monitoring and reporting process, helping the innovator better track project impact and communicate results to partners and funders.

Impact achieved:

188,000 end-users
76% women & 45% BoP

480 tons of food processed

153 million kWh saved

$100,000 USD investment raised
100% private funds

1 job created
50% of all employees are women

8,500 hectares under improved practices

70,000 tons of CO2e saved

$287,000 USD in sales

149,000 end-users with increased incomes
70% women & 36% BoP

NATURE'S NECTAR

Countries of operation: Zambia
Monitors: Water and Biodiversity
Grant amount: $190,000 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation
Co-funding provided by innovator: $157,759 USD

Challenge faced by end-users:

Sustainable beekeeping in Zambia remains largely inaccessible for many beekeepers. Traditional methods are highly destructive to forest ecosystems and risk becoming obsolete unless farmers transition to more sustainable practices. Each traditional hive requires the use of bark from an indigenous tree and typically lasts only two to three years. This results in significant forest loss, as the rate of extraction far exceeds the natural regeneration of these trees. Rising demand for Zambian honey further intensifies this pressure. As more hives are constructed using traditional bark-stripping methods, the threat of deforestation increases, putting both forest biodiversity and the long-term viability of the beekeeping sector at risk.

Innovator's provided solution:

The innovator distributes durable, locally made beehives that do not rely on forest bark, thereby eliminating pressure on indigenous trees while providing farmers with a reliable and motivating source of income. This income creates a strong incentive for farmers to protect surrounding forest areas, as healthy ecosystems support higher honey production and greater financial returns. By placing long-lasting beehives within forest landscapes, the innovation fosters increased bee activity, which in turn enhances local flora and fauna. Greater pollinator presence boosts floral fecundity, improves flowering patterns, and diversifies woodland species, contributing to more resilient and robust forest ecosystems. In addition to providing sustainable hives, the innovator offers comprehensive training, market access opportunities, and connections to financial services. Together, these efforts empower beekeepers, including those in remote and underserved areas, to adopt sustainable practices, improve their livelihoods, and contribute to long-term environmental conservation.

Barriers faced by innovator in reaching end-users:

Reaching beekeepers in remote, forested areas proved challenging, as the difficult terrain significantly increased the costs of distributing improved hives and providing ongoing extension support. Limited access to finance among rural beekeepers further constrained the widespread adoption of upgraded beehives, preventing scale-up. In addition, traditional beekeeping methods were deeply entrenched, requiring sustained behavior change efforts before farmers were willing to transition to more sustainable alternatives.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $17,969 USD	Strengthened gender-inclusive strategy and aligned operations and governance with gender-smart investment criteria, and improved positioning with inclusive investors and partners.
MARKET RESEARCH	Market expansion research for honey export into Europe and the United States.	In-house TA Tetra Tech Cost: $17,969 USD	Entered the European honey market.
	Comprehensive market research and distributor analysis for the honey industry in Botswana, DRC, and South Africa.	In-house TA Tetra Tech Cost: $17,969 USD	Increased its awareness of the profiles of target honey markets.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $5,990 USD	Consolidated all of its environmental and social systems and tools into a single, unified framework, allowing the business to document and manage its sustainability efforts in a more structured and systematic manner.
	Position paper on the environmental impact of bark beehives.	In-house TA Tetra Tech Cost: $59,896 USD	Strengthened Natures Nectar's capacity to advocate effectively for sustainable beekeeping practices, enabling the company to motivate the government to ban the use of bark beehives in Zambia.
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $1,083.33 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.

Impact achieved:

- **19,000 end-users** *58% women & 64% BoP*
- **90 tons food produced**
- **7,600 end-users with increased incomes** *69% women & 59% BoP*
- **$120,000 USD investment raised** *100% private funds*
- **3 jobs created** *23% of all employees are women*
- **3,000 hectares under improved practices**
- **$287,000 USD in sales**

NDKAY

Countries of operation: Zambia
Grant amount: $200,000 USD
Co-funding provided by innovator: $13,614 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

In Zambia, post-harvest losses for fruits and vegetables exceed 60%, largely due to the lack of appropriate storage facilities and the absence of a reliable cold chain. Farmers also face limited market access and must often travel long distances to reach established markets. When prices are unfavorable, they are forced either to accept low offers, return home with unsold produce, or discard their goods onsite. These challenges result in substantial revenue losses and directly undermine farmers' livelihoods, increasing their vulnerability to poverty at the household level.

Innovator's provided solution:

The innovator provides farmers with solar-powered cold rooms constructed from refurbished shipping containers to extend the shelf life of fresh produce, increase the diversity of products that can be marketed, and significantly reduce post-harvest losses. The model is designed to be cost-efficient, requiring end-users to pay only for the storage space they use, making cold storage accessible and affordable for smallholder farmers.

Barriers faced by innovator in reaching end-users:

Deploying the cold rooms required reliable sites close to local markets, yet challenges with land access and delays in obtaining local approvals often slowed installation. In addition, farmers' unfamiliarity with the pay-per-use cold storage model initially limited uptake, as many were accustomed to traditional storage and marketing practices. Early operations also faced limited aggregation volumes, which reduced the perceived value of the service for some producer groups until more farmers began participating.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $17,338 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $10,403 USD	Strengthened its sustainability practices by improving its ability to monitor, manage, and reduce its environmental footprint more effectively.
INVESTMENT READINESS	Development of investor material, including investor teaser and financial model.	In-house TA Tetra Tech Cost: $10,403 USD	Raised debt capital from a commercial bank in Zambia.
	Support for investment facilitation.	In-house TA Tetra Tech Cost: $10,403 USD	Raised a $1.2 million USD debt facility to facilitate a tender that was won for a project in Tanzania.
BUSINESS DEVELOPMENT	Development of a business scale-up strategy.	In-house TA Tetra Tech Cost: $10,403 USD	Strengthened its understanding of how to reinforce and refine its business model.
	Development of a dairy and horticulture expansion advisory report.	In-house TA Tetra Tech Cost: $10,403 USD	Increased its understanding of the Zambian dairy and horticulture industries and identified potential opportunities for partnerships.
ORG. CAPACITY DEVELOPMENT	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.
BoP IMPACT	Gender and base of the pyramid integration training report for lead farmers.	In-house TA Tetra Tech	Supported the innovator's efforts to recruit farmers for their solar cold rooms and train them on its operations and benefits.

Impact achieved:

8,400 end-users
58% women & 100% BoP

4,600 tons food produced

13,000 kWh saved

12 tons of CO2e saved

8,200 end-users with increased incomes
58% women & 100% BoP

1,600 hectares under improved practices

ONYX EARTH

Countries of operation: Zimbabwe
Monitors: Water
Grant amount: $30,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Many communities in Zimbabwe face significant challenges in accessing clean and safe water, due in part to the contamination of water sources by untreated wastewater. Poor wastewater management practices not only jeopardize human health but also contribute to extensive environmental degradation. Polluted rivers, lakes, and groundwater systems harm ecosystems, leading to biodiversity loss and ecological imbalances. For people, untreated wastewater contains pathogens and harmful contaminants that pose serious health risks, particularly in communities with already limited access to safe sanitation and water infrastructure.

Innovator's provided solution:

The innovator provides biogas solutions that use anaerobic digestion to convert wastewater and organic waste into clean biogas energy. The systems also separate nutrient-rich water from an organic by-product that can be used as fertilizer. Recovered water is stored in portable tanks for irrigating household gardens, while farms can apply the organic by-product to improve soil fertility and support crop production.

Barriers faced by innovator in reaching end-users:

In order to replace the use of firewood with biogas, Onyx must target their developed business plan that segments its end-users into three categories: high-end clients (housing projects and commercial farmers), middle-income users (medium-scale farmers), and low-income users (small-scale farmers). Although small-scale farmers show a strong willingness to adopt biogas technology, they lack the financial capacity to afford the systems, limiting adoption among this key target group.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $18,914 USD	Significantly increased women's participation in its technical workforce, with women now representing 57% of technical staff. When WE4F first engaged Onyx, women made up only about 30% of a small, skeletal team. Following the technical assistance, the innovator developed and implemented a deliberate strategy to integrate more women into its organizational structure, resulting in substantial progress toward gender inclusivity.
PRODUCT DEVELOPMENT	ISO/TR 19867-3:2018 testing and certification of biogas stoves	External TA Centre for Research in Energy and Energy Conservation (CREEC) Cost: $850 USD	Received ISO certification for their biogas stove.
BUSINESS DEVELOPMENT	Upgraded accounting and human resources systems.	External TA Paddington and Associates Cost: $5,600 USD	Now uses new human resources and accounting systems.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.

Impact achieved:

$416,000 USD in sales

OVOS DE OURO

Countries of operation: Mozambique
Grant amount: $75,000 USD

Nexus link: Energy-Food

Challenge faced by end-users:

In Mozambique, demand for affordable and reliable poultry feed is high, yet smallholder farmers struggle to access it because distribution networks are concentrated in major cities rather than rural areas.

Innovator's provided solution:

The innovator produces day-old chicks, eggs, layers (egg-laying chickens), and poultry feed. To ensure affordability for smallholder farmers, the company packages feed in smaller, low-cost bags rather than the conventional large sacks, enabling even the smallest producers to purchase what they need. Ovos De Ouro also employs technical assistance officers and a veterinary officer who regularly visit smallholder farmers to monitor their operations and provide extension services and advisory support.

Barriers faced by innovator in reaching end-users:

To maintain its market relevance and attract new customers nationwide, the innovator identified brand rebranding as a key strategic priority.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $26,007 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
MARKETING & SALES	Development of new logos and new branding materials.	External TA Bigger Than Me Cost: $ 5,902.50 USD	Helped the innovator clarify its branding and marketing priorities, enabling the company to develop a stronger brand identity and the key elements needed to increase its visibility and reach new markets across Mozambique.
	Marketing and brand visibility strategy for poultry products.	In-house TA Tetra Tech	

Impact achieved:

25,000 end-users
62% women & 21% BoP

10,000 tons food produced

27 jobs created
19% of all employees are women

$13.3 million USD in sales

PALMWORTH INVESTMENTS

Countries of operation: Zimbabwe
Monitors: Water and Biodiversity
Grant amount: $30,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Due to the high cost of conventional heating solutions, many farmers resort to cutting down trees to provide warmth for newly born piglets. Additionally, piggery operations often experience significant water wastage, further increasing operational inefficiencies and environmental pressures.

Innovator's provided solution:

The innovator operates an integrated, closed-loop farm that uses a biogas system to convert waste generated in its piggery division into energy for irrigation, food processing, and water treatment. The system also produces a nutrient-rich bio-slurry, which is distributed to surrounding communities for use as organic fertilizer.

Barriers faced by innovator in reaching end-users:

The innovator faced persistent challenges in reaching customers and end-users. Although it produced high-quality products, limited marketing channels, weak brand visibility, and reliance on traditional distribution methods constrained its market penetration. As a result, the company struggled to build consumer awareness, connect with urban buyers, and compete with larger, better-branded suppliers. Without a clear rebranding strategy or improved outreach efforts, its products risked being undervalued and overlooked in an increasingly competitive marketplace. In some instances, the innovator was forced to sell products below market price to avoid spoilage, further undermining profitability.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Gender lens investment readiness.	In-house TA Tetra Tech Cost: $18,914 USD	Now has a gender policy in place. The innovator has also made deliberate attempts to recruit more women into their organization.
BUSINESS DEVELOPMENT	Website development to expand innovator's digital footprint.	In-house TA Tetra Tech Cost: $6,488 USD	Expanded its customer reach, resulting in strengthened business performance and sustained growth over the past two years.

Impact achieved:

6 hectares under improved practices

6 tons food produced

$17,900 USD in sales

PHOENIX SEEDS

Countries of operation: Mozambique
Monitors: Water and Biodiversity
Grant amount: $172,000 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation
Co-funding provided by innovator: $108,963 USD

Challenge faced by end-users:

It is estimated that only 20% of smallholder producers in Mozambique use certified seed, while the majority rely on retained seed to plant new crops. This practice results in low yields, reduced crop quality, and increased inbreeding. Consequently, many smallholder farmers are unable to produce enough food to sustain their households throughout the year. The situation is further worsened by the effects of global warming, which is causing more frequent droughts and prolonged mid-season dry spells that severely impact agricultural productivity. As a result, staple food production is constrained, leading to poor nutrition and deteriorating health outcomes, especially among rural populations that depend on smallholder farming for their livelihoods.

Innovator's provided solution:

The innovator increases local production of well-researched, drought-tolerant seed varieties that are well adapted to local growing conditions. The model involves engaging small out-grower farmers and providing them with technical support to produce certified seed, which is then supplied to the growing number of small-scale farmers across Mozambique.

Barriers faced by innovator in reaching end-users:

The innovator faced several barriers linked to recurring drought conditions. Many end-users were unable to access seed because droughts significantly reduced seed yields, resulting in fewer farmers being reached. Another major challenge was geographic isolation; the innovator's operations were limited to Mozambique and required support to expand into neighboring markets such as Zimbabwe and Angola.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $13,393 USD	Enabled the innovator to formalize previously informal and inconsistent approaches to integrating women across its operations. The company now has a formal policy ensuring equal employment opportunities for both women and men, and has adopted a deliberate strategy to prioritize the inclusion of more women when contracting new small out-grower farmers and agro-dealers. Completion of the 2X assessment further strengthened the innovator's ability to evaluate its current standing and identify areas for improvement in gender mainstreaming.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $13,393 USD	Strengthened the innovator's ability to measure and monitor its environmental performance and manage waste more effectively, enabling the company to operate more sustainably. This improved environmental management capacity also enhanced the company's competitiveness in funding applications and was a key factor in unlocking new financing opportunities.
MARKET RESEARCH	Development of a market expansion strategy/report.	In-house TA Tetra Tech Cost: $40,178 USD	Signed a partnership agreement with Matapiri Seeds to distribute their seeds in Zimbabwe.
INVESTMENT READINESS	Investment facilitation support to access debt.	In-house TA Tetra Tech Cost: $13,393 USD	Raised $930,000 USD debt from a commercial bank in Mozambique.

Impact achieved:

- **7,300 end-users** *33% women & 23% BoP*
- **10,400 tons food produced**
- **13,100 kWh saved**
- **$943,000 USD investment raised** *100% private funds*
- **128 jobs created** *52% of all employees are women*
- **6,000 hectares under improved practices**
- **4,700 end-users with increased incomes** *21% women*
- **$368,000 USD in sales**

PKT & PARTNERS

Countries of operation: Democratic Republic of the Congo
Grant amount: $75,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation

Challenge faced by end-users:

Demand for domestic energy in the DRC is extremely high, yet access to electricity remains severely limited, only about 1% of the rural population and 15% of the urban population have reliable electricity. In the absence of appropriate energy alternatives, most households rely on firewood and charcoal for cooking, contributing to the destruction of an estimated 400,000 hectares of forest each year. The country also faces persistent food insecurity driven by low agricultural productivity, which is exacerbated by recurrent droughts, declining soil fertility, and the intensive use of pesticides and chemical fertilizers. These challenges deepen poverty, particularly in rural areas. Confronted with poor yields and diminishing soil health, farmers increasingly clear new land for cultivation, often through tree-felling and forest burning. This practice accelerates deforestation, degrades ecosystems, and intensifies the impacts of climate change across the DRC.

Innovator's provided solution:

The innovator provides rural and peri-urban communities with an ecological charcoal alternative that enables cleaner cooking. Makalos charcoal briquettes are produced from biodegradable waste collected in urban areas, offering a sustainable energy solution that reduces pressure on forest resources. In addition, their innovation benefits farmers through Bilanga Bio, a soil amendment and organic fertilizer designed to improve soil structure and nutrient content, thereby enhancing agricultural productivity.

Barriers faced by innovator in reaching end-users:

Infrastructure and logistics constraints - combined with an insufficient number of points of sale, limited timely, and affordable access to the innovation for end-users - affect the innovator's ability to scale.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $22,697 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
INVESTMENT READINESS	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech	
INVESTMENT READINESS	Development of financial models and investor teaser.	In-house TA OpenCapital Advisors Cost: $11,349 USD	Strengthened its business model and preparedness for raising investment funding.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA Tetra Tech	This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
BUSINESS DEVELOPMENT	Website development to expand innovator's digital footprint.	External TA Bigger Than Me Cost: $3,244 USD	Expanded into a new market by launching online sales in Kinshasa. They are now reaching more customers digitally and are in the process of partnering with a delivery service provider to enable nationwide distribution of their products.
ORG CAPACITY DEVELOPMENT	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.

Impact achieved:

22,000 end-users
66% women & 100% BoP

247,000 tons food produced

1,700 tons of food processed

$744,000 USD in sales

21 jobs created
39% of all employees are women

POWERLIVE

Countries of operation: Zimbabwe

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Many rural districts in Zimbabwe rely heavily on river water for daily household needs, while some communities depend on shared wells located as far as five kilometers away. Women often bear the burden of collecting water, carrying 25-litre buckets on their heads to meet essential needs such as cooking, drinking, cleaning, and laundry. Because water collection is physically demanding and time-consuming, many households rely on rainfall for agricultural activities. However, with increasingly unpredictable rainy seasons, crops frequently dry out before the rains begin, leading to poor harvests. Most rural households are low-income earners and cannot afford solar systems or petrol and diesel generators, limiting their access to alternative water-pumping or irrigation technologies that could reduce labor burdens and improve agricultural productivity.

Innovator's provided solution:

The innovator provides solar-powered water pumps that make clean, safe water readily accessible for drinking and agricultural use, reducing the need for rural communities to travel long distances to reach water sources. The pumps are offered on a pay-as-you-go basis, allowing customers to use the system while paying in monthly installments, which makes the technology far more affordable for low-income households.

Barriers faced by innovator in reaching end-users:

The innovator's solar pumping solution was designed to reduce the burden on women by minimizing the time and physical effort required to collect water for household needs and for irrigating nutrition gardens. While the technology effectively addressed a critical community need, its adoption faced notable challenges. Because many households rely on seasonal and irregular income, affordability remained a significant barrier. Even with the introduction of a pay-as-you-go model to spread costs over time, some users struggled to maintain regular payments, limiting the technology's reach and preventing certain potential end-users from adopting the solution.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PRODUCT DEVELOPMENT	Development of technical specifications and recommendations for the innovator's solar water pumps, as well as developing a new supplier list meeting the technical specifications of the innovator's new and bigger pumps.	In-house TA Tetra Tech Cost: $3,000 USD	Strengthened Powerlive's technical and procurement capabilities. The pump specifications equipped the innovator with the knowledge needed to make informed decisions about selecting pumps with greater depth capacity and improved water-supply efficiency to better meet customer needs. Additionally, the supplier database enabled Powerlive to identify and engage African pump manufacturers that supply Zimbabwe, expanding their sourcing options and supporting more cost-effective and reliable procurement.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $10,000 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
	Conducted gender inclusive partnership mapping and facilitation.	In-house TA Tetra Tech Cost: $10,000 USD	Facilitated access to best-fit gender-inclusive partners.
INVESTMENT READINESS	Developing an investor teaser as well as financial models.	In-house TA Tetra Tech Cost: $10,000 USD	Secured funds from Social Investment Managers and Advisors (SIMA).
	Investment facilitation to raise debt funding from external investors.	In-house TA Tetra Tech Cost: $20,000 USD	Raised $599,000 USD in debt funding.

Impact achieved:

83 end-users
43% women & 100% BoP
36 end-users using EUF

41 tons food produced

17,000 kWh saved

$599,000 USD investment raised
100% private funds

21 jobs created
71% of all employees are women

12 hectares under improved practices

999 tons of CO2e saved

$10,000 USD in sales

36 end-users with increased incomes
38% women & 100% BoP

20.6 million liters of water saved

RDG COLLECTIVE

Countries of operation: Zambia
Monitors: Water and Biodiversity
Grant amount: $75,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

The increasing frequency of drought is placing significant strain on smallholder farmers, who often lack affordable alternatives to rain-fed irrigation. This heavy reliance on rainfall makes farming systems highly vulnerable to climate variability, particularly for those cultivating maize, the region's primary staple crop. As droughts become more common and unpredictable, farmers face reduced yields, heightened food insecurity, and increased economic hardship.

Innovator's provided solution:

The innovator reduces farmers' dependence on rain-fed irrigation by providing pay-as-you-go solar water pumps. This business model makes the technology accessible to a wide range of farmers while helping to mitigate the impacts of climate change. In addition, the innovator's micro-irrigation products lower production costs, enable farmers to cultivate higher-value crops, and increase yields, all while reducing overall water consumption.

Barriers faced by innovator in reaching end-users:

Poor rural road networks made it difficult to install and maintain solar irrigation equipment, increasing operational complexity and costs. Farmers' limited access to upfront capital, despite the availability of pay-as-you-go models, also slowed adoption, as many struggled to meet even the initial payment requirements. Additionally, seasonal cash-flow constraints affected repayment consistency among smallholder users, further hindering widespread uptake of the technology.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $7,566 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
BUSINESS DEVELOPMENT	Developed a methodology to estimate crop water use for innovator's solar water pumps.	In-house TA Tetra Tech Cost: $11,349 USD	Developed a practical methodology for quantifying water-use efficiency gains achieved through RDG's irrigation solutions, strengthening their ability to measure impact and inform data-driven decision-making.
ORG CAPACITY DEVELOPMENT	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.

Impact achieved:

1,000 end-users
13% women & 1% BoP

645 hectares under improved practices

$56,000 USD in sales

REEL GARDENING

Countries of operation: South Africa
Monitors: Water and Biodiversity
Grant amount: $200,000 USD

Nexus link: Water-Food
Contributes to: Climate Adaptation
Co-funding provided by innovator: $58,253 USD

Challenge faced by end-users:

Starting a home garden often requires substantial amounts of water, start-up capital, and at least a basic level of gardening knowledge. For many low-income households, the prospect of investing scarce resources in seeds, fertilizer, and water, only to risk crop failure, can discourage them from growing their own produce. This missed opportunity limits their ability to improve household nutrition or generate supplemental income through the sale of surplus crops.

Innovator's provided solution:

The innovator has developed a unique seed system that can be grown into a vegetable or herb garden in nearly any region. Each unit consists of a pre-packaged paper strip embedded with seeds and fertilizer, allowing users to plant it easily at the correct depth with minimal effort. The system takes only five minutes to plant, uses up to 80% less water than traditional gardening methods, and provides months of fresh produce, along with the joy and satisfaction of growing food at home.

Barriers faced by innovator in reaching end-users:

The innovator experienced difficulties in aggregating produce from end-users for market transportation. Many farmers also lacked access to proper sorting and packaging facilities that met market requirements, limiting their ability to sell high-quality produce at competitive prices. To address these challenges, the innovator constructed a nearby facility for sorting and packaging, located within reach of most communities. They also introduced motorbikes equipped with storage boxes to collect produce directly from farmers and transport it efficiently to the facility, referred to as an "innovation hub." This model significantly reduced the time farmers needed to deliver their produce, improved the quality of goods reaching the market, lowered post-harvest losses, and ultimately increased the incomes of end-users.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $1,083.33 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.
GENDER INTEGRATION	Development of a forward-looking business plan including a 2X assessment on the Equillo platform, a gender lens investing webinar, and a 2X assessment report with recommendations.	In-house TA Tetra Tech Cost: $25,129 USD	Secured funding partnerships with at least one commercial bank in South Africa.

Impact achieved:

70,000 end-users
47% women & 100% BoP

12,000 tons food produced

37 million liters of water saved

$792,000 USD in sales

20,000 end-users with increased incomes
46% women & 100% BoP

23 hectares under improved practices

RURAL INTEGRATED ENGINEERING/VIRTUAL IRRIGATION ACADEMY

Countries of operation: South Africa
Monitors: Water and Biodiversity
Grant amount: $90,000 USD
Nexus link: Water-Food
Contributes to: Climate Adaptation
Co-funding provided by innovator: $76,000 USD

Challenge faced by end-users:

Public funding continues to flow into irrigation infrastructure as smallholder irrigation is increasingly viewed as a critical climate-change adaptation strategy. However, substantial evidence shows that these investments frequently underperform due to mediocre yields, inadequate maintenance, and weak governance structures. Although authorities are increasingly delegating irrigation governance to local water-user groups, these groups often lack the information needed to make informed decisions about water allocation or to resolve water-related conflicts. Moreover, there are no accountability systems in place to track the productive use of water, nor mechanisms to generate feedback that would enable learning, adaptation, and continuous improvement.

Innovator's provided solution:

Rural Integrated Engineering's Virtual Irrigation Academy and Chameleon Soil Moisture System is designed to transform the small-scale irrigation sector through three core functions: a suite of soil-water monitoring tools, a learning system, and a governance system. The monitoring tools measure soil moisture, nitrate levels, and salt content using color-coded indicators that signal when farmers need to take action. The learning system strengthens farmers' knowledge by combining real-time data with experiential, site-specific insights developed over generations of farming practice. In addition, the digital platform collects and displays data in a user-friendly format, enabling farmers, water-user groups, and other stakeholders to make more informed decisions about water allocation, management, and implementation. This transparency supports fair and equitable distribution of water resources. The governance component is particularly beneficial for women, who often play a primary role in irrigation management, by providing them with the information and platform needed to negotiate on equal terms and receive equitable treatment.

Barriers faced by innovator in reaching end-users:

The technology is quite expensive and requires more farmer cooperatives and end-user financing options to make the technology more affordable to end-users.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Development of a product quotation builder that would assist the South African Department of Agriculture to establish a mechanism for partnering with the innovator and also to get the innovator to qualify for registration on the government's procurement system.	In-house TA Tetra Tech Cost: $14,186 USD	Equipped the innovator with a quotation builder/prospectus designed to support navigation of South Africa's public procurement process, but external factors prevented the tool from influencing the intended procurement outcome. The innovator now possesses a reusable template that can support future procurement opportunities in other countries when similar processes arise.
BUSINESS DEVELOPMENT	Identification and mapping of pilot/demonstration sites for testing the irrigation products in partnership with the Department of Agriculture and other partners.	In-house TA Tetra Tech Cost: $28,371 USD	Increased product distribution and access to new operational sites across South Africa.
BoP IMPACT	Development of a Digital Inclusivity Index report for the innovator's chameleon sensor innovation.	In-house TA Tetra Tech Cost: $14,185 USD	Gained clearer insight into gaps within its business model and strengthened its capacity and preparedness to refine and improve the model moving forward.
PRODUCT DEVELOPMENT	Development of a mobile application that can be used by smallholder farmers to monitor their irrigation regimes.	External TA Bigger Than Me Cost: $6,435 USD	Now has an application that captures Chameleon card data, enabling more accurate tracking of irrigation water-use efficiency. The app also allows the innovator to stay updated on farmers' activities and progress as they adopt and use the Chameleon device, strengthening monitoring and support.

Impact achieved:

- **8,100 end-users** *78% women & 50% BoP*
- **14,000 tons food produced**
- **183 million liters of water saved**
- **$38,000 USD investment raised** *100% public funds*
- **6 jobs created** *40% of all employees are women*
- **1,900 hectares under improved practices**
- **711 end-users with increased incomes** *62% women & 34% BoP*
- **$156,000 USD in sales**

SOLAR VILLAGE

Countries of operation: Zambia
Monitors: Water and Biodiversity
Grant amount: $75,000 USD
Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $12,700 USD

Challenge faced by end-users:

Labor-intensive spraying using conventional knapsack sprayers often results in delayed and ineffective crop protection, leading to significant yield losses and reduced income for smallholder farmers. In addition, farmers living in remote areas, far from established infrastructure, struggle to access essential irrigation and energy services, further constraining their productivity and resilience.

Innovator's provided solution:

Solar Village distributes Micron's highly water-efficient sprayers along with the Solar Village Battery Stick to rural smallholder farmers. The sprayer reduces water and labor requirements by up to 90%, and cuts the time spent on pest management by 84% for men and 94% for women. By providing a solar-powered solution tailored to the sprayer's energy needs, Solar Village helps farmers avoid reliance on environmentally harmful and costly disposable batteries.

Barriers faced by innovator in reaching end-users:

Reaching farmers in remote areas significantly increased customer acquisition costs due to limited dealer networks and the logistical challenges of operating in hard-to-access regions. Awareness of water-efficient spraying technologies was also low, requiring extensive field demonstrations to build trust and encourage adoption. In addition, the pay-as-you-go model carried heightened risk in areas where farmers frequently experienced climate-related crop failures, making it more difficult for some customers to maintain consistent payments.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
BUSINESS DEVELOPMENT	Development of a credit risk assessment tool for use when onboarding new customers on the pay-as-you-go financial scheme.	In-house TA Tetra Tech Cost: $13,004 USD	Introduced a credit-risk assessment process into its business model, strengthening its ability to screen customers and reducing the risk of non-repayment. This improvement has already proven effective in mitigating financial exposure under the pay-as-you-go model.
INVESTMENT READINESS	Development of financial models and investor teasers.	In-house TA Tetra Tech Cost: $13,004 USD	Raised $ 2 million USD in results-based funding from Beyond the Grid Fund for Africa.
	Completed the delivery of a financial model.	In-house TA Tetra Tech	
	Updated financial model and investor teaser.	In-house TA Tetra Tech	Supported their pursuit of funding opportunities.
ORG. CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $1,083.33 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.

Impact achieved:

- **15,600 end-users**
  35% women & 100% BoP
  10,200 end-users using EUF
- **4,200 tons food produced**
- **315 kWh saved**
- **$2 million USD investment raised**
  100% public funds
- **425 jobs created**
  15% of all employees are women
- **4,100 hectares under improved practices**
- **5 tons of CO_2e saved**
- **$231,000 USD in sales**
- **1,300 end-users with increased incomes**
  30% women & 100% BoP
- **889,000 liters of water saved**

SUSTAINABLE BUILDERS

Countries of operation: Zambia
Grant amount: $75,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Adaptation

Challenge faced by end-users:

Farmers' vulnerability to climate change stems not only from their heavy reliance on rain-fed agriculture but also from a range of socio-economic, demographic, and policy factors that limit their capacity to adapt. For example, taxation on agricultural products is a significant constraint; information on which products qualify for zero-tax status is not clearly communicated, leaving many farmers unaware of these exemptions. Market dynamics also create challenges, particularly price-setting for staple crops such as maize, soybeans, and groundnuts. Prices are often determined at the ministerial or institutional level and do not always reflect farmers' actual production costs. This disconnect contributes to the growth of informal or black-market activity, further undermining the stability and fairness of formal agricultural markets.

Innovator's provided solution:

The innovator strengthens the efficiency of the agricultural supply chain by building business-management capacity, upgrading management systems, integrating digital solutions, and improving access to financial products and services for key market actors. In addition, the innovator partners with microfinance institutions to expand financial access for women's groups, supporting greater inclusion and participation in agricultural markets.

Barriers faced by innovator in reaching end-users:

Fragmented farmer organizations made it difficult to coordinate mobilization efforts and deliver training effectively. At the same time, limited access to reliable market-price information reduced farmers' willingness to participate fully in market-linked activities, as many were hesitant to engage without clear expectations of fair pricing and potential returns.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $37,823 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.

Impact achieved:

630 end-users
53% women

$1,000 USD in sales

SYLVA FOOD SOLUTIONS

Countries of operation: Zambia
Grant amount: $100,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Food waste in Zambia has been identified as a leading cause of business losses among small-scale horticulture farmers. The primary drivers of this challenge are farmers' limited knowledge of preservation techniques and their lack of access to the resources and equipment needed to extend the shelf life of perishable produce. Compounding the issue, very few stakeholders in the country invest in value-addition or post-harvest preservation technologies for horticultural products. As a result, approximately 30% of farmers have abandoned horticulture value chains altogether, unable to sustain their businesses in the face of persistent post-harvest losses.

Innovator's provided solution:

The solar dryer developed by Sylva Food has empowered many small-scale farmers who previously suffered significant losses due to food waste. In addition to providing preservation technology, the innovator purchases farmers' processed products and uses them as inputs in its agro-processing operations, creating a reliable and profitable market for local producers. To promote a sustainable and profitable market for traditional Zambian foods, Sylva Foods now offers a diverse portfolio of low-cost yet highly nutritious products that cater to both low-income and high-income consumers. All products are indigenous, organic, and free from artificial additives. The current range includes moringa soup, moringa cereal, moringa teabags, assorted dried local vegetables and fruits, as well as canned free-range chicken and goat meat.

Barriers faced by innovator in reaching end-users:

The distance between production zones and processing facilities significantly increased transport costs for smallholder farmers, reducing their overall profitability. Adoption of the solar-drying technology was initially slow, as many farmers were unfamiliar with the equipment and required time and support to build confidence in its use. In addition, seasonal variability in production affected the consistent utilization of the drying units, making it challenging to maintain steady processing volumes throughout the year.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
MEL ADVISORY SERVICES	Development of monitoring, evaluation, and learning data collection and reporting templates.	In-house TA Tetra Tech Cost: $12,137	Strengthened its reporting systems.

Impact achieved:

2,200 end-users
80% women & 100% BoP

12 tons of food processed

2,900 kWh saved

$13,000 USD in sales

2,100 end-users with increased incomes
81% women & 100% BoP

24,000 liters of water saved

TIVWANE MONEY SOLUTIONS

Countries of operation: Zambia
Monitors: Water
Grant amount: $62,500 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation

Challenge faced by end-users:

Smallholder farmers lack funds to purchase farming inputs and solar irrigation equipment.

Innovator's provided solution:

The innovator provides tailored credit facilities that enable small-scale farmers to access solar water pumps and premium agricultural inputs. These financing options include asset-based loans offered to individuals as well as groups, particularly cooperatives, ensuring that farmers with limited upfront capital can still obtain the equipment and resources they need to improve productivity.

Barriers faced by innovator in reaching end-users:

Low financial literacy among target end-users required extensive capacity-building efforts before farmers felt confident enough to take up loans. In addition, the perceived risk of indebtedness discouraged some farmers from accessing asset-based credit products altogether. High transaction costs in rural areas further slowed the onboarding of new clients, making it challenging to scale credit services efficiently.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $4,729 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
INVESTMENT READINESS	Development of financial models and investor teaser.	In-house TA Tetra Tech Cost: $6,305 USD	Improved its ability to clearly communicate its business model, risk profile, and growth strategy to potential investors, strengthening its overall investment readiness.
	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts and met with several investors who expressed interest. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA Tetra Tech	This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
ORG CAPACITY DEVELOPMENT	Development of a grants management tracker.	In-house TA Tetra Tech Cost: $3,153 USD	Improved the innovators' tracking of funding opportunities.
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $4,729 USD	Strengthened its alignment with ESG standards, resulting in enhanced compliance with the environmental, social, and governance requirements increasingly expected by investors and donors.

Impact achieved:

10,500 end-users
74% women & 60% BoP

408 tons food produced

778 kWh saved

$65,700 USD in sales

ZIRCON ENERGY SOLUTIONS

Countries of operation: Zambia
Monitors: Water and Biodiversity
Grant amount: $200,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $12,800 USD

Challenge faced by end-users:

The agricultural sector remains a vital component of Zambia's economy, contributing approximately 6% to national GDP. It provides an estimated 22.3% of the country's employment, with 4.3% in the formal sector and 18% in the informal sector. The sector is dominated by smallholder farmers, and production is largely maize-centric and heavily dependent on rain-fed systems. This reliance on rainfall has left the country, particularly rural smallholders, highly vulnerable to climate variability and climate change. Smallholder farmers also face significant challenges with existing irrigation technologies. Hand pumps, treadle pumps, and engine-powered water pumps all present limitations: they require substantial labor inputs, depend on fuel availability, and are often too costly to operate at scale. These constraints hinder the expansion of irrigation and limit farmers' ability to adapt to changing climatic conditions.

Innovator's provided solution:

The solar-powered water pump provides an effective and sustainable alternative to fuel-powered pumps, hand pumps, and treadle pumps. One of its primary applications is in smallholder irrigation systems, where it offers a clean-energy solution that is both environmentally friendly and operationally efficient. By enabling farmers to better control their water use, the technology supports more consistent irrigation, enhances farm productivity, and reduces reliance on costly or labor-intensive pumping methods. To ensure affordability, the solution is offered to smallholder farmers through a rent-to-own installment payment plan, making the technology accessible to those with limited upfront capital.

Barriers faced by innovator in reaching end-users:

Poor rural infrastructure made it difficult to install and service solar water pumps, increasing both time and operational costs. Farmers' limited familiarity with rent-to-own models also slowed decision-making, as many required additional support to understand and trust the financing approach. Furthermore, irregular mobile connectivity in remote areas disrupted digital payment and monitoring systems, adding another layer of complexity to the technology's adoption and ongoing management.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ENVIRONMENTAL	Received an environmental and social management system template, supporting slide deck, and capacity building webinar.	In-house TA Tetra Tech Cost: $34,678 USD	Strengthened Zircon's capacity to identify, manage, and mitigate environmental and social risks associated with deploying solar water-pumping systems.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $34,678 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $1,083.33 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.
	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.

Impact achieved:

- **186 end-users** *100% BoP*
- **131 tons food produced**
- **117,000 kWh saved**
- **$947,394 USD in sales**
- **4 jobs created** *21% of all employees are women*
- **29 hectares under improved practices**
- **12 tons of CO2e saved**
- **52 end-users with increased incomes** *100% BoP*

ZONAL

Countries of operation: Chad
Monitors: Water
Grant amount: $85,000 USD

Nexus link: Energy-Food
Contributes to: Climate Mitigation and Adaptation
Co-funding provided by innovator: $28,800 USD

Challenge faced by end-users:

Unprecedented floods in recent years have destroyed crops across Chad, worsening food security and nutritional conditions among vulnerable communities in the southern provinces.

Innovator's provided solution:

The Vital Fish Project primarily produces fish meal and fish oil, nutrient-rich by-products derived from sustainably harvested fish, to help strengthen food and nutrition security. The initiative works with local communities to promote sustainable fishing practices and purchases fish from smallholder farmers who depend on fishing as an alternative livelihood during the dry season. The project will be managed by ZONAL's women's team, with active participation from women farmers' organizations, ensuring strong female leadership and inclusive community engagement.

Barriers faced by innovator in reaching end-users:

Insecurity in the country due political instability, making movement for operational purposes difficult. To overcome geographic scaling challenges, the innovator needs investment and matured internal operations which can unlock growth opportunities in other countries. As Lake Lere is at risk of overfishing, the innovator must also work with local fishermen to improve management practices, creating long-term sustainability.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
ENVIRONMENTAL	Development of an energy-saving calculator/methodology.	In-house TA Tetra Tech Cost: $5,359 USD	Gained an understanding of how carbon credits apply to its fish-processing activities. Through the technical assistance, the team identified comparable equipment with similar operational profiles and received tailored tools, including energy and CO2 savings calculation sheets, which now enable the innovator to quantify its emissions reductions and assess potential eligibility for carbon-credit opportunities.
ENVIRONMENTAL	Development of environmental and social management systems templates.	In-house TA Tetra Tech Cost: $21,436 USD	Strengthened Zonal's capacity to pursue adaptation finance by equipping the organization with the knowledge and tools needed to prepare competitive applications for climate-adaptation funding opportunities.
ORG CAPACITY DEVELOPMENT	Conducted human resources diagnostics and talent management training workshop.	In-house TA Tetra Tech Cost: $1,083.33 USD	Strengthened its human resource management capacity, gaining clearer insight into organizational talent gaps and adopting improved practices for recruitment, performance management, and staff development.
ORG CAPACITY DEVELOPMENT	Capacity building training workshop on sustainable fishing in Lake Lere.	In-house TA Tetra Tech Cost: $10,718 USD	Increased awareness of sustainable fishing practices across all stakeholders working around Lake Lere, extending well beyond the ZONAL team. The innovator received strong encouragement from municipal leaders for its community efforts and has continued conducting regular training sessions to sustain awareness and promote long-term adoption of sustainable fishing methods.
ORG CAPACITY DEVELOPMENT	Provided carbon credit market diagnostics, recommendations, and training.	External TA Intellecap Cost: $2,221.55 USD (Group TA)	Developed better understanding of the voluntary carbon market and available opportunities for their business.
INVESTMENT READINESS	Reviewed business documents and applications for submission to various investors and funding opportunities.	In-house TA OpenCapital Advisors Cost: $3,120 USD (Group TA)	Access to a tailored list of investor contacts. This technical assistance was provided under the bridge contract, so further outcomes are unknown at this time.
INVESTMENT READINESS	Drafting accreditation documents for submission to the Adaptation Fund.	In-house TA OpenCapital Advisors Cost: $9,930 USD	Submitted an application for accreditation to the Adaptation Fund.
BUSINESS DEVELOPMENT	Developing and matching the innovator to investors using the Africa Big Deal Startup Database (2019-2022) for potential connections in renewable energy projects in Chad.	In-house TA Tetra Tech Cost: $10,718 USD	Access to a tailored investor database.
GENDER INTEGRATION	Provision of a gender lens investment readiness webinar, a 2X assessment report and a gender lens investment analysis summary.	In-house TA Tetra Tech Cost: $8,039 USD	Established a dedicated Gender Department that now guides women in the Mayo-Kebbi region toward greater financial empowerment. Women are systematically included in all activities, with their specific constraints and needs fully considered in program design and implementation. The knowledge gained through the 2X tools also contributed to securing new funding from Family Empowerment Media (FEM) for a project aimed at reducing birth rates and advancing women's economic development in Chad.

Impact achieved:

- **315,000 end-users** *34% women & 97% BoP*
- **33 tons of food processed**
- **214,000 kWh saved**
- **$35,000 USD investment raised** *49% public funds*
- **33 jobs created** *56% of all employees are women*
- **43,000 end-users with increased incomes** *34% women & 93% BoP*
- **143 tons of CO2e saved**
- **$194,000 USD in sales**

ZONFUL ENERGY

Countries of operation: Zimbabwe
Grant amount: $75,000 USD

Nexus link: Water-Energy-Food
Contributes to: Climate Mitigation
Co-funding provided by innovator: $103,000 USD

Challenge faced by end-users:

Every year, from August to September, approximately 11 million people living in Zimbabwe's rural and arid or semi-arid regions experience high levels of acute food insecurity. At the same time, less than 5% of the country's cultivated land is irrigated, despite more than 13 million hectares, around 11% of national land area, being suitable for solar-irrigated agriculture.

Innovator's provided solution:

Zonful's solar irrigation solution enables farmers to improve yields, enhance both crop and water productivity, and significantly reduce the time and physical labor required compared to manual irrigation methods. The pumps are longer-lasting, more efficient, and cheaper to operate than petrol-powered alternatives. To overcome the barrier of high upfront costs, Zonful offers a pay-as-you-go financing model that allows rural off-grid farmers to make small monthly payments. To strengthen women's access to agricultural inputs, the innovator intentionally targets women-headed households, particularly those who have never previously used a solar-powered water pump.

Barriers faced by innovator in reaching end-users:

Due to their reliance on seasonal and often unpredictable incomes, most target end-users in poor rural communities across Zimbabwe were unable to afford solar pumps to improve agricultural productivity. Although the innovation directly addressed critical water-access challenges for household use and nutrition gardens, affordability remained a major barrier to adoption. This limited the solution's reach and reduced its potential impact, particularly among the most vulnerable groups who stood to benefit the most.

Technical assistances received and outcomes:

	Received assistance	Category & Cost	Outcome
PRODUCT DEVELOPMENT	Development of technical specifications for new solar pumps and supplier list meeting the innovator's new and bigger pump specifications.	In-house TA Tetra Tech Cost: $2,601 USD	Enabled the innovator to refine its product specifications, resulting in a market-fit product with significantly reduced production and material costs. This improvement lowered prices for end-users, making the solution more affordable and increasing its potential reach.
GENDER INTEGRATION	Gender-lens investment support and promoting gender equity in the workplace through webinars, development of 2X assessment report, recommendations for gender and base of the pyramid integration policy and training curricula.	In-house TA Tetra Tech Cost: $5,201 USD	Strengthened its knowledge and capacity to integrate gender-lens investment requirements into decision-making processes, enabling it to identify and pursue new gender-aligned investment opportunities.
INVESTMENT READINESS	Development of a 3-statement financial model as well as an investor teaser pitch deck.	In-house TA Tetra Tech Cost: $2,601 USD	Strengthened investor-facing documents and prospects of raising funding from investors.
BoP IMPACT	Partnership facilitation between Zonful Energy and IWMI/CGIAR's Ukama/Ustawi.	In-house TA Tetra Tech Cost: $10,403 USD	Secured a Memorandum of Understanding valued at $40,000, disbursed as a grant to pilot Zonful Energy's innovation. This support enabled the company to scale its irrigation services and increased its visibility and engagement with international partners.
LEGAL SERVICES	Legal advisory services on employee non-compete and non-disclosure policies.	In-house TA Tetra Tech Cost: $5,201 USD	Enabled the business to establish legally compliant and streamlined employee management processes. This strengthened staff retention, as employees are now managed in a transparent and legitimate manner, ultimately improving overall service delivery.

Impact achieved:

937 end-users
24% women & 15% BoP
937 end-users using EUF

5,500 tons food produced

165,000 kWh saved

$552,000 USD in sales

130 jobs created
53% of all employees are women

218 hectares under improved practices

53,000 tons of CO2e saved

432 end-users with increased incomes
33% women

The WE4F Innovator Compilation was created through contributions from the Middle East and North Africa Regional Innovation Hub (a consortium of Berytech, cewas, IWMI, and Chemonics Egypt), the South and Southeast Asia Regional Innovation Hub (a consortium of Tetra Tech, CrossBoundary, and Devworks International), the Southern and Central Africa Regional Innovation Hub (a consortium of Tetra Tech, IWMI, and Open Capital Advisors), and the Secretariat Unit (Kathryn Bailey, McKenzie Horwitz). The report was finalized under the WE4F Bridge Contract managed by the International Water Management Institute (IWMI).

Published on June 26th, 2026