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This report was written by 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 USAID Secretariat Unit.

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ACRONYMS AND TERMS

AI	Artificial intelligence	MENA	Middle East and North Africa
B2B	Business-to-business	MFI	Microfinance institutions
BMZ	German Federal Ministry for Economic Cooperation and Development	MOU	Memorandum of Understanding
BoP	Base of the pyramid	N2N	Nature-to-nature
CFI	Call for Innovations	NFI	Nabahya Food Institute
CKM	Communications and knowledge management	Norad	Norwegian Agency for Development Cooperation
CO2e	Carbon dioxide equivalent	OCFI	Open Call for Innovations
COMACO	Community Markets for Conservation	PR	Public relations
DRC	Democratic Republic of the Congo	QoSS	Quality of Service Survey
EE	Enabling Environment	RBFs	Results-based financing
EMMP	Environmental Mitigation and Monitoring Plan	RIH	Regional Innovation Hub
EMMR	Environmental Mitigation and Monitoring Report	S/CA	Southern and Central Africa
ESG	Environmental, Social, and Governance	S/SEA	South and Southeast Asia
ESMS	Environmental and social management systems	Sida	Swedish International Development Cooperation Agency
EUF	End-user financing	SIMA	Social Investment Managers and Advisors
FAO	Food and Agriculture Organization	SMEs	Small- and medium-sized enterprises
GHG	Greenhouse gas	TA	Technical assistance
HAF	High Atlas Foundation	UAE	United Arab Emirates
HR	Human resources	UN	United Nations
IFC	International Finance Corporation	UNIDO	United Nations Industrial Development Organization
IoT	Internet of Things	USAID	U.S. Agency for International Development
IR	Investment readiness	USD	U.S. Dollars
KGC	Khmer Green Charcoal	VIA	Virtual Irrigation Academy
kWh	Kilowatt-hours	WE4F	Water and Energy for Food
LOP	Life of Program	WEF	Water-energy-food
MEL	Monitoring, evaluation, and learning	YRE	Yayasan Rumah Energi



SUMMARY



WHAT IS WATER AND ENERGY FOR FOOD?

Water and Energy for Food (WE4F) a joint international initiative of the German Federal Ministry for Economic Cooperation and Development (BMZ), the European Union, the Ministry of Foreign Affairs of the Government of the Netherlands, the Norwegian Agency for Development Cooperation (Norad), Sweden through the Swedish International Development Cooperation Agency (Sida), and the U.S. Agency for International Development (USAID). WE4F, through its Regional Innovation Hubs (RIHs), provides financial support, technical assistance (TA), enabling environment (EE) support, and investment facilitation to water-food, energy-food, and water-energy-food (WEF) innovations. The supported innovations impact smallholder farmers, helping them unlock missing inputs, finance, technology, and markets. By using these innovations, farmers and food companies can increase their food production and processing while minimizing water and energy use, which in turn enhances their climate resilience and reduces CO2 emissions.

WHAT HAS THE PROGRAM ACHIEVED?

Overall, 2023 was a successful year for WE4F. The Middle East and North Africa (MENA), South and Southeast Asia (S/SEA), and Southern and Central Africa (S/CA) RIHs supported 67 innovators, providing them with TA, grants, investment facilitation, and legal, policy, and regulatory support.

This support has helped innovators exceed, or be on track to exceed, nine key performance indicators. So far 1.82 million end-users have been impacted by WE4F-supported innovators, of which 655,000 are women and 1.5 million are base of the pyramid (BoP) end-users. These results highlight innovators' commitment to make their innovations more accessible to end-users through end-user financing (EUF) mechanisms, gender mainstreaming, and expansion to new markets. Of the total end-users, 45%, or 834,000, have experienced an increase in income, and 271,000 end-users are women.

In order to help these innovators to continue scaling and impacting end-users, the RIHs provided innovators with grants, TA, EE support, and investment facilitation. Overall, innovators received 120 TA instances in 2023. These TAs covered business development, marketing, sales, product design, human resources (HR), and investment readiness. As part of WE4F's key focus on women, BoP end-users, and protection of the environment and biodiversity, there have been 18 TAs on gender integration, 5 TAs on BoP impact, and 19 TAs on environmental sustainability.

Both on their own and with the help of the RIH investment teams, innovators have mobilized more than \$169 million U.S. Dollars (USD) from external sources, with 97% coming from private sources. This has exceeded the Life of Program (LOP) target by four times. Additionally, support from the hubs helped innovators generate over \$90 million USD in gross sales.

So far, WE4F-supported innovations have helped smallholder farmers and other end-users produce 6.19 million tons of food while saving 1.24 billion kilowatt-hours (kWh) of energy and 10.16 billion liters of water. As part of efforts to mitigate and adapt to climate change, innovators have helped end-users save 1.5 million tons of carbon dioxide equivalent (CO₂e). The reduction in greenhouse gas (GHG) emissions is due to innovators' technologies, business models, and agricultural practices.

Additionally, in 2023, innovators and program staff showcased the knowledge and expertise that they can share with regional and global WEF nexus stakeholders by participating in a diverse set of events. Hub staff, Secretariat staff, and innovators participated in, or hosted key sessions at, the 2023 UN Water Conference, Decarbonize Thailand, Cairo World Water Week, COP28, Arab SME Summit, and African Agribusiness and Science Week. Aside from external participation, the hubs focused on improving gender mainstreaming by hosting internal learning opportunities for innovators. The MENA RIH launched the MENA Women Innovate Network to support women-led and/or -owned innovators by sharing best practices, challenges, and extending support for gender lens investment as well as providing tailored services that aim to increase business opportunities for the supported women innovators and the number of women end-users. In 2023, two webinars were hosted with innovators not only attending from the MENA region, but also other WE4F supported regions.

In 2024, the hubs look to conclude the Open Call for Innovations (OCFI) process, providing support to new innovators as well as those still active in the program. Investment facilitation, EE, and TA will all play key roles in the year ahead as innovators have already identified their priorities as sustainable scaling, increased end-user outreach, and growth to new markets.

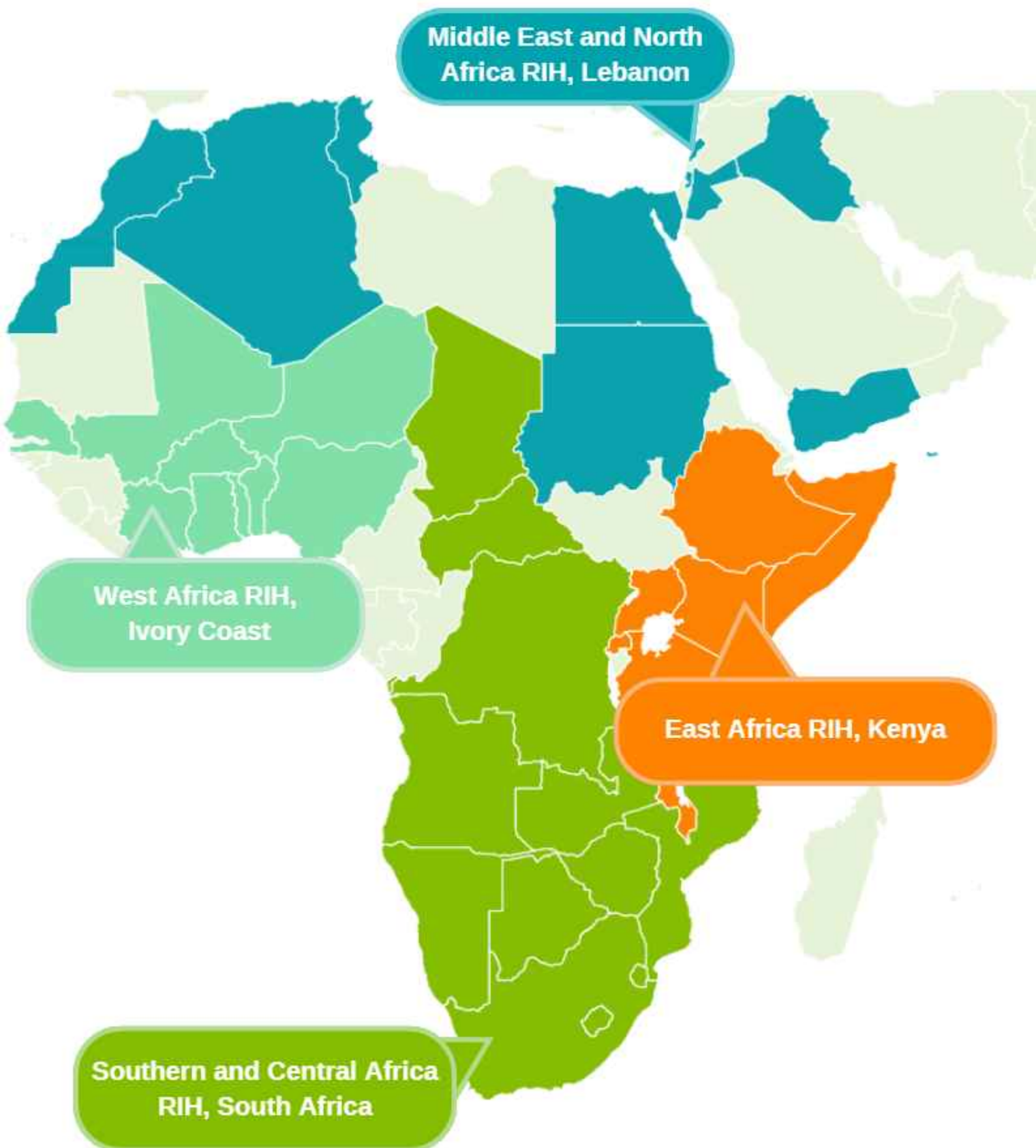


KEY PERFORMANCE INDICATORS

Key Performance Indicator	Life of Program Target (2020-2025)	Global Results to Date (2020-2023)
 Share of supported innovators that successfully marketed their climate-friendly, energy and/ or water-efficient innovations with profit	8% of innovations, of which 25% are led by women	25%
 Number of smallholder farmers and other end-users using energy-efficient, water-efficient, or climate adaptation related WE4F innovations in their activities	2.4 million end-users, of which 30% are women	1.8 million
	750,000 women end-users	655,000
	750,000 BOP end-users	1.5 million
	End-users using climate adaptation-related innovations	54,000
	End-users using climate adaptation & mitigation-related innovations	1 million
 Total mass of food produced as a result of WE4F innovations	5.3 million tons	6.1 million
 Total mass of food processed as a result of WE4F innovations	2.125 million tons	76,000
 Total energy saved in the food value chain as a result of the use of WE4F innovations	674 million kWh	1.2 billion
 Total volume of water consumption reduction in the food value chain as a result of WE4F innovations	2 billion liters	10.1 billion
 Number of smallholder farmers and other end-users that experience an increase in income	687,500 end-users, of which 30% are women	834,000
	205,000 women end-users	271,000
 Share of innovators and other stakeholders that use tools, methods, or processes to monitor the protection of water or biodiversity	80%	29.9%
	Monitoring water only	18.2%
	Monitoring biodiversity only	1.3%
	Monitoring water and biodiversity	10.4%
 Value of investment in US Dollars that WE4F innovators have mobilized from external sources	\$34 million	\$169 million
 Number of strategies, guidelines, or projects of international, regional or local organizations adopting and disseminating lessons learned from WE4F	4	5
 Total of GHG emissions saved by WE4F innovations	1 million tons of CO ₂ e	1.5 million
	Innovators with climate-mitigation innovations	33.33%

MENA RIH	S/SEA RIH	S/CA RIH	Current Status
23.5%	29.2%	21%	Exceeded
263,000	1 million	485,000	On Track
44,000	375,000	235,000	On Track
122,000	1 million	365,000	Exceeded
25,000	0	29,000	
161,000	485,000	450,000	
4.9 million	1 million	207,000	Exceeded
2,200	74,000	48	Off Track
759 million	487 million	2.6 million	Exceeded
7.8 billion	2.3 billion	18 million	Exceeded
104,000	580,000	149,000	Exceeded
6,300	192,000	71,000	Exceeded
38.7%	26.7%	18.8%	Off Track
29%	13.3%	6.3%	
0%	3.3%	0%	
9.7%	10%	12.5%	
\$33.1 million	\$131 million	\$5 million	Exceeded
N/A	N/A	N/A	Exceeded
934,000	315,000	278,000	Exceeded
25.9%	57%	25%	

MAP OF HUBS AND TARGETED COUNTRIES





BREAKDOWN OF INNOVATORS ACROSS THE NEXUS

88 innovators

17 water-food

533,000 end-users,
142,000 are women



8 MENA
Innovators

66,000 end-users,
10,000 are women

4 S/SEA
Innovators

377,000 end-users,
93,000 are women

5 S/CA
Innovators

89,000 end-users,
39,000 are women

20 energy-food

597,000 end-users,
272,000 are women



2 MENA
Innovators

345 end-users,
186 are women

12 S/SEA
Innovators

213,000 end-users,
82,000 are women

6 S/CA
Innovators

383,000 end-users,
189,000 are women

51 water-
energy-food

692,000 end-users,
239,000 are women



28 MENA
Innovators

195,000 end-users,
33,000 are women

17 S/SEA
Innovators

483,000 end-users,
199,000 are women

6 S/CA
Innovators

13,000 end-users,
7,000 are women

Innovation examples:

Organic fertilizers Wastewater treatment
Hydroponics Seeds
Desalination Apps
Drip Irrigation Digital platforms

Innovation examples:

Solar cold storage Thermal-based cold storage
Biogas Logistics services
Briquettes production Supply chain efficiency
Solar dryer Bioslurry

Innovation examples:

Solar PV systems Livestock production
Compost production Efficient cold storage
A.I. software Solar water pumps
Productive Use
Centers Tree nurseries & carbon
offsets

SECRETARIAT UNIT



ACTIVITIES

BUILD FUND FACILITATION

Mid-stage small- and medium-sized enterprises (SMEs) often face the "Valley of Death" and are unable to get debt and equity financing, as there are very few investors willing to invest in the range of \$200,000 to \$2 million USD, especially in countries where the finance and investment ecosystem grapples with challenges ranging from currency devaluation to supply chain uncertainties. Meanwhile, SMEs who are able to access financing, face high interest rates or collateral requirements of up to 100% of the loan. To mitigate these challenges and make capital available to SMEs, the BUILD/BRIDGE Fund provides debt financing/guarantees in the range of \$100,000 to \$2.5 million USD. This fund agreed to accept applications from WE4F innovators based in their focus countries. On the suggestion of hubs' investment teams, a few eligible innovators submitted applications for review in the past year and a half, one of those innovators is in the process of final risk committee review.

DISSEMINATING INFORMATION AND SHARING LESSONS LEARNED

Aside from events which WE4F hosted in 2023, the Secretariat Unit also coordinates the dissemination of information through the global and internal newsletters, internal program learning sessions, and by providing talking points and information on the program to USAID representatives and external organizations who disseminate WE4F lessons learned.

Internal Program Learning

Based on the global and internal newsletter data, the most relevant resources for innovators are funding opportunities, webinars on different topics that help elevate critical skills, and technology-based stories that showcase different innovations. To continue improving internal program operations, the Secretariat Unit worked to improve cross-hub MEL integration by focusing on MEL-informed innovator support, which brings together the MEL, TA, and investment teams. Additionally, incorporating MEL into hub-level strategic planning, helping to guide work on KPIs where RIHs currently fall short.

The Secretariat Unit also facilitated cross-hub discussions on gender mainstreaming; the RIH Gender Advisors discussed ideas for integrating more women in WE4F-supported innovations. From these cross-hub learning sessions, new support for innovators emerged; for example, it resulted in an internal webinar on the gender assessment which helped innovators explore gender lens investment. A similar approach helped the TA Units to increase the efficiency of the TA process and improve the procurement timelines for vendor-delivered TAs.

External Program Learning

Meanwhile, external lessons learning sharing involved a USAID representative at the 2023 Water for Food Conference in addition to hub staff and innovators' participation as speakers at events like COP28, Decarbonize Thailand, Cairo Water Week, and Africa Agribusiness and Science Week. The lessons learned and activities of WE4F were also disseminated through Results4America where WE4F's milestone-based grants was highlighted as a critical example of how to leverage results-based activities; and The Republic of Korea-UNOSSC Facility Phase 3 Programme/Facility for Sustainable Development in the Mekong Basin based on the Water-Energy-Food Nexus and South-South and Triangular Cooperation (RoK-UNOSSC Phase 3) which released, "Review of WEF Nexus related projects toward informing project pilot's delivery of SDG-impact," providing an overview of the S/SEA RIH. Through WE4F outreach activities and the continued growth of supported innovations, innovators and/or WE4F were featured by BBC, International Monetary Fund, Climatelinks, Agrilinks, Marketlinks, OnlineKhabar, PV Magazine, Iraq Business News, and many other platforms/outlets.



Number of Strategies, Guidelines, or Projects of International, Regional, or Local Organizations Adopting and Disseminating Lessons Learned from WE4F Publications, Events, or Presentations



DONOR ENGAGEMENT

In 2023, the Secretariat Unit supported the successful onboarding of a new WE4F donor, and Steering Committee Member, Norad. As WE4F has six donors, two Secretariat Units (one led by USAID and one led by GIZ), and five RIHs, it is imperative that all donors and management units maintain alignment on key activities, results, and challenges. Through the Donor Relations team, the USAID Secretariat Unit coordinates with the GIZ Secretariat Unit to systematically disseminate information to WE4F donors through the bi-annual donor Meetings as well as bi-monthly meetings between the Ministry of Foreign Affairs of the Government of the Netherlands, Norad, Sida, and USAID. The facilitation of the bi-annual donor meetings in March and October led to key strategic activities including: the switch from Calls for Innovations (CFI) to OCFIs; the commissioning of water monitoring assessments; and the exploration of how WE4F can strengthen partnerships and leverage mechanisms across donor agencies to further support innovators and reach core program objectives.

To improve the dissemination of hub and innovator updates, the Secretariat Unit and RIHs developed a concise, five-page report that highlights all key program activities at the regional and country levels (i.e., grants; TA; investment facilitation; EE and partnerships; event participation and innovator awards; communications and knowledge management (CKM); environment; gender; monitoring, evaluation, and learning (MEL); and hub-specific (O)CFIs).

EVENTS ORGANIZED BY WE4F

In 2023, the Secretariat Unit organized two major events - an online webinar during the 2023 United Nations (UN) Water Conference, and the 2023 Annual Convening hosted in Bangkok, Thailand. The Secretariat limited its 2023 event organizing activities due to the timing of the site visits and Annual Convening as well as the focus on elevating the roles played by the hubs in event organization and participation. For example, the MENA RIH led the COP28 activities as the event was held in Dubai, United Arab Emirates (UAE) and the S/SEA RIH Manager attended Asia-Pacific Economic Cooperation's Water Security Workshop as a speaker.

2023 UN Water Conference

The UN Water Conference webinar explored how to sustainably scale irrigation systems in Asia, Africa, and the Middle East and North Africa to achieve sustainable water and food security while facing climate change. For business and industry, the session shared how to integrate sustainable irrigation practices and water efficiency into their operations and the food value chain. For the scientific and technological community, the session explored how research institutions and technology developers can contribute to better water management and security by researching basins and surface water to help farmers and businesses improve monitoring and management while the technology community can help build better irrigation technologies that integrate different water management challenges.

And finally, for farmers, the session highlighted how the first two communities' work must be to the benefit of the vulnerable smallholder farmers whose water usage and ability to grow food will be the most affected by climate change. In total, 570 individuals registered for the session with 228 attending.

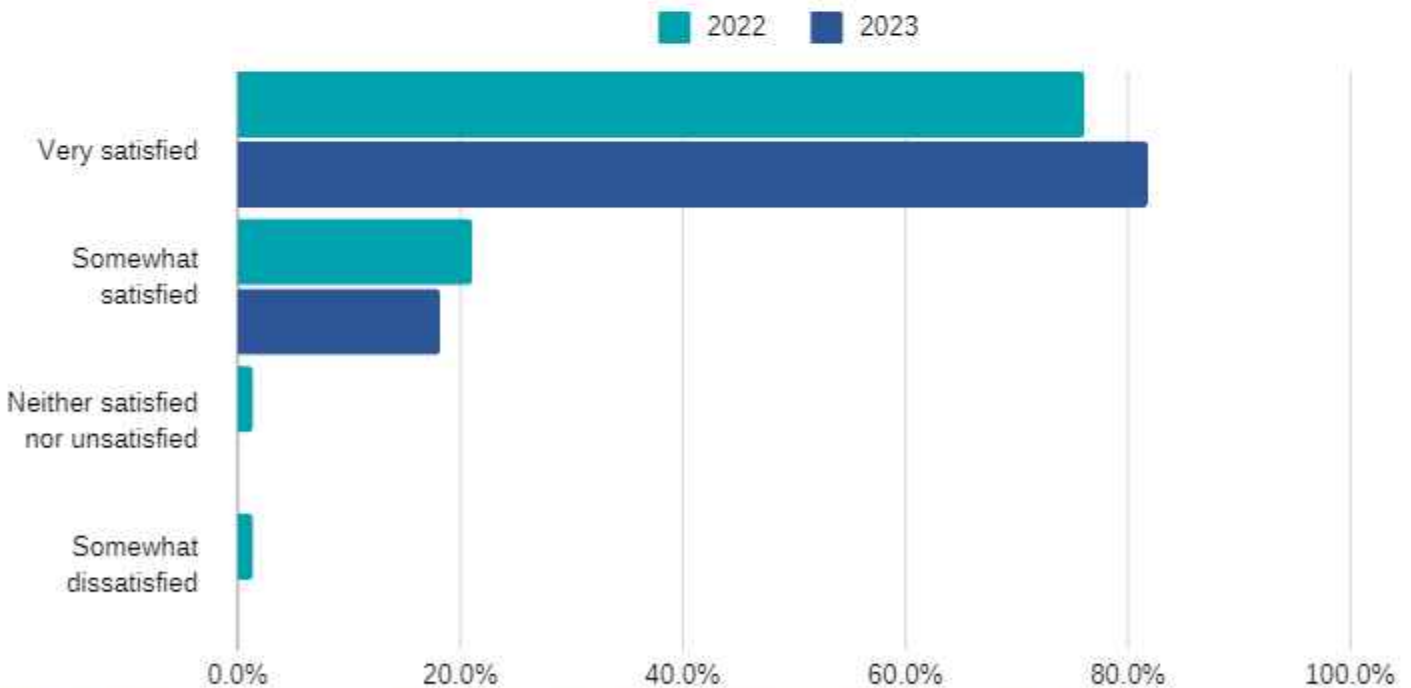
2023 Annual Convening

The second in-person Annual Convening was organized by the Secretariat Unit with the S/SEA RIH providing on-the-ground coordination support. This year's convening featured two parts - a Program Staff Day and the three-day Annual Convening.

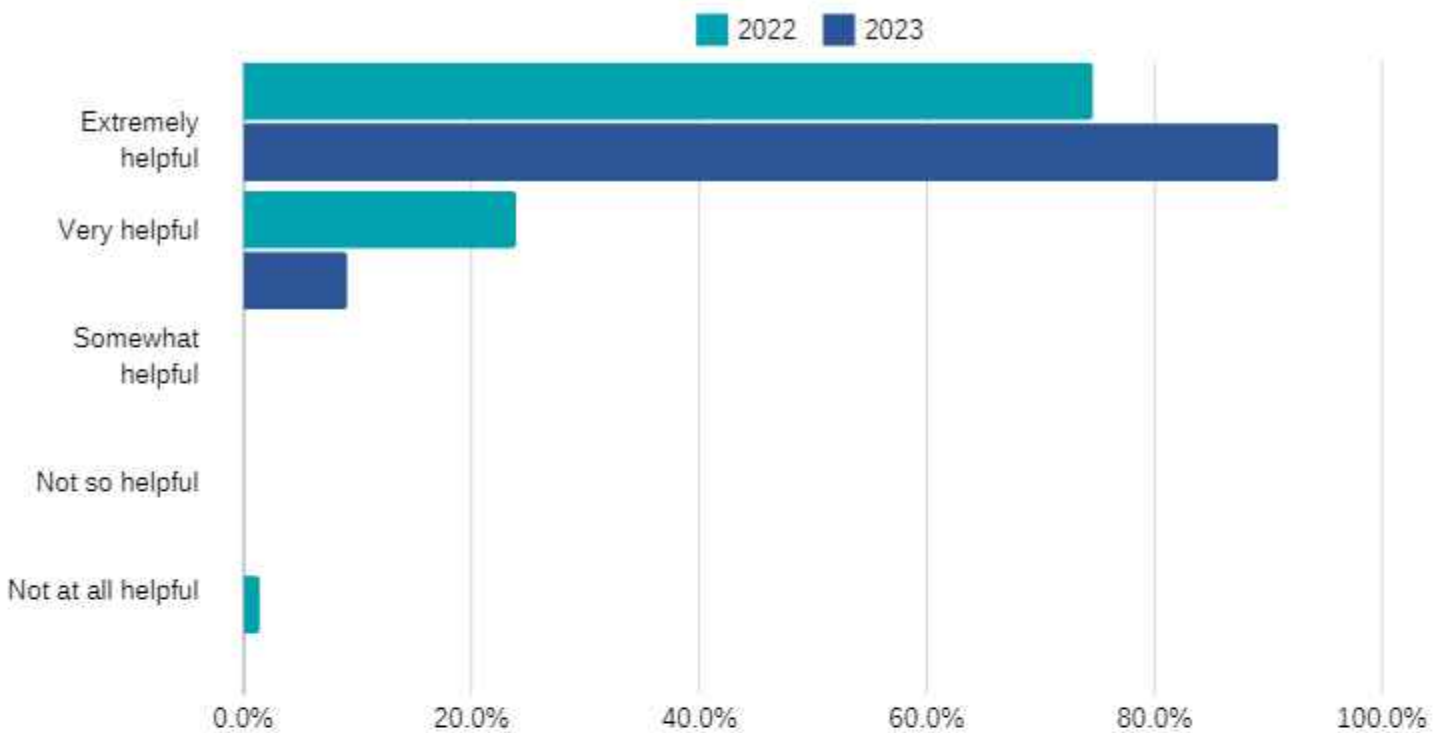
The Program Staff Day featured sessions recommended and selected by staff, resulting in an Unconference that covered key program topics like gender, MEL, investment, OCFI lessons learned, and the transition of innovators from grantees to alumni. It also provided an opportunity for the major portfolios (TA; grants and finance; MEL; CKM; and investment) to connect in-person, this helped to improve synergies for the coming year and explore new activity ideas. One of the key points of discussion was the transition from a limited CFI process to an ongoing OCFI. The lessons (i.e., focused country-focused outreach through hub networks, highlighting nexus link requirements in Q&As, and the implementation of planned application review cycles) were incorporated in the latter half of the year, improving the efficiency of the OCFI process. The hubs also shared various successful techniques as well as challenges faced during outreach activities to countries with low representation in the application process. During the second half of the year, the hubs saw more applications from these countries. The other key topics of value during the Program Staff Day were streamlining investors' readiness support for innovators, improving data collection, and streamlining USAID Regulation 216 process for environmental compliance.

The Annual Convening brought together over 160 participants from the donor partners, hub staff, Secretariat staff, innovators, and other important guests. Several interactive exchange formats, such as peer-to-peer learning and discussion rounds, sparked cross-regional exchanges amongst innovators. Popular topics included gender lens investment readiness, climate risk assessment, carbon credits, and gender mainstreaming, all of which represent the common innovator goals of scaling their innovations, becoming sustainable businesses, and reaching more end-users. Overall, attendees were satisfied with the Annual Convening, with the event receiving a 100% satisfaction rate and program staff (who participated as attendees, session facilitators, and notetakers) receiving a 100% helpfulness rating.

How satisfied were you with the event?



How helpful were the WE4F staff at the event?



EXTERNAL SURVEYOR PROGRAM

In 2023, management of WE4F's External Surveyor Program transitioned from the Secretariat Unit to the RIHs, as the hubs are better equipped to manage the program due to their local connections, knowledge, and understanding of logistics. Additionally, by managing the External Surveyor Programs, hubs could aim to maximize the benefits experienced by innovators (e.g., providing unique insights on their WEF nexus impact and sharing end-users' feedback on their products).

Over the course of 2023, the S/SEA, and S/CA hubs on-boarded their first cohort of External Surveyors who conducted impact assessments for 20 total innovators. Their reports helped to identify new positive impacts that were not previously reported due to innovators' lack of MEL capacity or previous under-reporting. For the S/SEA innovators this resulted in increased energy and GHG emissions savings, a higher number of end-users impacted, and increased food production (e.g., the impact assessment doubled the previously reported amount of food produced through Village Link). As S/CA innovators have limited data on end-users' food production and farm size, the External Surveyor analysis contributed previously unavailable data which resulted in a 50% increase in food production and increased the number of hectares under improved land management practices.

The External Surveyors' positive findings for BoP and end-users' incomes were especially valuable, as incomes are typically a data collection challenge for innovators across all regions (i.e., it is sensitive information and must be collected directly from end-users). Additionally, the program helped identify a possible risk of negatively impacting local water resources due to farmers' irrigation practices. In turn, the hub now has an improved understanding of which innovators will need environment-related TAs. To continue improving the External Surveyor Program implementation and organization, the Secretariat Unit is now providing both hubs with strategic planning workshops.

PROVIDING SUPPORT FOR HUB GRANT AND FINANCE MANAGEMENT

The Secretariat Unit Grants and Finance Manager works with the hubs' Grants and Finance Specialists to ensure the timely submission and organization of hub invoices and that all innovator documentation is in order for the distribution of milestone-based grant funding. For the dissemination of lessons learned during the financial management process, the Grants and Finance team participated in a monthly call that provided them with an opportunity to learn from each other's practices. Additionally, the Grants and Finance Manager regularly liaised with USAID to ensure donor satisfaction in finance and administration matters; monitored all WE4F budget spending; and provided advice and support to the USAID Secretariat and RIH counterparts to ensure donor compliance and timely deliverable submission. This included a presentation at the bi-annual donor meeting, providing an update on WE4F budget as well as an overview of funding opportunities for the remaining life of the program.

As highlighted further down in the report, in the “Looking Forward” section, a key continued focus of WE4F and hubs’ activities in the advocacy and support for gender mainstreaming, the site visits contributed to this continued focus as it provided staff and innovators with the time to identify and evaluate new opportunities to better reach customer groups, particularly BoP and women end-users.

SITE VISITS

From March 2023 through June 2023, the Secretariat Unit conducted site visits to learn more about the innovations in the field, connect with the hubs and innovators, share program activities with USAID Missions, and hear directly from end-users. The site visits covered South Africa, Zimbabwe, India, Nepal, Vietnam, Indonesia, Morocco, and Egypt and were timed to coincide with the hubs’ Regional Convenings. By visiting a diverse mixture of countries, regions, innovators, and end-users, the Secretariat Unit, RIHs, and innovators were able to engage in candid discussions about their on-the-ground conditions. The meeting of innovators and end-users at their businesses or homes, as well as discussing previous activities face-to-face, allowed program staff to see the development of innovators’ activities through a field lens and helped promote better practices by the program, innovators, and end-users (e.g., discussing with end-users their fertilizer and agricultural practices). New perspectives on innovators’ operations improved the overall understanding of innovators’ complex business models as well as their links to local communities and sectors.

One of the key objectives and takeaways from the site visit was to assess the environmental impact and climate risks for the end-users of WE4F-supported innovations. In almost all cases, not only did the team find the clear link to innovations’ climate adaptation and mitigation features, but also identified smaller future risks (e.g., potential overuse of water concerns) by examining the environment in which end-users conduct their agricultural activities. Program staff shared lessons and advice with farmers and innovators on efficient water usage; with a specific focus on water-food and WEF innovations, such as solar irrigation.

Deep-dives on innovations’ WEF nexus impact also positively benefited MEL and CKM activities. The MEL team and innovators were able to determine new ways to improve innovators’ quality of MEL reporting and impact calculations. For the CKM team, a presence on the site visits resulted in an improved Annual Convening that better targeted innovators’ needs as well as new storytelling methods that incorporated end-user and innovator experiences into compelling products.

TRANSITION FROM CALL FOR INNOVATIONS TO OPEN CALL FOR INNOVATIONS

In May 2023, the MENA, S/SEA, and S/CA hubs launched their OCFIs. The transition from the CFI process to the OCFI process required support from the Secretariat Unit to establish new timelines, program eligibility requirements, and operational plans. By switching to a rolling process that does not have a set deadline, the hubs are able to work with potential innovators to create a more customized support plan that leverages a co-creation process before the award is finalized. It also enables the hubs to develop a more diverse portfolio of innovators as they have more time to conduct outreach and target specific countries as well as industries (e.g., food processing innovators which have been notoriously difficult to reach and onboard into the program). The new OCFI process also introduces matching funds into the program eligibility requirements to bring skin in the game from the applicants and together with the program’s support it makes the overall support to be catalytic to their growth. Four rounds are currently in the full application stage and nearing completion, paving the way for innovators to soon be onboarded to the hubs.

WATER ACCOUNTING TOOL ASSIGNMENT

As highlighted by the 2022 Mid-Term Review, there were certain challenges and opportunities to improve the overall program’s offering and impact. The biggest challenge being that certain technologies’ potential to overuse of water in some of the focus regions may contribute to falling water tables. To counteract this challenge, WE4F onboarded two vendors, IWMI and BRL Ingénierie, to develop water assessment tools that could be used by the hubs and innovators to determine the potential effects of technologies being used in certain basins. The tool developed by IWMI for the S/CA RIH will cover the Zambezi River Basin, while BRL will develop tools to cover the Litani River Basin in Lebanon, the Red River Basin in Vietnam, the Ganges River Basin in India, the Nile River Basin in Egypt, and the Moghra Aquifer in Egypt’s West Desert.



CHALLENGES AND SOLUTIONS

Challenges	Solutions
Key Performance Indicators	
Across the program, WE4F's food processing targets are far behind. Individually, hubs have their own KPIs that are off track.	Across the program, WE4F's food processing targets are far behind. Individually, hubs have their own KPIs that are off track. During the OCFI process, hubs focus on outreach for food processing innovators. Customize External Surveyor SOWs to prioritize "Off Track" impact.
Innovators' water or biodiversity monitoring are far below target. At this moment, the cause is unclear, it could be due to under-reporting, insufficient hub environmental support, or lack of innovator follow-through on environmental mitigation and monitoring plans (EMMPs).	Identify causes by working with the hubs' TA, MEL, and EE units Explore additional/alternative sources of data to uncover under-reported activities.
Events	
There are many lessons learned and stories to share about the program on the global and regional levels.	Create regional and global event calendars forecasting all of 2024, ensuring diverse event participation and no overlapping attendance. Develop quarterly event calendars to accommodate changing innovators statuses and International Days of Importance.
When planning for innovators' participation in the Annual Convenings, delays occurred due to innovator review processes and challenges with obtaining visas.	Start Annual Convening process earlier solidifying dates and destination to allow for planning and host event later in the year, giving ample time for innovator review process.
Logistics of managing staff and ensuring session coverage can be difficult.	Group chat coupled with individual emails to staff ensured all participants knew their roles. Support from hub assistants ensured back-up coverage was available.
Due to the localized approach to WE4F, not all staff have had the opportunity to connect in-person for learning sessions.	Host a pre-Annual Convening Program Staff Day provided hub teams with the opportunity to interact and learn from each other.
Operations	
Difficult to figure out tangible TAs related to EE and policy advocacy.	MENA is engaging ecosystem actors (e.g., financing institutions, investors, government) to identify challenges from their side as well and try to bridge the gap between innovators and these stakeholders.
As the program moves towards the 2025 closeout, staff could potentially leave for new opportunities.	Ensure processes are recorded, track lessons learned and pivots to provide new staff with a comprehensive background of program activities, increase staff retention efforts, and provide training to quickly onboard new colleagues.
Managing a rolling CFI, along with hubs' other responsibilities, takes away time from key activities.	Suggested the hubs to review the applications, in bulk, once every quarter as it gives time for outreach activities' impact to kick in.
TA requests are getting complex due to innovators' growth.	Hub to procure more complex TAs from the vendor pool rather than relying solely on hub team members.
Steep learning curve for the hub takeover of the External Surveyor program, which resulted in delayed scopes of work.	Secretariat Unit will lead strategic planning meetings with the hubs to reflect on challenges that arose during the 2023 assignments, which will create new solutions and develop improved management strategies and processes.

LOOKING FORWARD

CONTINUED SUPPORT AND ADVOCACY FOR GENDER MAINSTREAMING

Currently, 35.9% of all end-users are women, which is slightly down from 38% last year but still exceeds the target of 30% of all end-users being women. This is due to the number of women end-users supported by MENA innovators not having the growth seen by the other RIHs. To help innovators access more women end-users and create more affordable, accessible technologies and business solutions, WE4F will continue to work with the hubs to improve innovators' gender mainstreaming and gender-related data collection efforts. Aside from the public MENA Women Innovate Network webinars hosted by the MENA RIH, the Secretariat Unit organizes an internal gender mainstreaming series to provide innovators with an opportunity to conduct deep dives on key sub-themes (e.g., EUF products for women) and learn from other hubs' innovators.

DISSEMINATING LESSONS LEARNED AND CONTRIBUTING TO THE GLOBAL WATER-ENERGY-FOOD NEXUS COMMUNITY

After four years of programming, WE4F staff have an endless supply of learning moments and pivots to share with stakeholders working in the WEF nexus. To improve the next generation of donor programs for the WEF nexus, as well as business ecosystem development, WE4F will focus, at the global level, on sharing strategic lessons related to the successes and limitations of program design and implementation.

To begin the dissemination process, the Secretariat Unit is working with the hubs to identify relevant conferences and forums for program participation. Key events in 2024 include World Water Week, the 2024 Annual Convening, Arab SME Summit, and, potentially, COP29. Additional thematic webinars, (e.g., gender mainstreaming), may be conducted by the hubs and Secretariat to further disseminate lessons learned and improve innovators' knowledge on key program themes.

EXPLORE THE SUSTAINABILITY OF THE WE4F MODEL

As the WE4F program closes in 2025, the Secretariat Unit and the RIHs will explore options related to the sustainability of the hubs' activities as well as the feasibility of different options to sustain programmatic impact. Potential avenues to explore may include passing off the work to local stakeholders for continued implementation or the pursuit of sustainable funding mechanisms beyond donor funding.

PREPARING INNOVATORS FOR THE NEXT STEP IN THEIR SCALING JOURNEY

A key theme that emerged throughout innovators' investment readiness journey was the mutual interest of investors and innovators to successfully scaling climate lens investment in the WEF nexus. All innovators positively contribute to climate mitigation, adaptation, or both, so targeting the formerly mentioned investment category allows them to pursue growth through additional investment mechanisms.

Through the RIHs, WE4F will continue to work with innovators to support them in accessing climate lens investment, as it also contributes to the key WE4F objective of helping innovators move past donor grants and onto private sector investment. The Secretariat Unit will also continue to pursue collaboration with investment guarantee instruments (e.g., the BUILD/BRIDGE fund with Bamboo Capital and UNCDF).

PROMOTING SUSTAINABLE WATER USAGE AND PREVENTING OVERUSE

In 2024, WE4F's water accounting tools for MENA, S/CA, and S/SEA RIHs will be launched for program and public use. The Secretariat Unit will work with the hubs to disseminate information and resources about the tools, supporting interested parties as they look to integrate the tools into their operations.



MIDDLE EAST AND NORTH AFRICA



MAP OF MIDDLE EAST AND NORTH AFRICA INNOVATORS



- | | | |
|---|--|--|
|  <p>AbuErdan
Tech solutions for poultry farming</p> |  <p>Compost Baladi SAL
Community-based, user-driven bio waste disposal & composting solution</p> |  <p>Hydroponics Africa
Manufactures, installs, & promotes customized hydroponic fodder & vegetable systems</p> |
|  <p>Agrisolar
Provides easy-to-install solar irrigation systems</p> |  <p>Dhiaa al Alamiyah
Uses hydroponics to grow barley in a more sustainable and cost effective manner for sheep</p> |  <p>Irma & Co
Makes & sells pepper paste made of peppers grown with drip irrigation</p> |
|  <p>Agritopia
Provides smart greenhouse solutions fully automated system that measures soil moisture, distributes fertilizer, & irrigates crops.</p> |  <p>Egymag
Takes waste from vegetable markets to create bio-fertilizers & poultry and fish feed from black soldier fly larvae</p> |  <p>IRSC
Desert-friendly, energy- efficient, nano-grid solar pump systems</p> |
|  <p>Ainda Agricultural Center
Develops solar-powered smart irrigation systems that will help farmers reduce water use</p> |  <p>Green Eagle Tech
Provides farmers with financing for solar irrigation systems</p> |  <p>Mozare3
Provides farmers with access to financing & markets, as well as agronomy support</p> |
|  <p>Al Radhwa Solution (Albu Saif)
Uses hydroponics to grow barley in a more sustainable and cost effective manner for cattle</p> |  <p>Green Essence Lebanon
Solar-powered energy to rural communities & farmers</p> |  <p>Natagri
Improving the cherry value chain through water and pest management</p> |
|  <p>ALVATECH
Solar-powered water treatment for saline & water scarce areas</p> |  <p>GreenScape
Provides advanced water-saving, wastewater treatment, & water harvesting solutions.</p> |  <p>Nakhla Company
Provides maintenance & consultation services for date palms owners</p> |
|  <p>Bahir al Kamal
Installs solar systems for smallholder farmers</p> |  <p>GreenShovel
Provides smart AI, monitoring systems, & advisory services for greenhouses as well as pump and irrigation services.</p> |  <p>PlatFarm
Precision-based farming and irrigation</p> |
|  <p>Biodôme
Provides biogas units to farmers as well as a compost packing & promotion service.</p> |  <p>Green WaTech
Offers a tested, safe, low-cost, & efficient solution for wastewater treatment & reuse for irrigating vegetables.</p> |  <p>Raptor Engineering Supplies and Contracting
Provides rural farmers, with reliable & cost-effective solar pumping systems</p> |
|  <p>Biomass SAL
Increasing organic food production through sustainable resource use</p> |  <p>Hajjar Foods SAL (GOBALADI)
Goat dairy for food and nutrition</p> |  <p>Robinson Agri
Holistic irrigation & farming solutions</p> |
|  <p>Burj al Iraq
reclaim agricultural land through desalinated irrigation with subterranean PVC pipes</p> |  <p>High Atlas Foundation
Promoting subsidized trees among rural communities in exchange for carbon offsets</p> |  <p>SOWIT
Optimizing irrigation for sustainable production & market access</p> |
|  <p>Chitosan Egypt
Nature-based shrimp biofertilizer for organic & sustainable farming needs</p> | |  <p>SudaGarlic
Provides garlic-producing smallholder farmers with storage, processing, marketing, & distribution services.</p> |

2023 SUMMARY

At the beginning of 2023, the MENA RIH supported 34 active innovators across three cohorts - 2021 Regional Cohort, 2022 Regional Cohort, and the 2022 Iraq Cohort. By the end of the year, 23 of the 34 innovators were still active in the program.

The grant agreements of the 2021 Regional Cohort (14 grantees and one TA only innovator) and 2022 Iraq Cohort (eight grantees) closed during 2023, with more than 50% of grantees achieving their targets. Twelve innovators from the two cohorts are still active (nine 2021 Regional Cohort innovators and three 2022 Iraqi Cohort innovators) within WE4F. For the 2022 Regional Cohort, 12 grantees and one TA only innovator entered their second year of the program. By the conclusion of the year, 11 of the 13 were still active in the program. Throughout 2023, active innovators received a total of 45 TAs that focused on helping them scale their business, reach financial sustainability, and optimize their social and environmental impact.

By the conclusion of 2023, the MENA RIH exceeded six key indicators that highlight the progress WE4F innovators have made - and the benefits of hub support - in improving the WEF nexus:

- 23.5% of businesses scaled with profit - almost three times the target of 8%
- 4.9 million tons of food produced - 25% above the LOP target
- More than 930,000 tons of CO2e saved - over three times of the LOP target
- 759 million kilowatt-hours (kWh) of energy saved - 5% more than the LOP target
- 7.8 billion liters of water consumption reduced - exceeding the LOP target by 50%
- \$33 million USD in investment mobilized - surpassing the LOP target by \$13 million USD

There are four key indicators for which the MENA RIH is currently off track: number of end-users, amount of food processed, number of end-users with increased incomes, and the percentage of innovators monitoring water or biodiversity.

SDG CONTRIBUTION



KEY PERFORMANCE INDICATORS

Key Performance Indicator	Life of Program Target (2020-2025)	Results to Date (2020-2023)	Current Status
 Share of supported innovators that successfully marketed their innovations with profit	8%, of which 25% are led by women	23.5%	Exceeded
 Number of smallholder farmers and other end-users using WE4F innovations	750,000 end-users, 30% are women	263,000	Off Track
	225,000 women end-users	44,000	Off Track
	187,500 BOP end-users	122,000	On Track
	End-users w/ climate adaptation-related innovations	25,000	
	End-users w/ climate adaptation & mitigation innovations	161,000	
 Total mass of food produced as a result of WE4F innovations	4 million tons	4.9 million tons	Exceeded
 Total mass of food processed as a result of WE4F innovations	50,000 tons	2,200 tons	Off Track
 Total energy saved in the food value chain as a result of the use of WE4F innovations	718 million kWh	759 million kWh	Exceeded
 Total volume of water consumption reduction in the food value chain as a result of WE4F innovations	5 billion liters	7.8 billion liters	Exceeded
 Number of smallholder farmers and other end-users that experience an increase in income	300,000 end-users, 30% are women	104,000	Off Track
	90,000 women end-users	6,000	Off Track
 Share of innovators & other stakeholders monitoring the protection of water or biodiversity	80%	38.7%	Off Track
	Monitoring water only	29%	
	Monitoring biodiversity only	0%	
	Monitoring water & biodiversity	9.7%	
 Value of investment in U.S. Dollars that WE4F innovators have mobilized from external sources	\$20 million	\$33 million	Exceeded
 Total of GHG emissions saved by WE4F innovations	300,000 tons of CO2e	934,000 tons	Exceeded
	Innovators with climate-mitigation innovations	25.9%	

INNOVATOR SCALING AND MATURATION

2021 REGIONAL COHORT MILESTONE TRACKER

● On target
 ◐ Targets partially met
 ● Not on target
 ● Status unknown/TBD

Innovator	Overall Status	Successfully Marketed	End-users Impacted	Food Produced	Food Processed	Energy Saved	Water Saved	Increased Incomes	Investment Mobilized
AbuErdan	●	●	●	●		●	●	●	●
AlvaTech	●	●	●				●		●
Baramoda	●	●	●	●			●	●	●
Biomass	●	●	●	●		●	●	●	●
Chitosan Egypt	●	●	●	●			●	●	●
Compost Baladi	●	●	●	●			●	●	●
GOBaladi	●	●	●		●	●	●	●	●
Green Essence	●	●	●	●		●		●	●
High Atlas Foundation	●	●	●			●		●	●
IRSC	●	●	◐	●		●		◐	●
Platform	●	●	●	●		●	●	●	●
Robinson Agri	●	●	●	●			●	●	●
SOWIT	●	●	◐	●		●	●	●	●

2022 IRAQ COHORT MILESTONE TRACKER

● On target
 ◐ Targets partially met
 ● Not on target
 ● Status unknown/TBD

Innovator	Overall Status	Successfully Marketed	End-users Impacted	Food Produced	Food Processed	Energy Saved	Water Saved	Increased Incomes	Investment Mobilized
Ainda	●	●	●	●	●	●	●	●	
Albu Saif	●	●	●	●		●	●	●	●
Bahir al Kamal	●	●	●	●		●		●	
Burj al Iraq	●	●	●			●	●	●	
Dhiaa al Alamiyah	●	●	●	◐		●	●		
GreenScape	◐	●	◐	●		●	●	●	
GreenShovel	●	●	●	●		●	●	●	●
Nakhla	●	●	●	●			●	●	●

2022 REGIONAL COHORT MILESTONE TRACKER

● On target
 ◐ Targets partially met
 ● Not on target
 ● Status unknown/TBD

Innovator	Overall Status	Successfully Marketed	End-users Impacted	Food Produced	Food Processed	Energy Saved	Water Saved	Increased Incomes	Investment Mobilized
Agrisolar	●	●	●	●		◐		◐	●
AgriTopia	●	●	●	●			●	●	●
Biodome	●	●	●	◐			●	●	●
Egymag	●	●	◐	●			●	●	
Green Eagle Tech	●	●	●	●		●	●	●	
Green WaTech	●	●	●	●			●	●	
Hydroponics Africa	●	●	◐	●			●	●	
Irma & Co	●	●	●		●		●	●	
Mozare3	●	●	●	●			●	●	●
Natagri	●	●	●						●
Raptor Engineering	●	●	●	●		●	●	●	●

2021 REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment

	Beginner	Intermediate	Advanced
AbuErdan	●		
AlvaTech	◐		●
Baramoda	●		
Biomass		●	
Chitosan		◐	●
Compost Baladi		●	
GOBaladi	◐		●
Green Essence	●		
HAF			●
IRSC		●	
Platform	●		
Robinson Agri		◐	●
SOWIT		●	

BoP Assessment

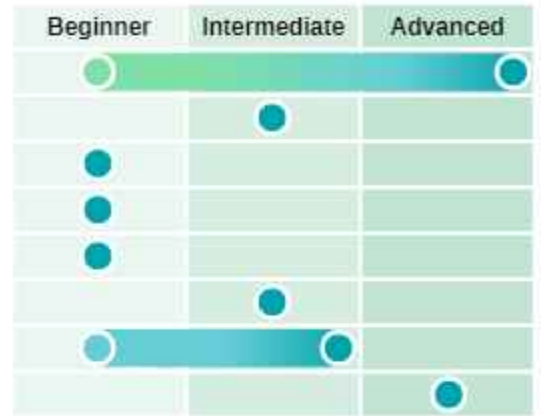
	Beginner	Intermediate	Advanced
AbuErdan		●	
AlvaTech	◐		●
Baramoda		●	
Biomass		●	
Chitosan		●	
Compost Baladi		●	
GOBaladi	◐		●
Green Essence	◐		●
HAF			●
IRSC		●	
Platform	●		
Robinson Agri	◐		●
SOWIT	◐		●

2022 IRAQ THEMATIC ASSESSMENTS

Gender Assessment

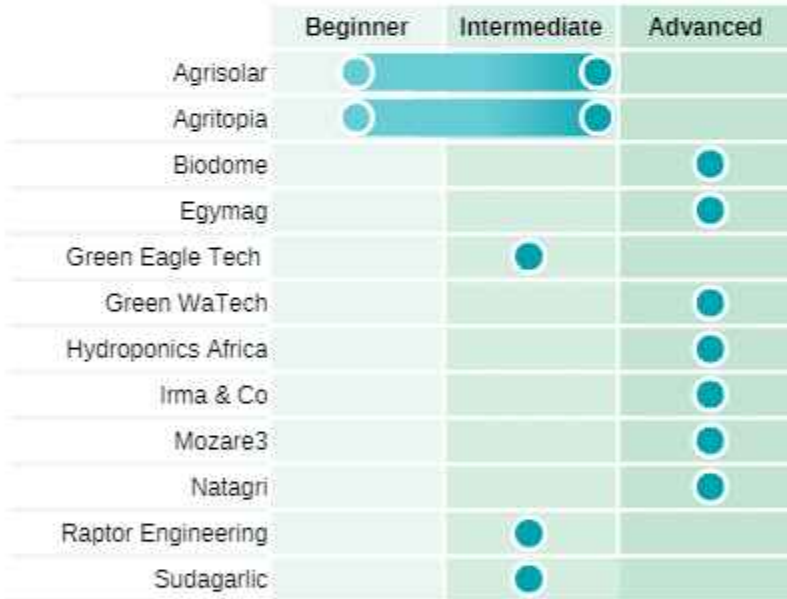


BoP Assessment

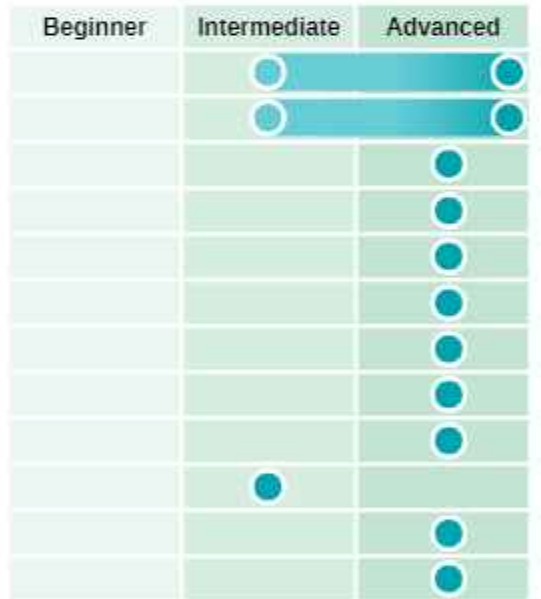


2022 REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment



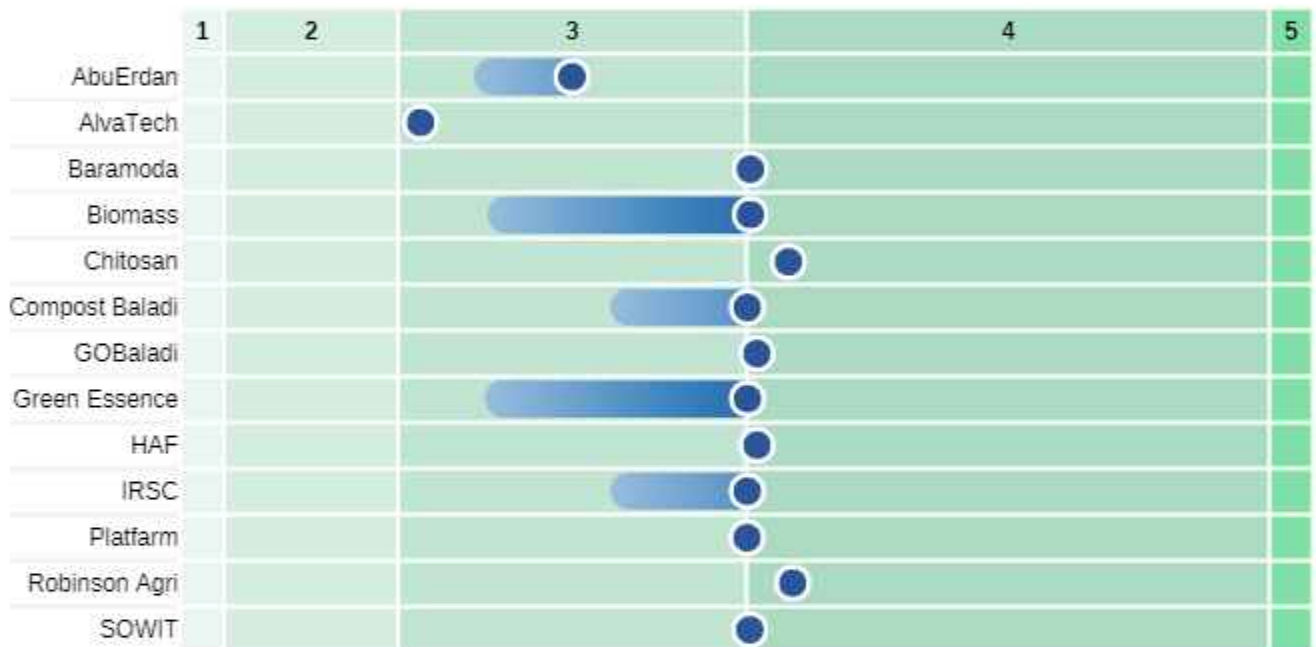
BoP Assessment



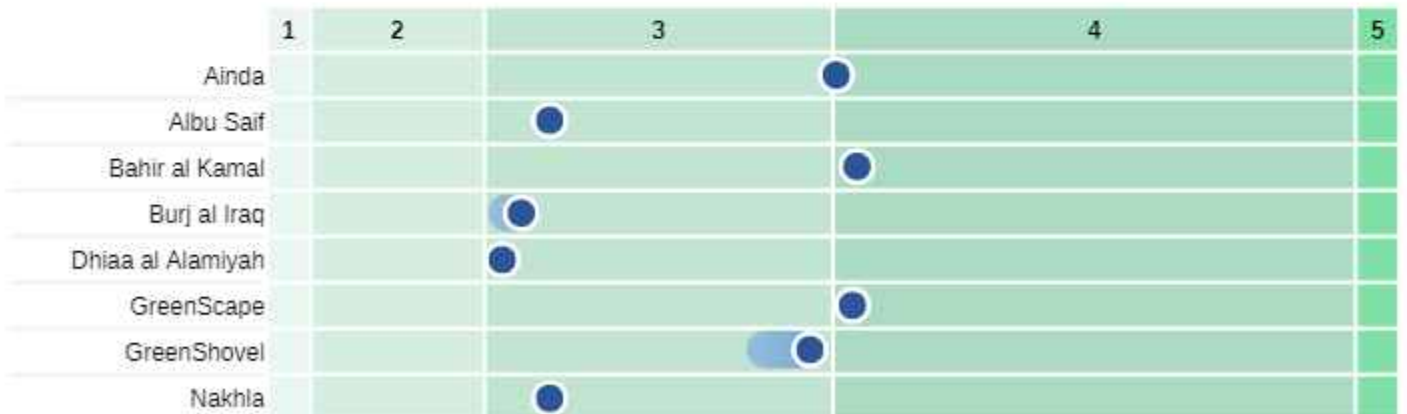
CUSTOMER GROWTH OVER TIME

Stages	Number of End-users
1	0 - 99 end-users
2	100 - 999 end-users
3	1,000 - 9,999 end-users
4	10,000 - 999,999 end-users
5	1,000,000+ end-users

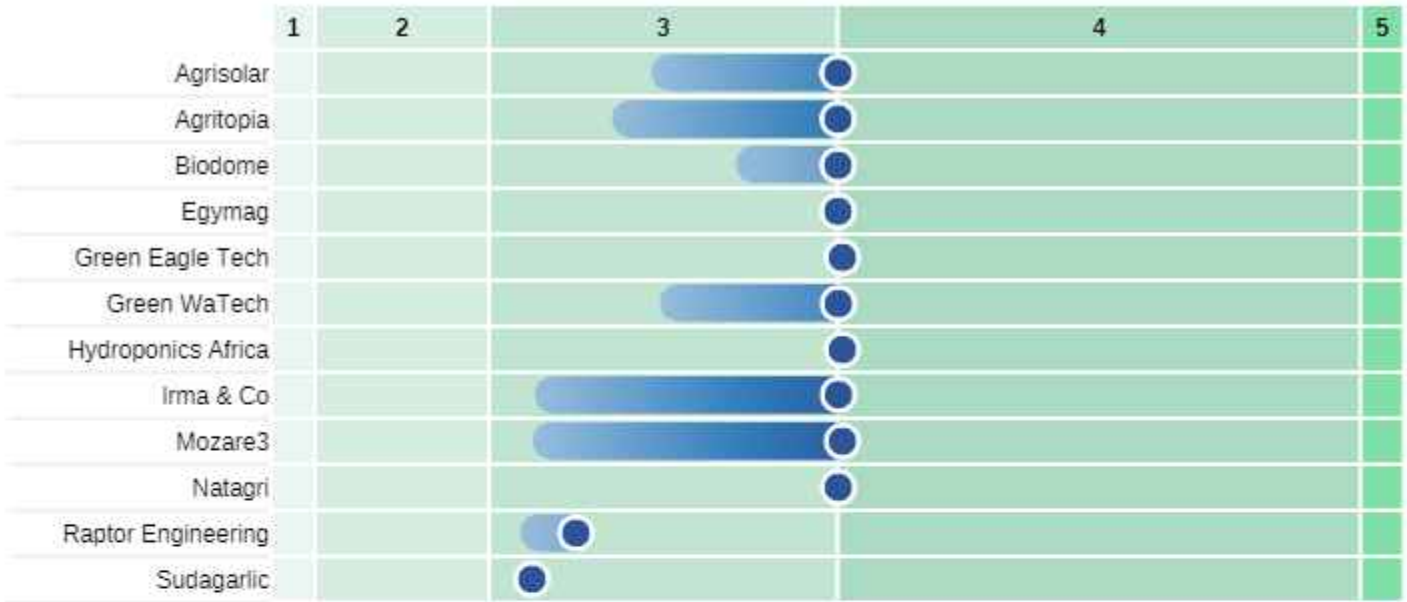
2021 REGIONAL COHORT



2022 IRAQ COHORT



2022 REGIONAL COHORT



Excluded from the above charts due to lack of data and/or their status as inactive alumni: Spark Renewables, Solar Wind Middle East, Schaduf, SuWaCo, Ma'an Youth Society, and Sudagarlic.

INNOVATOR UPDATES

2021 REGIONAL COHORT



AbuErdan received a marketing TA which helped in designing AbuErdan's pricing and negotiation strategy and approach as well as designing and developing online marketing campaign(s) that expanded AbuErdan's reach, awareness, and sales in Jordan, Saudi Arabia, the UAE, and Egypt. As part of the efforts to continue scaling, the innovator launched their Chicken Dot app in Sudan through a partnership with Zwya (a poultry production company) and began operations and supplying services in Jordan.



AlvaTech received TA for EUF with a focus on pilot testing in the Moroccan market with few financial institutions.



Biomass received TA to develop climate risks and adaptation measures which could be used for training their farming partners. The innovator expanded to new markets, entering the French avocado market and growing sales leads in the UAE. The company received a grant from the USAID-funded Agriculture and Rural Empowerment program. The grant is used for packaging machines and harvesting tools for avocado, allowing for less waste, more yield, and less loss of water and energy. In the year ahead, the company plans to raise more capital to fund the company's growth, aiming to reach more markets and to work with more farmers.



Chitosan Egypt received marketing TA focused on the ability to prioritize high return-on-investment customers for their expansion, production capacity, long-term strategic planning, the ability to use the market strategy, and the establishment of a marketing and partnership plan. This plan 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. Chitosan was selected as one of the TOP 50 Africa's Business Heroes candidates for 2023 out of 27,000 companies. In 2024, the innovator plans on building a new factory and expanding to Saudi Arabia. Also working on exporting to five African countries.



Compost Baladi received a TA for a business model structure and partnership framework which helped them revisit the business model verticals and improve growth through solid partnerships. The innovator also received an investment readiness (IR) TA, involving the design of a customized financial model for its three segments, conducting detailed financial analyses for each segment, reviewing the joint venture model, and providing guidance to enhance the overall financial performance of the company. The founder was recognized by the 30 under 30 Forbes Middle East List for the Social Impact category. In 2023, Compost Baladi expanded to Jordan and, in 2024, plans to expand to Saudi Arabia through its consulting services.



GoBaladi grew its market presence, reaching dozens of new points of sale; this is partially thanks to a branding and marketing TA. GoBaladi also received IR support to prepare their 2023 budget and support to update their HR Manual to include gender-sensitive policies and procedures. The innovator participated in COP28, where they spoke about their impact thanks to WE4F and how donor funds can help innovators scale in the upcoming years. In 2024, GoBaladi will receive blueprints to plan their facility's expansion. They will also receive a gender-related TA and possibly a Governance TA. The innovator will help WE4F conduct a study to assess how to increase the income of women shepherds and to train them on the findings of the study.



Green Essence Lebanon received business advisory support and support to disseminate information about their innovation at events and ecosystem gatherings. The innovator designed a system for their fellow WE4F graduate, Robinson Agri, that allows them to heat water and generate electricity simultaneously. For 2024, there are two planned TAs: (1) to study the market potential of various renewable energy solutions in Lebanon and neighboring countries; and (2) a carbon credits assessment that will analyze their readiness to sell credits on the market.



High Atlas Foundation (HAF) received a TA to set up a prototype management information system to build the data management infrastructure to better serve their carbon credit goals. They also received a MEL TA that helped HAF enhance their existing monitoring mechanisms by integrating more indicators and addressing data collection challenges when selecting future beneficiaries. This was particularly relevant in terms of irrigation systems and energy usage types, fostering the adoption of solar irrigation systems as a more energy-efficient alternative to conventional methods. Additionally, HAF is currently engaged in a collaborative effort with Plan Vevo to attain certification and enter the global market for selling carbon credits.



IRSC received a MEL TA to validate their impact and end-user number. The innovator developed a new brand and worked on the packing for the fruits and vegetables that focus on the benefits for sustainable communities. IRSC also developed a sales strategy for smallholder farmers that includes offering payment facilities and providing training on how to use their products. In addition, IRSC introduced innovative agricultural technologies along with IoT to make sure that they use minimal amounts of water and fertilizers. They're in the process of building a cold storage station for a new eco industrial park that will serve Upper Egypt.



Platform's outcomes of the ad hoc support and TAs they received in 2022 on product development and marketing became evident in 2023. For example, Platform 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. Their improved product user experience/user interface design also played a role in their client acquisition and product sales. Moreover, Platform launched "Ask Platform" – a GPT-powered AI tool to enable the sustainability and productivity of their farming clients. They also expanded to new markets including South Africa and the UAE working on strategic crops for food security like wheat.



Robinson Agri, now The Quinta Group, received a MEL TA that helps them leverage their MEL reporting and learning and implement this exercise in-house in the future and report accurate impact data. The innovator also received a TA on branding and marketing strategy, which helped them accurately portray their full operation on paper and disseminate information internally and externally. In 2023, thanks to coordination between different WE4F Hubs, West African innovators visited the company's demo plot in Ghana. The innovator also has a current, ongoing TA which will provide a full market study for East, Central, and West Africa. The provided data about various markets and the opportunities specific to the company is allowing them to conduct serious meetings with potential partners in Ivory Coast, Senegal, Ghana, and South Africa.



SOWIT partnered with the International Finance Corporation (IFC) of the World Bank Group in a strategic initiative to boost financial and digital inclusion for thousands of Moroccan farmers. This collaboration aimed to use IFC's expertise to enhance farmers' access to digital tools and financial resources, thereby improving agricultural productivity and sustainability in Morocco. For 2024, the company is strategically positioning itself for growth by expanding its operations into Egypt and various Sub-Saharan African nations.



2022 IRAQ COHORT



Ainda Agricultural Center received TAs on solar system advisory, project tracking for WE4F KPIs, internal control and financial management, an accounting system upgrading, and environmental safeguarding. Ainda worked to expand their market to target more customers with solar system installations. The innovator also developed a Memorandum of Understanding (MOU) with GreenScape and with Faraday Solar Company. In 2024, Ainda plans to target poultry farmers with smart development for their farms along with the ability to install solar systems. They aim to engage more investors using their strong financial controls and well-established governance.



Albu Saif received TAs for administrative control, manufacturing and inventory tracking, hydroponic barley pricing, and environmental safeguarding. This assistance has 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. The innovator also received an IR TA to design a detailed financial projection for their calving farm business line over the next five years. Over the past year, Albu Saif opened two poultry farms with a capacity of 21,000 chicks. In 2024, the innovator will expand to livestock breeding with the new establishment of barns with a capacity of 375 cows.



Bahir Al Kamal received TAs for the development of supplier partnerships for business expansion; establishment of a solid supply chain with flexible payment options; connections with six solar system providers; project tracking for KPI progress; marketing and sales strategy development; comprehensive financial analysis; and environmental safeguarding. As a result, the company now has multiple options for purchasing solar systems and is in a better position to record achievements with the WE4F program. The innovator has a pending MOU with National Bank of Iraq for EUF.



Burj Al Iraq benefited from TAs for factory production and income tracking, project tracking for KPI progress, and environmental safeguarding. This assistance has enabled the company to effectively track and analyze manufacturing production, manage costs, and maintain stable stock movement. Burj Al Iraq also expanded to two big distributors who purchased pipes in bulk quantities and implemented their innovation on large areas in southern Iraq for land reclamation with the government. For 2024, the innovator plans to expand to more distributors as a method for increasing sales.



Dhiaa Al Alamiyah received TAs for manufacturing and inventory processing tracking, sales tracking, KPI progress tracking, and hydroponic advisory service. This support has 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. In 2024, the innovator plans to increase their herd size as a method of increasing revenue.



GreenScape received TAs for market penetration, project tracking, environmental safeguarding, operation optimization, and developing project management system structure. The innovator 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. GreenScape also signed an MOU with fellow WE4F innovator, Ainda Agriculture Center. To meet high demand from customers, in 2024 the innovator is planning to establish a new compost factory.



GreenShovel received TAs for marketing strategy, project tracking, revenue management, and environmental safeguarding. The innovator also 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. GreenShovel also opened a new demo site (0.75 hectares) to cultivate vegetables and fruits and sell them to the market. In 2024, GreenShovel will open a new branch in Erbil, where they can offer their unique and competitive products.



Nakhla received TAs for business model refinement, sales and distribution strategies, loan amortization scheduling, project tracking, and environmental safeguarding. The innovator also opened new market channels, selling through supermarkets, e-commerce, wholesalers, and sub-distributors.

2022 REGIONAL COHORT



Agrisolar received a TA for HR support and gender policy where they received job descriptions and HR policy that they further implemented to hire across several departments. Due to technical TAs received by the innovator, Agrisolar was able to develop a remote monitoring system for their innovation, which will be ready to launch in 2024. Now, the innovator and the hub team are working on



a TA to perform a market analysis of Lebanon and Morocco so Agrisolar can sell their locally manufactured mounting structures. Agrisolar's partnership with the World Fish Program, which launched in 2023, will allow them to provide their solution together with a solar paddle solution for aquaculture application integrated within agricultural land. Finally, they put in place a partnership with the Faculty of Engineering at Cairo University to support students in their graduation projects. As part of their commitment to reducing fossil fuel usage, the innovator replaces their automobile fleet with electric vehicles. Due to currency challenges in Egypt, the innovator opened a branch in Dubai. Through the hub's IR support and linkages with Frankly.green, Agrisolar was able to secure crowdfunding from the organization, the first of its kind in the Middle East. In 2024, Agrisolar plans to start onsite manufacturing of its mounting structure and expand its sales in other countries, particularly Lebanon and Morocco.



AgriTopia received a TA on marketing and competition analysis, which focused on existing and newly developed products to target small farmers. AgriTopia 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. The CEO of AgriTopia, Shadha Musallam, was selected as part of the SheWinsArabia cohort 2023 for women entrepreneurs. Due to the political situation in the West Bank and in Gaza, and the restriction of Palestinians' movements, AgriTopia hopes to find new input streams and is, potentially, considering the establishment of a manufacturing facility in a new country. If deemed necessary, a specific TA for this activity is planned for 2024.



Biodome received a TA for an employee retention strategy. The innovator also received support for EUF, which focused on the assessment of farmers for targeted business development and EUF activities. Another TA supported a skill gap analysis, enabling the development of specific training and development strategies. Currently, the innovator is receiving support for partnership mapping, identifying stakeholders for sales or partnership objectives. This initiative aims to provide a new perspective for the company's next stage of growth, uncovering opportunities at a national level.



EgyMag received an IR TA that prepared investment documents and connected the innovator with potential investors, Frankly.green and HIMangel. The innovator also received a gender-focused TA for developing new business models for the Nature2Nature (N2N) project, helping them expand to new locations and reach more women end-users. Egymag's N2N project provides rural women with special boxes to breed larvae and raise them on organic home waste. Egymag then buys from them the organic fertilizer and grown-up larvae. As a result of an organizational development TA, Egymag hired a part-time HR director and implemented an organizational structure that includes training and career planning for the employees. WE4F linked Egymag with the Jordanian Yaraqat El Saghira, resulting in a signed partnership. Egymag continues to work on expansion to Saudi Arabia, Kenya, and Lebanon. The innovator also expanded their facility to 2500 square meters. In 2024, WE4F will support Egymag with a strategic planning TA to help map their expansion. In addition, a carbon credit scheme will be rolled out to assist Egymag in entering the carbon credits market and start selling carbon credits.



Green Eagle Tech received a TA for a 2023-2027 strategic action plan. Based on the TA, the innovator is working on expanding to Yemen, Jordan, Mauritania, Algeria, and Saudi Arabia. The innovator also received IR TAs (one for an updated data room and a second on due diligence and investment facilitation) which supported the development of a business case used to work on the process of funding from Bamboo Capital. The innovator established two partnerships with large agricultural aggregators that will provide EUF as well as partnerships with Solargy, Cigesco Sudan, and businesses in Luxor. The innovator is also working with the United Nations Industrial Development Organization (UNIDO)'s Inclusive Green Growth in Egypt project, which they were linked to by WE4F; and started a pilot with two smallholder farmers and the Egyptian Ministry of Agriculture. Furthermore, Green Eagle Tech developed an EUF partnership with Contact, a company that provides loans to customers; and another partnership with Qena Company for Mechanization and Agricultural Investment where the latter company provides end user financing for smallholder farmers to install Green Eagle's innovation. The innovator also expanded to Algeria to implement a 20,000-hectare rain irrigation project. For 2024, the innovator envisions expansion activities in Yemen, Sudan, Saudi Arabia, the United States, and Lebanon. The innovator will receive a feasibility study TA for rain irrigation component local manufacturing.



Green WaTech received assistance with developing a comprehensive business strategy and guidance on negotiating financial proposals. Green WaTech also received an IR TA to enhance its pitch deck presentation and apply to Cartier Women's initiative. The last TA focused on the formulation of a marketing strategy, involving client segmentation, targeted marketing messages, and identification of potential clients, including local agricultural operators as distribution channels. Currently, strategic planning assistance is aiding Green WaTech in refining its long-term strategic objectives, restructuring its business model to align with growth targets, and identifying focal areas for the next phase of expansion.



Hydroponics Africa received an IR TA to develop a financial model and a TA for a smallholder farmer assessment framework to help reduce the risk of EUF. The innovator and the hub developed a marketing strategy and partnerships framework through a marketing and partnerships TA. 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. Having hired a local team leader at the end of December, during 2024, Hydroponics Africa is planning to establish an operation base to drive forward their expansion in Eastern Sudan.



Irma & Co focused on translating their gender-related efforts into their HR and procurement manuals. They were able to define their marketing position and brand identity thanks to a specialized TA. The company expanded to multiple points of sales in Lebanon and were able to open two new branches of their restaurants (one in Beirut and one in the Cairo area). Thanks to their current TA, they will be able to penetrate the Egyptian market with their products grown and processed in Lebanon. Irma & Co also received grants and TA from the USAID-funded Food Systems Challenge through which they focus on compliance and certifications for exports. In 2024, the innovator will focus on expanding to new markets, growing brand awareness, standardizing processes, and improving their organizational structure.



Mozare3 received an EUF TA which 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. Through an SDG impact and MEL TA, the innovator built a sustainable model for the demo farm, including the development of a sustainable financial co-sharing model with smallholding farmers. Mozare3 conducted a technical training of two modules focused on open field cultivation and water desalination for the agronomist team to improve their knowledge for better farmer support. The innovator exported their first shipment of strawberries to the UAE and exported their first shipment of red onions to Holland. To further their financing work, Mozare3 and the IFC started working on a credit scoring system for farmers. In addition, Mozare3 and USAID signed an MOU for a new project focused on empowering women laborers to enhance their skills in harvesting and post-harvesting processes through training and workshops on the farm and in post-harvest units. Currently, an IR TA is in development to assist Mozare3 during the fundraising process for venture debt, discuss the 2024 budget, and analyze the company's financial performance.



Natagri received support and trainings related to finance and investment; it was used to accurately forecast their 2023 operations. The innovator also received HR and organization structure support, which is used to streamline their hiring process, evaluate team performance, set smart KPIs, have a proper salary grading system, and set the right structure. The recommendation is for the HR Manager to have two staff members that deal with day-to-day administrative tasks while the manager follows-up on strategic targets and recruitment. The TA also recommended how to empower middle management and presented mitigation measures to risks related to human resources. As part of the brokering activities, the IR team linked Natagri to Cedar Oxygen. The innovator also saw success in expanding their market in the United Kingdom. In the upcoming year, Natagri intends to expand their operations and reach more end-users through increasing their relationships with more smallholder farmers and processing more food for consumers.



Raptor Engineering received a marketing plan TA and incorporated maintenance services into their daily work. It 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. A financial tool was developed for Raptor; the innovator used it to set new sales targets in November 2023 when they decided to implement price changes. Raptor also started working more on their exposure and participated in an exhibition each quarter, attending one in Luxor, the Sahara Expo, and the Fayoum Expo. This increased participation resulted in newly created networks and leads. Furthermore, the innovator developed their pricing strategy to match the market. Currently, an EUF TA is underway. This TA explores different modalities for financing.



Sudagarlic - due to the ongoing conflict in Sudan, Sudagarlic has been non-operational since April 2023.



DIGITIZATION IN MIDDLE EAST AND NORTH AFRICA

Digitization in agriculture continues to grow in the Middle East and North Africa, with the most notable conversation related to artificial intelligence (AI) and its potential use for agriculture. Out of the 35 innovations that have received support from the MENA RIH, 11 of them incorporate digital technologies, digital e-commerce platforms, or AI. Each innovator carves their own unique path within the digitization conversation as their solutions are based on the end-users' needs and the ecosystems in which they operate.

Egypt:

AbuErdan uses AI to optimize poultry production, ensuring sustainability and profitability.

Agrisolar specializes in the provision of solar components for solar engineering, procurement and contracting firms. They received a grant and TA for the development of a remote monitoring system. This system is designed to enable preventive maintenance and operational cost reduction, particularly for smallholder and remote clients. It is currently in early commercialization stages.

Mozare3 provides digital contract farming and financial access solutions. To enhance Mozare3's ability to communicate the positive impacts created by their digital solutions, the innovator received an SDG impact TA. An EUF TA provided by WE4F enabled Mozare3 to expand its business model by providing access to finance and water/energy saving technologies for farmers as key services. Mozare3's TAs have significantly empowered Mozare3 to enhance its software and operations, supporting farmers in improving their environmental impact and financial inclusivity.

Platform is revolutionizing precision agriculture with AI by integrating IoT sensors and weather data, their platform optimizes irrigation and fertilization. WE4F's support in 2023 was important for scaling operations and enhancing platform performance, leading to stronger partnerships with smallholder farmers and an improved customer success team.

Iraq:

Green Shovel integrates AI in agriculture, offering smart control systems for greenhouses and irrigation, optimizing conditions while conserving resources. The TA provided by WE4F was helpful in enabling the scale of AI-controlled systems in 2023, leading to enhanced agricultural productivity and resource conservation.

Lebanon:

Biomass significantly increased its digital sales platform use in 2023. This move, while not typical for an innovator whose solution is not technology-based, did lead to a substantial expansion of its online presence, sales, and end-user base.

GoBaladi, under Hajar Foods, produces and sells goat dairy products. The innovator leveraged their online presence to expand their sales to end-users. The online marketing tactics also allowed them to better understand their target audience (e.g., age, location, purchasing habits, and more) and effectively made it possible for them to conduct a better go-to-market strategy and reach more customers.

Irma & Co offers artisanal Armenian heritage products sourced from smallholder farmers and processed by vulnerable groups. The innovator leveraged digital and e-commerce platforms to enhance its online sales and presence, significantly growing its customer base by 20%.

Robinson Agri provides sustainable and climate-resilient agriculture solutions in Lebanon and Africa. In 2023, the innovator planned to integrate smart agriculture solutions, including precision agriculture and greenhouse automation, taking a significant step towards technological advancement in farming in Lebanon. They updated their greenhouse solutions changing from traditional tunnels to right-sided greenhouses. For their nursery solutions they added solar heat pump-controlled environment technology which helped reduce the operation costs, directly affecting the price of the seedlings and consequently improving their sales and growth. As a result, their greenhouse and nursery solutions have become efficient, improving their sales and bottom line.

Morocco:

High Atlas Foundation focuses on sustainable tree nurseries and carbon credit sales. The innovator is advancing its digital infrastructure for enhanced tree monitoring and performance tracking, having reached advanced stages of its carbon credit certification process in 2023. This development is part of their ongoing innovation to improve social impact and carbon sequestration monitoring and scale, as well as enhance farmer profitability and financial inclusion through carbon credits.

SOWIT combines AI, agronomic expertise, and remote sensing to provide actionable insights for efficient farm management in Africa. WE4F's grant and the TA on product development and EUF helped bolster SOWIT's capabilities, particularly in utilizing their deep data analytics to facilitate access to finance for smallholder farmers and improve resource management.

OPEN CALL FOR INNOVATIONS

The MENA RIH's OCFI launched in May 2023, with the review of the first batch occurring in July 2023. During this period, the hub received 57 applications, of which 48 were eligible and, after review, seven advanced to the full proposal stage. Of the seven who advanced, six completed the necessary documentation. Over 30% of the applicants assessed in the first batch were women-owned or led organizations.

For the second batch, which lasted from July 2023 until January 2024, the hub received 145 applications, of which 61 were eligible and 46 advanced to the full proposal stage. Of the applications submitted, 55% came from women-led and/or -owned innovations. The second OCFI also received eligible applicants from countries, such as Algeria and Tunisia, where previous rounds did not yield eligible applicants. Lebanon and Yemen also saw a significant increase in the number of applicants. Jordan, West Bank/Gaza, Egypt, Morocco, Tunisia, and Egypt had the highest percentage of eligible applicants.

Country	Batch 1 Number of Applications	Batch 2 Number of Applications
Egypt	11	20
Morocco	11	19
Jordan	9	10
Iraq	6	8
West Bank/Gaza	6	4
Lebanon	4	55
Tunisia	4	8
Sudan	4	1
Algeria	1	2
Yemen	1	12
Total	57	139

This distribution highlights a diverse range of innovators across the targeted countries, including countries that did not present eligible applicants in previous calls. It also underlines the improvement in representation of women-led and/or -owned enterprises in the program.

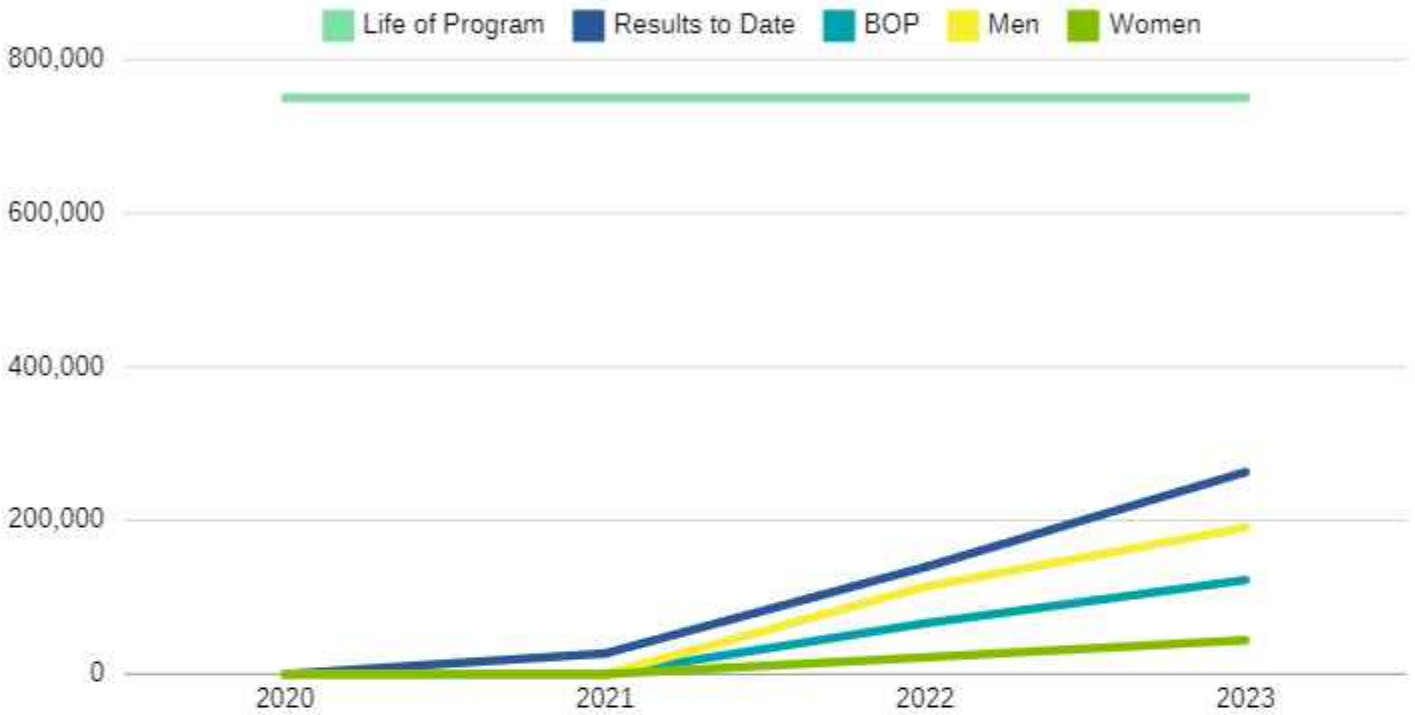
At the end December 2023, the MENA RIH launched its second Iraq CFI, which saw 58 applicants, of which 28 were eligible and 31 submitted concept notes. Of the eligible applications, 24 were invited to the full proposal stage. By the end of the first quarter of 2024, the MENA hub aims to have selected up to 20 innovators from the OCFI and the Iraq CFI.



RESULTS TO DATE

END-USERS IMPACTED

Number of WE4F End-Users



The MENA Hub is off track in meeting the KPI2 target to date, as only 35% of the LOP target has been met. One of the main reasons for the delay in meeting KPI2's target is the original documentation requirements for reporting the number of end-users using the innovation. Given the nature of countries and organizations in the MENA region, it was extremely difficult to meet documentation requirements related to traceable identifiers for every end-user. For innovators who operate a business-to-business (B2B) model, it is uniquely challenging as they need to acquire such information from their retailers/ distributors who may not be tracking this data at all. Since amending said requirement, innovators are now able to acquire information about their B2B end-users by getting signed letters from their points of sales. For the remaining life of the program, the MENA RIH anticipates being able to move closer to the target.

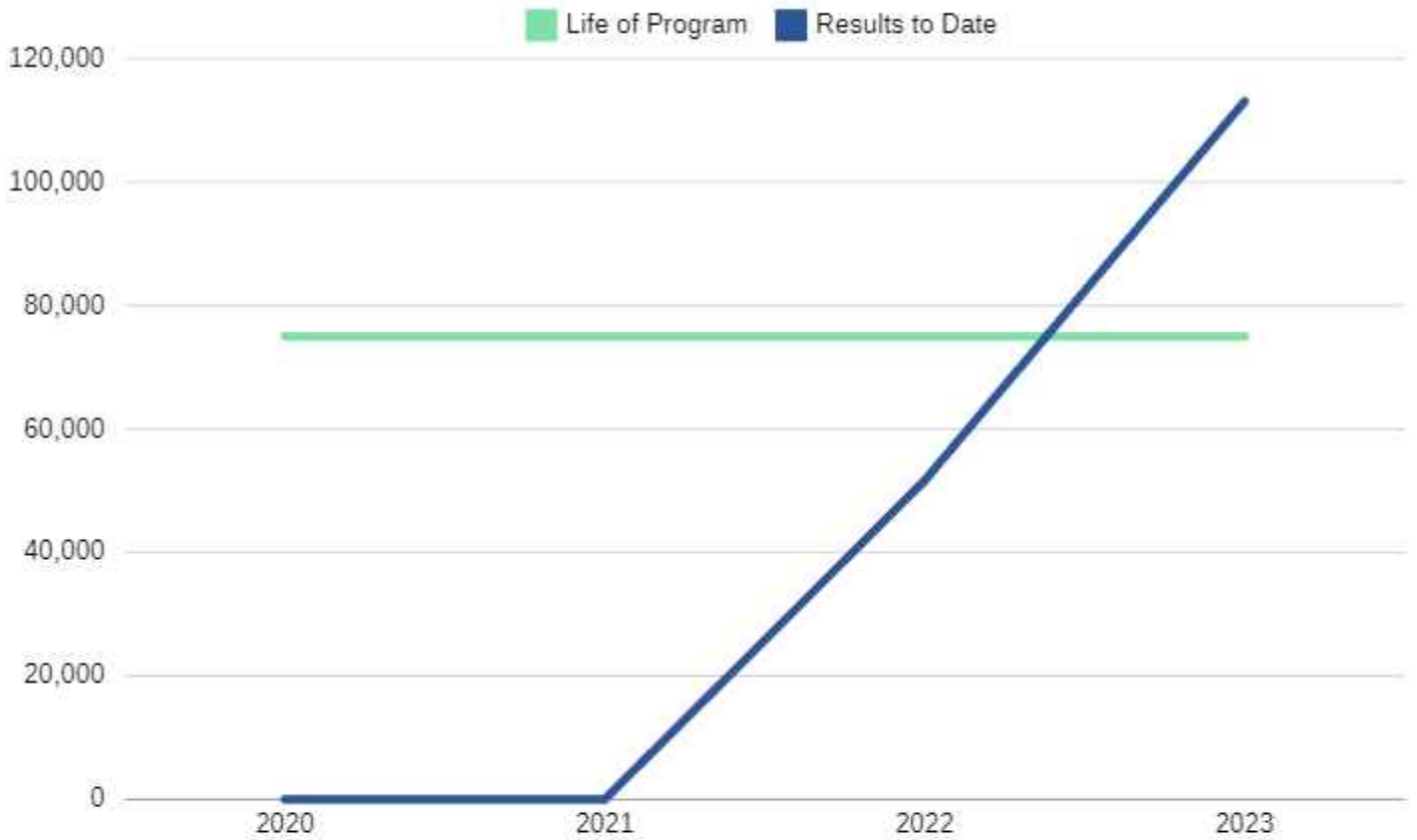
The major three countries that contribute to MENA RIH's total end-user result are Egypt (36%), Lebanon (33%) and Morocco (21%). Part of the reason for these countries contributing the most to MENA RIH's end-user total are innovations that individually contribute high end-user totals. Chitosan Egypt individually contributes 13% of all end-users, followed by Mozare3 (Egypt) with 8%, SOWIT (Morocco) with 9%, GoBaladi (Lebanon) with 9%, and HAF (Morocco) with 7%.

Women end-users represent around 17% of total end-users. This is because many innovators work in the energy/renewable energy field, which is a male dominated field in MENA. Moreover, due to limited access to technology and high illiteracy rates for women, it remains challenging for innovators to reach out to women end-users. To address the lack of participation by women, the hub became more proactive and conducted gender-focused TAs focused on outreach to women end-users and women cooperatives.

A key TA recommendation for Egyptian innovators was the implementation of demonstration days in rural areas for several innovators in Egypt; these days should be conducted with the support from local community-based organizations to ensure outreach to more women end-users. The same approach is currently being discussed in Lebanon, where a planned innovator demonstration day will support their efforts to reach out to more women end-users.



Number of End-Users Using Financing Mechanisms



As the number of innovators using EUF is highly related to the total number of end-users, there are similarities between the key contributors of the two indicators. Differences do emerge, however, due to the high cost of products (e.g., solar water pumps, greenhouses, irrigation systems), EUF becomes a necessity in innovator's business model as well as the ease with which an innovator can access capital that can be used to offer EUF solutions (e.g., digital solutions can leverage already existing data to create risk assessment frameworks and evaluate credit worthiness). The main contributors to this result are Chitosan (25%), SOWIT (20%), Mozare3 (13%), Green WaTech (10%), and Ainda Agricultural Center (5%).

Innovation Category	Popular End-User Financing Mechanisms
Irrigation	Offering payment facilities (e.g. lower down payments, installment plans over extended periods)
Energy Production and Infrastructure	Facilitating access to financing from entities providing financial services (e.g., banks, microfinance institutions (MFIs))
Farm Inputs	Offering favorable payment facilities for buyers and suppliers
Digital Solutions	Integrating EUF as a core solution Creating customized products in collaboration with other organizations

Over the past year, WE4F's TA support and capacity building initiatives have helped several innovators successfully implement and integrate EUF mechanisms into their solution offerings and marketing strategies. Several innovators also established formal partnerships or initial agreements with financial institutions. When AgriTopia's operations in West Bank/Gaza faced slowdowns due to crises, in early 2023, the innovator explored potential EUF modalities with the Palestinian Agri Union and MFIs to develop customized loan/grant facilities. End-user financing thus became integral to their growth plans. In 2023, WE4F's grant, as well as the product development and EUF support provided in 2022, played a crucial role in strengthening SOWIT's capabilities. The support enabled SOWIT to leverage its deep data analytics to effectively facilitate smallholder farmers'

access to finance. As a result, SOWIT successfully collaborated with international partners and financial institutions. These partnerships played a pivotal role in providing smallholder farmers, including women, with essential financial services and support, leveraging the detailed agricultural data offered by SOWIT's platform for informed decision-making on risk, farmers' productivity, and improved resource management.

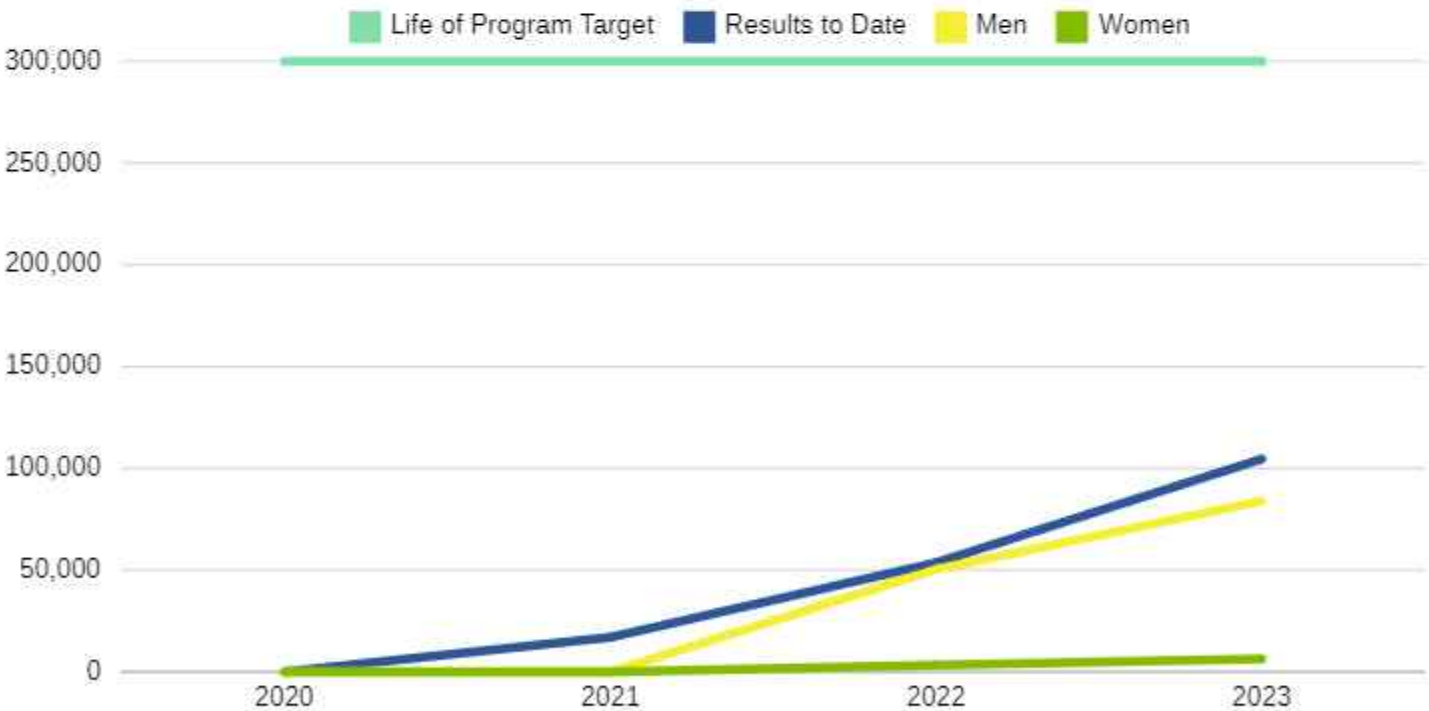
In late 2023, Mozare3 received an EUF TA, which allowed it to expand its business by integrating the EUF model in their business operations. This expansion was facilitated by the development of an innovative risk assessment framework, effective farmer segmentation, and creditworthiness analysis, along with WE4F's facilitation of links between Mozare3 and two major banks in Egypt.

Aside from providing support to innovators, the MENA RIH entered MOUs with Al Majmoua in Lebanon and Attawfiq in Morocco, both of which are MFIs in their respective countries and the MENA region. The Al Majmoua partnership centers on solar pumping solutions, with the organization receiving support to develop a multi-criteria alternative risk assessment framework for farming end-users. The MENA RIH developed a system sizing and payback assessment tool for credit officers; and designed a new product for financing solar pumping systems in Lebanon, which features favorable terms for smallholder farmers. At the end of 2023, the product underwent a pilot phase in partnership with two pre-vetted service providers, Green Essence (a graduated WE4F innovator) and another solar PV solutions provider, who presented 31 cases for financing. Out of 31 cases presented by the two service providers, a few have successfully received financing.

The partnership with Attawfiq Microfinance involved similar efforts, including the design of a financial product with features tailored for smallholder farmers and livestock breeders. Biodome Maroc, an innovator supported by WE4F, brought forth 16 cases to participate in the pilot program and an initial assessment was conducted.

In 2024, the pilot programs are set to scale up, with the hub's goal of completing the piloting phase by the second half of 2024 and securing financing for at least 15 end-users in both countries during the pilot phase. Following this, the launch of the products is planned. Additionally, the MENA RIH will introduce a third EUF product in 2024.

Number of WE4F Innovation End-Users with Increased Incomes



Almost 40% of end-users experienced an increase in income. SOWIT, Mozare3, Chitosan, Green Essence and Robinson Agri together contribute to 65% of KPI7's total result to date. Egypt ranks first on this indicator (47%), followed by Morocco (26%) then Lebanon (23%). This is primarily because most of the innovators are based in Egypt, including the top two performers. It is also worth noting that the number of women end-users experiencing an increase in income is significantly lower than the number of men. Multiple reasons could have contributed to this gender gap including but not limited to a significant number of end-users reported under KPI2 are of unknown gender (stemming from B2B innovators' reporting); samples selected for MEL TAs/External Surveyors' assignments comprised mainly males because of the end-user gender distribution; and limited access to assets, especially land, which would enable women to benefit from innovations.

Providers of farm inputs, particularly those offering organic fertilizers and alternative inputs (i.e., Chitosan), have had the greatest collective impact. This is largely due to the cost savings they enable farmers to achieve by replacing chemical fertilizers and pesticides, whose prices are continuously rising. Innovators who facilitate the replacement of diesel with sustainable energy sources, such as solar pumping providers, also positively impact farmers' bottom lines. SOWIT and Mozare3 are among the largest drivers of increased farmer income, most likely because they enable farm-level savings in water, energy, and fertilizer use; measure the impact efficiently; and facilitate financial inclusion.

GREENHOUSE GAS EMISSIONS REDUCED

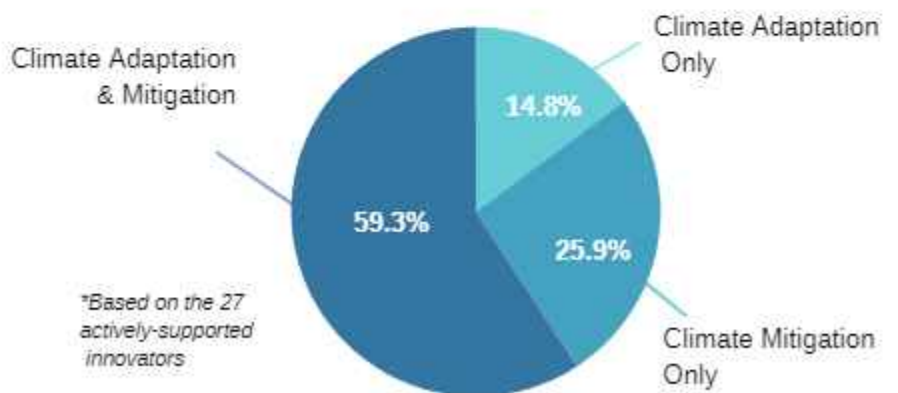
Total Greenhouse Gas Emissions Saved by End-Users Through the Use of WE4F Innovations (tons of carbon dioxide equivalent (CO2e))



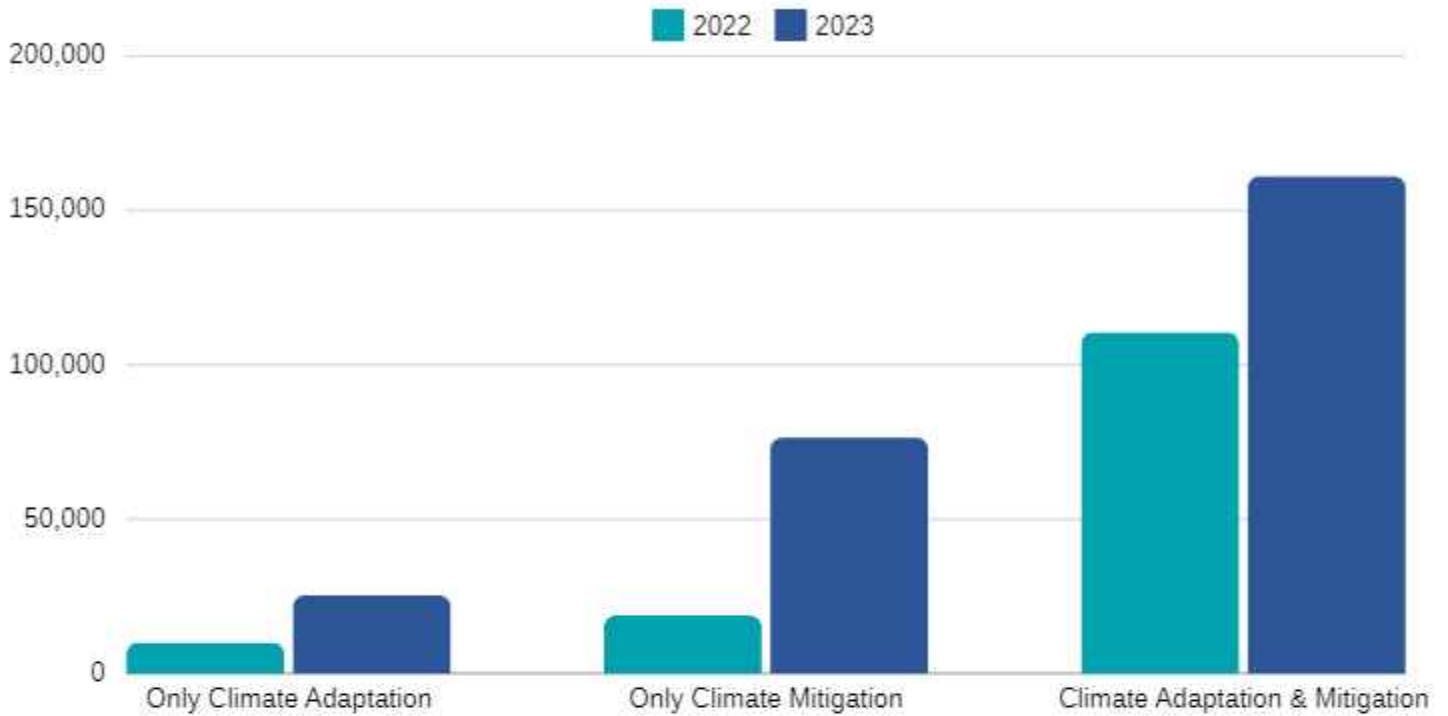
Most of the MENA RIH's GHG savings come from end-users switching from fossil fuels to renewable energy sources, particularly solar photovoltaic panels. As a result, the hub's total result was triple (930,000 tons of CO2e) the LOP target of 300,000.

As for the innovators, the highest contributors are Agrisolar (69%), SOWIT (9%), Green Essence (6%), HAF (5%) and Nakhla (4%) - together these innovators contribute to about 93% of the total GHG savings for the MENA RIH. Both Agrisolar and Green Essence Lebanon are solar irrigation providers while SOWIT's GHG savings stem from their digital solution enabling farmers improved utilization of resources.

Percent of Innovators Doing Climate Adaptation and Mitigation*



Number of Smallholder Farmers and Other End-Users Using a Climate Adaptation, Climate Mitigation, or an Innovation that Tackles Both



The majority of the MENA RIH's innovators are deploying and scaling solutions that are focused on both climate mitigation and climate adaptation, demonstrating the program's effectiveness in realizing diverse environmental impact. Climate adaptation innovators, such as Robinson Agri, offer solutions like drought-resistant crop varieties, efficient irrigation systems, and controlled farming methods (e.g., greenhouses), or wastewater treatment systems for irrigation, like Green WaTech. Climate mitigation innovators, like Raptor Engineering and Green Essence, deliver solar irrigation systems and energy efficiency solutions.

Interestingly, a significant number of innovators offer both adaptation and mitigation solutions, demonstrating the interconnectedness of addressing climate change impacts and their causes. For instance, Biomass provides a dual approach by enhancing controlled farming in greenhouses (adaptation) and promoting permaculture practices for better carbon sequestration and decreased dependency on synthetic inputs (mitigation).

Many end-users operate in remote areas with minimal access to on-grid energy and therefore use generators as their main source of energy. With the continuously increasing prices of fossil fuels and unreliable access to diesel, smallholder farmers seek alternatives to ensure high crop yield. Thus, solar irrigation provides farmers with a more sustainable option. This switch highlights why most innovators and end-users fall into the "Climate Mitigation and Adaptation" category, as solar-powered technology serves as an adaptation for the farmers to become more resilient and as a mitigation to reduce GHG emissions. Green Eagle Tech, for example, integrates adaptation and mitigation by deploying efficient irrigation systems alongside solar pumps and other solar-powered products, showcasing a holistic approach to both adaptation and mitigation.



PRODUCED AND PROCESSED MORE FOOD

Food Produced with WE4F Innovations (tons)



Due to significant contributions by the MENA innovators in 2023, the hub was able to significantly surpass the LOP target by 970,000 tons of food produced. The most noteworthy contributors to the total mass of food produced in 2023 are digital precision agriculture innovators SOWIT and Platfarm (more than 1 million tons each). Their substantial impact is likely due to their ability to enable farm-level efficiencies in energy, water, and materials, as well as enhanced land productivity per hectare through their asset-light solutions. Following them are Green Essence Lebanon, Robinson Agri, and Agrisolar. These innovators provide efficient irrigation systems, solar pumping systems, greenhouses, compost, and biofertilizers, each enabling the production of more than 10,000 tons of food in 2023. These solutions also enhance land productivity per hectare by increasing soil productivity and/or facilitating access to reliable and affordable energy and water resources.

Total Mass of Food Processed as a Result of WE4F Innovations (tons)



For 2023, Ainda Agricultural Center, GOBaladi, and Irma & Co are the three contributors to the hub's food processing indicator. Ainda Agricultural Center has aided in achieving this target by enabling the farmers they serve to access value-added services such as cleaning, packing, and processing facilities. Irma & Co contributed by expanding their production capacity and sale of artisanal food heritage products, through their growth in Lebanon, Egypt, and other markets outside the MENA region.

The MENA RIH found it challenging to source and identify food processing innovators who fit the WE4F criteria. The hub assumes this could be due to the restriction on the minimum number of end-users required as part of the selection criteria for innovators to join WE4F and their capacity to count them, given the fact that their business models tend to be B2B oriented. Moreover, the water and/or energy savings impact of many of the food processors that applied to previous Calls for Innovations were constrained to their own facilities without sufficient evidence of the impact on the downstream and upstream of their value chains. As part of the OCFI process, the hub has placed a strong emphasis on increasing its share of innovators contributing to food processing and expects to make a significant contribution to this KPI in 2024.

USING LESS ENERGY AND WATER

Energy Saved (kilowatt-hours)



The MENA RIH has successfully exceeded the LOP target by 40 million kWh. This can be attributed to the hub's work with energy-focused innovators, like HAF, Green Essence Lebanon, SOWIT, IRSC, and Platform. The solar irrigation innovations (Green Essence Lebanon and IRSC) help end-users transition energy sources, causing a decrease in energy consumption by the farmers and higher energy efficiency. While digital solutions (SOWIT and Platform) support farmers in better utilizing their available energy sources as they can help inform end-users' decision-making.

The notable exception to the solar irrigation and digital platform innovators is HAF, which recorded the highest energy savings of all innovators. This was partially due to the MEL TA that they have received. The service provider used the Clean Energy Emission Reduction (CLEER) tool to calculate energy saved through extrapolating the results based on the percentage of end-users who use some type of energy in their irrigation practice. This was also the case for SOWIT as part of the innovator's energy savings and was recorded through the MEL TA. SOWIT attained significant energy savings by surveying end-users who transitioned from grid electricity both pre- and post-innovation use. The collected data was input into the CLEER tool to calculate average annual consumption, extrapolating the results to determine energy savings for all end-users.

So far, innovators in the 2021 Regional Cohort who contribute to energy savings have had more time to realize and implement the impact of the TAs and hub support they received. For example, GO Baladi and Hajar Foods received a technical manufacturing resource efficiency TA in 2022, with a heavy focus on low-cost energy efficiency solutions. The impact of these solutions was realized in 2023. Moreover, the TAs and grants to the HAF in 2021 and 2022, catalyzed the scale-up of both their tree nurseries and their integration of solar systems in the nurseries. The 2021 Regional Cohort also had a more substantial portfolio of digital solutions that could more readily capture the energy savings data (SOWIT, Platform, AbuErdan).

In terms of the countries that innovators contribute energy savings to, the order is: Morocco (42%), Egypt (29%), Lebanon (24%) of the result. These savings contribute to governments' goals in the countries. The Government of Morocco has a strategy to reach a 52% target for renewable power capacity to become a low-carbon economy, thus creating an opportunity for innovators to have a major role in the energy transition. The Government of Egypt has a similar strategic objective to increase the proportion of electricity generated from renewable sources to 42% by 2035.

Total Volume of Water Consumption Reduction (liters)



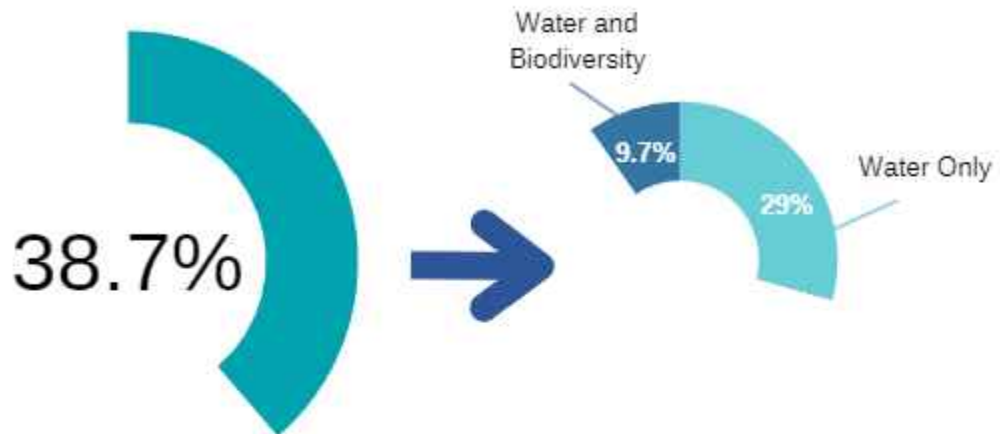
Due to the MENA RIH's support of several different innovators who focus on water savings through irrigation (Robinson Agri contributes 19% of total water savings), biofertilizers (Chitosan contributes 19% of total water savings), and digital solutions (Platform contributes 19% of total water savings), the hub has successfully surpassed the LOP target by over 2.8 billion liters. Like several other results, Egyptian innovators rank first and contribute to 51% of water savings results. Lebanon follows with innovators who contribute to 32% of the water savings (aside from Robinson Agri, Green Essence Lebanon is a major water savings contributor with 8% of the total). Finally, Iraq-based innovators contribute 12% of the result (by itself, Ainda contributes 8% of water savings).

Providers of solar pumping solutions, such as Green Essence and Ainda, received TAs in 2022 with aspects covering optimizing their system sizing. This often led to a reduction in the size and cost of systems, as well as the volumes of water pumped. They were also supported in operationalizing their EUF mechanisms, which increased the adoption of their solutions among farmers while pairing such services with trainings on responsible and efficient water use wherever possible. Robinson Agri developed a partnership with Green Essence and scaled their provision of greenhouses and other integrated farming solutions, significantly driving water savings among the end-users they serve. Additionally, Chitosan Egypt and other organic and bio-based agriculture input providers have also contributed to increased water reduction. They scaled their sales of water-retaining and soil-improving products, building on the grant support provided as well as marketing, sales, and market research TAs. Several 2021 Regional Cohort innovators have also improved by using MEL data and tools to measure their impact.

Similarly to energy savings, 2021 Regional Cohort innovators had more time to realize and implement the impact of the TAs and hub support they received. Many also improved how they document and report their data. The first cohort had a more substantial portfolio of digital solutions that could more readily capture the water savings data in a manner acceptable to the program. Innovators in digital solutions, water capture/storage, water irrigation, and water salinity management received about 24 TAs in market research, marketing, sales, and other project management and business development aspects, which contributed to their increased end-user reach and impact. Moreover, with the increased ad hoc MEL support in 2023 and the in-depth MEL TAs for selected innovators in 2022 and 2023, more innovators were able to improve their data collection and reporting practices.



Share of Innovators Monitoring Water or Biodiversity



The 38.7% of the innovators who use tools, methods, or processes to monitor water protection or biodiversity are mainly those who have digital innovations such as Platfarm, GreenShovel, SOWIT, AbuErdan, and Mozare3. Additionally, some innovators have high environmental awareness and responsibility as they were the most active in working with the hub's environmental, social, and governance (ESG) team. These innovators include Agrisolar, Agritopia, HAF, and Green WaTech. Finally, other innovators were already monitoring water and biodiversity consumption, such as Natagri.

The hub has worked with each innovator to raise awareness on the topics of water saving and biodiversity. For 2022 Iraq Cohort in particular, the innovators were given a TA on water resources management and soil health as well as their effect on conservation of biodiversity. All the innovators received an ESG clinic in which the topics were discussed thoroughly with them. As for the women-owned/women-led innovations, they contributed with a share of 58.3% while the men-owned have a share of 41.7% of the innovators who use water and/or biodiversity monitoring tools.

In contrast to the indicator results, the hub's environmental experts found during their site visits regarding the implementation of the environmental mitigation and monitoring plans, that the absolute majority of 2021 Regional Cohort, 2022 Regional Cohort, and 2022 Iraq Cohort innovators reported that concrete actions to promote water conservation, reduction, and enhancement and protection of biodiversity are being taken. Such actions include, but are not limited to:

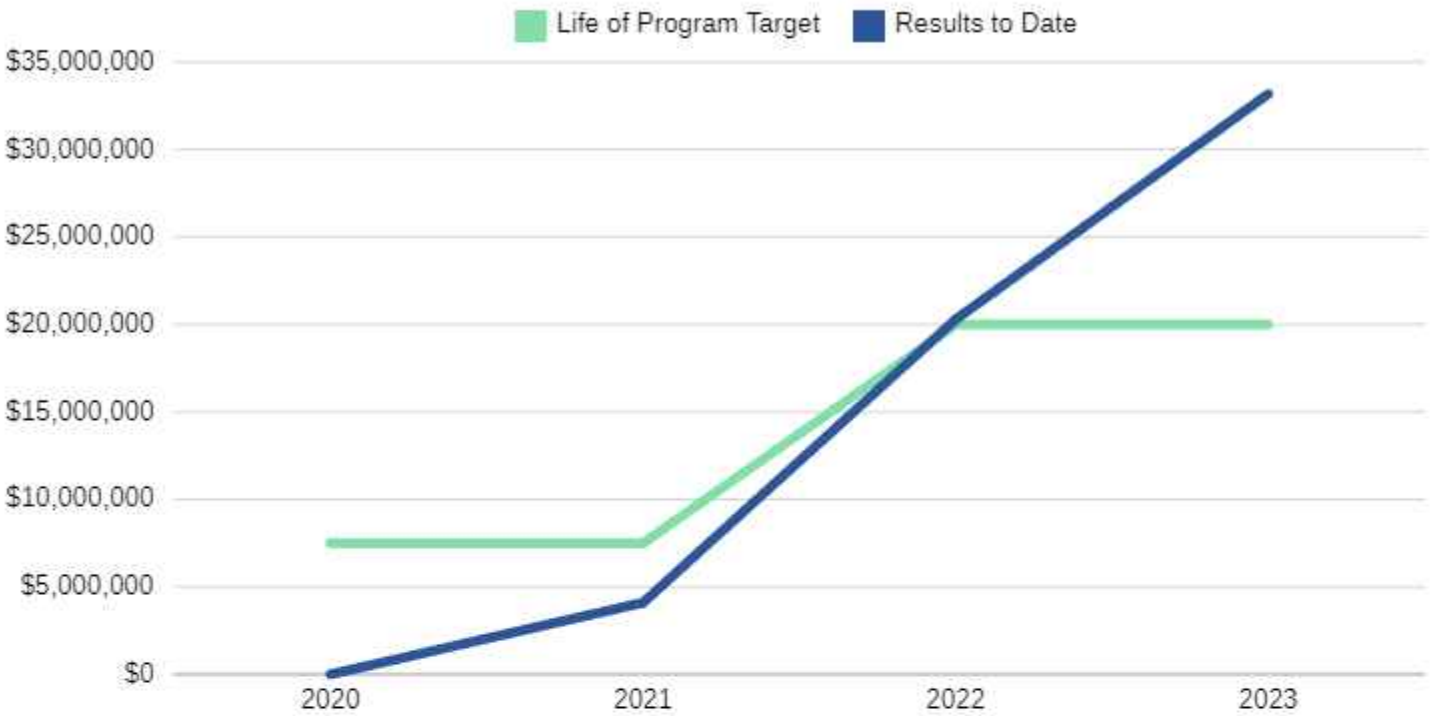
- Providing advisory/recommendations to farmers on sustainable farming techniques (e.g., crop rotation, companion planting, green manure, soil fertility and health, working with beneficial insects, composting, and conserving biodiversity for protected lands).
- Promoting waste management activities to ensure that waste streams do not reach nearby water bodies and maintenance plans to ensure that the waste doesn't reach the soil or groundwater.
- Conducting water sample analysis to ensure that the quality of the surrounding water sources is not adversely affected by the innovator's project activities.
- Digital solutions advisory services for the farmers directly help them improve the soil health, biodiversity, as well as save water.
- Interventions on vegetation removal that ensures that farmers do not destroy habitats or remove trees to implement solar PV systems; and raising awareness to alter potential overuse of water upon installation of solar PV pumping solutions.

Due to this discrepancy, in future reporting activities the MENA environmental team and the MEL team will collaborate when reviewing innovator results and investigate potential under-reporting or misreporting.



INNOVATIONS SCALED

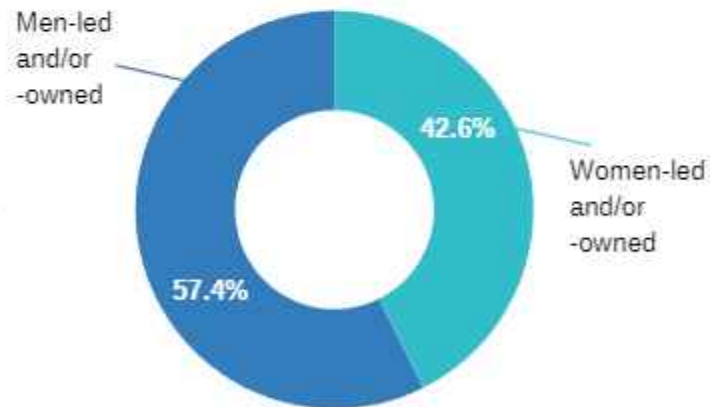
Innovator Investment Mobilized (in U.S. Dollars)



With the support of the WE4F investment readiness and facilitation team, MENA RIH innovators successfully mobilized over \$33 million USD in investments in the last three years, exceeding the initial target of \$7.5 million USD and the revised target of \$20 million USD. The funds were raised by a total of 22 innovators, which also surpassed the initial goal of 16. The fundraising was distributed between Egypt (76.27%), Iraq (57.71%), Morocco (40%), and Lebanon (8.64%).

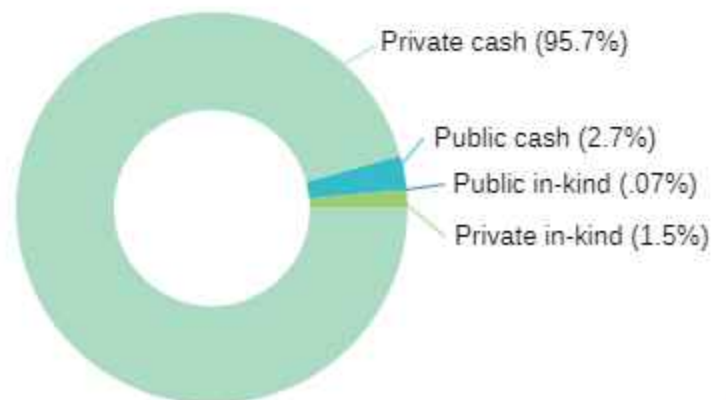
It is noteworthy that 42.6% of the funds were raised by women-led/owned companies. This can be attributed to the increase in impact funds/initiatives that encourage funding for women-led companies and WE4F's focus on mainstreaming gender into all activities. Amam Ventures, one of the impact funds specializing in gender lens investing in the MENA region, is currently benefiting from EE TA to enhance their impact measurement and management framework to integrate WEF nexus objectives. This TA collaboration holds the potential to benefit multiple MENA innovators that are gender-focused, thereby increasing the percentage of funds raised by women-led companies.

Investment Breakdown by Gender



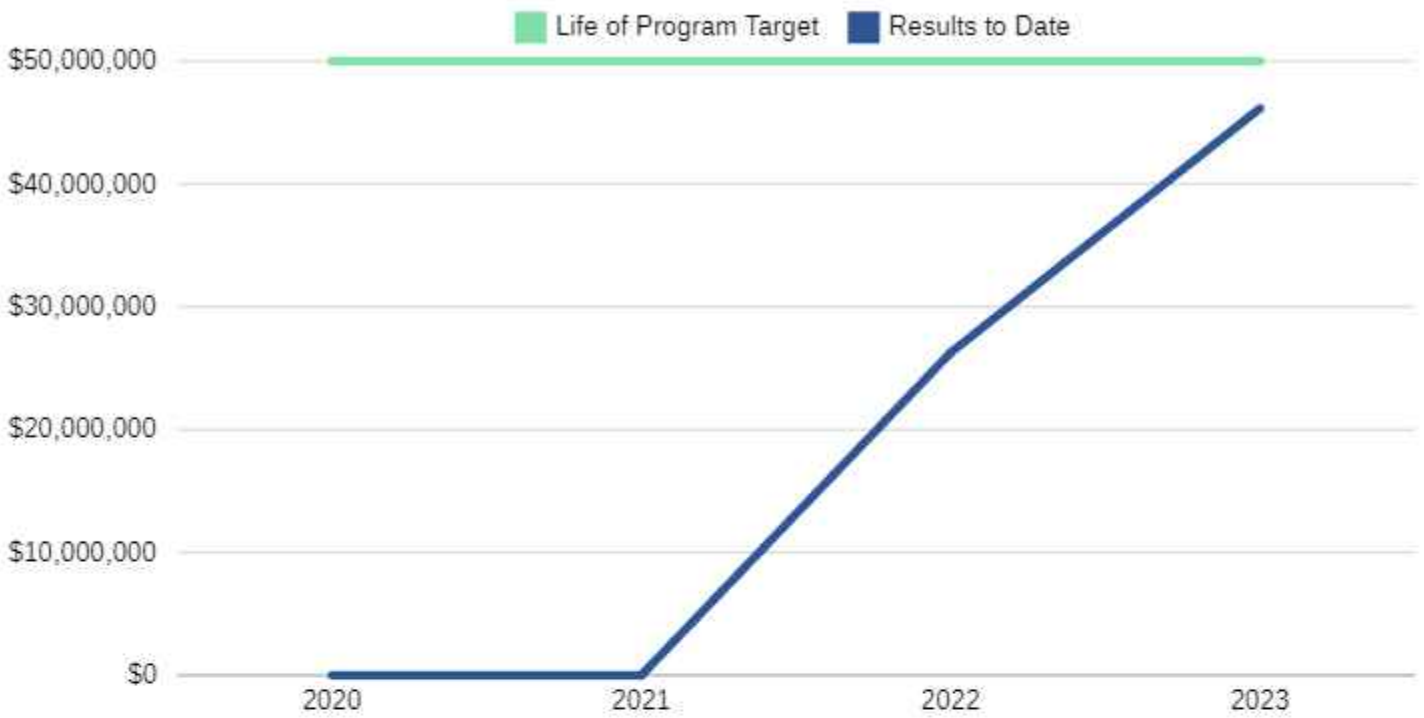
To continue fundraising, and in addition to the IR support, innovators need to strengthen their corporate governance foundation and actively tackle risks by focusing on identification, implementing tailored mitigation strategies, and seamlessly integrating risk management into their business planning processes.

Public versus Private Investment



The pie chart illustrates a predominant reliance on private funding for WE4F innovators, with 95.7% of funds sourced from private cash, compared to a marginal 2.7% from public funding. The remaining percentage is private in-kind, which represents a very small and unused investment category by the MENA innovators. This emphasizes innovators' preference for private financing as the primary means for expansion, highlighting a disparity in investment contributions from the public funding.

Innovator Gross Sales (in U.S. Dollars)



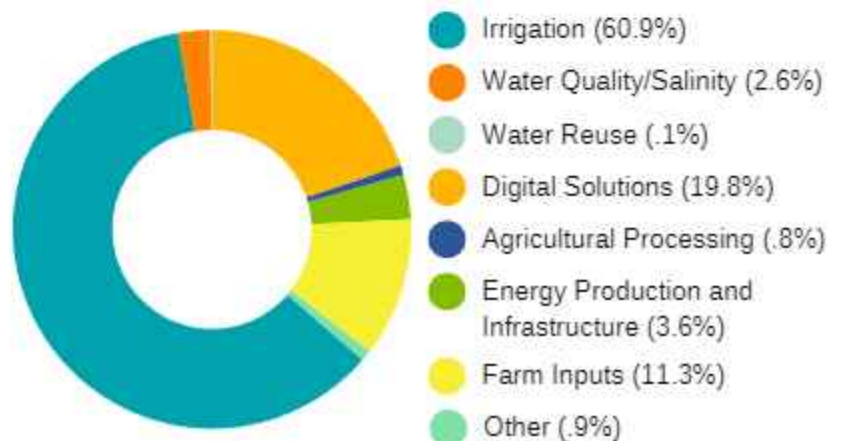
Sales in Egypt rank first accounting for 64% of the gross sales followed by sales in Lebanon who account for 25%. The top 5 innovators who contribute to almost 75% of the MENA RIH's gross sales result to date are: Green Eagle Tech (22.37%), Mozare3 (17.34%), Agrisolar (16.39%), Robinson Agri (13.39%), and Biomass (5.09%).

One of the main challenges faced by MENA innovators are the continuous fluctuations in exchange rates and the instability of the region's economic and financial situation. Other challenges included end-users facing increasing input costs and diminishing margins which may hinder the adoption of their solutions, limited awareness of end-users of the business case to adopt solutions, and the high capital expenses, or prices, of many innovations. While deeper analysis is needed to understand the correlation, innovators offering EUF schemes are likely to have higher gross sales and increasing growth rates.

Several IR and organizational development TAs were delivered, with the objective of enhancing operational efficiency. For example, Agrisolar received TAs covering HR and gender integration support, improved financial management, and a mapping of working capital facilities to expand operations. In the previous year, they received an advanced TA on designing a remote monitoring system to enhance their reach to remote and BoP end-users and to reduce operations and maintenance costs, which began deployment in 2023. This diverse operational and IR support may have played a role in enabling their increased sales. Green Eagle Tech received a TA on strategic planning for growth, a gender integration TA, and an advanced feasibility analysis for their local manufacturing site to produce key components locally, reducing costs and improving the affordability of their irrigation systems. Mozare3 also benefited from an advanced TA on a feasibility study to assess the optimal business model for providing access to land for smallholder farmers and the optimal mix of resource-efficient technologies to deploy, as well as one on EUF to expand their contract farming service offering to include access to finance and access to technologies.

Innovators in the 2021 Regional Cohort had additional time to realize and implement the impact of the TAs and hub support they received in the preceding year. Examples include Robinson Agri, which benefited from a TA on EUF that facilitated customer adoption, and Biomass, which improved supply chain optimization and the integration of partner farms. Robinson Agri also received a TA focused on marketing and sales in 2023. Furthermore, approximately 50 TAs were implemented covering market research, marketing, sales, product development, EUF, and other areas of project management and business development.

Gross Sales Breakdown by Innovation Type



Share of Supported Innovators that Successfully Marketed their Climate-friendly, Energy and/or Water-efficient Innovations with Profit

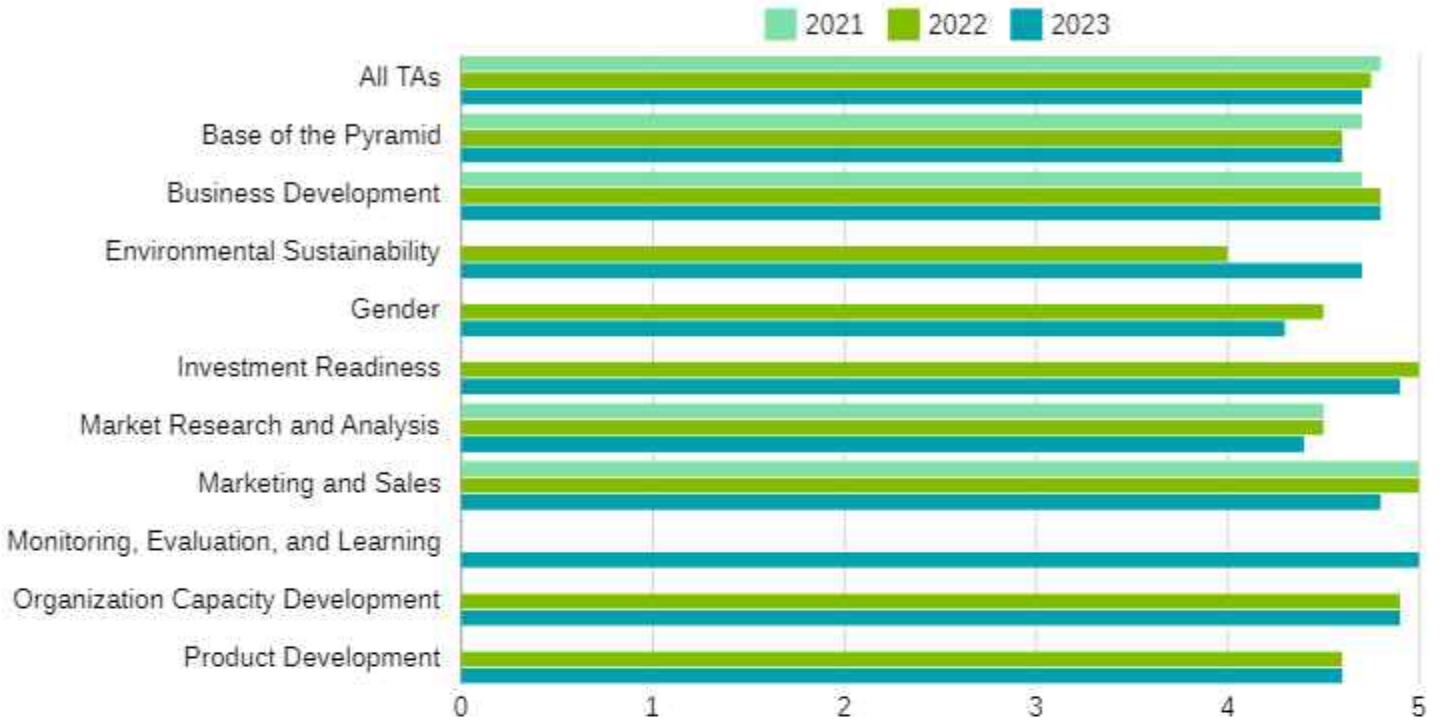


The hub surpassed the 8% LOP target with 23.5% of innovators having successfully marketed their innovation with profit. Out of those, 37.5% are women-led and/or -owned innovators (AbuErdan, GOBaladi, and Egymag). The other innovators include Bahir Al Kamal, Green Eagle Tech, Green Essence, Green Shovel and Platfarm.

In 2023, 46 TAs were delivered, covering market research, marketing, sales, EUF, and other aspects of project management and business development. These TAs likely contributed to the success in marketing innovations profitably, with many focusing on new market expansion, development of new solutions, improved pricing strategies, and identification of new customer segments. Such efforts supported enhanced turnover, cash flow and profitability, from which top-performing innovators like Green Eagle Tech, Egymag, and AbuErdan capitalized on. About 15 TAs were specifically aimed at improving financial management, cost control, cost structure analysis, and IR, which also likely contributed to improved profitability. Several innovators benefitted from both sales generating, price, and cost improvement aspects. For instance, Hajjar Foods received a TA on resource efficiency and another on marginal cost analysis, which improved unit economics along with water, energy, and material use in 2022. In 2023, Hajjar Foods also benefited from market research and marketing TAs, further enhancing sales and end-user reach. Additionally, several TAs focused on supplier expansion and selection, enabling competitive sourcing and, consequently, enhanced profitability.



Average Technical Assistance "Quality of Service Survey" Score



With more than 125 completed TAs over the course of the last three years, the MENA RIH has started to identify emerging trends. Across all cohorts, as the innovators matured, their requested TAs grew more complex, strategic, and specialized. Innovators engaged in detailed market and feasibility studies, while also exploring specialized areas such as manufacturing optimization and carbon credit strategies. ESG considerations gained traction, with initiatives to integrate inclusive practices and sustainable resource management, including HR and procurement best practices as well as improvements in carbon emissions control and waste management.

The changing TA needs of innovators reflect a dynamic journey from foundational support to strategic expansion across different sectors within agriculture. Initially, digital solution innovators focused on market penetration strategies such as market studies and product enhancement, primarily to scale their solutions for BoP populations and smallholder farmers. This focus evolved towards commercial development as these innovators matured. For agricultural processors in Lebanon, early TAs aimed at improving governance, resource efficiency, and IR to navigate economic crises, gradually shifting to emphasize scaling operations like supply chains and marketing for growth. Farm input innovators, dealing with products like compost and biofertilizer, started with operational excellence TAs including cash flow and quality assurance, moving towards marketing and partnership development for market reach. Similarly, capital-intensive farm production and infrastructure innovators initially focused on making their solutions more affordable and accessible, later transitioning to strategic planning and IR to facilitate strategic scaling and new market entries.

Women-led or owned innovators exhibited a similar range of TA needs compared to their counterparts. However, they demonstrated a notable eagerness to integrate women and vulnerable communities into their business operations. To accommodate this request, their TAs were systematically designed to facilitate this integration within their marketing, product development, human resources, and procurement processes.

In countries grappling with economic instability, such as Egypt, Lebanon, Iraq, and Sudan, TAs were tailored to address market diversification and fundraising, as well as fortifying sales channels and value proposition delivery. These TAs worked to improve innovators' resilience to navigate financial unpredictability.

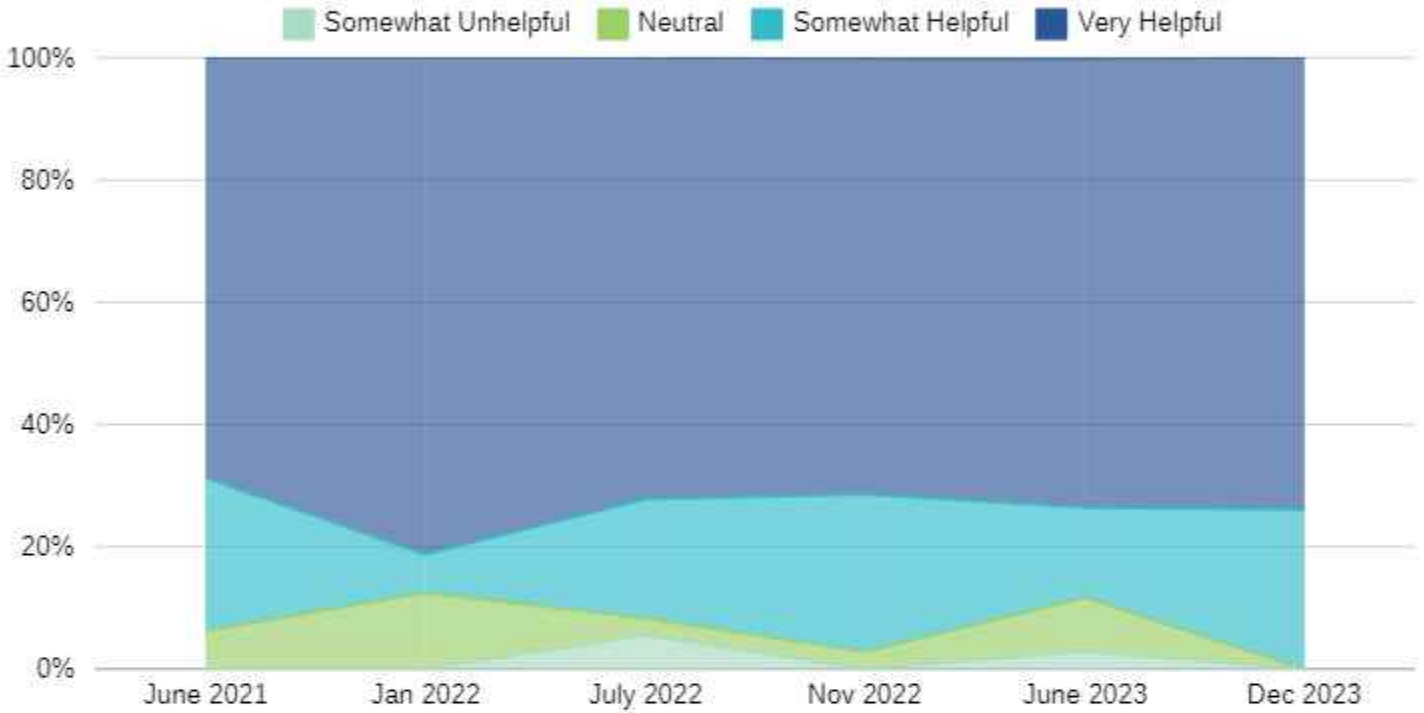
In order to ensure that TA support levels continue to maintain their same quality, the TA team implemented a series of measures to maintain high quality standards: hiring an additional team member dedicated exclusively to quality control and assurance; a two-tier review process for TA deliverables; weekly assessments and progress reports on TAs; and, finally, senior TA team members periodically conduct follow-ups with country coordinators to ensure consistent quality and address any emerging issues.

QUALITY OF SERVICE SURVEY

Conducted by the Secretariat Unit, the Quality of Service Survey (QoSS) gathers all innovators' feedback on their experiences working with the MENA RIH. The QoSS helps the hub improve problem areas and identify successful pivots that can be shared with the other hubs. The latest November 2023 QoSS gathered results from all 23 active MENA RIH innovators.

GENERAL HUB SUPPORT

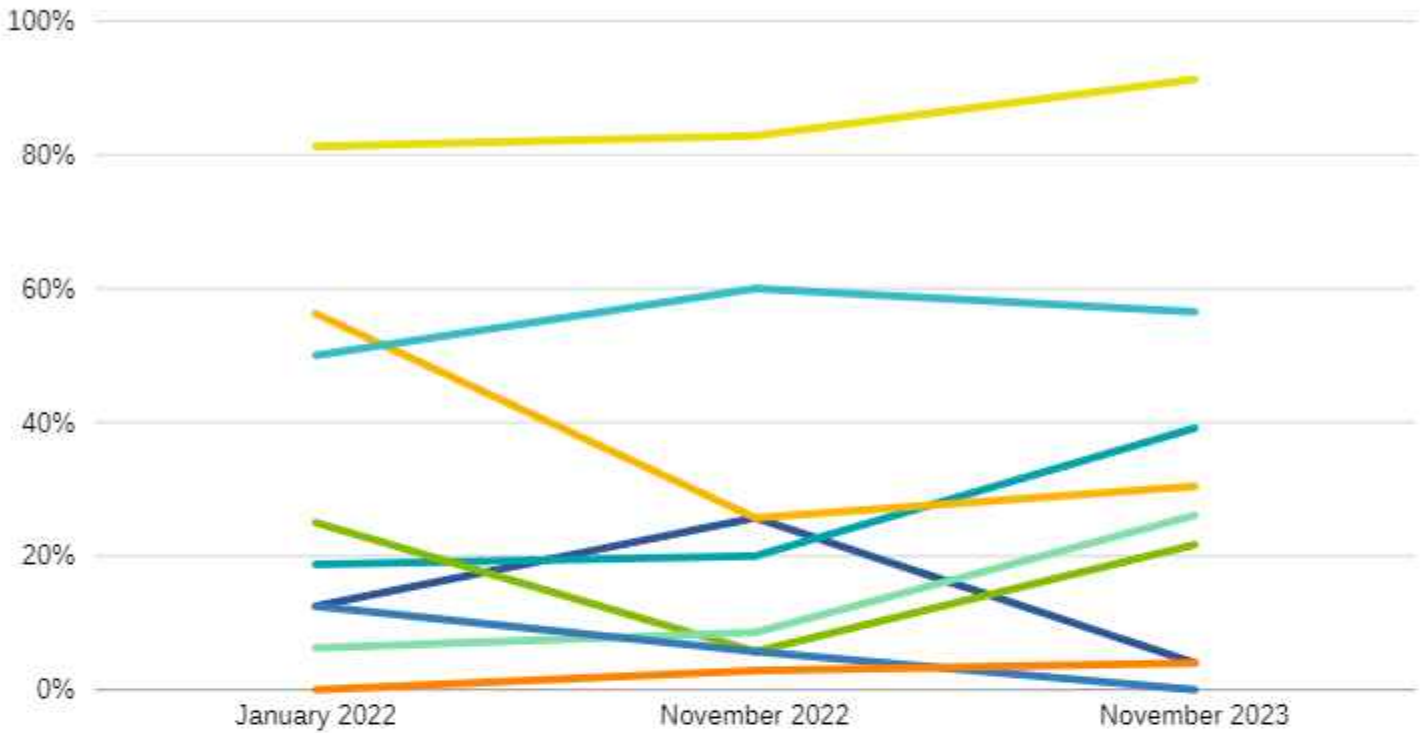
Overall, how helpful has the MENA Hub's support been to your organization's success?



In November 2023, the MENA RIH reached its highest score since the beginning of the program, with 100% of innovators indicating that the hub support for them was very helpful or helpful, with the share of very helpful reaching 73.91%. This is due to delivery of complex TA and increased trust in the hub's skills and service delivery as the impact of the RIH's support on the business and personal growth of the innovators becomes evident. This is following the hard work of the country coordinators and RIH specialists in building trust-based relationships with the innovators through regular check-ins, constant follow-ups, and tailored support.



Reflecting on the support received from the MENA Hub, which of the following has been most useful to you?



Most notably, the TA support continues to outperform all other support categories. This is potentially due to two reasons: (1) as TA is a main pillar of WE4F, it overlaps with all other program activities; and (2) innovators have benefited from the support and continue to seek it out.

The continued maturation of the innovators can also be seen in their continued value of partnership, networking, and ecosystem building going from 50% in January 2022, to 60% in November 2022, to 56.5% in November 2023. Numerous MENA innovators have created partnerships with other WE4F innovators (e.g., sub-distributor, accredited supplier); market linkages, bootcamps, and annual convenings are perceived to be falling under this category. It also accounts for innovators' ability to tap into partnerships developed at the hub level, for instance, being featured at events like the Arab SMEs Summit and COP28.

Gender mainstreaming has seen the most growth over the course of WE4F, going from 7.5% annual average in 2022 to 25% in 2023.

This is due to the more formalized TAs provided in 2023 and the launch of gender-based webinars through the MENA Women Innovate Network. A heightened understanding of gender impact led to more gender TAs under procurement, with a higher engagement level from innovators.

The environmental sustainability and compliance usefulness continues to hover in the 20s (21.7% in November 23 versus 25.7% in November 2022); it is assumed that innovators categorize the EMMP and environmental mitigation and monitoring report (EMMR) support, KPI-related TAs, and environmental impact assessment TAs, under this support category.

The share of innovators choosing IR support decreased after the MENA RIH onboarded the Iraq innovators in 2022, with an improvement in 2023, resulting in almost the same annual average. Sessions focused on IR during the bootcamp and Annual Convening as well as investor linkages may not necessarily have been identified as IR-specific support. This is also because a lot of the innovators who received this support graduated from WE4F or became alumni and have not filled this QoSS. Whereas for newer innovators, the results of IR support may yet to be seen in the longer term.

The share of innovators choosing data collection and M&E as part of the most useful type of support activities is on a continuous rise, going from 20% in 2022 to 39.1% in November 2023. Three MEL TAs were delivered, and the MEL team was able to share learnings from previous submissions and address barriers to document end-users for innovators.

Chart Key

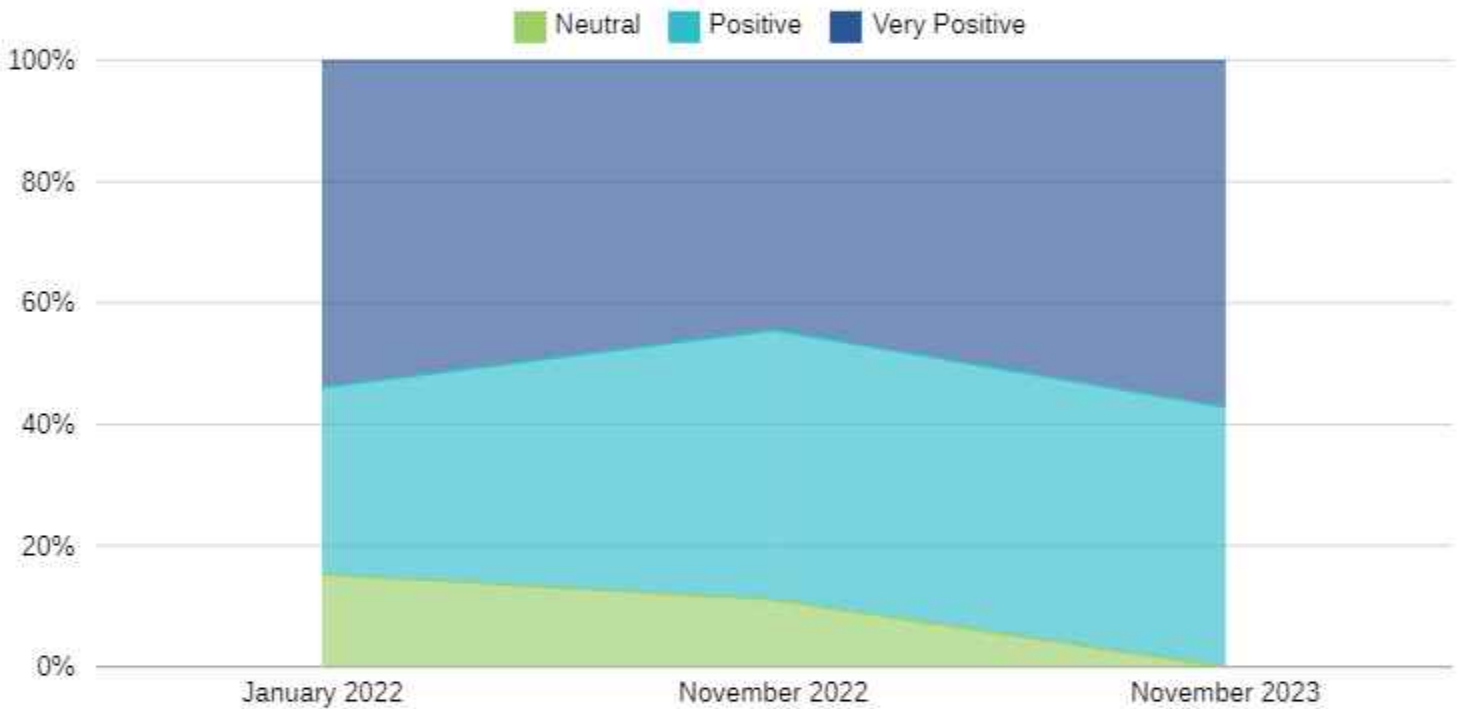
- Addressing Enabling Environment Barriers
- Technical Assistance
- Gender Mainstreaming
- Investment Facilitation
- Monitoring and Evaluation
- Environmental Sustainability and Compliance
- Other
- None
- Partnership, Networking, and Ecosystem Building

with B2B customers. As noted in the QoSS section on MEL, most innovators leverage MEL data for additional purposes, outside of program reporting requirements.

“Addressing EE barriers” is the support category that witnessed the most severe drop in usefulness (25.75% in November 2022 to 4.3% in November 2023). This may be partially due to the different types of labeling EE TAs and activities can have. For instance, some are labeled EUF schemes, market entry support for new markets, or support with addressing recruitment challenges. A communication effort that helps innovators make the link between these TAs and the EE, is needed. This drop also shows the heightened pressure innovators face due to deteriorating economic environments with high inflation and devaluations across countries, as well as limitations on imports and bank withdrawals/transfers in some countries.

TECHNICAL ASSISTANCE

Reflecting on the technical assistance provided to you, what could be the impact of technical assistance in the long term (1+ years post-completion of the assignment)?

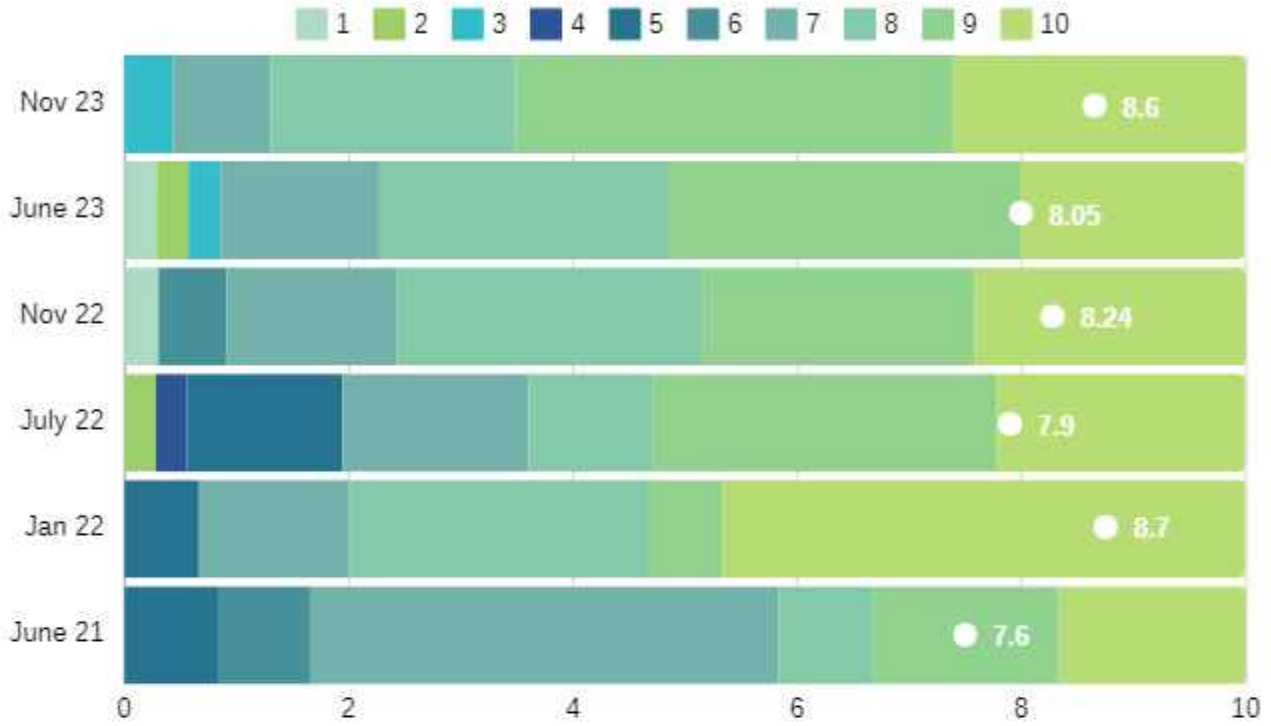


The expansion of the TA team and the increased frequency of one-on-one meetings with innovators have led to improvements in both overall satisfaction levels and the TA identification/scoping process. Specifically, the addition of a dedicated team member responsible for quality control and quality assurance has been instrumental in these improvements. Moreover, TAs’ long-term value for innovators highlights two interesting trends over time. The perceived long-term value of TA continues to increase while the bi-annual satisfaction rankings maintain a cyclical value. Satisfaction is higher during the end of the year and the beginning of the year, slightly dropping in the middle of the year when many TAs are usually in the beginning or the middle of their implementation.

The upward trajectory of perceived long-term value can be attributed to several factors. For instance, 2021 and 2022 Regional Cohort innovators seem to have recognized the long-term impact of the TAs they received in 2022, which primarily focused on business development, product development, and organizational capacity building—areas that often take time to demonstrate their full effect. Two innovators mentioned in the QoSS that market insights and knowledge gained in the short term supported them in approaching the market differently and/or identifying new markets, leading to long-term expansion. Additionally, a few advanced TAs were scoped and launched at the end of 2023 (i.e., plant design to achieve ISO compliance and carbon credits), indicating the adaptability of the hub to meet the evolving needs of innovators.

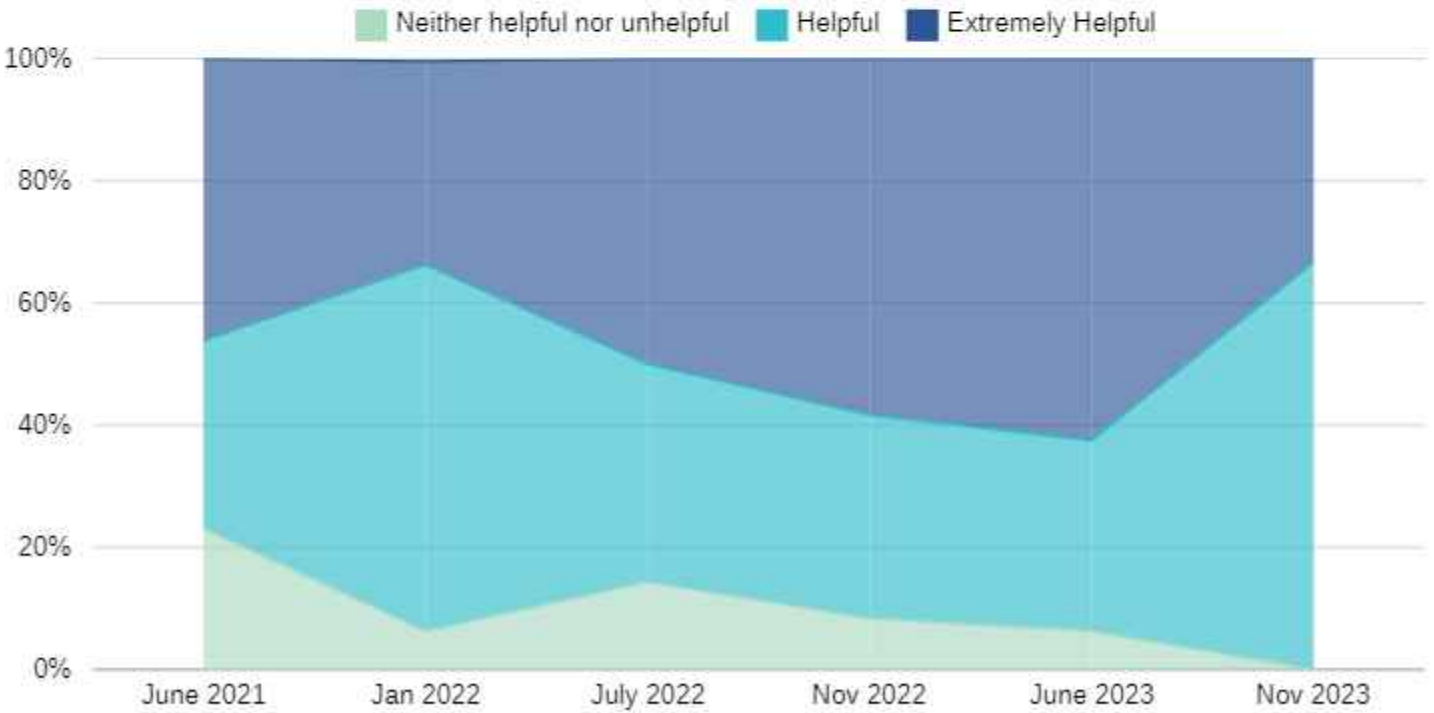


On a scale of 1-10, how satisfied are you with the MENA Hub's Technical Assistance Unit (1-Extremely Dissatisfied to 10-Extremely Satisfied)



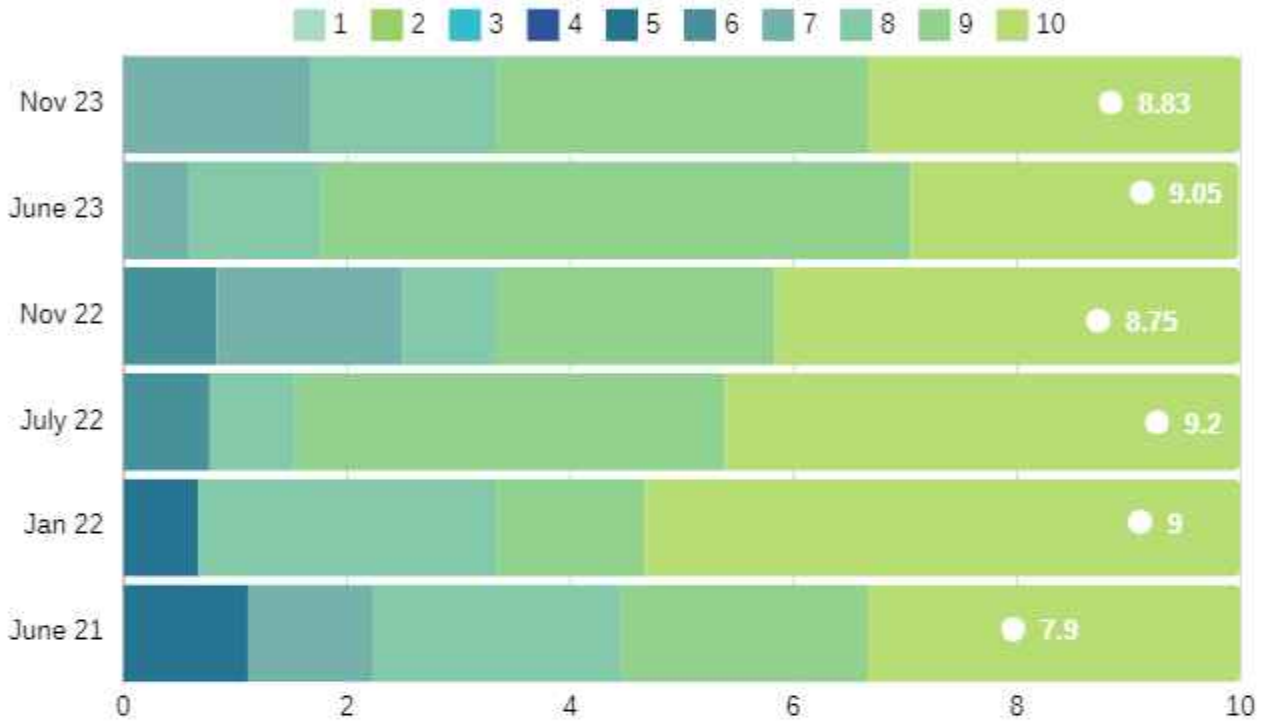
INVESTMENT FACILITATION

How helpful has the investment readiness team's support been in moving your organization toward your goal of raising investment?



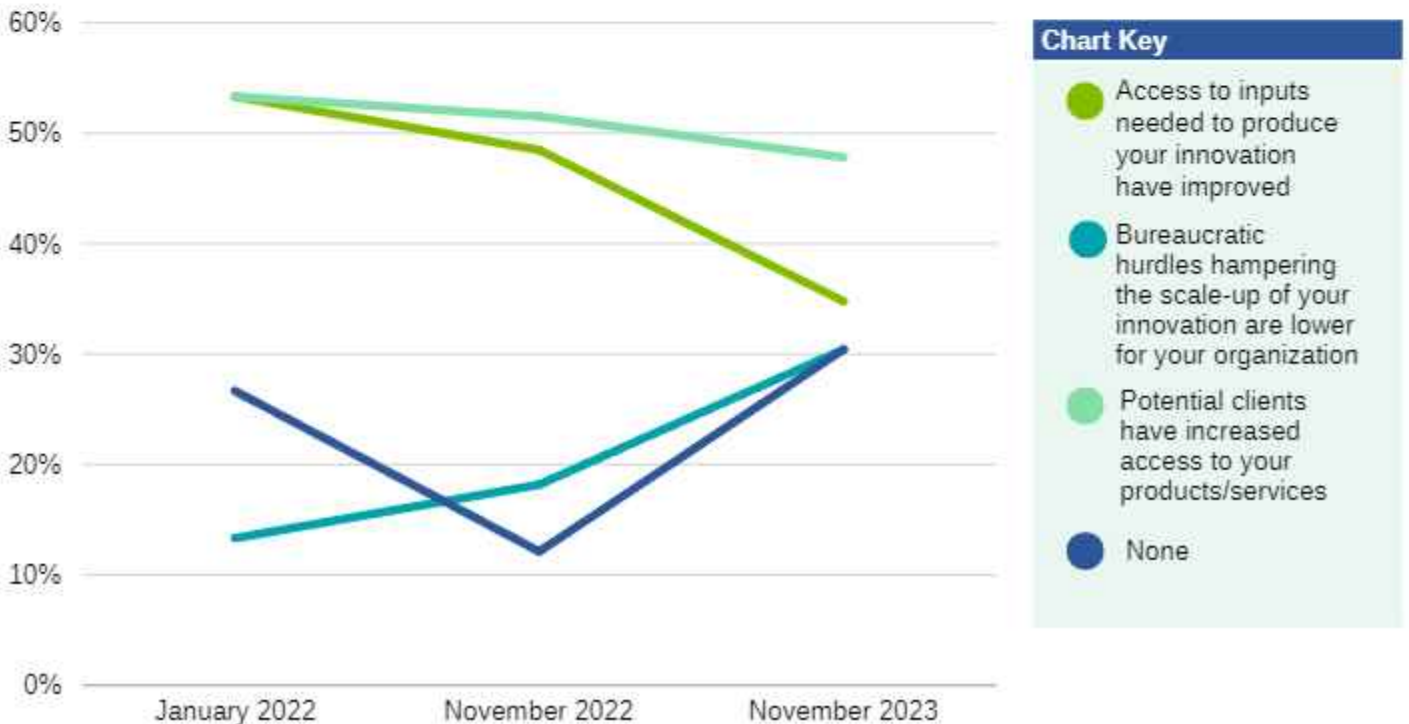
The innovators' satisfaction with the brokering unit continues to remain high, underscoring the unit's dedication to supporting innovators in their IR journey and attracting investors. Innovators are increasingly informed about innovative financing solutions and are actively engaging with the IR team for this purpose. The current fundraising pipeline includes promising ventures with a cumulative value of \$2.78M USD. The thorough assistance provided at a detailed level highlights the commitment to ensuring the comprehensive and effective support of innovators in their investment endeavors.

On a scale of 1-10, how satisfied are you with the MENA Hub's Investment Readiness Team (1-Extremely Dissatisfied to 10-Extremely Satisfied)



LEGAL, POLICY, AND REGULATORY SUPPORT

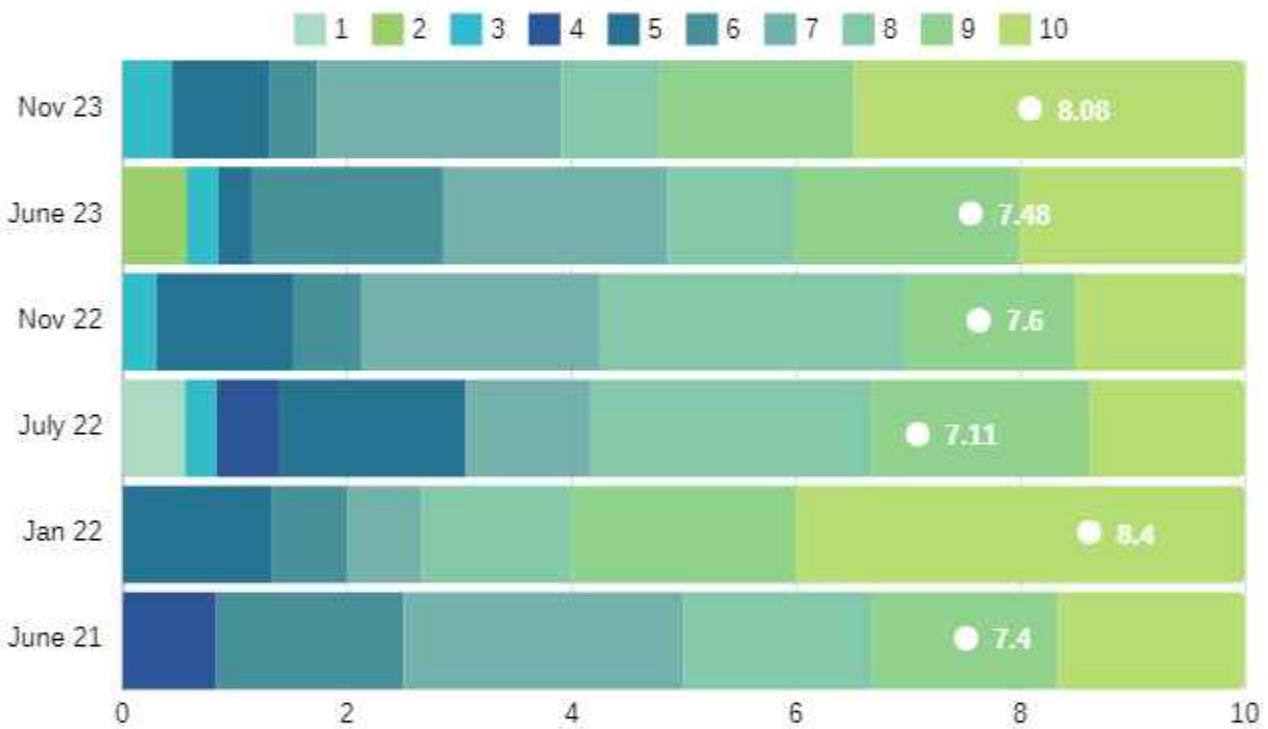
Since joining WE4F, which of the following have occurred? Select all that apply.



The results depicted in the table reflect the complex interaction between the hub's strategic interventions and the operational realities faced by innovators. A perceived decrease in potential clients' access to products/services and access to inputs may not be directly attributable to legal, policy, and regulatory support, but rather to market penetration and supply chain management challenges that are continuously tackled with the support of Country Coordinators and the TA Unit. Such challenges often extend beyond the immediate scope of policy and legal frameworks and are influenced by a multitude of market-driven and logistical factors.

The fluctuating satisfaction with a reduction of legal, policy, and regulatory barriers may also suggest that while some regulatory barriers have been lowered, others may have emerged or become more apparent as businesses grow and evolve. This highlights the need for a dynamic approach to advocacy that evolves in line with the changing regulatory landscape and the operational realities of businesses. Considering this, the hub's forward-looking strategy for 2024 will focus on an increased understanding of critical areas of the legal and policy framework for innovators. The EE team will actively investigate partnerships, networks, and possibly EE interventions that have advocacy potential and can bring forward insight and information the hub gathers to inform and influence the efforts of stakeholders specialized in the governance sphere.

On a scale of 1-10, how satisfied are you with the MENA Hub's EE Unit (1-Extremely Dissatisfied to 10-Extremely Satisfied)



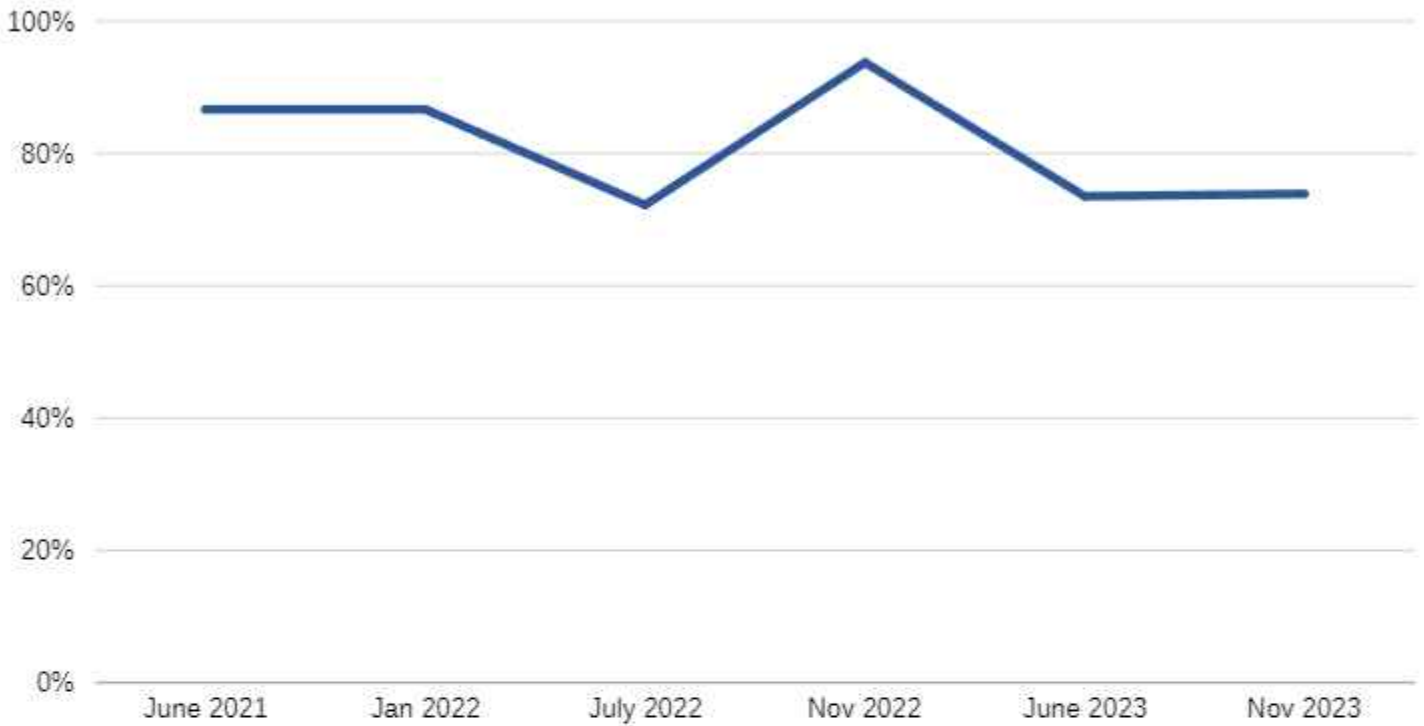
It is at times challenging to directly relate the satisfaction levels numbers to the EE Unit team support as the team works on specific issues that are identified by innovators and require customized solutions. The exception to this work is the country-level EE activities that cover specific interventions in a country (e.g., EE TA for mapping Egyptian biofertilizer labs) or the creation of knowledge products that would benefit a wide audience (i.e., the country profiles). It is also possible that innovators do not recognize some EE activities as part of the category, instead categorizing it under a different hub activity.

Looking forward, the hub recognizes areas needing further attention and will run assessments to identify the needs of newly selected innovators (2024 Iraq Cohort and OCFI innovators). The emphasis will be on focused support for the new innovators; targeted interventions and partnerships that benefit one innovator but has the potential to achieve systemic changes at an ecosystem level; and amplifying efforts in advocacy and enhancing visibility at strategic events.

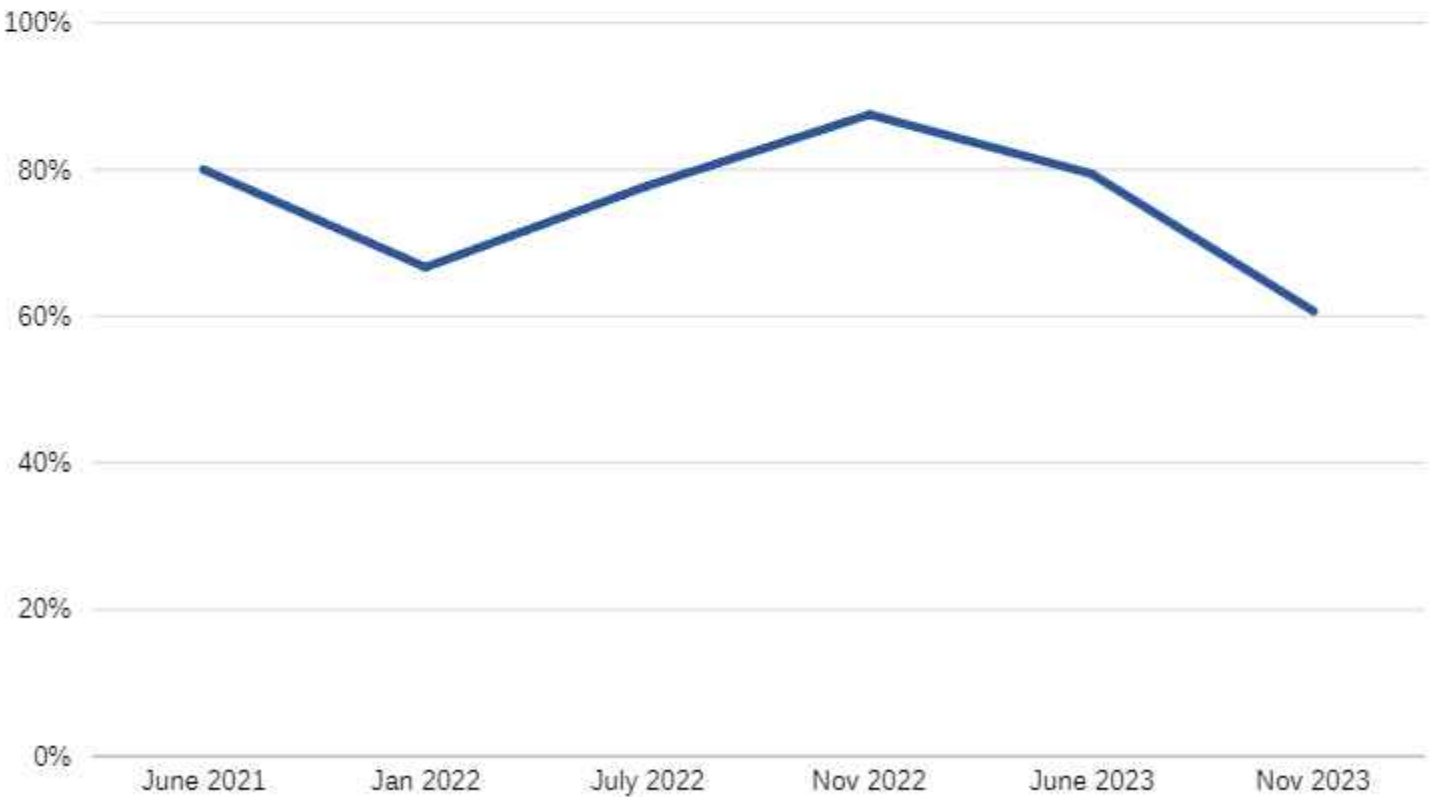


KNOWLEDGE SHARING AND MONITORING AND EVALUATION

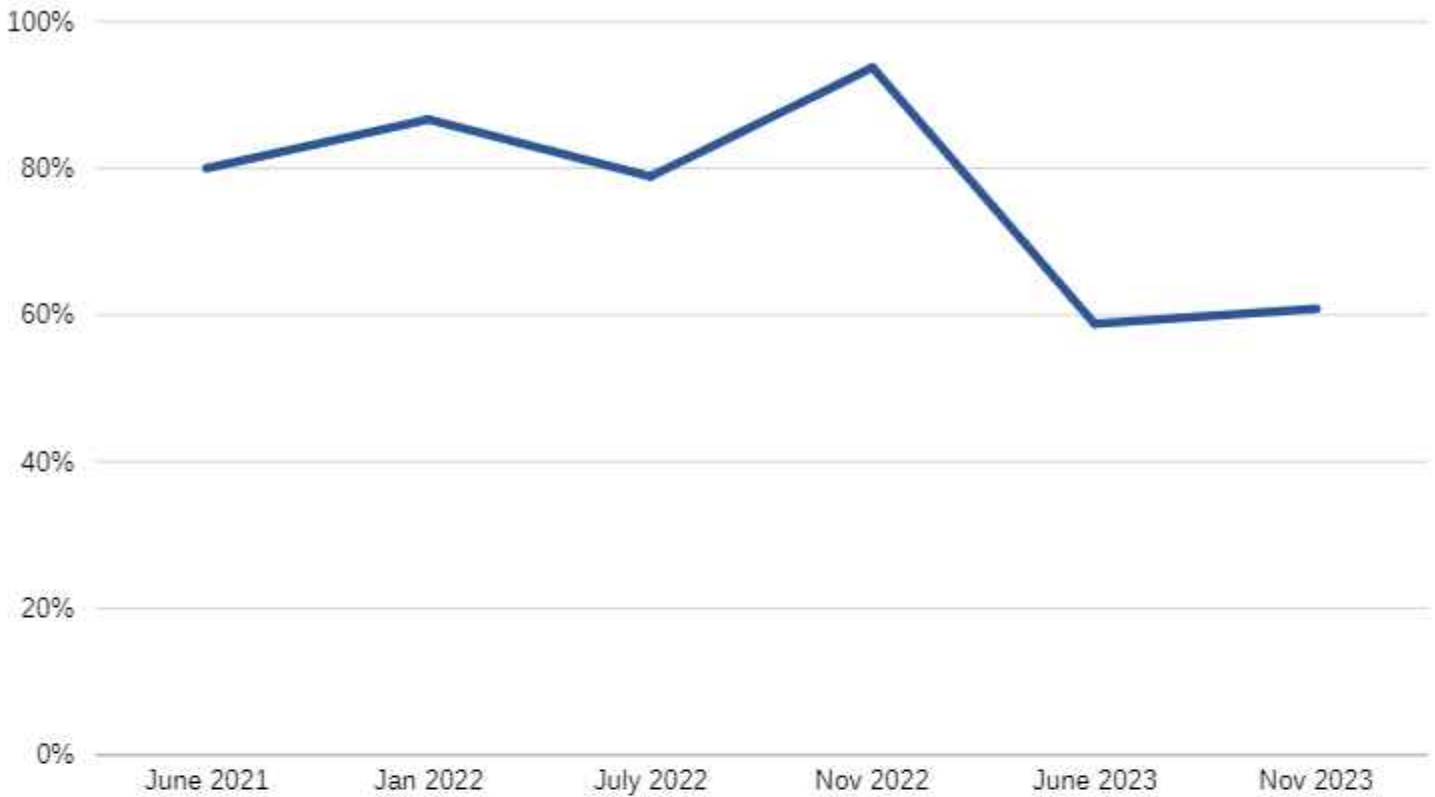
Has the engagement with WE4F led to an increase in knowledge about gender integration?



Has the engagement with WE4F led to an increase in knowledge about environmental sustainability, including climate resilience and biodiversity?



Has the engagement with WE4F led to an increase in knowledge about Base of the Pyramid (BOP)?



Based on the requested TAs and increased innovator engagement, the MENA RIH knows that there has been an improvement in the innovators' knowledge of gender and BoP engagement strategies and tactics. The QoS, however, noticeably fluctuates depending on the intensity of the capacity building support provided during the bootcamps, annual convening, and hub-led online trainings, including ESG clinics. Significant increased benefits were reported by the innovators following the Annual Convening and Regional Bootcamp in 2022, which thoroughly covered BoP and gender - and after intensive online trainings on BoP engagement, financing, and marketing strategies. The year 2023 was marked with advanced EUF activities working with both the innovators to operationalize their pilots in 2022 and with two micro-financing entities on financial product development targeting BoP. In 2024, the MENA RIH will develop one more EUF product, scaling the two pilots in 2023 and work with at least three more innovators on designing and deploying EUF mechanisms.

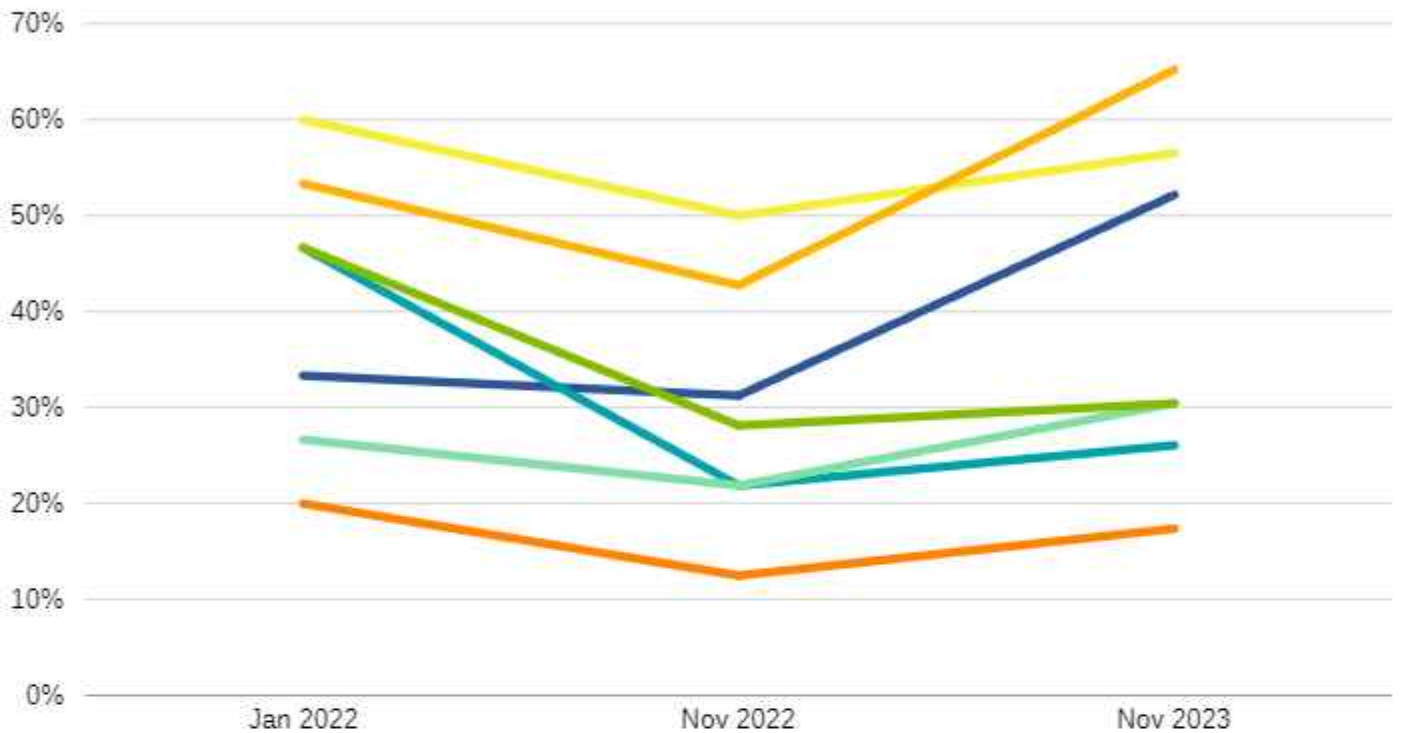
It is important, however, to acknowledge that not all innovators reported gains in knowledge. This can be attributed to the prior expertise of some innovators, especially those already advanced in their gender and BoP strategies. WE4F pivoted to include more advanced topics for these innovators in subsequent bootcamps and annual convenings while still providing foundational knowledge for beginners and intermediates.

The current mixed environmental sustainability results could be due to the different statuses of the innovator cohorts. The 2022 Regional Cohort innovators responded more positively to the question of increased knowledge as they submitted their EMMRs at the end of November. The 2021 Regional Cohort and the Iraq innovators, all of whom graduated from WE4F or became alumni, no longer participated in one-on-ones with the Environmental Specialist to update progress on their EMMPs nor develop additional documentation. The graduated innovators also had their EMMRs approved, so they no longer needed frequent meetings to discuss improvements in the environmental compliance aspects.

Overall, all the innovators have been consistently improving since the beginning of the program and they have gained cumulative knowledge which helped them become more environmentally compliant.



Does M&E data collection for WE4F support any of the following aspects of your business/organization?



From November 2022 to November 2023, there is a general upward trend for most categories, indicating an increase in the M&E data collection support provided by MENA RIH as well as an increase in innovators' ability to appropriately utilize data gathered during MEL surveys for strategic growth and expansion decisions. The most notable spikes in usage pertain to strategic decision-making and customer analysis. By leveraging data collected to identify their customers segments and understand their target audience, innovators improve their customer outreach. It is also directly connected to the improvement witnessed in the development of marketing campaigns, customer relationship management, and sales plans. Overall, innovators continue to recognize that the effort exerted in data collection and analysis pays off by informing their decisions in various aspects of their business and helping them properly allocate their resources, attention, time, and manpower.

Chart Key

- Customer analysis
- Fundraising
- Managing partners
- Publicizing impact
- Sales/marketing
- Strategic decision-making
- Don't use WE4F data outside of reporting



CHALLENGES AND SOLUTIONS

Challenges	Solutions
Open Call for Innovations	
<p>Administering the OCFI pilot in 2023 presented several challenges that require thoughtful consideration. In countries with ongoing conflicts, such as Sudan and West Bank/Gaza, applicants face difficulties in both applying online and in meeting program requirements due to ongoing conflicts, hindering their ability to scale and secure matching funds. Additionally, economic crises and volatile currencies in Egypt, Lebanon, and Iraq have created obstacles for innovators in securing market financing instruments to match grant funding, which impacted their ability to (and/or confidence in) committing to a specific matching fund. Furthermore, the open-ended nature of the OCFI, without a set deadline, led to a prolonged application process.</p>	<p>To address the challenges in administering the OCFI, the MENA RIH implemented several solutions. These include offering flexible submission formats to accommodate internet connectivity issues in countries with ongoing conflicts and adopting less stringent eligibility criteria for the end-user cut-off, thus facilitating participation from such countries. Furthermore, in the Q&A webinars and the awareness video, the hub provided detailed explanations of various options for matching funds, such as profit re-injection, and offering concrete examples of in-kind contributions that are relevant to innovators in the MENA region. To streamline the application process, the hub highlighted the timeline for review cycles and encouraged early application, allowing innovators to benefit from a longer support period, which is particularly important as the program concludes in mid-2025.</p>
Environmental, Social, and Governance	
<p>Innovators often do not prioritize gender aspects due to cultural and social norms in MENA.</p>	<p>To mitigate this challenge, the RIH has been proactive in reaching out to innovators to discuss the importance of gender mainstreaming. The hub also organized gender sessions during the Regional Bootcamp, launched the MENA Women Innovate Network which organizes gender-focused, and conducts continuous discussions with Country Coordinators to make them more engaged in gender mainstreaming issues.</p>
<p>Innovators' lack of awareness on activities related to environmental sustainability including, waste management, biodiversity conservation, and climate adaptation activities that count towards mitigation measures in the EMMRs.</p>	<p>Provide activity examples during the ESG clinics and one-on-ones that help innovators link the activities that they have already implemented with the impact on natural resources management, habitat conservations, and biodiversity preservation.</p>
<p>Some innovators do not prioritize environmental sustainability-related activities due to competing priorities and resource constraints.</p>	<p>Share with the innovators their final EMMR on the USAID Environmental Compliance Database and communicate how they can use it for investment rounds as well as to showcase that they are compliant with USAID's Regulation 216.</p> <p>The USAID Regulation 216 procedure necessitates grantees to recognize and address potential environmental risks. The hub's team has offered comprehensive assistance to innovators in achieving these objectives, holding regular one-on-one meetings to highlight the significance of environmental considerations for their overall business advancement.</p> <p>Connect the implemented interventions with their work, helping them avoid extra burdens or effort (e.g., if innovators have an existing site inspection report, add the environmental requirements rather than creating a new template).</p>

Challenges	Solutions
Regional Stability	
Currently, four of the RIH's target countries (Sudan, Yemen, Lebanon, and West Bank/Gaza) are experiencing conflicts. Issues such as movement restrictions in West Bank/Gaza and agricultural fields burned down in South Lebanon might delay innovators who support farmers in the regions from reaching their targets.	Granting a no-cost extension for the innovators and exploring updates to their transformational work plan, including focusing on regions less impacted by conflict.
Scaling EUF for women. While this is a challenge for both men and women and for many types of scale-ups operating in WEF in accessing financing from banks who often demand personal collateral, women in the MENA region often lack the personal collateral (e.g. land) that they could submit for financing due to lower rates of asset ownership compared to men.	<p>Focusing on alternative risk assessments in our EUF work with our partner financial institutions.</p> <p>Connecting relevant innovators with donors/NGO who support women economic empowerment. Helping them put forward the financial sustainability of the model.</p>
<p>Challenges in raising investment in the MENA region because of the difficult economic and political environment: high inflation, currency depreciation, banking and import restrictions in many countries, high interest rates.</p> <p>Challenges preparing innovators to raise investment in the MENA with many innovators having limited human resources working in finance.</p>	<p>RIH works on mapping various investment types from various types of investors including concessional debt from investment funds and identifying/connecting to impact funds in the region.</p> <p>The IR team displays perseverance and diligence in steady follow-ups with all stakeholders to reach positive outcomes.</p> <p>RIH helps innovators upgrade their financial and budgeting skills and identify gaps in their organization and business plan prior to facilitating connections.</p>

LOOKING FORWARD

The coming year represents a period of acceleration for the MENA RIH, with at least 20 new innovators being onboarded and the hub continuing to support the 23 active innovators. To support innovators' scaling, the hub will continue to: optimize EUF schemes; encourage partnerships between innovators; improve product offerings through BoP and gender inclusion as well as challenging innovator business models; upgrade innovators' organizational and financial planning capacities; and support innovators as they work to reach financial sustainability. Due to innovators' interest in exploring carbon markets, the hub will work with several innovators to explore opportunities related to the selling of carbon credits.

In 2024, the hub will work on the following regional activities, as recommended by the 2022 Mid-Term Evaluation and the movement towards the conclusion of the program in mid-2025:

- Finalize the water accounting tool dashboard for Egypt and Lebanon, and contract a new Iraq river basin tool.
- Conduct a feasibility study for establishing a sustainability impact fund in the MENA region
- Identify cross cutting EE priorities in Lebanon, Egypt, and Jordan, and kickstart work to tackle the issues through a policy white paper.
- Participate in the organization and management of the Annual Convening.

As in past years, the RIH is scouting relevant national and regional events to attend and partner with in 2024; these include the Arab SMEs Summit, Cairo Water Week, and similar high-level occasions to share key learnings. The MENA RIH aims to create as many exposure opportunities as possible for both the innovators and WE4F, these opportunities will ensure that the hub is aware of new developments in the sector and remains at the forefront of innovations within the WEF nexus.



RECOMMENDATIONS FOR POLICY AND PRIORITY DIALOGUE

Although the policy landscape, market trends, and opportunities for WE4F innovations differ across the MENA region, the hub has identified several areas that require - and can benefit from - advocacy, capacity building, and showcasing efforts that target governments, the private sector, and development partners.

Areas of priority include:

- Showcasing proven WE4F-supported technologies and business models that can achieve significant impact across the MENA region (i.e., solar irrigation, IoT smart control for water efficiency, resource recovery for biofertilizer). Showcasing can be done by innovators and hub representatives either at key industry events in the region (i.e. MENA Climate Week, Cairo Water Week) or as part of specialized capacity building programs (i.e. by Res4Africa) or through dedicated webinars. The target audience is manifold and may include, among others, public decision makers, business enablers and partners, financiers.
- Advocating for catalytic finance and other de-risking mechanisms (loan guarantees, first loss, and so on) to support the scaling of SME solutions.
- Encouraging the creation of dedicated impact funds tailored for the unique needs of the MENA region and collaborating with international financial institutions and private investors to support the establishment of these funds.
- Devising and implementing EUF schemes that can help make WE4F innovations accessible and affordable. Partnering with financing organizations to create customized EUF schemes relevant for WEF nexus.
- Highlighting the close linkages between gender mainstreaming and WE4F-supported innovations.
- Facilitating cooperation and exchange on investment strategies by (impact) investors that can help scale innovations.
- Advocating for transparency and streamlining of registration, customs, and license issues, on a national level and for export and international certification.
- Building public and private business partnerships that can significantly facilitate operational and market expansion.

Stakeholder engagement around each of these topics varies and, depending on the needs of the topic, will include partnership development, EE interventions, CKM activities, and/or event and conference participation. By engaging with external stakeholders, especially those aligned with larger programs like UNIDO, the hub can strengthen its influence in policy dialogues and drive improvements within the nexus.



SOUTH AND SOUTHEAST ASIA



MAP OF SOUTH AND SOUTHEAST ASIA INNOVATORS



 Adaptive Symbiotic Technologies Seed treatment that reduces water consumption, increases drought tolerance, & enhances crop yields	 FreshR (ZooFresh) Live fish value chain tech	 Punam Energy Pvt. Ltd. (ONergy Solar) Integrated solar irrigation systems for vulnerable populations
 Agrosolar Solar-powered pumping systems with integrated pay-as-you-go financing plans	 Gham Power Integrated solar solutions for farmers	 Pumpkin Plus Agro Innovation A sandbar cropping method to impact women & transform land
 aQysta Nepal Sustainable irrigation with a pay-per-harvest model	 Husk Power Systems Biomass & solar PV hybrid mini-grids for off-grid farming communities	 RecyGlo Turning organic waste into biogas & fertilizer & recycling batteries into solar power sets
 ATEC Australia International Climate-resilient biogas digesters that empower women & smallholder farmers	 Khmer Green Charcoal Co-friendly biomass/og-waste charcoal briquettes to improve poultry-raising & cooking	 RDO Trust Turning faecal sludge and organic solid waste into nitrogen-rich co-compost
 Centre for Aquatic Livelihood Jaljeevika Provides an Internet of Things (IoT) sensor-based advisory support system for small-scale fish farmers	 Komodo Water/PT. Tinamitra Mandiri Provides island & coastal communities with sustainable water management solutions & fisheries with solar-powered ice production systems	 S4S Technologies Procures farmers' produce, engages women micro-entrepreneurs for solar-powered drying, and then sells the produce
 Claro Energy Solar irrigation systems for food security & reduced production costs	 Mandala Agrifresh Helps farmers manage post-harvest food waste through a solar-powered cold storage unit	 Sumba Sustainable Solutions Inclusive & sustainable solar energy solutions for agro-processing in villages
 Covestro Inclusive Business ASEAN Tackles post-harvest loss challenges in underserved communities with the Solar Dryer Dome technology	 MimosaTEK Internet of Things platform for precision agriculture	 Techno-Hill Engineering Provides solar-powered dryers, cold storage, & pumps to farmers to reduce post-harvest food waste
 Egreen Technology Supplies efficient biogas digesters & purifiers that allows farmers to generate electricity from farm waste	 MyVAS4Agri (Village Link) Provides farmers with a mobile application that gives location-specific and timely recommendations to reduce water usage	 The Goat Trust Aggregative goat-farming services to empower smallholder women farmers
 Entrepreneurs Du Monde Pteah Baitong Offers solar-powered irrigation systems & additional financing support	 New Leaf Dynamic Technologies Provides farmer cooperatives with biomass-powered cold storage units	 Tun Yat Pte.Ltd On-demand rental service & online platform for low-cost, high-quality agtech machinery to low-income farmers
	 Oorja Development Solutions Pay-per-use clean energy services for marginalized farmers	 Yayasan Rumah Energi Facilitates small and mid-size enterprises & microfinance organizations to install biogas digesters for small livestock farmers
	 Promethean Power Systems Milk-chilling tech for small scale dairy farmers	

2023 SUMMARY

In 2023, the S/SEA RIH did not onboard any innovators but did launch its new OCFI. All active S/SEA innovators received varying forms of support from the hub in 2023. Over the course of the year, the hub supported eight grantee innovators and eight TA-only innovators. Of the 32 innovators who have been supported over the years, 25 of them attended the Regional Convening and 16 attended the Annual Convening.

So far, innovators have exceeded six key indicators:

1. 29.2% of innovators have successfully marketed their innovations with profits, over three times the initial target
2. 1 million end-users impacted, with 375,000 of them being women and almost all of them being base of the pyramid
3. 487 million billion kWh of energy saved - 24 times the Life of Program (LOP) target
4. 2.3 billion liters of water have been saved, over two times the LOP target
5. 580,000 end-users with increased income - 45% more than the target
6. \$131 million USD in investment mobilized - more than six times the target

Three indicators are on track to exceed LOP targets, with current result showing:

1. 315,000 tons of CO₂e saved
2. 74,000 tons of food processed
3. \$37 million in gross sales

There are currently two indicators that are off track, but have had progress towards the LOP targets:

1. 1 million tons of food produced, 45% of the LOP target
2. 26.7% of innovators are monitoring water or biodiversity











To increase food production impacts, the hub is focusing on onboarding innovators who work on scaling innovations that contribute to food production. This includes but is not limited to solar pumps, agri-waste fertilizer, and agri-advisory platforms. In addition, the hub facilitates external evaluations to accurately calculate food production numbers as innovators may not be able to capture this data accurately in all cases.

Due to the nature of the cohort, in which 56% of the innovators do not work with water-related technology, the innovators may not track water impact as it is not relevant. For those who are relevant, the hub provides training and support through EMMPs to help innovators enhance their capacity to monitor water usage and biodiversity conservation, enabling them to implement effective strategies and technologies. WE4F is also in the process of developing a water assessment dashboard which will also include a dashboard for S/SEA innovators. Finally, the hub is facilitating knowledge sharing among innovators, enabling them to learn from each other's experiences and best practices in monitoring water usage and biodiversity, ultimately driving progress toward the LOP targets.

SDG CONTRIBUTION



KEY PERFORMANCE INDICATORS

Key Performance Indicator	Life of Program Target (2020-2025)	Total Current Results (2020-2023)	Current Status
 Share of supported innovators that successfully marketed their innovations with profit	8%, of which 25% are led by women	29.2%	Exceeded
 Number of smallholder farmers and other end-users using WE4F innovations	1 million end-users, 25% are women	1.07 million	Exceeded
	250,000 women end-users	375,000	Exceeded
	250,000 BOP end-users	1 million	Exceeded
	End-users w/ climate adaptation & mitigation innovations	488,000	
 Total mass of food produced as a result of WE4F innovations	2.25 million tons	1 million tons	Off Track
 Total mass of food processed as a result of WE4F innovations	100,000 tons	74,000 tons	On Track
 Total energy saved in the food value chain as a result of the use of WE4F innovations	20 million kWh	487 million kWh	Exceeded
 Total volume of water consumption reduction in the food value chain as a result of WE4F innovations	1 billion liters	2.31 billion liters	Exceeded
 Number of smallholder farmers and other end-users that experience an increase in income	400,000 end-users, 25% are women	580,000	Exceeded
	100,000 women end-users	192,000	Exceeded
 Share of innovators & other stakeholders monitoring the protection of water or biodiversity	80%	26.7%	Off Track
	Monitoring water only	13.3%	
	Monitoring biodiversity only	3.3%	
	Monitoring water & biodiversity	10%	
 Value of investment in U.S. Dollars that WE4F innovators have mobilized from external sources	\$20 million	\$131 million	Exceeded
 Total of GHG emissions saved by WE4F innovations	450,000 tons of CO2e	315,000 tons	On Track
	Innovators with climate-mitigation innovations	57%	

INNOVATOR SCALING AND MATURATION

2021 REGIONAL COHORT MILESTONE TRACKER

● On target
 ◐ Targets partially met
 ● Not on target
 ● Status unknown/TBD

Innovator	Overall Status	Successfully Marketed	End-users Impacted	Food Produced	Food Processed	Energy Saved	Water Saved	Increased Incomes	Investment Mobilized
aQysta	●	●	●	●		●		◐	●
ATEC Biodigesters	●	●	●	●			●		●
Claro Energy	●		●			●		●	●
Gham Power	◐	●	●	●		●	●	●	●
Khmer Green Charcoal	●	●	●	●		●		●	●
The Goat Trust	●	●	●	●		●		●	●
Oorja	◐	●	●	●		●	●	●	●
Promethean	◐	●	◐	●	●	●		●	●
ONergy Solar	◐	●	●	●		●	●	●	●
Pumpkin Plus	●	●	●	●				●	●
RDO Trust	◐		●	◐		●	●	●	●
Sumba Solutions	●	●	◐		●			◐	
Tun Yat	◐	●	●					◐	
ZooFresh	●	●	●						●

LEGACY COHORT MILESTONE TRACKER

● On target
 ◐ Targets partially met
 ● Not on target
 ● Status unknown/TBD

Innovator	Overall Status	Successfully Marketed	End-users Impacted	Food Produced	Food Processed	Energy Saved	Water Saved	Increased Incomes	Investment Mobilized
AST	●		●					●	
Husk Power	●		●		●			●	●
MimosaTEK	◐	●	●	●			●	●	●



2022 REGIONAL COHORT MILESTONE TRACKER

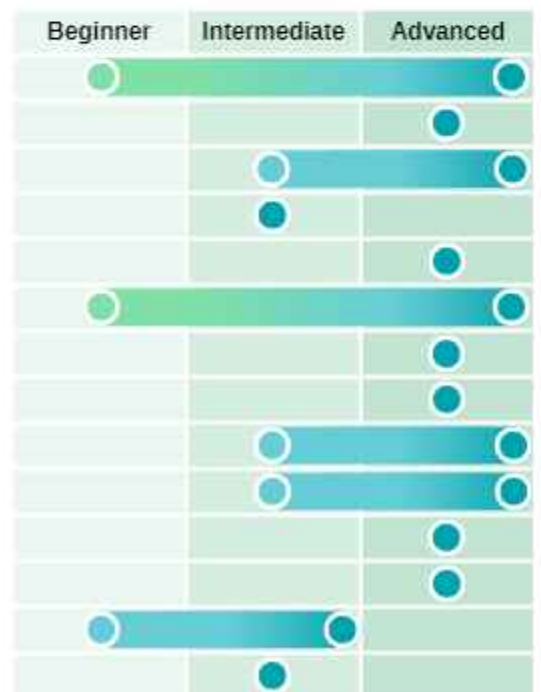
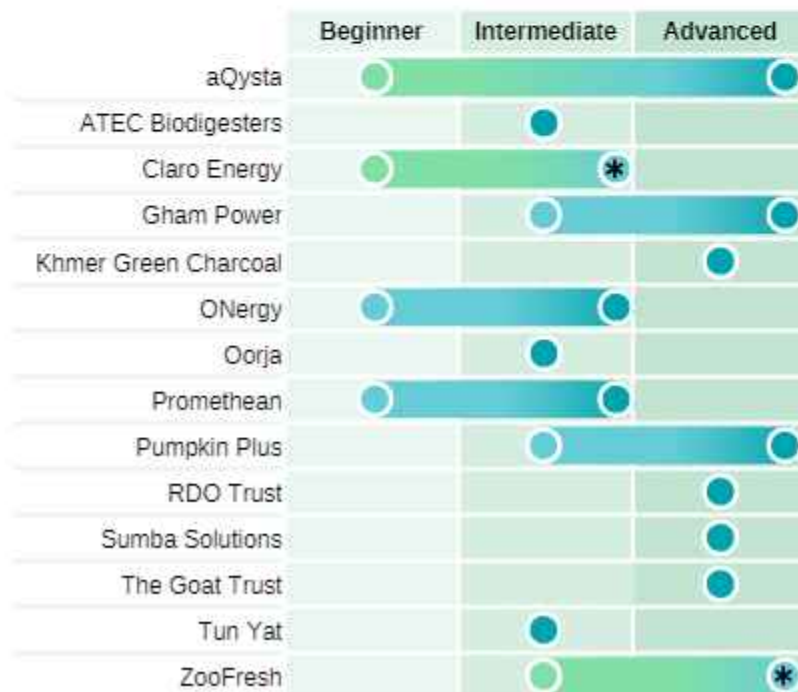
● On target
 ◐ Targets partially met
 ● Not on target
 ● Status unknown/TBD

Innovator	Overall Status	Successfully Marketed	End-users Impacted	Food Produced	Food Processed	Energy Saved	Water Saved	Increased Incomes	Investment Mobilized
Agrosolar	●	●	●	●		●	●	●	●
Covestro	◐		●		●	●		●	
Egreen	●	●	●	●		●		●	●
Jaljeevika	◐		●	●	●	●	●	●	●
Komodo Water	●	●	●		●	●	●	●	●
Mandala Agrifresh	●	●	●		●	●	●	●	●
New Leaf	◐	●	●		●	●		●	◐
Pteah Baitong	●	●	●	●		●	◐	●	●
RecyGlo	●	●	●	●		●	◐	●	●
S4S Technologies	◐	●	●		●	●		●	●
Techno-Hill	●	●	●	●	●	●	●	●	◐
YRE	●	●	●	◐		●		●	●
Village Link	●	●	●	●			●	●	●

2021 REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment

BoP Assessment



LEGACY COHORT THEMATIC ASSESSMENTS

Gender Assessment

	Beginner	Intermediate	Advanced
AST	●		
Husk Power		●	
MimosaTEK		●*	

BoP Assessment

	Beginner	Intermediate	Advanced
AST	●		
Husk Power		●	
MimosaTEK	●	●	

2022 REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment

	Beginner	Intermediate	Advanced
Agrosolar	●*		
Covestro	●	●	
Egreen		●*	
Jaljeevika		●*	
Komodo Water		●	●*
Mandala Agrifresh			●
New Leaf		●	
Pteah Baitong	●	●*	
RecyGlo			●
S4S Technologies			●
Techno-Hill		●	
Village Link		●	
YRE		●*	

BoP Assessment

	Beginner	Intermediate	Advanced
Agrosolar	●	●	●
Covestro		●	●
Egreen			●
Jaljeevika	●	●	●
Komodo Water		●	●
Mandala Agrifresh			●
New Leaf		●	●
Pteah Baitong			●
RecyGlo		●	●*
S4S Technologies			●
Techno-Hill		●	●*
Village Link			●
YRE	●	●	●

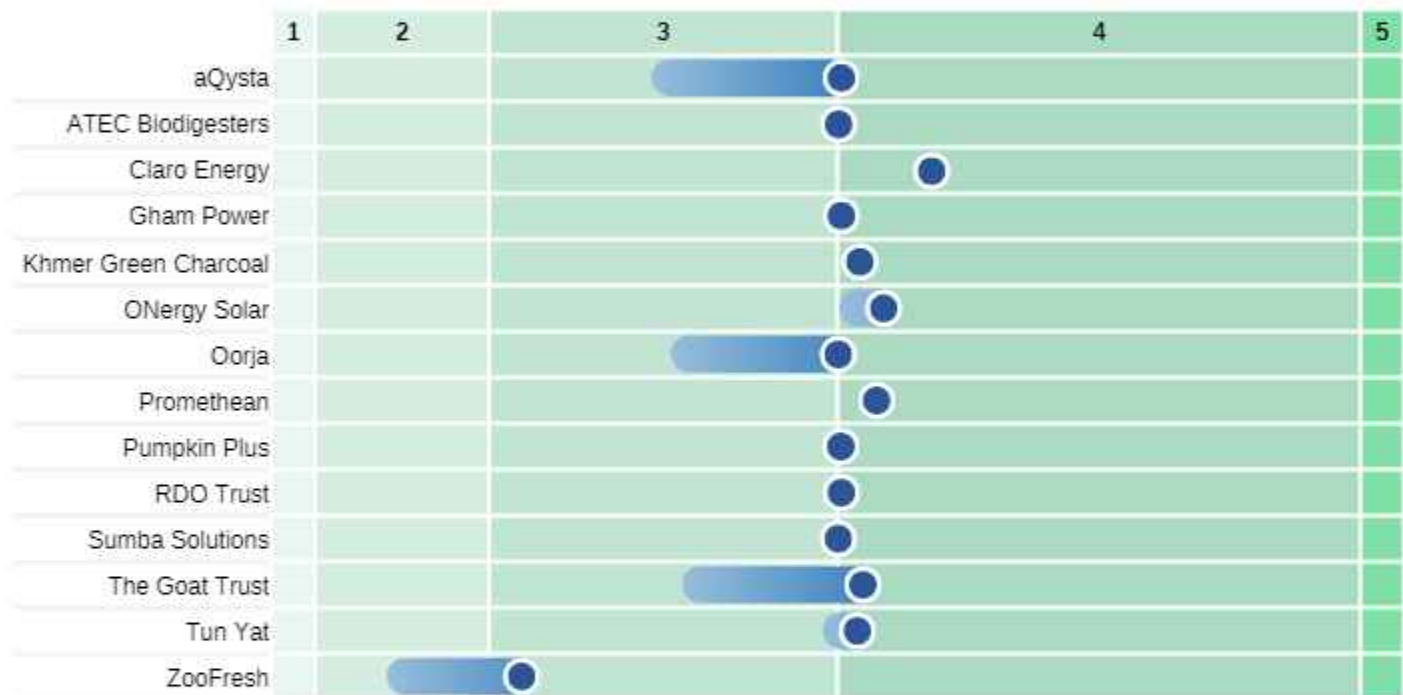
* While some innovators improved significantly in BoP impact and better served women end-users since joining WE4F, the hub witnessed a decrease of BoP or women end-users for a few innovators. This can often be attributed to the innovator's expansion into new markets where most of their end-users are not BoP or women; or innovators lack data-segregated information for the new market. In 2024, the hub will provide TAs to ensure inclusive expansion and the correct reporting of end-users.



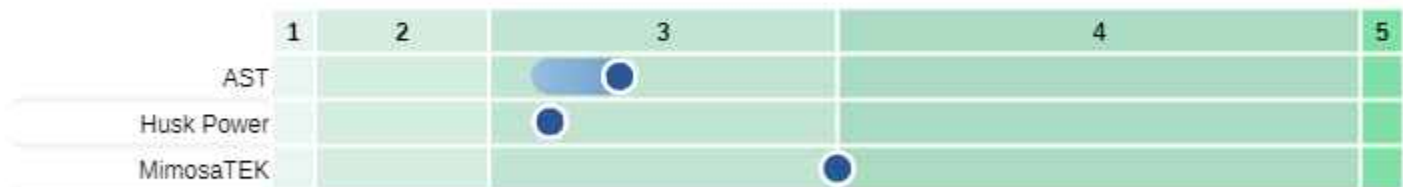
CUSTOMER GROWTH OVER TIME

Stages	Number of End-users
1	0 - 99 end-users
2	100 - 999 end-users
3	1,000 - 9,999 end-users
4	10,000 - 999,999 end-users
5	1,000,000+ end-users

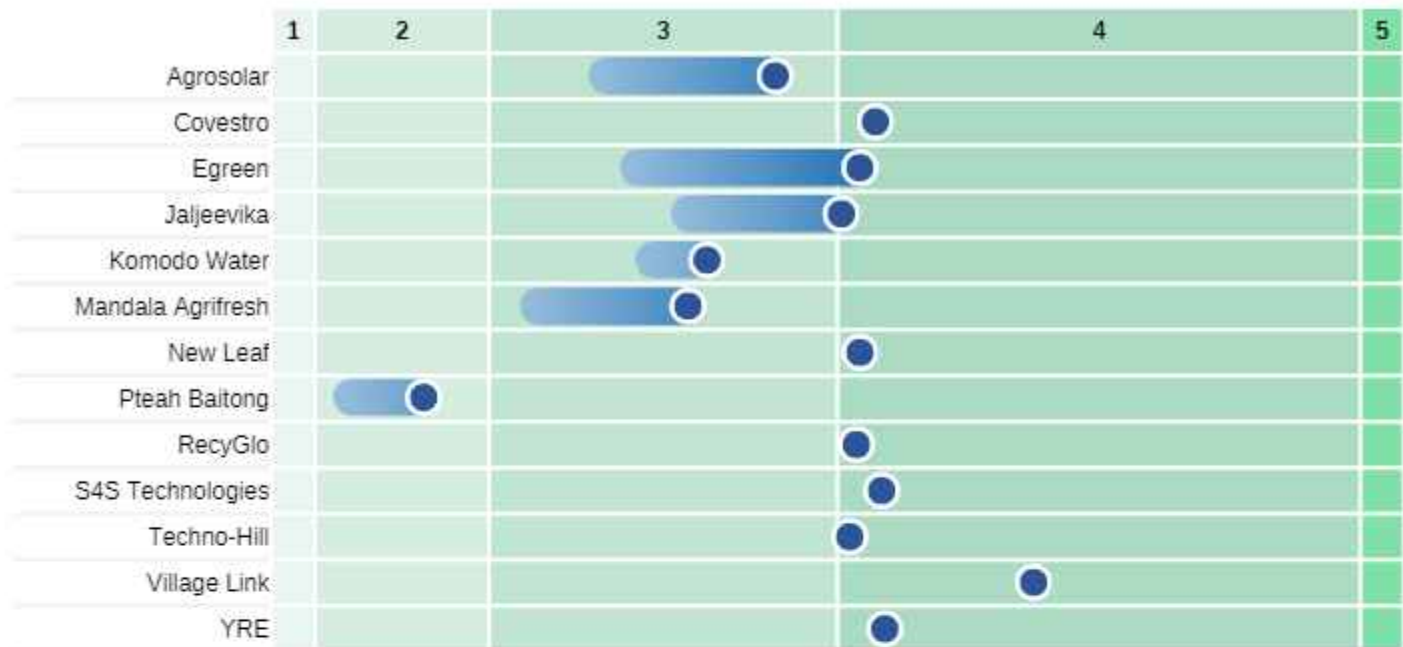
2021 REGIONAL COHORT



LEGACY COHORT



2022 REGIONAL COHORT



Excluded from the above charts due to lack of data and/or their status as inactive alumni: Lal Teer, Sistema.Bio, and Village Infrastructure Angels.

INNOVATOR UPDATES

2021 REGIONAL COHORT



aQysta received TA on talent management and people practices. As part of their scaling efforts, the innovator received an investment matching capital grant of \$50,000 USD to unlock the private capital funding of \$600,000 USD. This helped aQysta invest in working capital, capital expenditure, and operating costs to promote their GROWN model. They also created five B2B partnerships that cover market linkage, EUF, and farmers' outreach. In 2024, aQysta plans to work on (1) adopting organic practices for their model and (2) raise investment capital. The hub will continue to work with aQysta by providing TA on these topics.



ATEC Biodigesters received an investment facilitation TA that has been ongoing since 2022. This assistance included a wide range of full spectrum transaction advisory support for their initial convertible note raise of \$1.3 million USD and its extension round in 2023. The support encompassed improvements to the virtual data room, a refresh of the pitch deck, and introductions to investors.



Claro Energy received investment facilitation support to facilitate its debt raise. Additionally, the innovator has established three B2B partnerships to increase sales revenue. The hub introduced them to the Aga Khan Rural Support Programme (India) which resulted in additional sales. With plans to raise equity in the year 2024, the hub anticipates providing investment facilitation TA support.



Gham Power received investment facilitation support and TA support on talent management and HR. They collaborated with financial institutions in Nepal for EUF after receiving a TA from the hub and worked on a smart-agriculture project with Mandala Agrifresh. The innovator was also nominated for the Earthshot Prize and shortlisted for the ICT4Ag Inspire Challenge 2023.



Khmer Green Charcoal (KGC) received TA to develop a new website and improve its outreach among various stakeholders, including investors. The team at KGC also received training to manage their website and communication. In 2024, KGC aims to enhance its production and explore partnerships and investors for business expansion.



The Goat Trust implemented recommendations from the 2022 TA on public relations (PR) and communication, enabling The Goat Trust to update its Pashubazaar logo and website, and implement a new communication strategy. Collaborating with IIGMA, they launched the Vivekananda fellowship and signed an MOU with Meghalaya State Rural Livelihoods for northeast India expansion. New product lines, including liquid fertilizer, goat dung manure, lotion, and shaving cream, were introduced. Goat Trust received a \$120,000 USD award from USAID and Reliance Foundation to address barriers limiting women's access to technology.



ONergy Solar received TA to enhance the inclusion of women end-users in solar-powered irrigation services, integrating gender considerations into various processes. Focusing on Jharkhand, Odisha, and West Bengal, ONergy achieved recognition at the Clinton Global Initiative Greenhouse.



Oorja received PR and communication support to update its materials, which contributed towards securing additional investment. Oorja secured \$1 million USD in blended finance from Acumen, Elea, Artha, Echoing Green, and 1to4 Foundation. They also received prestigious awards: Best Off-Grid Project at the Mercom India Renewables Summit, Start-Up Energy Transition Awards by the German Energy Agency, and recognition in the World Energy Council Quality Energy Access and SDG-7 category.



Promethean Power Systems received TA on talent management and HR. The hub also extended investment facilitation support, aiding in the development of a pitch deck and identification of potential investors. In partnership with a non-banking financial company, Promethean successfully facilitated cattle loans for its dairy farmers. Promethean also secured convertible notes totaling \$500,000 USD from Acumen.



Pumpkin Plus received TA for partnership development, leading to MOU signings and connections with potential partners. They also received TA for IR to improve their pitch decks and investment materials for accelerators and donors. Due to the extended impact of COVID-19, Pumpkin Plus plans to pursue grants from the other non-WE4F donors for organizational capacity.



RDO Trust opened its third fecal sludge treatment plant in the Coonoor in Nilgris District. The MOU was signed between RDO Trust and Coonoor Municipality. The hub is currently working on a TA for its women green worker producer company to expand the marketing and sales of its co-compost.



Sumba Sustainable Solutions, in partnership with PowerWells, installed an upcycled solar home system on Sumba Island. They also received a TA on talent management and people practices.



Tun Yat received TA to design an information and communication technology platform to support their marketing outreach. The platform helps the innovator serve more farmers. Tun Yat also signed agreements with machine agents/dealers and machine owners on transaction mechanisms.



ZooFresh aggressively expanded its operations in Haryana and Rajasthan, establishing numerous B2B partnerships with restaurants and hotels while fortifying its supply chain to meet growing demand. To diversify its product portfolio, the innovator added meat and chicken to its supply portfolio. ZooFresh has initiated efforts to expand into new states, namely Bihar and Jharkhand. The innovator is also exploring cold-chain technology for in-transit storage of raw materials.

LEGACY COHORT



Adaptive Symbiotic Technologies introduced its innovative formulation in powder form to avoid logistics challenges for farmers. The innovator decided to focus on implementing the recommendations from the previous TA on marketing and sales strategy.



Husk Power Systems expanded in Bihar, secured B2B partnerships, and received honors, including the Zayed Sustainability Prize. Husk received investment facilitation support for its \$43 million USD Series D equity round, which was part of its \$103 million USD fundraising efforts.



MimosaTEK signed an MOU with Winrock to become a project partner in implementing the five-year USAID Climate Resilient Agriculture in the Mekong Delta project in Southern Vietnam. In 2024, MimosaTEK will receive a TA to enhance its existing ferti-irrigation system on sustainable wastewater management, preventing discharge into the local ecosystem.

2022 REGIONAL COHORT



Agrosolar (Agros) expanded to nine more hubs in Myanmar and six in Cambodia. The innovator also secured \$4 million USD in funding (equity, debt, and grants), which included a successful \$2.7 million USD pre-Series A equity round in March 2023. The innovator received pre-launch transaction advisory from the hubs for its potential capital raise in 2023-24, focusing on financial model review, capital structure analysis, and investor outreach. Agros also received a TA in market research to support international expansion into Bangladesh, Indonesia, and Vietnam. For 2024, the innovator is positioning itself for a Series A round targeting \$5-7 million USD.



Covestro received a \$500,000 AUD (about \$330,000 USD) grant from the Australian Government under the "Gender Responsive Equitable Agriculture and Tourism (GREAT)" program, emphasizing gender equality in Vietnam. The innovator received TA for an EUF strategy in Vietnam, aiming to facilitate farmer access to loans and subsidies for solar dryer domes. This TA involved collaboration with relevant financial institutions, such as banks and micro-credit institutions in Vietnam, as well as engaging with pertinent government departments endorsing such solutions for farmers.



Egreen received IR support, which included a comprehensive assessment of its fundraising documentation and offered recommendations for improvements. The innovator also received a TA on talent management and HR. Egreen successfully launched a branch in Southern Vietnam, securing five new contracts with energy service company models and entering an MOU with the Vietnam Farmers Union. Additionally, Egreen initiated the Circular Biogas Technology – Smart Filter Systems for H₂S-Removal and S-Recovery (S-IRCLE) project with a Technische Universität Berlin aiming to commercialize advanced IoT biogas purifiers. Active in accelerators like Acumen, Climate Finance Accelerator, and Improving Private Sector Competitiveness, Egreen plans to expand further in 2024, with ongoing hub support for investment documents and investor connections.



Jaljeevika is currently receiving TA to support its Nepal expansion, focusing on market understanding and legal compliance. The innovator formed six new B2B partnerships and expanded to Odisha and Assam. With the hub's support, Jaljeevika was selected for the Energy for Livelihoods Accelerator by Acumen India.



Komodo Water received TA for organizational capacity and talent management to build its HR capacities. The hub also provided IR support through reviews of its pitch deck and financial documents. The innovator is expanding operations to Bari and Kawai villages. It also formed collaborations with Fortuga and local governments, receiving recognition from the Catalyst Changemaker Lab. Komodo Water, with hub support, is now seeking funding for agricultural sector diversification.



Mandala Agrifresh received TA on marketing strategy to boost sales and create institutional partnerships. The support 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), Aloj Fintech, and UB Agro farming. The innovator now plans to enhance branding and communication strategy for various stakeholders with TA support from the hub.



New Leaf Dynamic Technologies successfully secured \$795,000 USD in equity during a pre-Series A round. It also expanded its reach by exporting GreenChill units to Kenya and Bangladesh through new channel partners. New Leaf received TA support on HR policies to adopt more inclusive policies covering employee code of conduct and ethics, corporate travel, health and safety, and gender. The innovator is currently receiving a TA on PR and communication.



Pteah Baitong secured a \$7,500 USD grant and accelerator program through SWITCH to Solar, with grant funding provided by Khmer Enterprise. SOGO Energy invested \$120,000 USD for a 60% equity stake in the company.



RecyGlo expanded in Thailand and Vietnam, forming 50 partnerships with local farmers, producers, research institutions, and universities. It is in the process of securing \$500,000 USD in a bridge round from an investor based in the UAE. RecyGlo also received an IR TA for financial planning.



S4S Technologies (S4S) received a TA for carbon financing and investment facilitation, aiding in a \$9 million USD debt raise from a development financial institution. The innovator formed three new partnerships, expanded to Madhya Pradesh and Rajasthan, won the Earthshot Prize 2023 in the category "Build a Waste Free World", and joined the Marico Innovation Foundation's Scale-Up Program. The hub will assist S4S in creating its environmental and social management system, which will assist S4S with its current equity raise and attract other long-term climate impact-focused investors.



Techno-Hill Engineering received a TA for market research, development of standard operating procedures, and business strategy, enhancing its capacity to provide solar water pumps, dryer domes, and cold storage services for fish farmers in Myanmar.





Village Link received a TA for marketing strategy, resulting in four contracts with private clients and over 10 MOUs with stakeholders. The innovator also received support from the hub to improve the team's skills in capturing photos and videos, managing social media, and engaging with farmers, investors, and stakeholders. To address the innovator's HR challenges, they established MOUs with universities to onboard interns to conduct research and support ongoing business activities for expansion. In 2024, Village Link will continue working with the hub on its current TA for communication.



Yayasan Rumah Energi (YRE) received TA for its organic fertilizer marketing strategy and received a TA on talent management and people's practices. To boost bio-slurry sales, the innovator formed strategic partnerships with organizations on promoting and supplying bio-slurry to its farmers (e.g., PISAgr, Partnership for Forest, and Golden Agri Resources). YRE also established a for-profit entity – PT Biru Karbon Nusantara – to ensure regulatory compliance for their future carbon trading activities.

DIGITIZATION IN SOUTH AND SOUTHEAST ASIA

Of the S/SEA innovators, 17 innovators use digital technologies or platforms in their innovations. These innovations range from IoT-equipped smart metering, to apps providing advisory services, to digital e-commerce platforms; these digitized innovations have been able to create an impact on farmer productivity and income. Across South Asia and Southeast Asia, innovators are working to embed digitization into their operations. Below are examples of innovators' work.

India:

Claro Energy uses a remote monitoring and control system and pay-as-you-go card which farmers can use as digital money. It also has an Android app for booking and scheduling irrigation services.

Husk Power uses an AI platform to forecast the demand and supply of clean energy. This AI-based platform has played a significant role in providing clean energy to rural communities in India and Africa.

Jaljeevika provides a portable IoT device and other water quality management systems, so farmers have real-time pond analysis and advisory support.

Oorja embeds several digital technologies into their pay-per-use cluster operation including smart meters, digital payment system, digital flowmeters, and remote monitoring features within solar pumps.

Promethean equipped its refrigeration hubs with a digital milk analyzer which provides milk data on quantity and quality to dairy processors/buyers.

Myanmar:

TunYat developed digital apps to enhance the marketing of its agricultural equipment. Tun Yat received TA support to design and develop these digital apps.

Village Link provides digital advisory and training services through their mobile app. The innovator also expanded its digital advisory services to six new crops. It is in the process of piloting AI in its Htwet Toe App for the automatic diagnosis of crop disease through photos sent by farmers. Village Link currently has an on-going TA to develop and enhance its digital marketing collateral, aiming to better reach and engage potential farmers, investors, clients, and stakeholders. Village Link signed more than ten MOUs with stakeholders and partners, focusing on cooperation to prepare bidding documents and proposals for programs applying digitalization, such as digital loans/financing schemes, training, services, and research.

Nepal:

Gham Power developed an IoT-equipped smart meter and launched their Super Krishak app to provide digital agri-advisory service to its farmers. Gham Power received TA support on EUF and EE support for partnership development. In addition, the company also received investment facilitation support for pitch deck review, financial projection, and potential investor identification.

Mandala Agrifresh developed a supply chain management app that helps them monitor and maintain the quality of produce throughout the value chain and minimize losses.

Vietnam:

MimosaTEK developed and sold IoT-enabled irrigation systems. This integrated system streamlines both irrigation and fertilization tasks for farmers, resulting in significant savings in labor costs, time, and the consumption of water and fertilizer.

RecyGlo uses an IoT software system to manage its waste collection supply chain and production of organic fertilizers. It provides data analytics on the client's circular economy model including carbon footprint, logistics, and raw material transfers. The innovator uses the internal system to gather and aggregate data from all its clients while the external client-facing platform presents a data dashboard that helps with compliance submissions to accreditation and certification bodies. The innovator's enterprise resource planning software powers the supply chain and ensures client traceability.

Egreen developed an IoT biogas generator system for remote control and operation of the system. Egreen is in process of researching an update to the IoT biogas generator system and to integrate a livestock farming management app.

OPEN CALL FOR INNOVATIONS

In May 2023, the S/SEA RIH launched its OCFI. In the first round (May to June 2023), 26 eligible concept notes were submitted, eight passed the concept note stage, and four submitted full applications; in the second round, (July to September), 21 eligible concept notes were submitted, three passed the concept note stage, and three submitted full applications; and in the third round (October to December), 17 eligible concept notes were submitted, eight passed the concept note stage, and four submitted full applications.

Country	Round 1	Round 2	Round 3
Bangladesh	1	1	1
Bhutan	0	0	1
Cambodia	5	1	1
India	7	7	5
Indonesia	0	0	1
Philippines	1	3	1
Laos	0	1	1
Malaysia	0	0	0
Myanmar	3	1	2
Nepal	3	2	1
Sri Lanka	0	2	0
Singapore	1	0	0
Thailand	1	0	1
Vietnam	3	3	2
Total	25	21	17

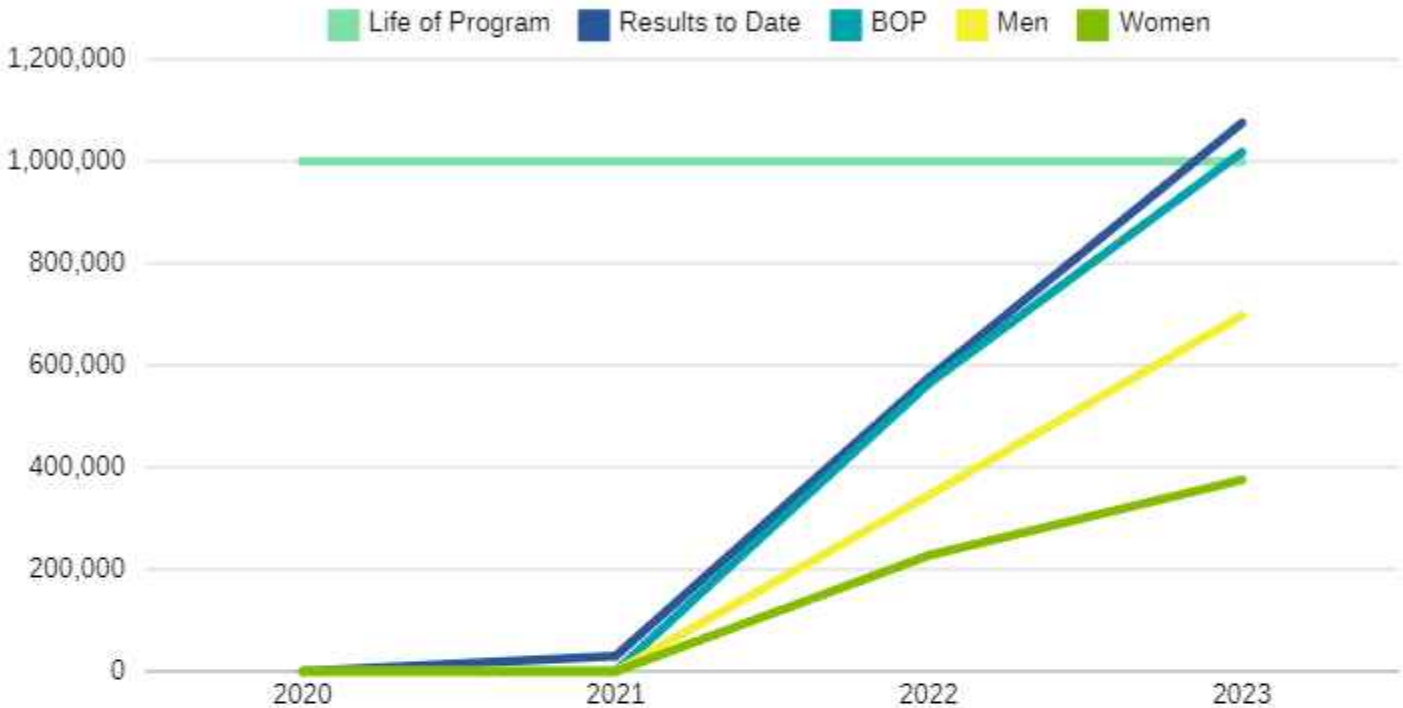
In the year ahead, the hub plans to leverage social media channels and its network to increase outreach activities throughout the region. Focusing on outreach through social media platforms (e.g., Facebook and LinkedIn) is a strategy proven popular due to the increase in program interest by innovators based in Bangladesh, Cambodia, and Thailand. Activating the hub's regional network to contact accelerators, associations, and other relevant organizations attracted new interest in 2023. This strategy will be continued to attract applicants from underrepresented countries. The hub will also explore other channels of communication such as Slack Groups that could help the hub reach wider networks. Many of these communities concentrate on specific regions like Southeast Asia, and India, which would help the team to reach out directly to innovators and promote WE4F.



RESULTS TO DATE

END-USERS IMPACTED

Number of WE4F End-Users



As of the end of 2023, S/SEA innovators impacted over 1 million end-users, surpassing the LOP target by 7.5%. Almost all the end-users are BoP end-users, so innovators outperformed the BoP end-user target of 250,000 by over three times. For the LOP target of 250,000 women end-users, the hub exceeded this target with 375,000 women end-users.

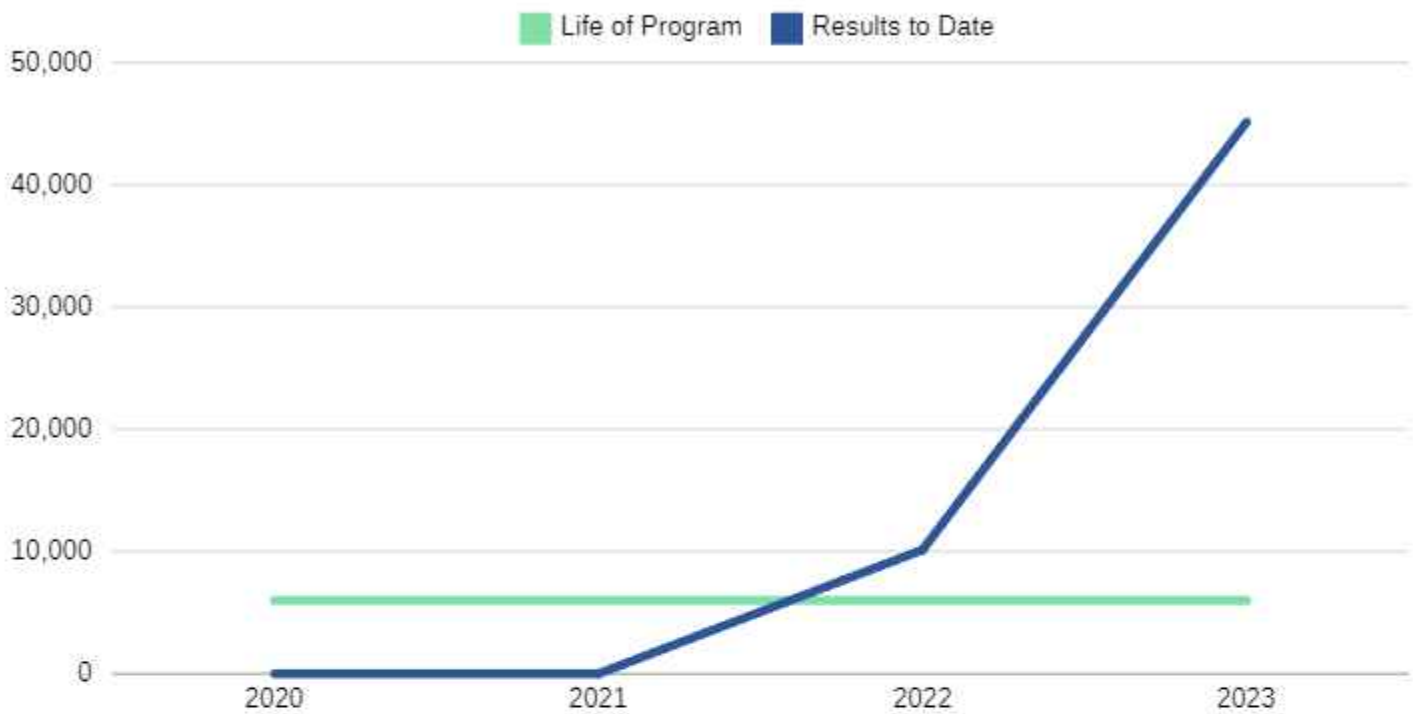
Village Link (Myanmar) impacted 373,000 end-users due to their digital innovation which provides end-users with climate and water-smart agricultural information. Claro Energy (India) and ONergy (India) contributed 216,000 and 98,000 end-users respectively; as solar water pump providers, their innovations target an important need amongst farmers - the demand for irrigation water and the desire to move away from expensive, polluting diesel pumps. The Goat Trust impacted 58,000 end-users, while Egreen reached 43,000 end-users with their livestock management and sales, and conversion to sustainable biogas generators, respectively.

To support the innovators in reaching more end-users, the hub provided various TAs to improve outreach and accessibility. For example, EUF-related TAs helped innovators conduct workshops and establish partnerships with financial institutions to provide loans to smallholder farmers.

To improve women's access to innovators' technologies and services, the hub provided TAs on gender integration, conducted workshops, and formed partnerships with organizations dedicated to gender mainstreaming. Furthermore, when formulating other business development TAs, the hub incorporated a gender lens which enables innovators to specifically target and support women in their value chain.



Number of End-Users Using Financing Mechanisms



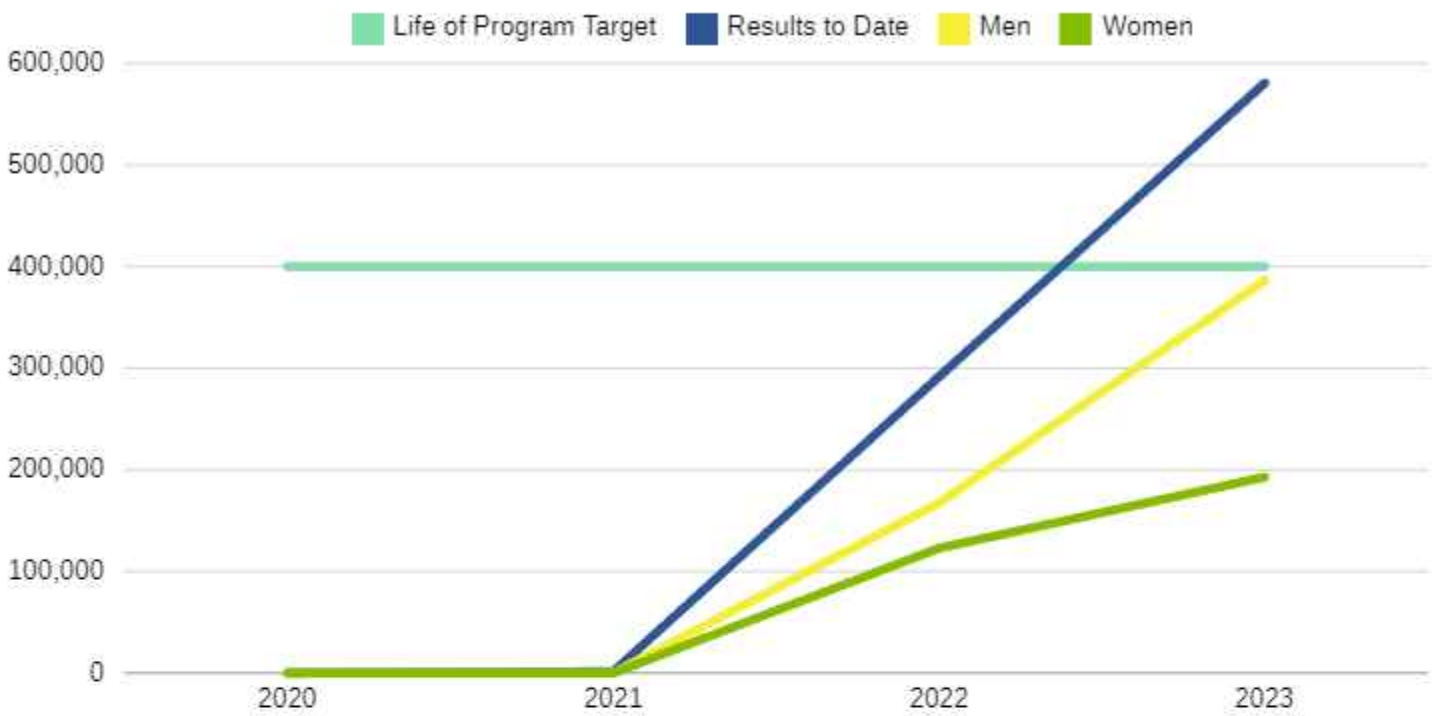
The hub surpassed the LOP target for end-users using EUF models in 2022, but the development and deployment of EUF models continue to grow as more innovators aim to improve their innovation accessibility. Of all S/SEA innovators, 47% have a focus on EUF and use a diverse range of business models for end-users, examples include pay-per-use, pay-as-you-go, an energy service company model, government schemes, and funding from banks and MFIs. Some innovators employ default guarantees (e.g., New Leaf Dynamic, Gham Power, ONergy), banking correspondent models (e.g., Promethean), or peer-to-peer lending platforms (e.g., Jaljeevika) to reach distant or unbanked end-users. The largest providers of EUF schemes are New Leaf (22,000 end-users), ATEC (7,000 end-users), Goat Trust (5,000 end-users), aQysta (3,000 end-users), and Tun Yat (1,900 end-users).

These innovations need financing support owing to the price of the products such as biomass-powered cold storage (New Leaf) or biogas digesters (ATEC) which tend to be expensive for smallholder farmers. In some other cases, such as Goat Trust and aQysta, the financing is necessary for inputs such as the purchase of goats and agricultural inputs, respectively.

In 2023, more innovators emphasized the need for EUF schemes and established partnerships with financial institutions. At the same time, innovators designed innovative mechanisms around co-funding or co-signing to de-risk investments for financial institutions. The hub provided innovators with TAs to create implementation plans and tailored financial products with financial partners. The hub also facilitated discussions and explored engagements with new partners in countries like Vietnam, particularly in the nascent sector of EUF for solar-powered products in agriculture. Additionally, the hub conducted reviews of government policies and schemes to help innovators identify EUF opportunities. For example, Promethean, through an EUF TA, established partnerships with financial institutions, gaining insights into industry norms and securing formal agreements with three companies. These efforts resulted in increased partnerships, customized products, and raised awareness among bankers, enabling loans for smallholder farmers for nexus products. Furthermore, it led to sales partnerships with financial institutions. For example, since the hub and Women on Wings signed the MOU, the partner collaborated with two innovators, Jaljeevika and Promethean, to enhance market systems for increased income opportunities for women farmers. With Jaljeevika, two strategy workshops were conducted to guide the team through capacity development.



Number of WE4F Innovation End-Users with Increased Incomes

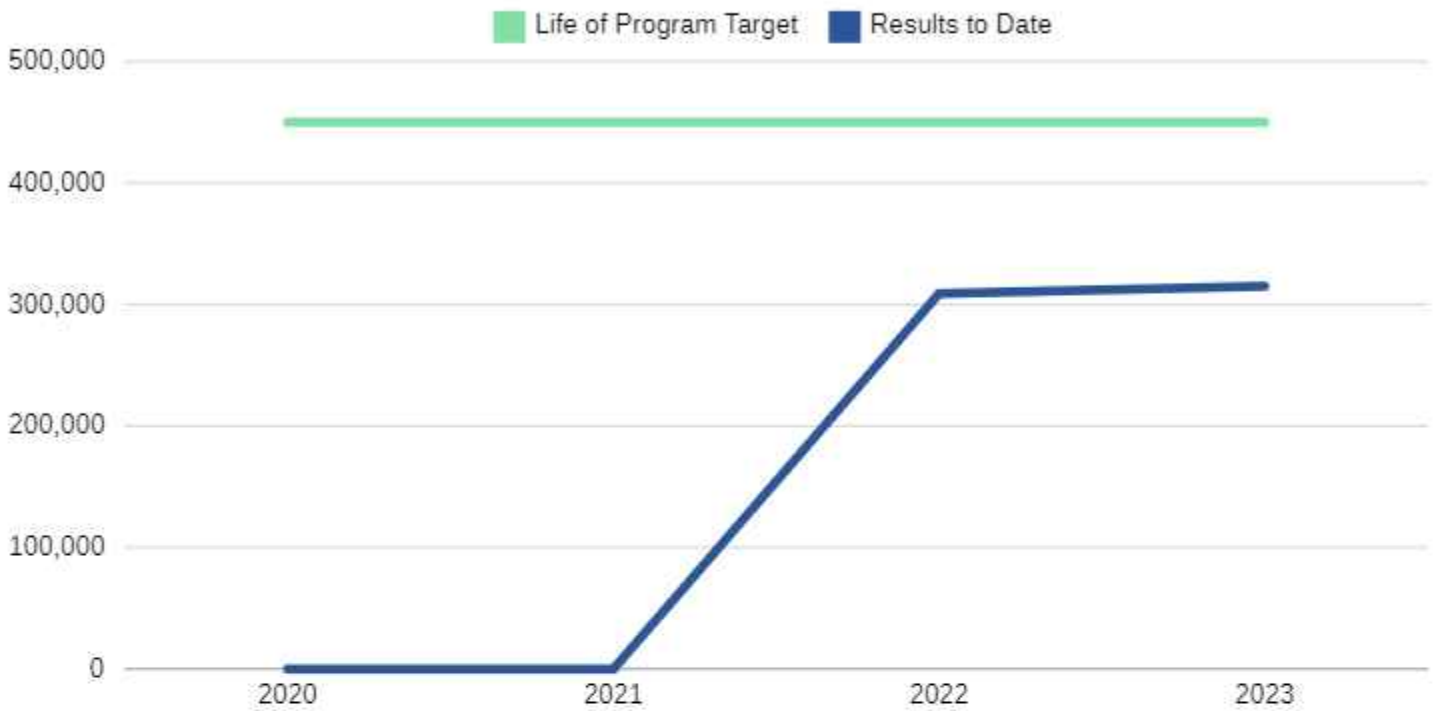


Innovators have positively impacted over 580,000 end-users, surpassing the S/SEA LOP target. The top five innovators with the highest number of end-users reporting increased income are Village Link (Myanmar), Claro (India), ONergy (India), Goat Trust (India) and Egreen (Vietnam). Village Link users experienced improved incomes through better advisory and recommendations from the Htwet Toe application. While ONergy and Claro Energy end-users reduced their expenditures on diesel, leading to increased crop cycles and higher income; Goat Trust end-users experienced income increase through sales of goat milk and meat products; and Egreen end-users use biogas generators to save costs on electricity used on pig farms. India, Myanmar, and Vietnam stand out as the top three countries with the highest proportion of end-users reporting increased income, totaling 535,00 individuals – increasing by almost 300,000 end-users when compared with 2022.

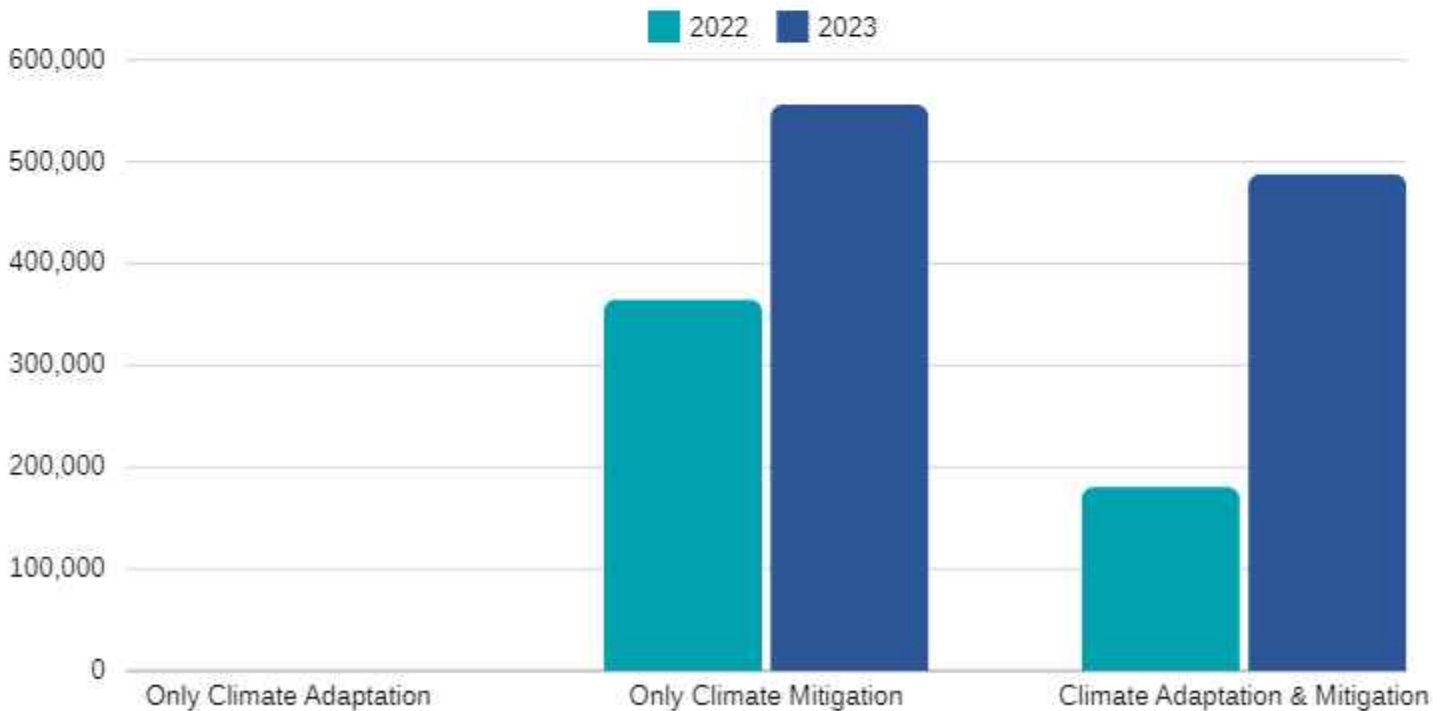


GREENHOUSE GAS EMISSIONS REDUCED

Total Greenhouse Gas Emissions Saved by End-Users Through the Use of WE4F Innovations (tons of carbon dioxide emissions equivalent (CO₂e))



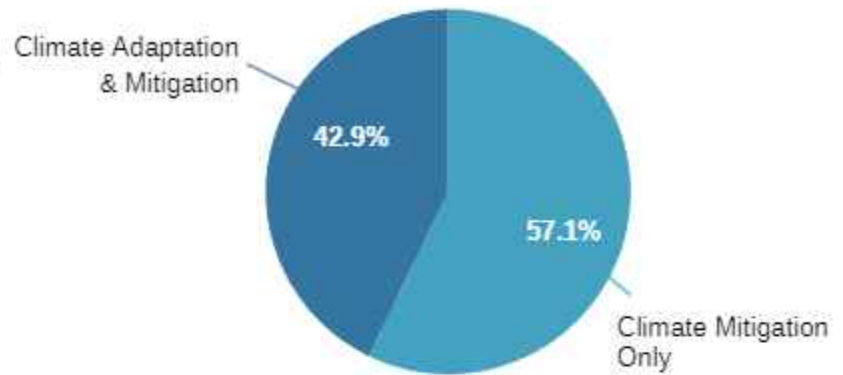
Number of Smallholder Farmers and Other End-Users Using a Climate Adaptation, Climate Mitigation, or an Innovation that Tackles Both



S/SEA innovators successfully saved over 315,000 tons of CO₂e, achieving 70% of the hub's LOP target. Smallholder farmers account for 74% of the reduction, and women-led and/or-owned innovators contribute about 60% of the GHG emissions reduction. Egreen (Vietnam), Claro Energy (India), and ONergy (India) were the top three contributors, primarily by substituting diesel for biogas-powered generators and solar-powered irrigation systems.

Other solutions that contributed to savings include biomass waste to energy (New Leaf, India), and composting (RDO, India). Just under 43% of innovators contribute to climate adaptation and mitigation, while about 57% contribute to only climate mitigation. A high number of innovators (11) focused on mitigation and adaptation through solutions such as livestock management, IoT for irrigation, crop treatment solutions and organic fertilizers. A greater number of innovators (20) provide innovations to mitigate climate change through transition away from fossil fuels in food processing, storage, and irrigation.

Percent of Innovators Doing Climate Adaptation and Mitigation*



*Based on the 14 actively-supported innovators.

PRODUCED AND PROCESSED MORE FOOD

Food Produced with WE4F Innovations (tons)



Current food production results, exceeding one million tons, fall short of the hub's LOP target by 55%. Although nearly all innovators are on track for impacted end-users, the amount of food produced by the end-users is less than expected. Village Link contributed the most at 652,000 tons, followed by RDO (104,000 tons) and then Egreen (38,000 tons). These three innovators have had the most significant contributions to food production, mainly due to their substantial end-user base and engagement with relatively larger farmers. Village Link's technology not only improves paddy yields but also facilitates a transition to less water-intensive crops like green and black grams.

Given the hub's priority to support innovators who work with smallholder farmers and the termination of innovators who mainly contributed to this target, the 2.25 million targets can be less than realistic under these circumstances. The hub therefore proposed to reduce the target to 1.75 million tons in 2024 to reflect the reality of the market. In addition, the hub will focus on onboarding more OCFI innovators who work on food production to ensure the achievement of the target by the end of the program.



Total Mass of Food Processed as a Result of WE4F Innovations (tons)



Innovators' end-users processed over 74,000 tons of food, achieving 73% of the S/SEA Hub LOP target. S4S (India), Promethean (India), New Leaf (India), Komodo (Indonesia) and Covestro (Vietnam) were the top five contributors to food processing, benefiting from their mature operations, large end-user bases, and established market links. Innovators employ solar-powered dryers, thermal battery-powered refrigeration, and biomass-powered cool rooms to extend product shelf life for institutional buyers.

Strong market partnerships are essential for scaling food processing companies. Innovators face the challenge of navigating a fragmented market that is monopolized by middlemen. Despite this, companies are adopting business-to-business-to-farmer models to increase food production quantity and focus on varieties that yield higher returns for farmers. Additionally, they actively pursue EUF partnerships to facilitate farmer investment in these solutions.



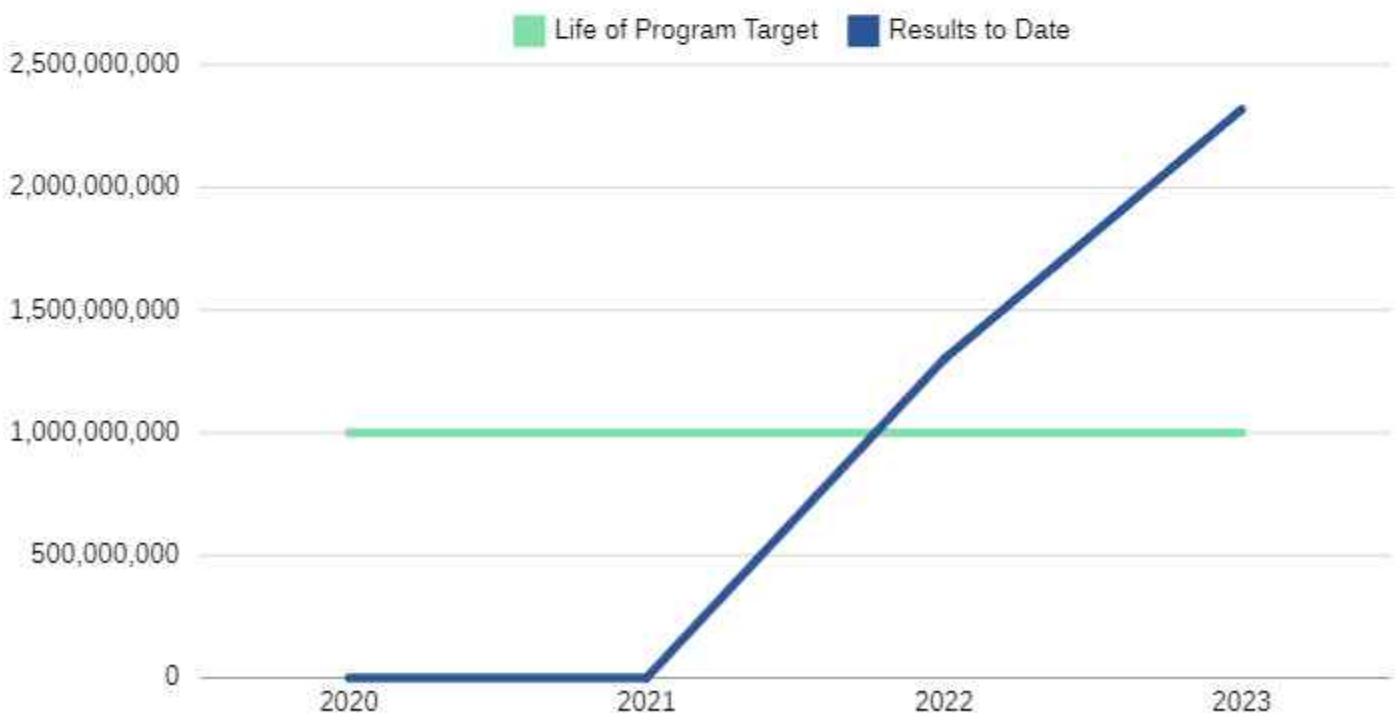
USING LESS WATER AND ENERGY

Energy Saved (kilowatt-hours)



Innovators have achieved 487 million kWh of energy savings, surpassing the S/SEA LOP target by twenty times. Smallholder farmers contribute to 90% of these savings, and women-led and/or-owned innovators contribute around 26%, equivalent to 127 million kWh. The notable results from three Indian innovators, Claro Energy (346 million kWh), S4S (74 million kWh), ONergy (29 million kWh), Egreen (20 million kWh) and ATEC (8 million kWh) which can be attributed to the effective substitution of fossil fuels with more efficient solar water pumps and biogas powered electricity, reduction of food waste through solar dryers.

Total Volume of Water Consumption Reduction (liters)



The current results indicate a reduction in water consumption of over 2.3 billion liters, exceeding the S/SEA Hub LOP target by more than double. Smallholder farmers contribute to 99% of this reduction, with women-led and/or-owned innovators contributing around 88%. The top three contributors to this achievement are Village Link (Myanmar), MimosaTEK (Vietnam), and RDO (India). Village Link's climate and water smart agriculture application, Htwet Toe is facilitating a transition to less water-intensive crops like green and black grams through its digital advisory support, this resulted in a decrease of 1.9 billion liters of water use. MimosaTEK's IoT solutions enabled precision agriculture for farmers, reducing water consumption by 209 million liters. Similarly, RDO through co-compost enables better water retention and recycles wastewater saving 31 million liters of water.

The hub provided support to innovators through one-on-one calls and MEL TA to ensure accurate estimation of water savings. Additionally, efforts are underway to help innovators mitigate negative impacts on local water resources by collaborating on environmental management and mitigation plans.

To prevent water overuse and help innovators with water solutions better understand how they can impact river basins, there is a vendor currently designing a water monitoring dashboard for the Ganges and Red River Basins; it will also contain forecasts for future water availability. Through this tool the hub expects to be able to guide innovators on sustainably scaling their innovations without negative impacts on water availability. Once the dashboard is complete, a training will be organized for innovators and the hub, so both can learn to effectively use the dashboard to help expand the innovation sustainably.

Share of Innovators Monitoring Water or Biodiversity



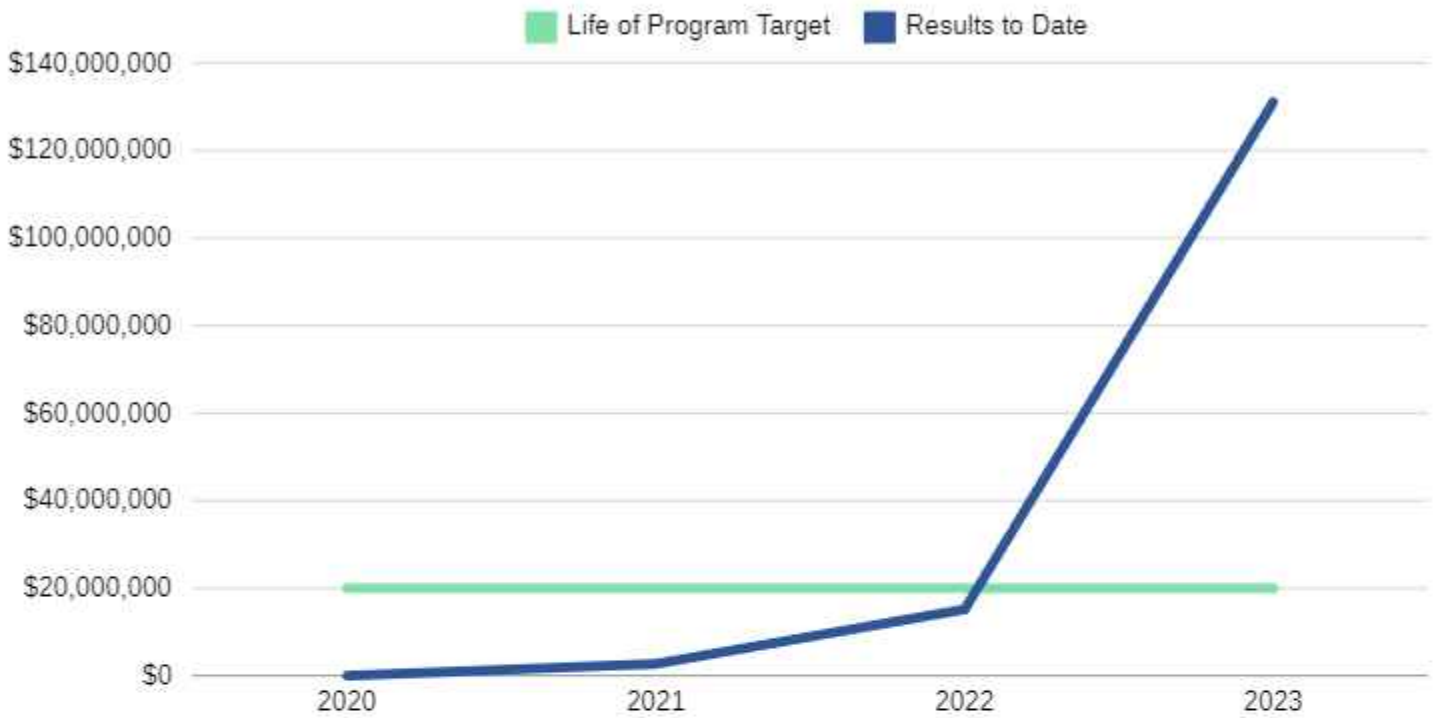
In 2023, 26.7% of S/SEA innovators reported using tools, methods, or processes to monitor water or biodiversity. These innovators include Agros, Pteah Baitong, ONergy, Claro, Oorja, Gham Power, and aQysta, which focus on solar pumps; Komodo Water for ice blocks; Jaljeevika and ZooFresh in fisheries; and KGC producing charcoal from coconut shells. Innovators focused solely on water monitoring are Gham Power, Oorja, Techno Hill, and AST. KGC leads in biodiversity monitoring, while Jaljeevika, Komodo Water, and S4S Technologies are notable for monitoring both water and biodiversity. This reporting is strongly influenced by the business model and innovation, and monitoring is often a business decision for innovators to increase yields or reduce income losses for smallholder farmers.

To help more innovators monitor their innovations, the hub has strengthened its efforts to introduce more tools related to tracking sustainability impacts. For example, the hub organized a session on monitoring water usage as a part of its capacity building initiative for innovators to be more ready on EMMPs and related reporting. The hub also conducted a workshop on life cycle analysis for the innovators during the Regional Convening.



INNOVATIONS SCALED

Innovator Investment Mobilized (in U.S. Dollars)



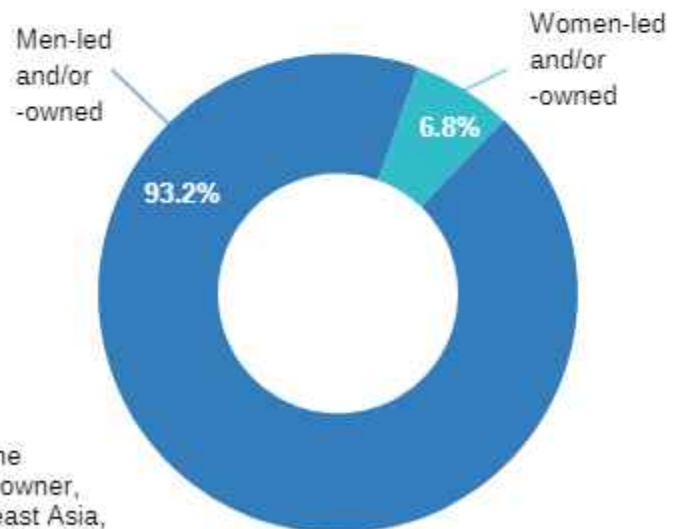
At the program's onset, there were gaps in fundraising expertise, knowledge on approaching investors, and insufficient resources for successful fundraising. Throughout the program, there was noteworthy growth in the innovators' maturity, knowledge, and experience in fundraising, evident in the annual and accumulated investment mobilized. The S/SEA innovators mobilized over \$131 million USD in investment, with 18 innovators from across Nepal (aQysta, Gham Power), Bangladesh (ATEC), Cambodia (Agrosolar, Pteah Baitong, KGC), Vietnam (MimosaTEK), Indonesia (Komodo Water), India (Jaljeevika, Husk Power, Goat Trust, New Leaf, Oorja, Promethean, RDO, S4S Technologies, ZooFresh) and Myanmar (Techno Hill) raising funding. Notably, Husk Power achieved a significant \$103 million USD deal, with hub support contributing to securing over 40% of the equity portion of the deal.

Women-led and/or -owned innovators raised more than \$8.8 million USD, accounting for 7% of all investment raised by S/SEA innovators. S4S Technologies is the highest contributor to this achievement with a \$6 million USD investment deal closed. Oorja Development Solutions is the other women-owned company that has raised \$1 million in seed capital funding. Zoo Fresh has also been able to raise over \$1.5 million from investors. Most of the closed deals were equity deals with a combination of working capital debts. However, this does not represent the trend of the market but rather the fact that most of the innovators are early-stage start-ups. For the growth-stage innovators in the cohort, (e.g., Husk Power and S4S), they tend to look for a mix of equity and debt when they raise capital.

While other investment-related factors contribute more to the required support than the gender of the company's leader/owner, many women-led/-owned companies, particularly in Southeast Asia, rely more on IR and business scalability support due to their early stage. For example, the hub is working towards

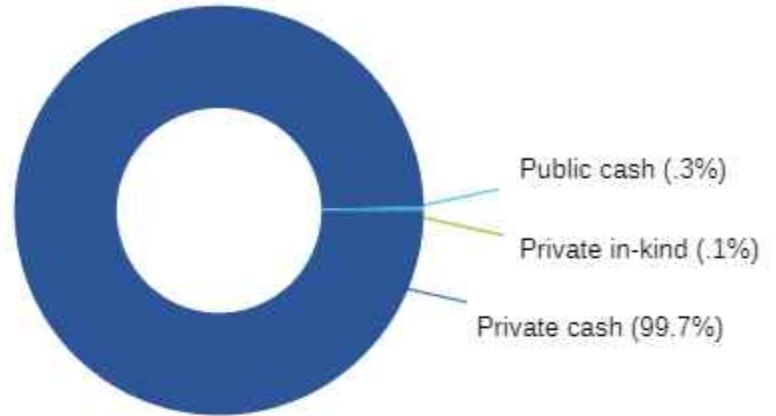
providing more customized IR support to women-owned/led companies in the cohort such as Komodo Water. Once they are more mature and ready for loan and equity investments, they may seek more in-depth support such as business valuation, financial modeling, and deal structuring. They can also benefit from the gender-focused funds at this stage. Many SEA companies, including those led/owned by women, are yet to reach this stage.

Investment Breakdown by Gender

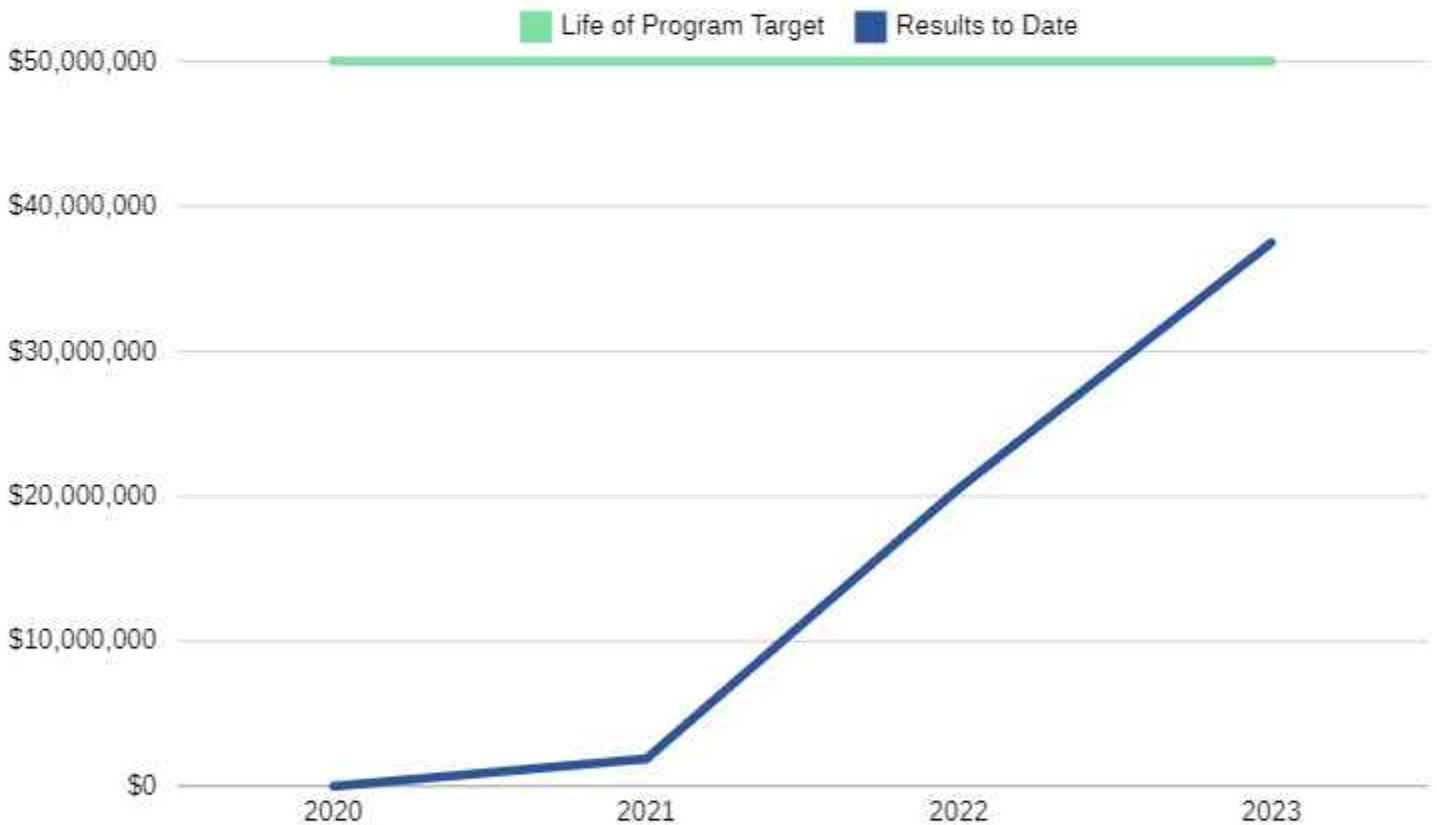


As most of the innovators in the cohort are early-stage companies, having a proven viable business model and scalability that can ultimately attract investors should be the priority. The relatively early-stage companies also need more customized IR support in form of market research to estimate market size, training to make projections based on current sales and market conditions, and capacity development to create and maintain management information systems that can support in building the data for fundraising documents, including the financial documents.

Public versus Private Investment



Innovator Gross Sales (in U.S. Dollars)



The S/SEA innovators achieved over \$37 million USD in gross sales, reaching 75% of the hub's LOP target. India played a dominant role, contributing 84%, followed by Vietnam (8%) and Myanmar (4%). Key contributors to gross sales in India include S4S Technologies (\$13 million), ZooFresh (\$4 million), Claro Energy (\$3 million), Promethean (\$2.8 million) and Mimosatek (\$2.7 million). Gross sales are tied to the business model and team capacity, along with the perceived value of innovators' technologies by farmers in enhancing their incomes. Market-based models, where farmers play roles as suppliers or users with assured market linkages provided by the innovator, contribute significantly to innovators' gross sales achievements. This is exemplified by S4S, Zoo Fresh, and Promethean in India.

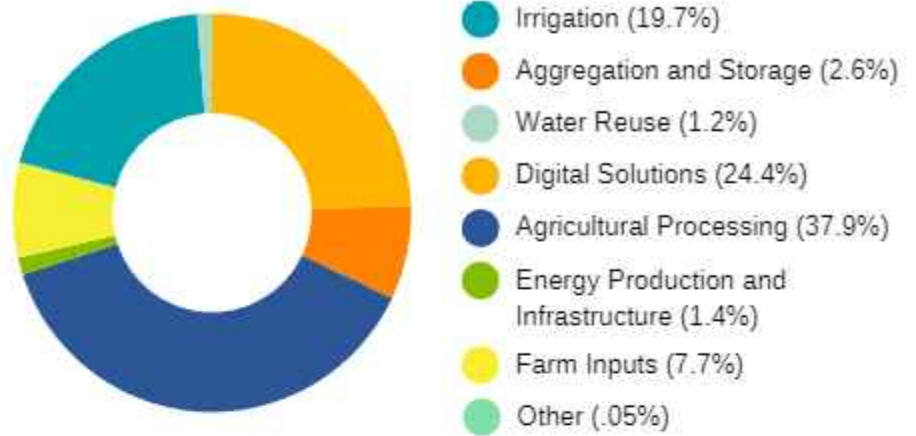
Other innovators like Claro Energy (India) and Mimosatek (Vietnam) achieve higher sales for their solar-powered irrigation systems and IoT systems, respectively, due to direct demand in food production and government support through subsidies. The latter is especially the case of solar-powered irrigation in India. The presence of EUF mechanisms for these solutions also plays a pivotal role in driving sales.

Innovators, especially during their growth stage, face challenges in mapping sales channels and establishing lead generation systems. Many struggle to develop effective lead funnels, hindering resource allocation and sales conversions. Additionally, innovators often face challenges in establishing initial trust with their first clients, especially in B2B and business-to-government business models. These clients typically place large

and rely on long-term business partnerships. Therefore, they normally expect a long track record to prove their trust – something early- and growth-stage companies do not usually have. As a multi-donor funded program, the hub's support is crucial in establishing these initial networks and initiating conversations with these clients, especially with governments and corporations. It can help with validating the work done by the innovators.

Innovators involved in importing and exporting technologies encounter challenges related to comprehension of applicable laws, documentation for transactions, and tax implications, leading to pricing issues for end-users. For instance, products are categorized differently in two countries and innovators must apply for the correct licensing to sell or export, and sometimes certify their products through authorized labs. Similar challenges emerge in taxation for new revenues such as carbon credits. Hub support is required to understand the requirements more clearly to shape innovators' market entry and expansion opportunities.

Gross Sales Breakdown by Innovation Type

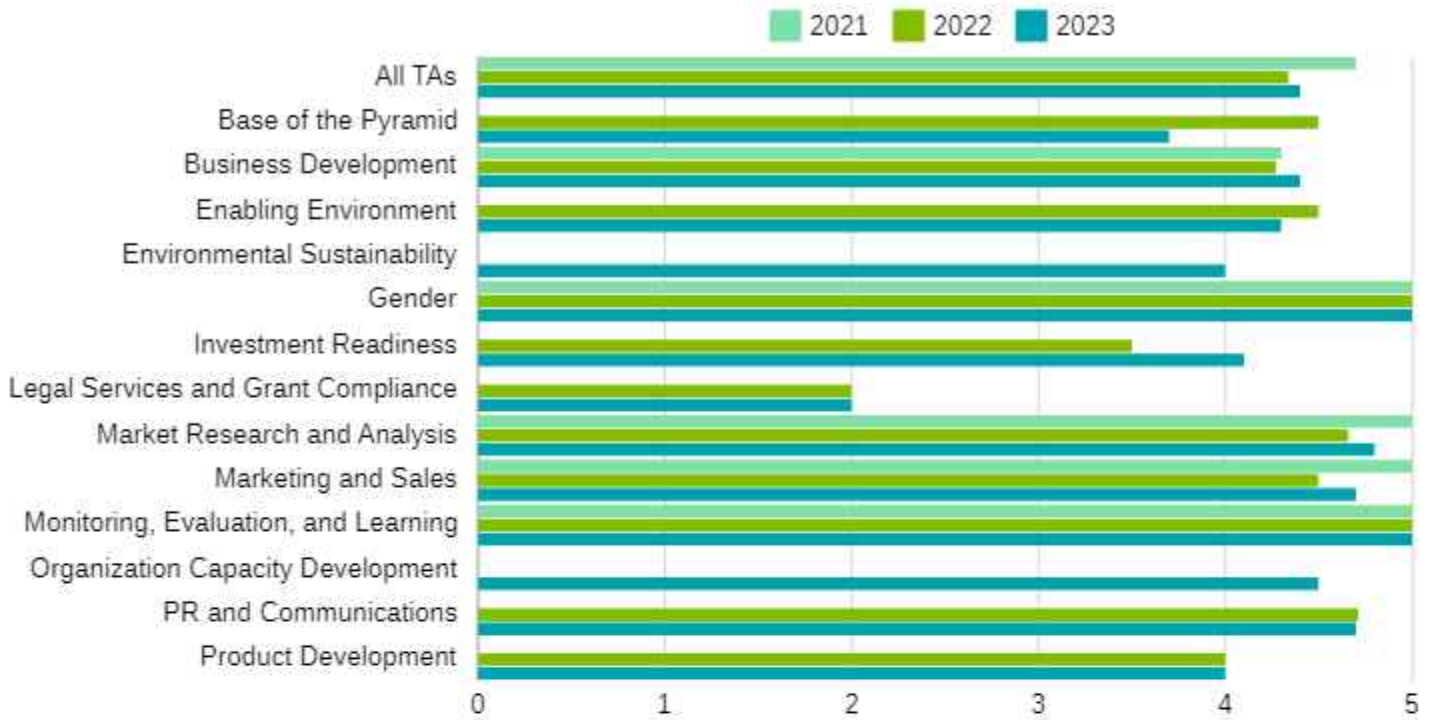


Share of Supported Innovators that Successfully Marketed their Climate-friendly, Energy and/or Water-efficient Innovations with Profit



Slightly over 29% of innovators have successfully marketed their businesses, while others are gradually scaling their business and impact in the region. Three women-led and/or -owned innovators made profits in 2023, namely Village Link, Komodo Water, and Oorja. Many innovators reinvest profits into expansion, impacting short-term profitability but achieving growth in year-on-year sales and customers. The hub supports them in business strategy development, expansion partnerships, and investment facilitation. Innovators marketing products to farmer groups generally see better affordability and sales, as they meet crucial crop production needs for individual farmers. Farmer groups have better affordability and coordination between individual farmers to adopt new technologies. By being associated with governments and NGOs, they can facilitate better outreach and accessibility either with awareness campaigns or EUF support.

Average Technical Assistance "Quality of Service Survey" Score



With the increasing maturity of companies, there is a shift in the types of TA requested, evolving into strategic needs like voluntary carbon market credits, international partnerships, environmental and social management systems, organizational capacity development, investment advisory and readiness support, and EUF. This shift is evident across all countries.

As the complexity and expectations of TA rise, the hub ensures quality through peer reviews and engagement of expert service providers with relevant contextual experience. Disparities among innovators, especially from advanced ecosystems like India compared to countries like Cambodia or Indonesia, are noted. The nascent markets lead innovators to iterate on business models and seek new partnerships. In countries like Myanmar, political situations on the ground may slow down TAs and expansion activities, but local experts are procured to support market identification and expansion. This allows innovators to reach farmers in hard-to-reach areas and increase sales.

Lessons learned from supporting the 2021 Regional Cohort and the 2022 Regional Cohort innovators will be embedded in hub's operation for when it comes to supporting the newly onboarded OCFI innovators. The hub also expects more targeted support with more TAs being provided through service providers. This will not only ensure localization of the TA outcomes but also build local partnership and knowledge transfer among the innovators and vendors.

QUALITY OF SERVICE SURVEY

Conducted by the Secretariat Unit, the QoSs gathers all innovators' feedback on their experiences working with the S/SEA RIH. The QoSs helps the hub improve problem areas and identify successful pivots that can be shared with the other hubs. This QoSs gathered results from 28 RIH innovators in June 2023 and 13 RIH Innovators in December 2023.



GENERAL HUB SUPPORT

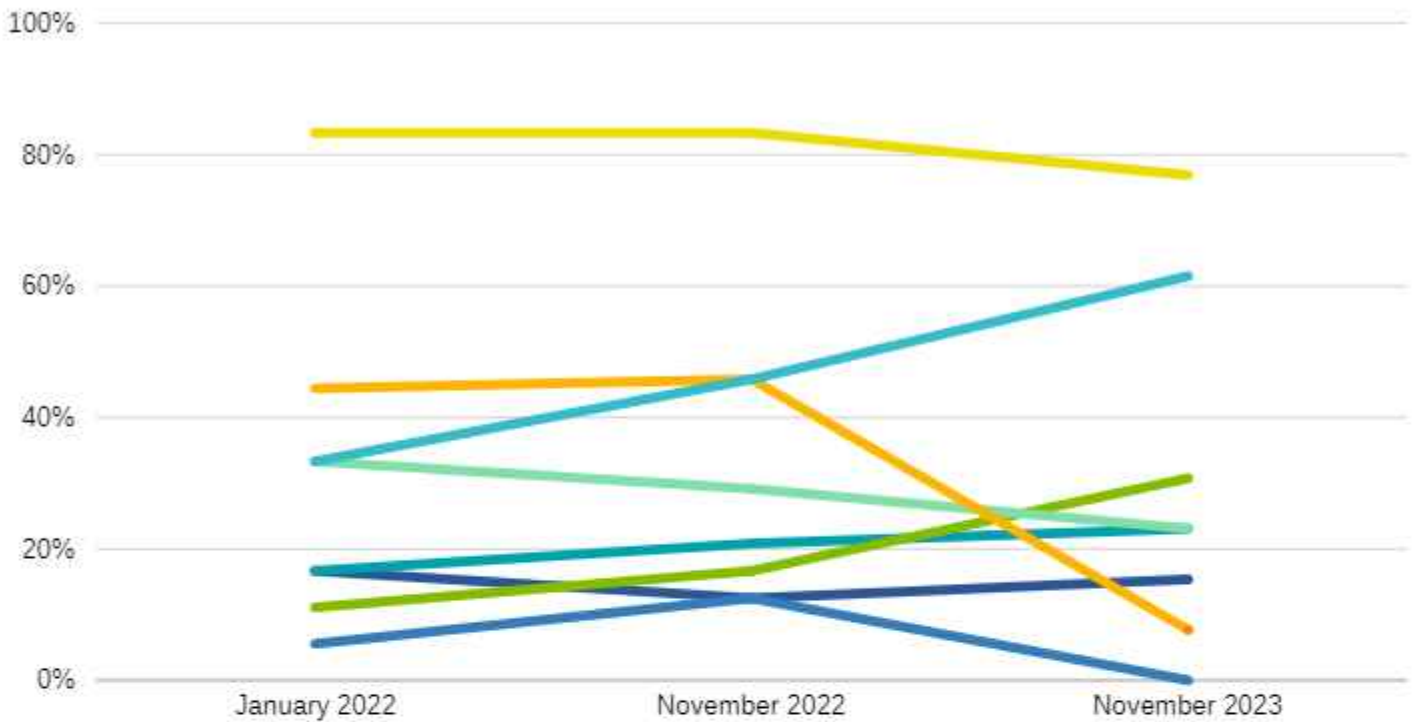
Overall, how helpful has the S/SEA Hub's support been to your organization's success?



Innovators' appreciation for hubs fluctuates but overall, the appreciation tends to increase over time. In June 2021, innovators rated the hub's support as a combined 83.4% (helpful - 50% and very helpful 33.4%), but in December 2023 the helpfulness level significantly increased to 92.3% (helpful - 30.77% and very helpful - 61.54%). The hub has worked to enhance engagement with innovators by offering support tailored to their needs for business expansion, remaining responsive and communicative through regular check-ins, and sharing of relevant opportunities. The hub also leverages Country Coordinators to facilitate discussions, fostering trust and transparency among innovators.



**Reflecting on the support received from the S/SEA Hub,
which of the following has been most useful to you?**



The most valuable category remains TA. The TA Unit acts as a bridge for all business and advisory requirements and enables partnership collaboration between the innovators. This creates multiple touch points with the innovator. Also, by leveraging insights gained from engaging with innovators, the hub has developed a deeper understanding of innovators' business models and requirements. This allowed the hub to be able to guide and help the innovators prioritize their business problems that need attention. While some of the TAs were still provided using hub's internal resources, the hub had strengthened its localization efforts by providing more TAs using the local service providers.

The next most popular support categories in order are: partnerships, environmental support and compliance, gender, and MEL. The innovators' value of these categories and their impact varies over time due to the nature of the provided support and direct assistance to innovators from the hub.

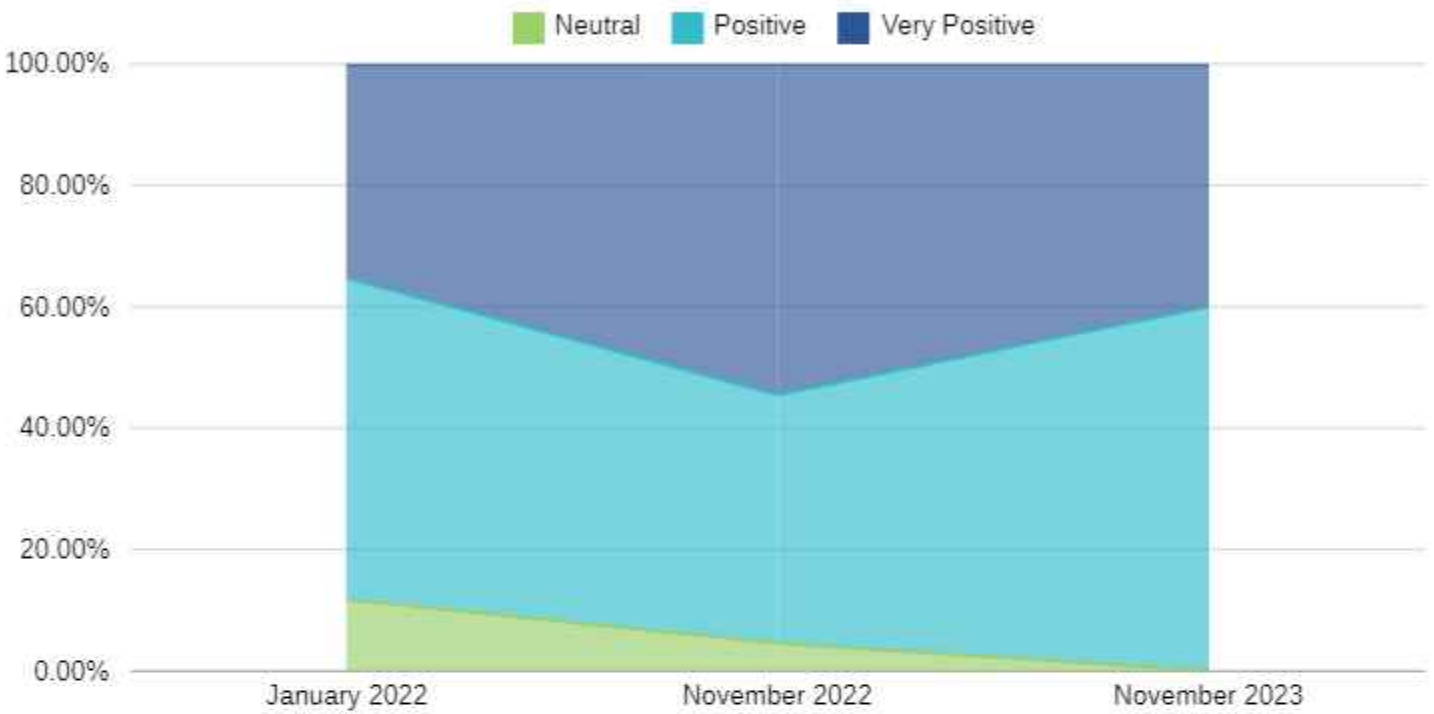
Chart Key

- Addressing Enabling Environment Barriers
- Technical Assistance
- Gender Mainstreaming
- Investment Facilitation
- Monitoring and Evaluation
- Environmental Sustainability and Compliance
- Other
- None
- Partnership, Networking, and Ecosystem Building

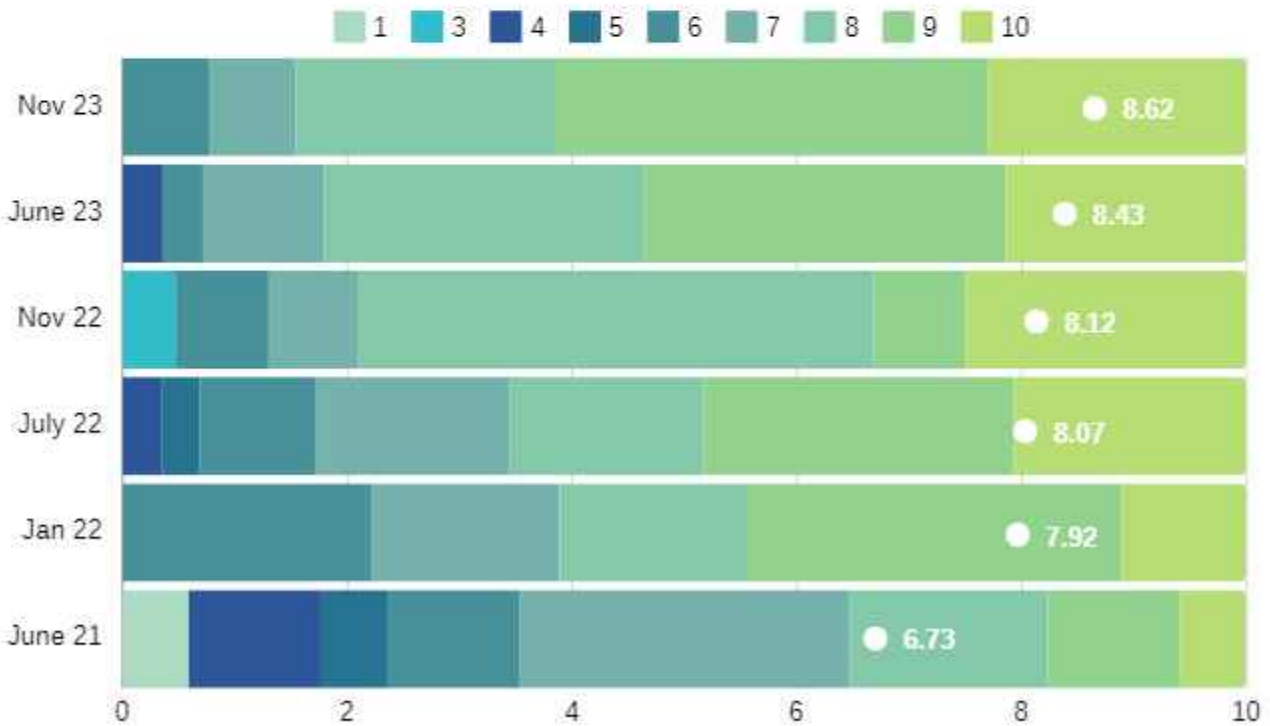
While the EE Unit's satisfaction rating has continuously increased and is now at 7.92 out of 10, the overall usefulness of the support category remains in the teens. This could be due to results that are hard to prove or see in the short run. In addition, there was a short-term knowledge gap in the EE after the discontinuation of the Policy and Regulatory Advisor position. Following the technical direction of the previous USAID COR, the hub decided to discontinue the Policy and Regulatory Advisor position, which was responsible for leading the EE tasks. The hub adapted to empower Country Coordinators to take a more proactive role in connecting innovators with relevant partners in the region. This change aims to offer more targeted support, potentially resulting in better outcomes as the Country Coordinators have the in-depth knowledge and connections to solve many regulatory issues. To support the Country Coordinators for EE topics that require more expertise, the hub will continue to procure local vendors to provide EE TA to the innovators and is looking to allocate resources to DevWorks (one of the WE4F S/SEA consortium partners) to provide specialized support.

TECHNICAL ASSISTANCE

Reflecting on the technical assistance provided to you, what could be the impact of technical assistance in the long term (1+ years post-completion of the assignment)?



On a scale of 1-10, how satisfied are you with the S/SEA Hub's Technical Assistance Unit (1-Extremely Dissatisfied to 10-Extremely Satisfied)

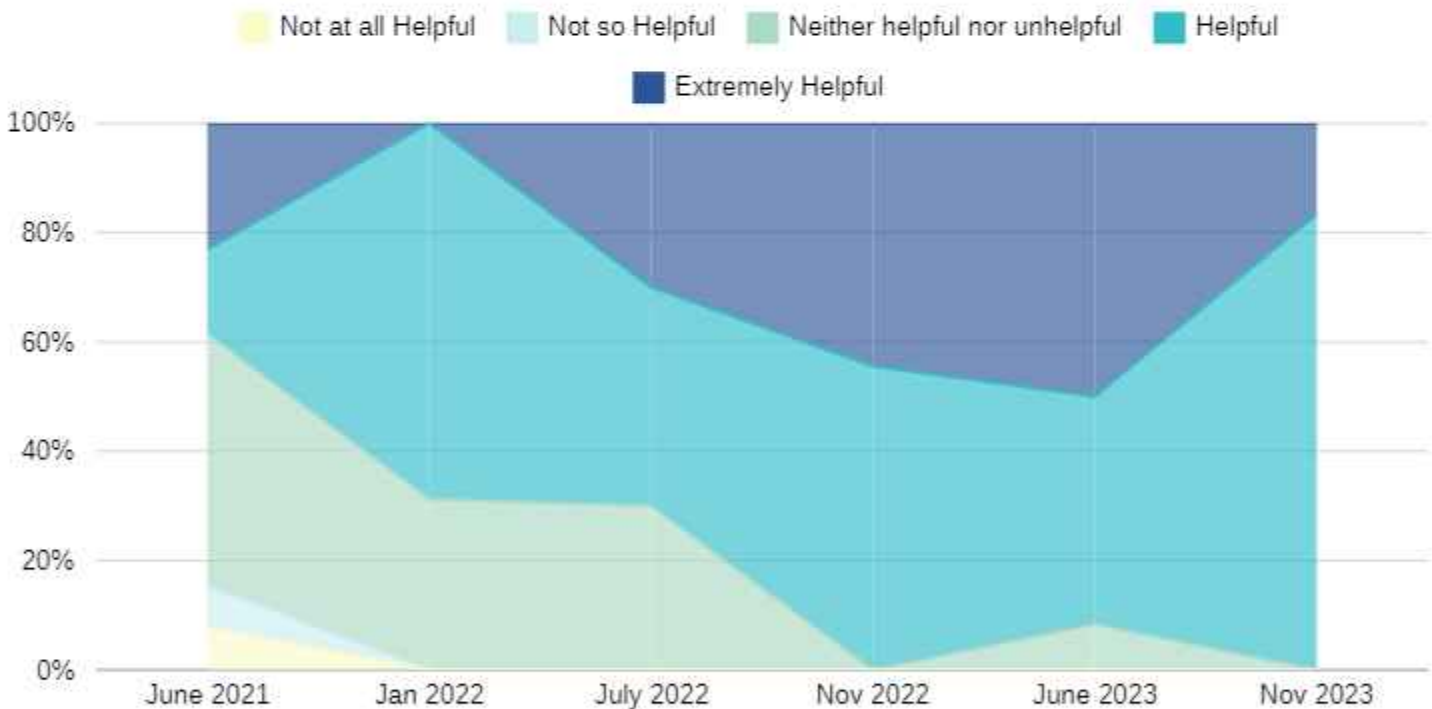


There is a consistent increase in innovators' overall satisfaction with the TA Unit services, with the current satisfaction score at 8.62, up from 8.43 in the last round. The hub not only focuses on providing TAs but also actively engages with innovators, supporting them through various requests, document reviews, partner introductions. Workshops were also organized to cover various topics such as voluntary carbon market, environmental management, and gender lens investment. TA Unit also works closely with the Country Coordinators who serve as a bridge between innovators and all units of the hub. Additionally, innovators increasingly find it convenient to reach out to the TA Unit with specific needs and TA requests. We have also noticed that annual and regional convenings are opportunities for new TA support identification for the hubs and innovators.

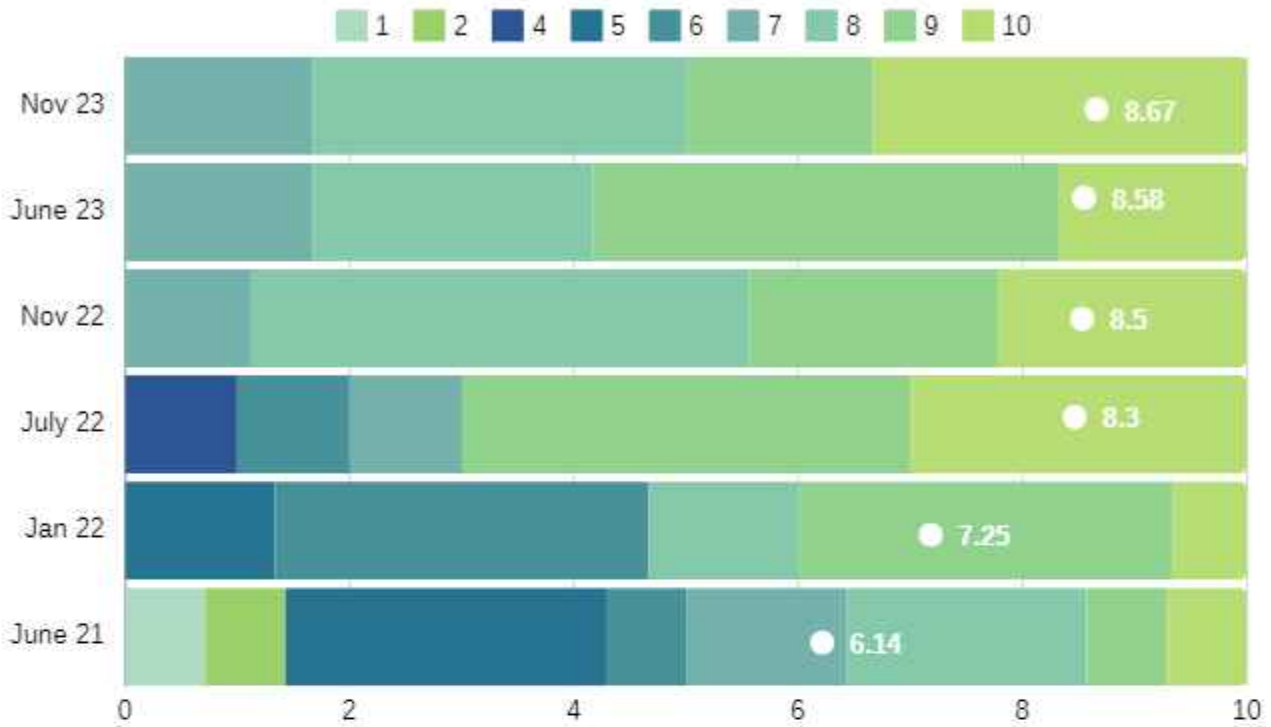
Innovators' feedback on the long-term impact fluctuated between "very positive" and "positive" over the months. A balanced approach is crucial to align with TA requirements and expectations, given the differing expectations between mature and early-stage innovators. As the hub progresses towards more nuanced and mature TAs, the long-term impact of these interventions is expected to be higher, with innovators realizing benefits over an extended time. "WE4F has significantly expanded our network by connecting us with new business associates," shared Adaptive Symbiotic Technologies (India) about their marketing and sales TA. Egreen experienced a substantial increase in biogas purifying product sales, achieving a growth of approximately 10,000 units through the implementation of a successful marketing plan. Khmer Green Charcoal, which received a PR and communications TA, now independently conducts its PR activities. Oorja, benefiting from gender mainstreaming TA, tripled the proportion of women in their customer base from 5% to 15% and integrated new work packages in their advisory service.

INVESTMENT FACILITATION

How helpful has the investment readiness team's support been in moving your organization toward your goal of raising investment?



On a scale of 1-10, how satisfied are you with the S/SEA Hub's Investment Readiness Team (1-Extremely Dissatisfied to 10-Extremely Satisfied)



Compared to previous surveys conducted in the previous QoS rounds, the S/SEA RIH's results for the Brokering Unit have remained at the same high level of satisfaction, with a score of 8.67. It is important to note that many innovators who received the Brokering Unit support are ready to raise investment. For those who are not investor-ready yet, a complementary approach between TA Unit and Brokering Unit will be used to provide IR support.

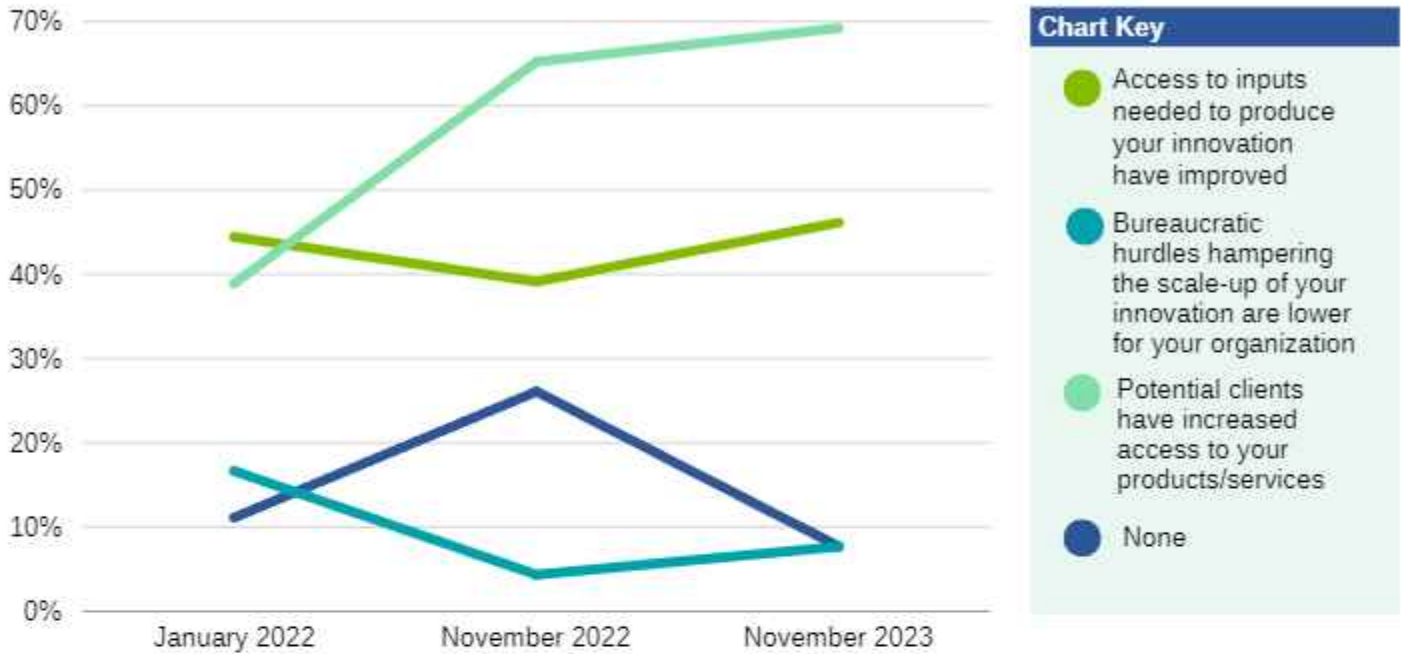
Over the consecutive halves, the Brokering Unit attentively considered nuanced feedback from innovators, resulting in improved scoring from November 2022 to December 2023. Throughout the year, the team has focused on continuous improvements, particularly in the following areas: enhancing communication with innovators, promoting IR support for innovators with smaller funding requirements, developing customized target investor outreach lists, and creating a comprehensive, sortable investor database. The team has also collaborated with the RIH Manager to identify opportunities to utilize matching capital grant funding on an ad-hoc basis.

Over the program period, there has been a substantial increase in investor readiness among innovators. The Brokering Unit noted a significant improvement in the knowledge of innovators and their understanding of the fundraising process for select cohort companies and across the entire hub. The collaboration between the TAU's IR support and other units has contributed to positive outcomes, empowering innovators to plan for future fundraisers.

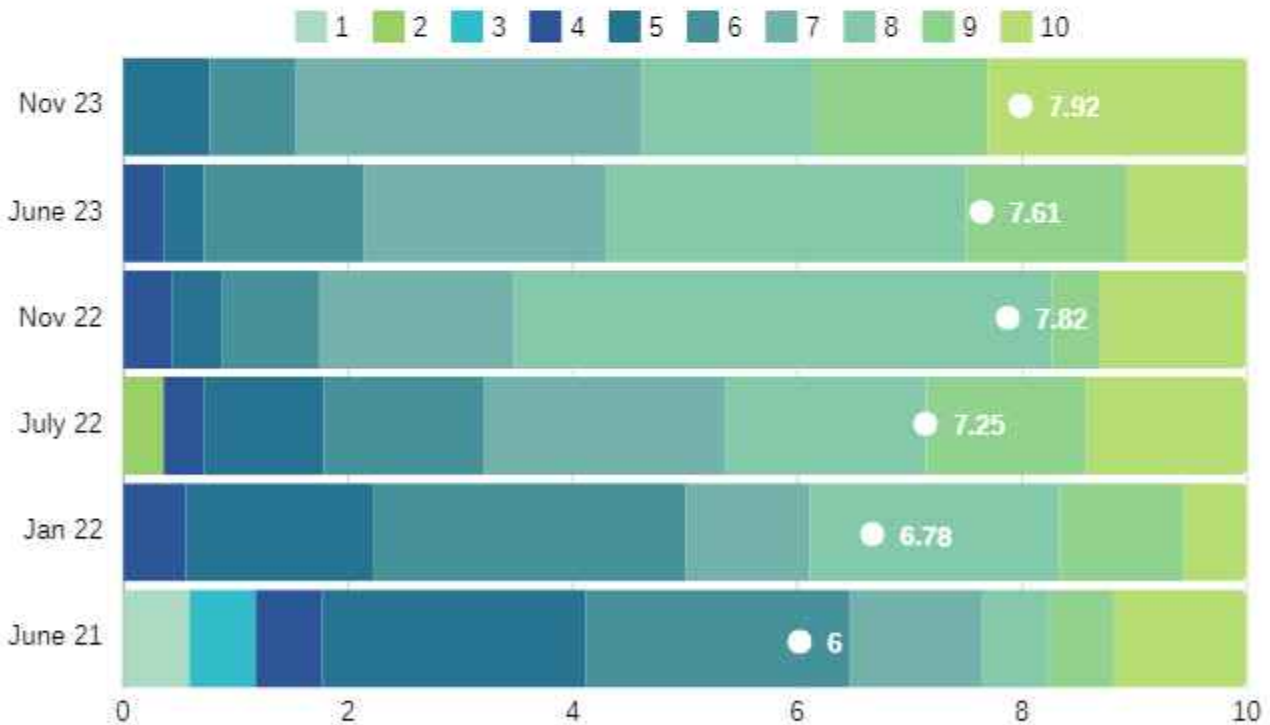


LEGAL, POLICY, AND REGULATORY SUPPORT

Since joining WE4F, which of the following have occurred? Select all that apply.



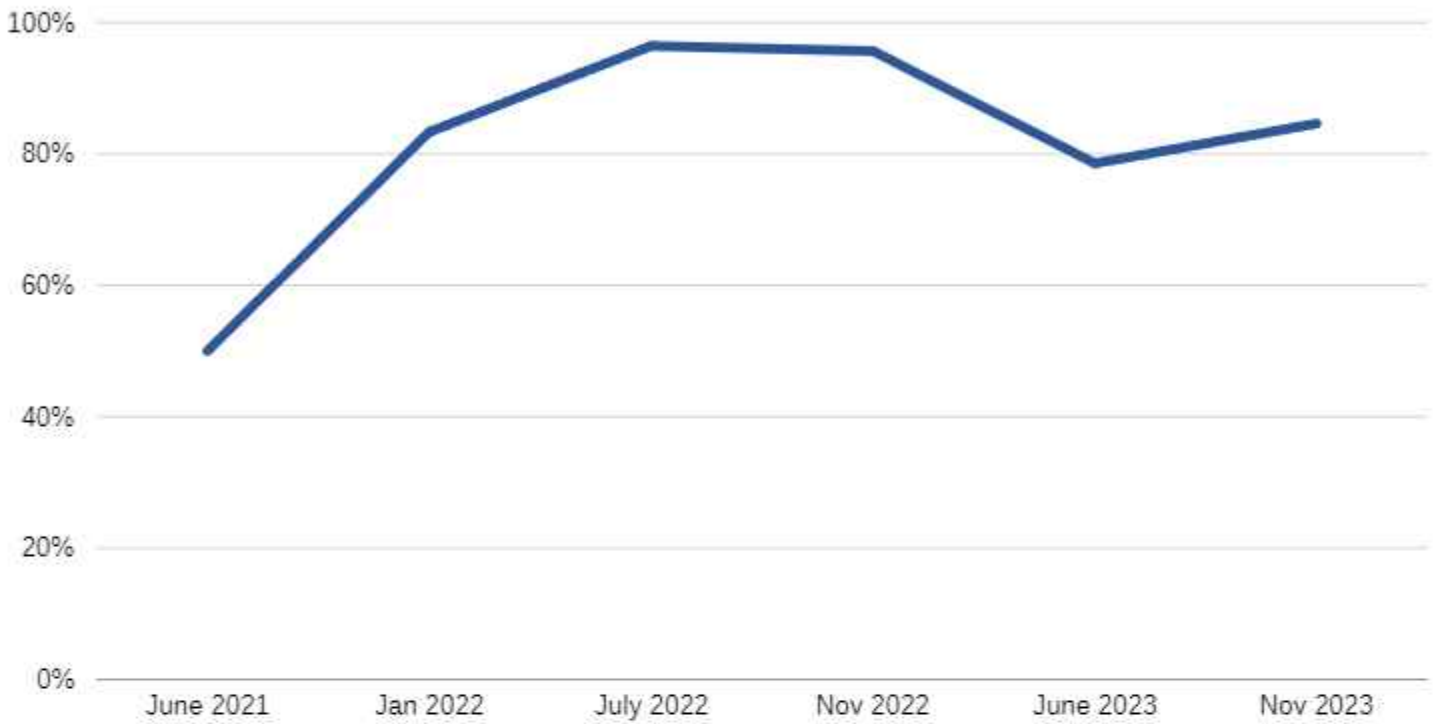
On a scale of 1-10, how satisfied are you with the S/SEA Hub's Enabling Environment Unit (1-Extremely Dissatisfied to 10-Extremely Satisfied)



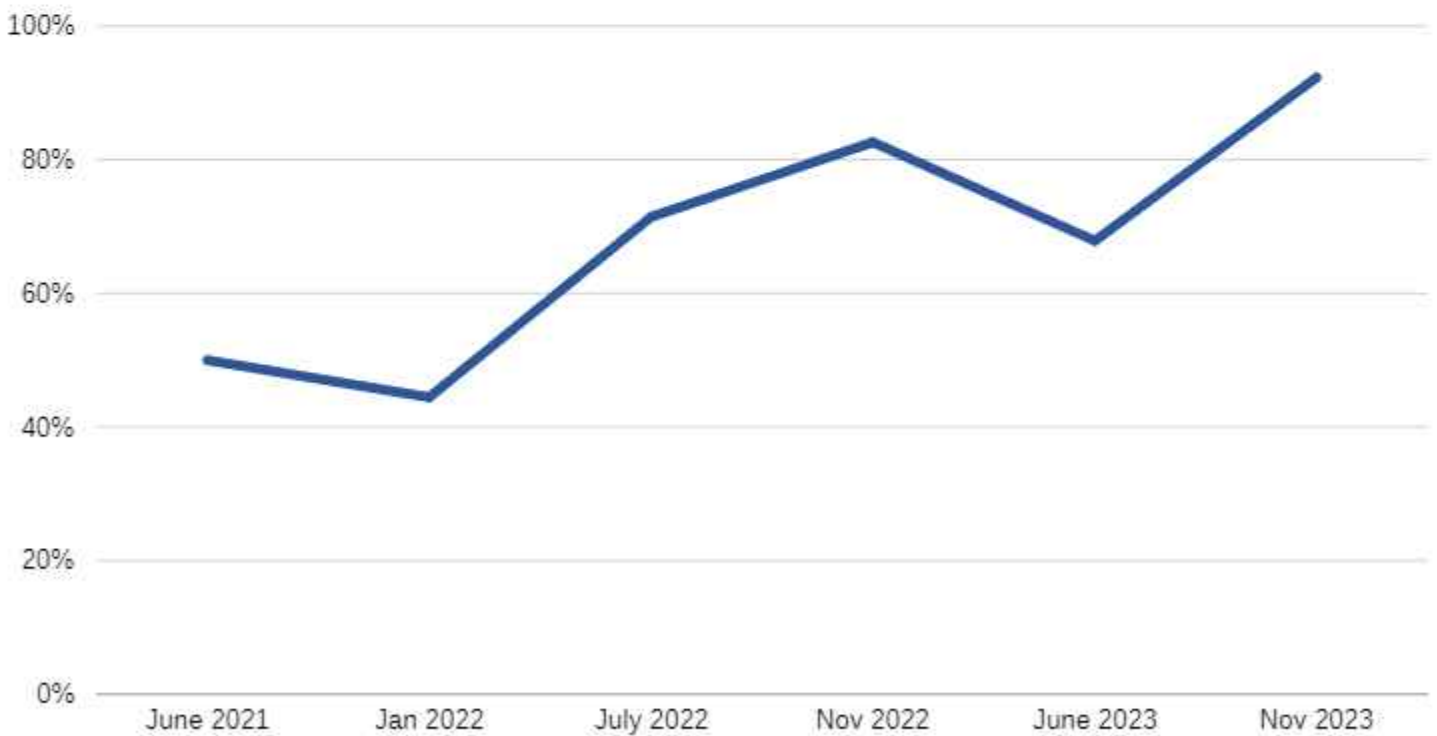
Though there was a slight dip in the results of the June 2023 QoS when the EEU lead position was discontinued, EEU's satisfaction rating has consistently risen since 2021. In December 2023, the hub achieved a 7.92 out of 10 satisfaction rating, marking the highest rating ever. This achievement stems from the hub's close collaboration with innovators, which is facilitated by Country Coordinators and stakeholder engagements integrated within TA assignments. This collaboration addresses EE needs through targeted TA and ad hoc support. Noteworthy efforts include connecting innovators with financial institutions and community organizations for potential partnerships. Country Coordinators have also addressed policy challenges through TAs, arranging discussions with relevant ministries and departments. For instance, in Vietnam, collaborations were established with the Department of Agriculture and Rural Development, Department of Scientific and Technology, and the Vietnam Farmers Union, resulting in MOUs to promote Egreen products.

KNOWLEDGE SHARING AND MONITORING AND EVALUATION

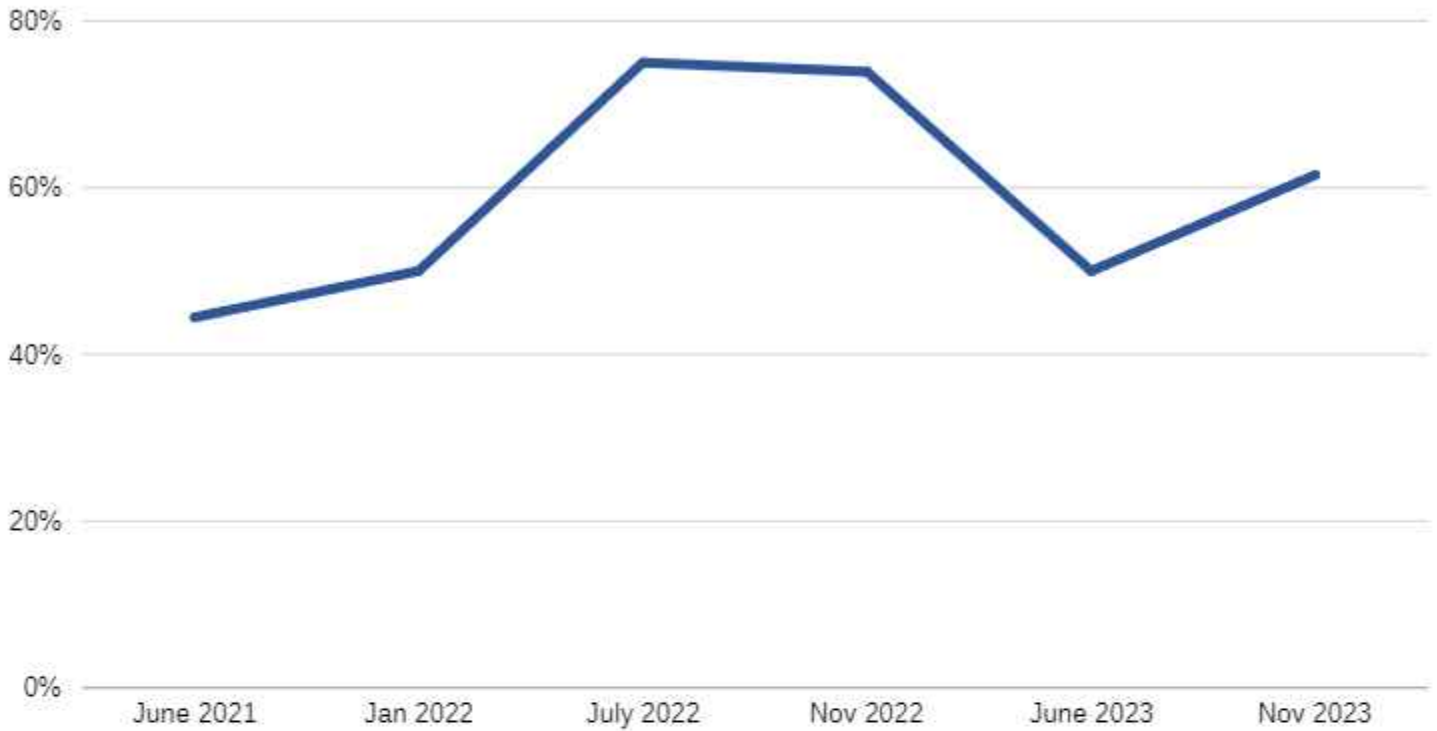
Has the engagement with WE4F led to an increase in knowledge about gender integration?



Has the engagement with WE4F led to an increase in knowledge about environmental sustainability, including climate resilience and biodiversity?



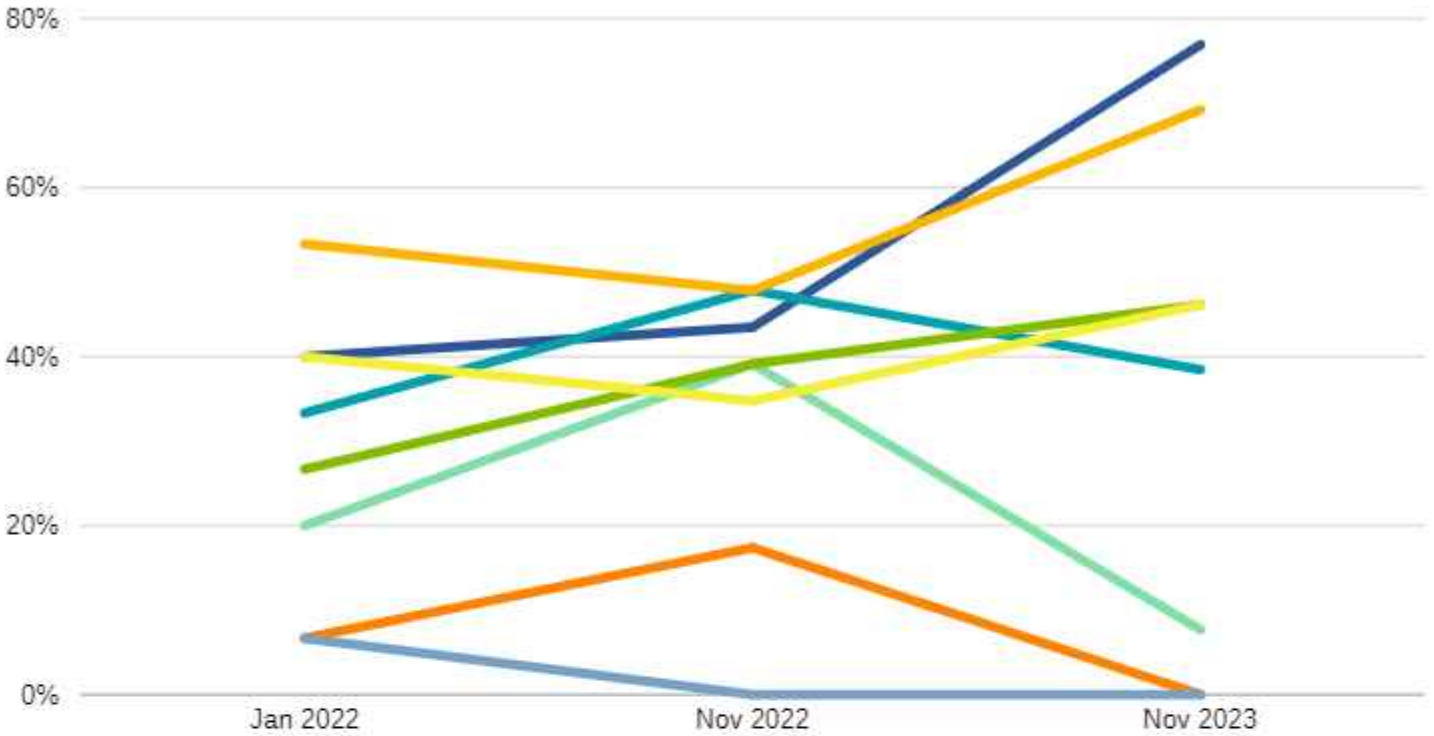
Has the engagement with WE4F led to an increase in knowledge about Base of the Pyramid (BOP)?



The S/SEA innovators have shown increased knowledge about gender integration, BoP integration, and environmental sustainability. The hub's efforts resulted in a consistent rise in interest in WE4F themes during successive QoSs, reflecting growing engagement. Addressing previous one-way communication challenges, the hub has enhanced innovators' involvement in events, networking sessions, and peer learning, fostering active participation and a deeper understanding. Innovators now actively connect, share, and analyze, showcasing a culture of continual learning.



Does M&E data collection for WE4F support any of the following aspects of your business/organization?



In the past year, S/SEA innovators demonstrated an expanded understanding of how to utilize MEL data, integrating it into various aspects of their operations. To help innovators further leverage MEL data and accurately report results, the hub provided support through MEL TAs and one-on-one calls. Over 76% of innovators now utilize customer data for customer analysis, while 69% incorporate MEL data into decision-making processes, reflecting increased utilization. Additionally, a greater proportion of innovators found target setting and indicator selection processes “very easy” or “easy.” Challenges, however, persist in the data collection process, with over half of the innovators finding it “neither easy nor difficult” or “difficult.” In the upcoming year, the hub plans to extend MEL TAs to incoming OCFI innovators and conduct third-party external evaluations for additional innovators to assess their social and environmental impact.

Chart Key

- Customer analysis
- Fundraising
- Managing partners
- Publicizing impact
- Sales/marketing
- Strategic decision-making
- Don't use WE4F data outside of reporting
- Other

Overall, innovators express satisfaction with the support provided by the hub. They appreciate the guidance and encouragement from the hub team, highlighting the program’s positive impact on their business expansion, IR, ESG integration and impact monitoring. Innovators express eagerness to continue participating in future opportunities, citing the program’s value in knowledge sharing and peer-to-peer learning. Their feedback underscores the importance of ongoing support and investment assistance from the hub, reflecting a strong commitment to collaboration and mutual success.



CHALLENGES AND SOLUTIONS

Challenges	Solutions
Open Call for Innovations Outreach and Recruitment	
<p>The OCFI encountered challenges in attracting eligible, mature companies to apply. Additionally, securing strong applications from the six priority countries where the hub has limited or no representatives — Bhutan, Laos, Thailand, Philippines, Malaysia, and Sri Lanka — has proven difficult.</p>	<p>The hub undertook extensive outreach efforts to engage with relevant accelerators and networks supporting agri-tech innovators, promoting OCFI news through social media and hosting Q&A webinars to attract potential applicants. Furthermore, proactive efforts included engagement with individual companies to encourage their application. OCFI applications have been translated into local languages, including Thai, Vietnamese, Indonesian Bahasa, and Nepali, to enhance outreach.</p>
<p>Delays in receiving OCFI applications within the stipulated deadline have been a notable issue.</p>	<p>To ensure that the hub receives submissions in a timely manner, the hub ensures ongoing communication with applicants, sending reminder emails for the concept note and full application submissions before the deadline. In cases where applicants miss the deadline, follow-up emails are sent to provide an opportunity to submit within the next evaluation round.</p>
TA-only innovators Engagement and MEL requirements	
<p>In general, TA-only innovators often exhibit lower responsiveness in providing data, primarily due to limited human resources. The absence of a POC and lower motivation, due to a lack of a grant, contributes to delays in responding to requests from the hub. As a result, their performance against the hub's MEL targets tends to be suboptimal, influenced by challenges in scaling up their business operations and being unable to put resources for data collection.</p>	<p>The hub ensured consistent communication with the POC to assess their need for support. The hub shared MEL training resources with innovators unfamiliar with the MEL process. The hub also monitored performance through bi-monthly calls, evaluating their progress and assessing interest in receiving TA support for business expansion. This helped ensure the scalability of the innovators despite the lack of a grant while the positive relationship increased innovators' willingness to provide MEL data to the hub.</p>
Hub's Operation	
<p>EE activities continue to remain relevant for innovators despite the absence of the Unit Lead while implementing policy advocacy and partnership development initiatives with uncooperative government and/or without in-country staff can be difficult. EE activities continue to remain relevant for innovators despite absence of a lead; pivoting to other models has become important.</p>	<p>The EE activities are now managed collaboratively by the RIH Manager, Country Coordinators, and Tier 2 Vendors, as required. The hub will also partner with local entities such as think tanks, NGOs, and academia to co-create and co-implement the advocacy strategies. With a better COVID-19 situation, the hub representative will also visit the local government and partners to strengthen relationships.</p>
<p>As the program progresses, the complexity of TAs has increased, posing challenges in identifying the right Tier 2 vendors and effectively managing and executing the TA.</p>	<p>WE4F is implementing strategies to identify Tier 2 TAs early in the process, allowing for proactive planning and resource allocation to effectively address the complexity of these TAs. In some cases, TAs are procured for multiple innovators with similar needs to accelerate the procurement process and meet innovator needs. Hub teams are focused on gap analysis to scope the TAs better and ensure overall quality of the deliverables from service providers.</p>

Ensuring quality and responsiveness of the external evaluators, especially across multiple countries and innovators, has been a challenge.

WE4F will coordinate with the Secretariat to prioritize conducting external evaluation for fewer innovators and assign only one country for each vendor. This will improve the quality of the deliverables due to in-depth knowledge developed for the innovators in those countries.

LOOKING FORWARD

With the extensive outreach efforts, the hub expects to onboard at least eight OCFI innovators within the first half of 2024. Up to \$200,000 USD in a matching grant per grantee and/or TAs will be provided. To ensure continuous IR and transaction advisory support, local subcontractors, with optimal knowledge and experience of local investment context, will be onboarded for these tasks. The hub will also emphasize delivering TAs through local service providers to ensure localized solutions provided to the innovators. This will also ensure quality of deliverables as the hub expands its cohort to onboard more innovators through the OCFI process.

In the upcoming period, innovators are shifting their focus towards organic farming and certification, carbon credits, gender lens investment, and environmental management systems. Communication and IR remain critical areas where innovators seek support. Additionally, in 2024, innovators are looking to continue activities that focus on: market expansion, institutional building, investment/fund raising, and partnership development. To continue building relevant knowledge and skills, the hub will host its last Regional Convening in Indonesia in May. A series of workshops and unconferences will be organized during the convening to build capacity and foster connections among innovators.

As 2024 represents the last full year of the program, the hub will attend and participate in events to disseminate lessons learned, failures, and recommendations for future programming. Key potential events include Decarbonize Thailand Symposium, Seventh ASEAN Inclusive Business Summit, Asia Clean Energy Forum, Solar and Storage Live, and Sankalp Global Summit.

Lastly, the hub will focus on preparing for the program closing, emphasizing activities such as developing a sustainability plan and identification, selection, and engagement with regional partners who can provide ongoing support to the innovators post the WE4F program.

RECOMMENDATIONS FOR POLICY AND PRIORITY DIALOGUE

Key themes that should be prioritized include facilitating access to the carbon credit market, fostering government policies that promote climate-smart technologies, implementing supportive measures for EUF, especially these being inclusive of women, and promoting platforms for partnership connections throughout the value chain.

One of the key challenges is the absence of sufficient policy measures supporting smart technologies/innovations for smallholder farmers (including those related to EUF and import duties). In addition, facilitating connections with other private sectors at both country and regional levels is crucial to supporting innovator's expansion. Engaging with external stakeholders from both the private and public sectors is vital to bolster advocacy activities for policy measures that facilitate the adoption of smart technologies and innovations among men and women smallholders.

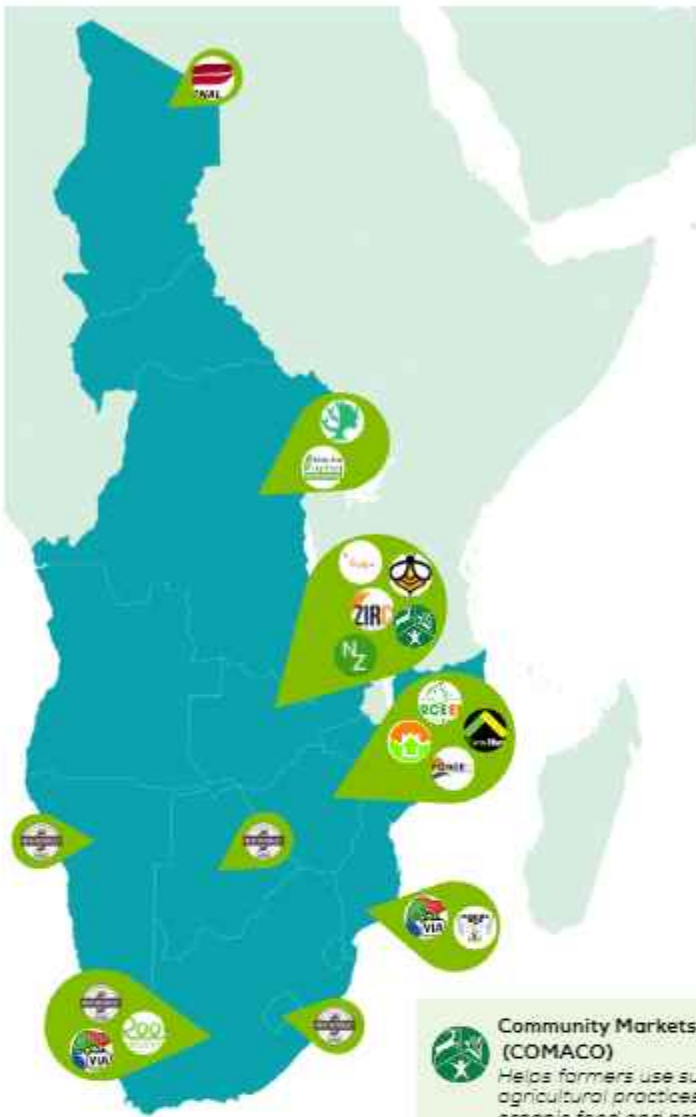
Promoting the adoption of sustainable agri-technology and certification/compliance of all innovators will be the hub's priorities in 2024. To ensure successful implementation, collaboration and buy-in at a government level will be crucial – in addition to private agricultural companies who can contribute to support the adoption or pay the premium for sustainable growth products. Additionally, forming strategic alliances with key networks or programs not only builds new contacts for the hub but also benefits innovators, facilitating their business scale-up.



SOUTHERN AND CENTRAL AFRICA



MAP OF SOUTHERN AND CENTRAL AFRICA INNOVATORS



Community Markets for Conservation (COMACO)

Helps farmers use sustainable agricultural practices to produce organic food and protect biodiversity



FarmHut Africa

Provides a digital marketplace & logistic service to farmers, helping reduce their energy consumption



KivuGreen

Provides farmers with weather & extension services through their digital platform



Lanforce Energy

Sells & provides access to biodigesters through a PAYGO system



Meat Naturally

Linking smallholder farmers & commercial meat buyers



Nature's Nectar

Helps farmers use sustainable agricultural practices to produce honey in a manner that protects biodiversity



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



Ndkay

Provides farmers with solar cold rooms that extend product shelf life and reduce post-harvest losses



Phoenix Seeds Limitada

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



Powerlive

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



Reel Gardening

Biodegradable seed tape



Rural Integrated Engineering

Provides irrigation products & services through their Virtual Irrigation Academy



Solar Village

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



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 PAYGO business model

2023 SUMMARY

In 2023, the S/CA RIH onboarded six new innovators from its second CFI and two through its newly launched OCFI, bringing its total to 17. The two newly onboarded OCFI innovators were legacy innovators who transitioned to grantees through the OCFI process. All S/CA innovators received varying forms of support from the hub in 2023. The majority of this was through grants, TA, and participation in the program's convenings. Only one grantee could not attend the Regional Convening, but the hub supported their virtual participation.

So far, innovators have exceeded three key indicators:

1. 21% of innovators that have successfully marketed their innovations with profits, over 2.5 times the initial target
2. 278,000 tons of CO₂e have been saved, exceeding the target by 38,000 tons
3. 18 million liters of water have been saved, surpassing the target by 6 million liters

Two indicators are on track to exceed life of program targets, with current results showing:

1. 2.65 million kWh of energy saved
2. \$5 million of investment mobilized

There are currently three indicators that are off track, but have had progress toward the LOP targets:

3. 485,000 end-users impacted
4. 149,000 have experienced increased incomes
5. 207,000 tons of food grown











The current result for the number of end-users impacted presents a unique situation. The high-level target may be off track, the subset targets for number of women end-users and number of BoP end-users have a different story. At 235,000 women end-users, the S/CA RIH is set to meet the associated target, while the 365,000 BoP end-users exceed the LOP target. This is due to the S/CA RIH working mostly with innovators who specifically target women and BoP end-users.

Two key indicators that are low are: (1) the share of innovators monitoring water or biodiversity and (2) the amount of food processed. To improve this in 2024, the hub will take several actions. The hub will conduct a comprehensive review of the data collection tools used by current innovators. This is to ensure that they are not under-reporting and are indeed capturing the accurate amount of food processed from its innovators. Additionally, the hub will develop and provide tools for innovators to monitor their water usage and evaluate their impact on biodiversity. Finally, the hub will organize capacity-building sessions focused on biodiversity and water savings. These sessions will equip innovators with the knowledge and skills to better monitor and manage their impact on these areas.

SDG CONTRIBUTION

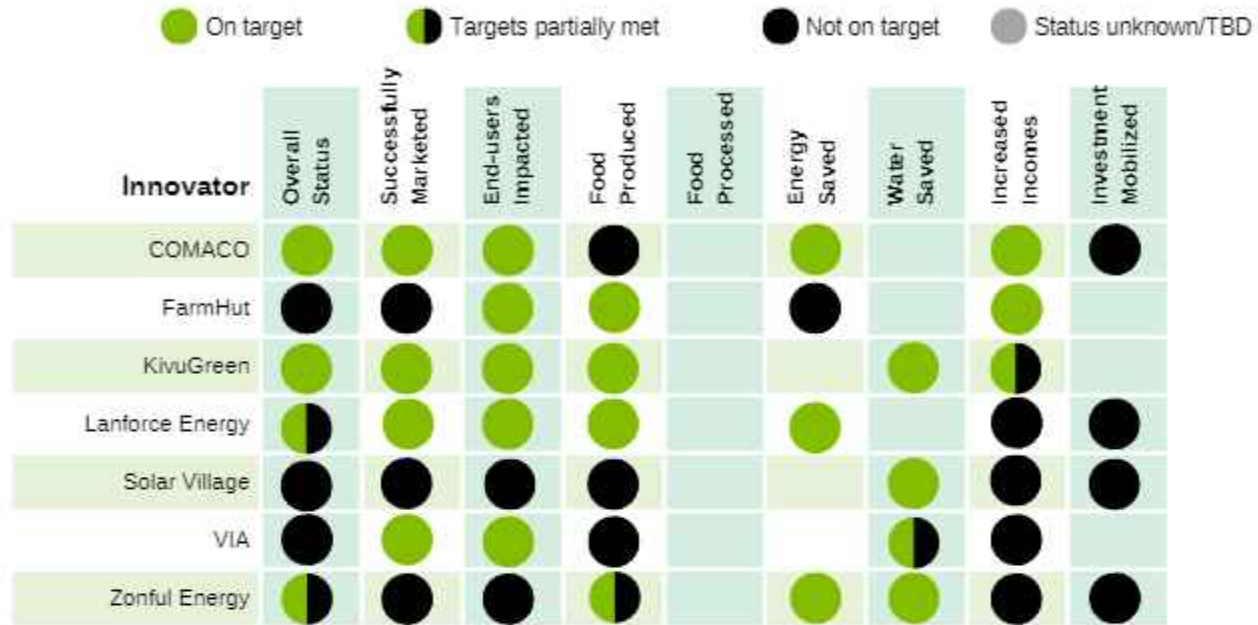


KEY PERFORMANCE INDICATORS

Key Performance Indicator	Life of Program Target (2020-2025)	Total Current Results (2020-2023)	Current Status
 Share of supported innovators that successfully marketed their innovations with profit	8%, of which 25% are led by women	21%	Exceeded
 Number of smallholder farmers and other end-users using WE4F innovations	1 million end-users, 25% are women	485,000	Off Track
	250,000 women end-users	235,000	On Track
	250,000 BOP end-users	365,000	Exceeded
	End-users w/ climate adaptation & mitigation innovations	450,000	
 Total mass of food produced as a result of WE4F innovations	1.3 million tons	207,000 tons	Off Track
 Total mass of food produced as a result of WE4F innovations	475,000 tons	48 tons	Off Track
 Total energy saved in the food value chain as a result of the use of WE4F innovations	3.2 million kWh	2.6 million	On Track
 Total volume of water consumption reduction in the food value chain as a result of WE4F innovations	12 million liters	18 million liters	Exceeded
 Number of smallholder farmers and other end-users that experience an increase in income	250,000 end-users, 25% are women	149,000	Off Track
	62,500 women end-users	71,000	Exceeded
 Share of innovators & other stakeholders monitoring the protection of water or biodiversity	80%	18.8%	Off Track
	Monitoring water only	6.3%	
	Monitoring biodiversity only	0%	
	Monitoring water & biodiversity	12.5%	
 Value of investment in US Dollars that WE4F innovators have mobilized from external sources	\$7.5 million	\$5 million	On Track
 Total of GHG emissions saved by WE4F innovations	240,000 tons of CO2e	278,000 tons	Exceeded
	Innovators with climate-mitigation innovations	25%	

INNOVATOR SCALING AND MATURATION

2022 REGIONAL COHORT MILESTONE TRACKER

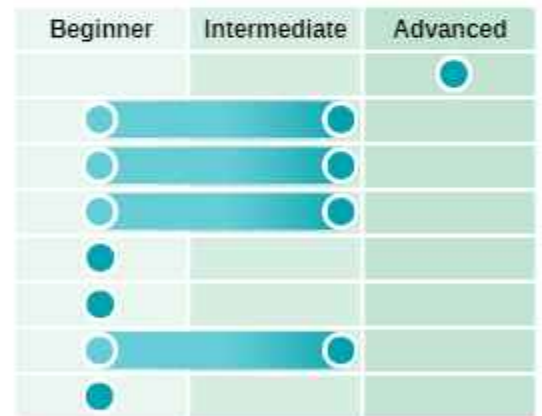


2022 REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment

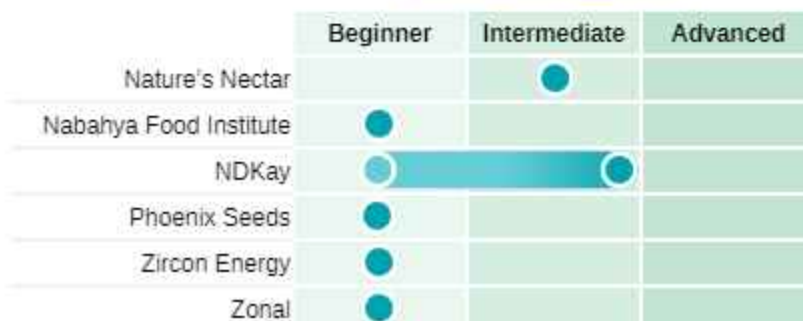


BoP Assessment

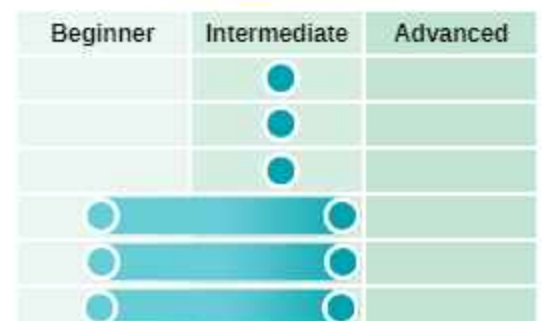


2023 REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment

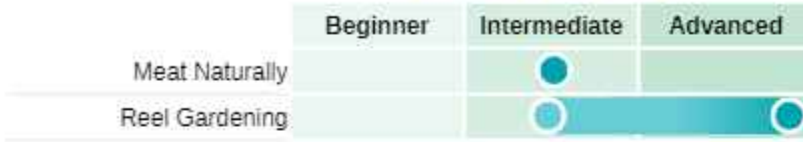


BoP Assessment



2023 OCFI REGIONAL COHORT THEMATIC ASSESSMENTS

Gender Assessment



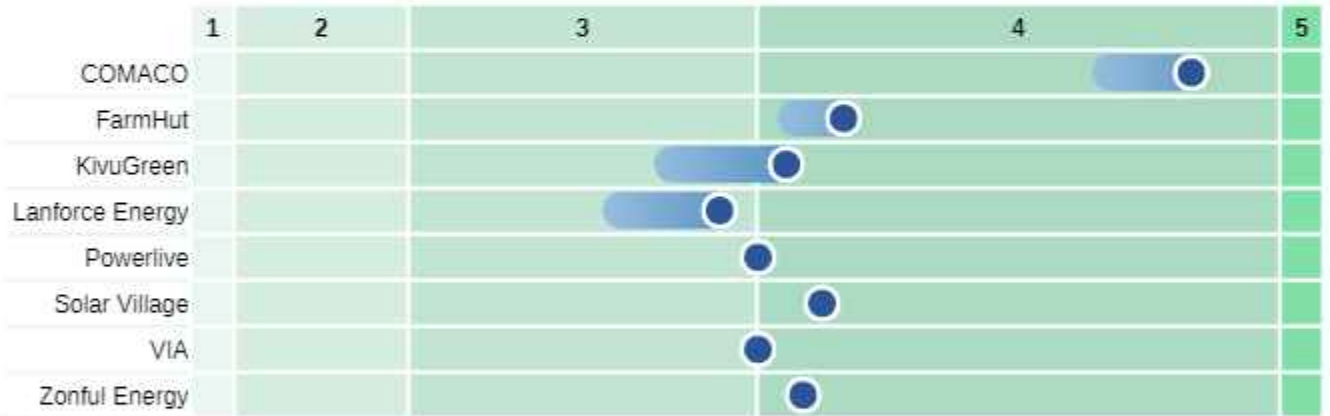
BoP Assessment



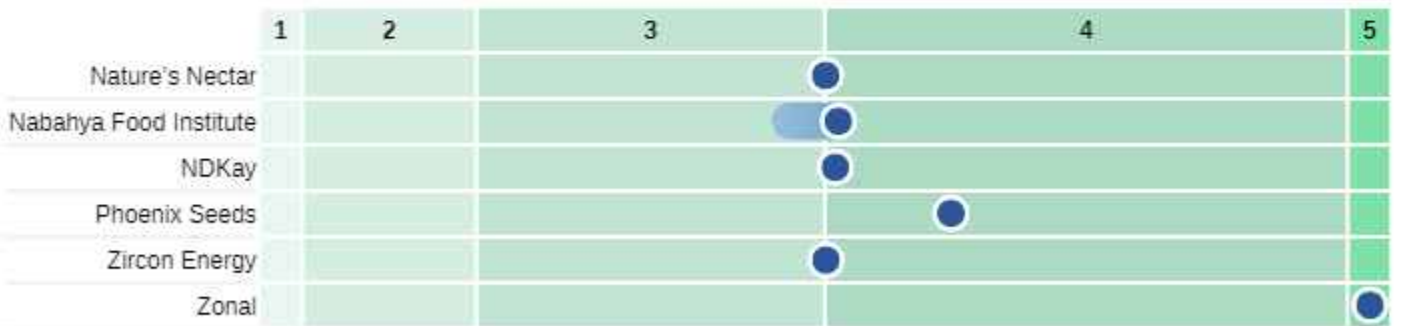
CUSTOMER GROWTH OVER TIME

Stages	Number of End-users
1	0 - 99 end-users
2	100 - 999 end-users
3	1,000 - 9,999 end-users
4	10,000 - 999,999 end-users
5	1,000,000+ end-users

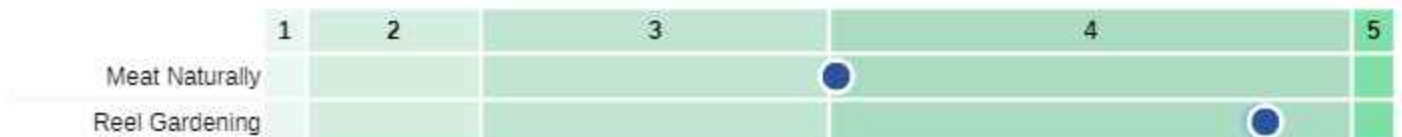
2022 REGIONAL COHORT



2023 REGIONAL COHORT



2023 OCFI COHORT



Excluded from the above charts due to lack of data and/or their status as inactive alumni: Sylva Food Solutions.

INNOVATOR UPDATES

2022 REGIONAL COHORT



Community Markets for Conservation (COMACO) received support to develop an energy-saving calculator that helps the innovator understand its energy needs and implement strategies to conserve and utilize alternative energy sources. As of 2023, they began testing the tool to refine it. The innovator signed several agreements with the Zambian Ministry of Green Economy and Environment for extended support to plant 5 million gliricidia trees countrywide, combating deforestation and supporting climate-smart agriculture. COMACO was recognized by the Zambia Environmental Agency for improved environmental management practices. In the coming year, the S/CA hub will support the innovator in transitioning 65 cooperatives into self-sustained federations.



FarmHut received support to integrate gender-inclusive messaging through a toolkit developed by the hub. The innovator established partnerships with the Adventist Development Relief Agency and the Zimbabwe Farmers Union who work with smallholder farmers and collaborate with them on different events. These partnerships will increase the innovator's reach to a greater number of farmers and end-users. With the help of the S/CA RIH, Farmhut successfully completed their company's registration in Zambia. Now, they are focusing on establishing their core services in logistics and information, as well as their new financial solutions for farmers. In the year ahead, the hub will assist FarmHut in connecting with local farmer organizations and partners and raising funds.



Kivu Green received TA to develop their EMMP and gender lens IR. Kivu Green signed MOUs with the United Nations Development Programme and Syndicat de défense des intérêts paysans (SYDIP) to improve their EUF mechanisms, making their solution affordable for farmers. The innovator also signed MOUs with the Food and Agriculture Organization (FAO) as an incubator to train smallholder farmers on digital agriculture and received high-capacity information technology equipment from FAO to continue its efforts to digitize the Democratic Republic of the Congo (DRC)'s agricultural sector. In the year ahead Kivu Green plans to integrate voice services into its platform to help illiterate farmers.



Lanforce Energy received various TA instances (i.e., gender-inclusive partnerships, financial models, and business expansion into Mozambique) with an overall objective of reaching more women end-users. The innovator formed two key partnerships with Upya Technologies and Sistema Bio to improve affordability for BoP customers and to service more customers. Lanforce Energy's CEO won numerous awards in 2023 including the African Women Awards - Most Influential Female in Renewable Energy, MEGA FEST Awards - Outstanding Woman CEO of the Year, Platinum Winner, Global Well Respected CEOs Awards - Well-Respected CEO in the Energy Sector. In the coming year, the innovator plans to expand into Mozambique.



Powerlive received TA to build a financial model and investment facilitation which resulted in them securing funds from Social Investment Managers and Advisors (SIMA). The partnership with SIMA will enable the innovator to expand their operations in Zimbabwe. The funding was made possible through the collaboration between Powerlive and the Energy Access Relief Fund, administered through SIMA. The innovator is utilizing the funding to reach out to BoP communities with sustainable energy solutions. Powerlive was the recipient of multiple awards including, the Gold Winner Outstanding Woman of Impact (Zim CEOs Network), Top Solar Company - Silver Winner (Agro & Renewable Energy Awards), and Gold Woman of Impact in the Energy Industry. In 2024, Powerlive plans to hire more community-based agents and distributors across the country.



Solar Village received support from the ESG Advisor to understand the environmental impacts of their project for improved environmental management and biodiversity preservation in their catchment area. With assistance from the Brokering Unit, Solar Village secured funding worth \$2 million USD from Beyond the Grid to improve farming activities for small-scale farmers. In 2023, Solar Village formalized its collaboration with a fellow innovator, COMACO, which allowed them to gain access to a network of farmers and cooperatives for further distribution of their micron sprayers.



Rural Integrated Engineering/Virtual Irrigation Academy (VIA) received TA to develop their mobile app which captures chameleon card data to help track irrigation water use efficiency. It also helps the innovator stay up to date with farmers' activities and growth during the adoption of the chameleon device. The innovator has conducted and finished assessments in Mozambique and 200 chameleon devices have been distributed. The innovator was a winner in the UpLink - World Economic Forum Smarter Climate Farmers Challenge. The innovator in Australia also won the Inclusion Award under the Water Changemakers Innovation Awards at COP28. In the coming year, VIA will continue working with the hub to further develop their mobile application that helps smallholder farmers with smartphones but no laptops access information about their crop watering regimes.



Zonful Energy received TA to develop a financial model which enabled the innovator to develop and adopt financial management and accounting tools for improved business operation efficiencies. In the past year, Zonful diversified its operations, adding biogas solutions and a pay-as-you-go financing solution for the systems. They also launched a subsidiary social enterprise advocating for sustainable agriculture. The innovator was ranked second in Solareye International's list of Top 10 Solar Companies in Zimbabwe. In the year ahead, Zonful plans to complete a non-compete and non-disclosure policy with assistance from the hub.

2023 REGIONAL COHORT



Nature's Nectar received market research TA support to help the innovator identify new opportunities to sell its honey in Europe and the United States. The innovator currently exports honey to South Africa through an off taker and is now exploring having their brand exported to South African stores directly. The innovator has benefited from the EE Unit work to broker engagements between the South African Department of Agriculture, Land Reform, and Rural Development and the Zambian Department of Veterinary Services to facilitate this. Nature's Nectar plans to harvest honey from over 2000 farmers and conduct agroforestry activities to increase the number of trees in the innovator's catchment areas.



Nabahya Food Institute (NFI) received TAs for gender lens IR, EMMP development, development of an energy and carbon saving calculator, and HR and talent management. Since joining the program in 2023, the innovator opened five new selling points for their briquettes, launched 10 farmer field schools, and signed MOUs with two briquette machine suppliers. NFI was awarded a grant from TerraFund for AFR100, through the project One Tree Planted, whose mission is to help with global reforestation. In the year ahead, NFI will continue to onboard cooperatives and implement strategies to start selling carbon credits.



NDKay received TA for investor readiness. With support from the hub, NDKay secured a credit facility from FNB Zambia that will see the innovator expand its operations to Tanzania. Additionally, the innovator received support from the EE Unit in their efforts to reach 65,000 farmers within the WE4F program for optimum utilization of their cold room innovation. NDKay signed an MOU with the Kafue Gorge Training Institute to offer on-the-ground training to future engineers and gain access to KGTI's network for future collaborations. The innovator also signed an MoU with Arusha Training Institute for a similar work arrangement and to gain access to the Tanzanian market. In 2024, NDKay will continue to recruit farmers for their solar cold rooms and train them on its operations and benefits.



Phoenix Seeds received TA for a market penetration strategy to export seed to Zimbabwe. This support will help expand the innovator's revenue and make the business eligible for cheaper credit lines in U.S. Dollars. As a result of the support from the hub, the innovator started distributing maize, sesame, and cowpea seeds across six provinces in Zimbabwe.



Zircon Energy received specialized support to understand their investment needs. This support will extend to 2024, as the innovator intends to receive external investments and the hub will assist them in reaching their IR goals. The innovator has received a suppliers list through the hub that will enable them to have engagements for potential partnerships across Southern Africa in efforts to ascertain the best possible supplier for solar water pumps that the innovator offers to its end-users.



Zonal has received TAs since joining the hub, including the development of an energy and carbon saving calculator, EMMP development, gender lens IR, HR, and talent management. The innovator signed MOUs with four women cooperatives for their Vital Fish project and an MOU with one fish supplier. Since signing the MOUs, Zonal has begun construction on multiple production sites. The innovator was awarded a grant from the Economic Community of West African States a project in collaboration with the Swiss Agency of Development and Cooperation SDC, the main objective is to train and support agro pastoral operators in family-type animal production through the production of species of dairy cows, small local processing of milk and the production of fodder for dairy cows in the Mayo-Kebbi East and Mayo-Kebbi West Provinces of Chad. In the year ahead Zonal will train the cooperatives on fish processing and increase production quantities at their sites.



2023 REGIONAL COHORT



Meat Naturally received TA on gender lens IR, which informed the business on how they can make improvements to increase their favorability for potential investors. The innovator received approval for their registration as part of Verra's carbon crediting program, VM0042 Methodology for Improved Land Management. This program finances activities that reduce and remove emissions, improve livelihoods, and protect nature. In the year ahead Meat Naturally will expand its grassland fire management and sheep shearing training to reach more communities.



Reel Gardening received TAs including, environmental monitoring plan support and a talent workshop providing HR function support. The innovator partnered with Anglo Platinum and Omnia to co-finance the distribution and support of household garden-in-a-box usage. Reel Gardening is growing its operations and revenue streams by expanding to Nigeria. So far, 100 households have been trained in the use of the innovation in the country. Reel Gardening's CEO was awarded the Veuve Clicquot Bold Woman Award. In the year ahead Reel Gardening plans to expand to Mozambique. The innovator is also designing a mobile banking solution with Nedbank that leverages agro-mobile hubs. The solution will make it easier for end-users to coordinate the selling of agricultural produce as well as bulk commodities for specific offtake markets. It will also build a strong credit profile for end-users thus unlocking debt financing.

DIGITIZATION IN SOUTHERN AND CENTRAL AFRICA

The S/CA RIH has three digital innovators, Kivu Green, Farmhut, and Virtual Irrigation Academy. Both Kivu Green and Farmhut use AI chatbots that provide farmers with weather and agricultural knowledge. The chatbots develop as farmers continue to engage with the platform. As a result, the chatbot responses are expected to improve.

Farmhut is already making use of the tool that the hub developed to calculate their carbon emissions. Now, they have managed to aggregate better the transportation of farmers' produce to the market.

Both Kivu Green and Farmhut received TA to develop gender and BoP strategy toolkits for their communication activities, specifically to increase women farmers' knowledge of farming. For Kivu Green, the innovator was advised to add voice functionality to their platform so illiterate farmers could access the information. It is available in seven local languages. Kivu Green formed partnerships that resulted in the innovator receiving high-capacity information technology equipment to continue its efforts to digitize the DRC agricultural sector.

Both agritech innovators have contributed to more than a third of the end-users' impact in the region and around half of these end-users experienced an increase in income and increased food production. The EUF mechanisms that these innovators use make their digital technology accessible to people at the base of the pyramid and these innovators are making great strides to ensure that their technology is inclusive through strategic partnerships.

Virtual Irrigation Academy is also taking steps to make their irrigation technology more inclusive. With the help of the hub, the innovator is developing a mobile application for their chameleon card data which will help farmers without laptops access information about their crop watering regimes. Farmers with smartphones will now be able to efficiently track irrigation water use. This will make their continued expansion into South Africa and Mozambique more inclusive. The innovator has partnered with the Department of Agriculture in South Africa and World Vision to make their technology affordable to farmers.

In the year ahead, these digitization innovators are looking to expand their businesses and form partnerships. They will also explore various investment opportunities to scale up. As they grow, the hub is assisting them to monitor the impact that they may have on the environment through environmental and social management systems (ESMS).

OPEN CALL FOR INNOVATIONS

In 2023, the S/CA hub completed two rounds of its OCFI. The first round of the call saw nearly 100 applications from mainly from the Central African Republic, South Africa, and Zambia. Of these applications, 13 moved on to the full application stage. Three innovators have since started the onboarding process at the end of 2023. In its second round, the hub received over 50 applications mainly from the DRC, Mozambique, Namibia, South Africa, and Zambia. Of these applications, 17 moved on to the full application stage. The hub is in the process of finalizing the onboarding process.



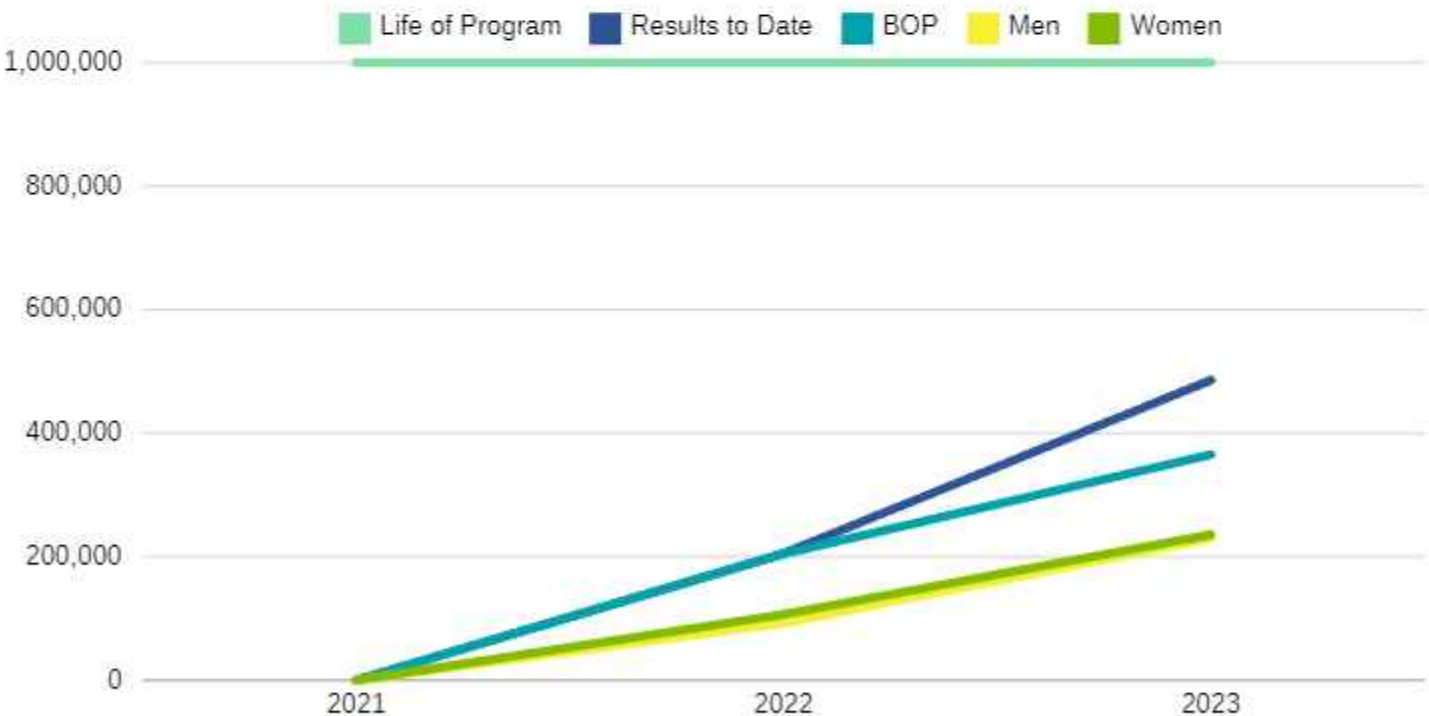
Country	Batch 1 - Full Application	Batch 2 - Full Application
Central African Republic	1	0
Democratic Republic of the Congo	1	6
Mozambique	0	2
Namibia	0	1
South Africa	1	1
Zambia	2	4
Zimbabwe	0	3
Total	5	17

Following the USAID Zimbabwe buy-in, the S/CA RIH developed a new Zimbabwe Biogas OCFI which exclusively targets biogas innovators in Zimbabwe. The RIH received 22 concept notes, of which seven companies completed their full applications and four were selected to be innovators.

RESULTS TO DATE

END-USERS IMPACTED

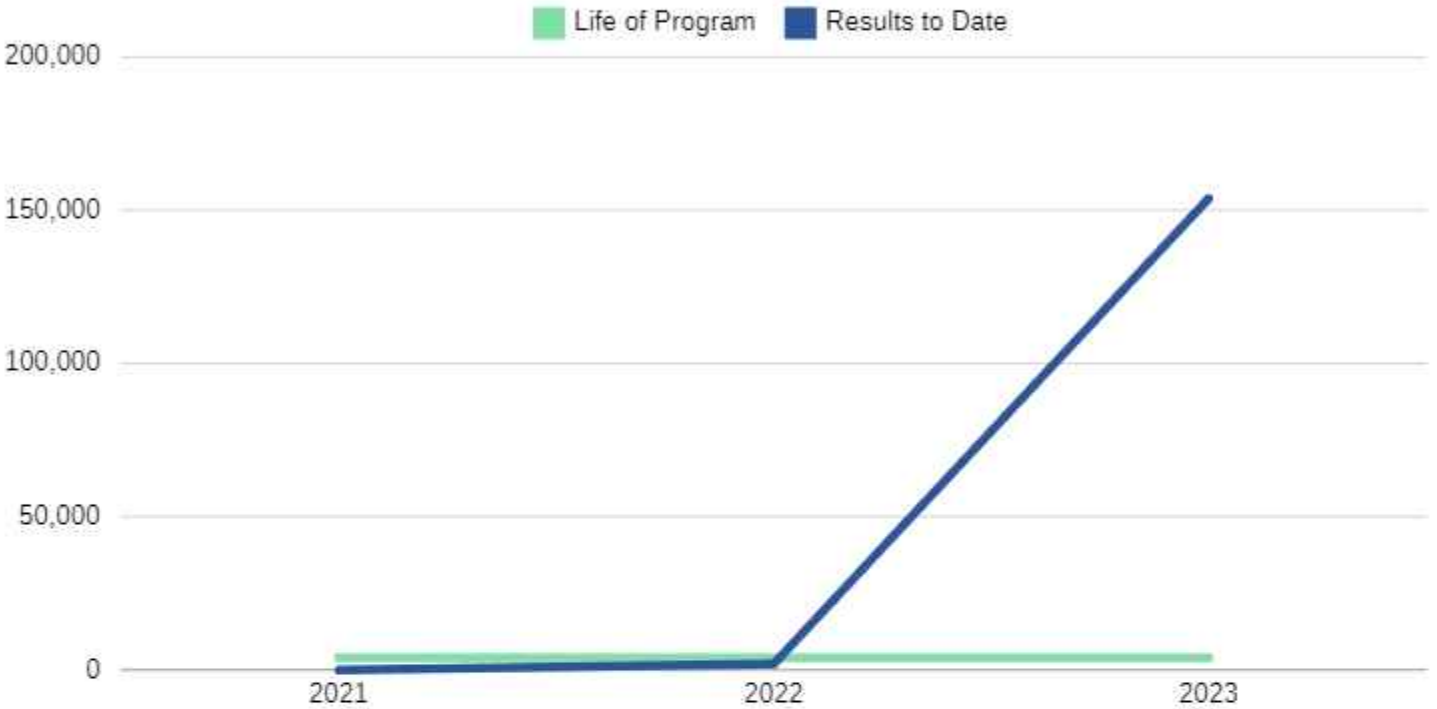
Number of WE4F End-Users



As of 2023, the S/CA innovators have impacted a total of 485,000 end-users, 48.6% of its 1 million end-users LOP target. The innovators contributing the most to this result are from mainly three countries: Zambia, which is home to COMACO; Zimbabwe where Farmhut Africa is based, and the DRC with KivuGreen. The digital solution innovators (Kivu Green and Farmhut) contributed more than 33% of the total end-users due to their digital innovations focusing on inclusivity (e.g., voice services) and offering EUF schemes.

While the S/CA RIH is set to meet the target for number of women end-users and has surpassed the target for number of BoP end-users, the hub continues to promote and integrate gender and BoP mainstreaming. Over the course of 2023, the hub conducted webinars on gender lens IR support as well as gender and BoP integration support. To improve knowledge on gender, the EE Unit hosted a GenderUp session which supports innovators in identifying gender and other relevant diversity among innovation end users. This capacity building was done to improve innovators' scaling strategies by optimizing the inclusion of relevant social groups and anticipating unintended negative consequences for different social groups.

Number of End-Users Using Financing Mechanisms

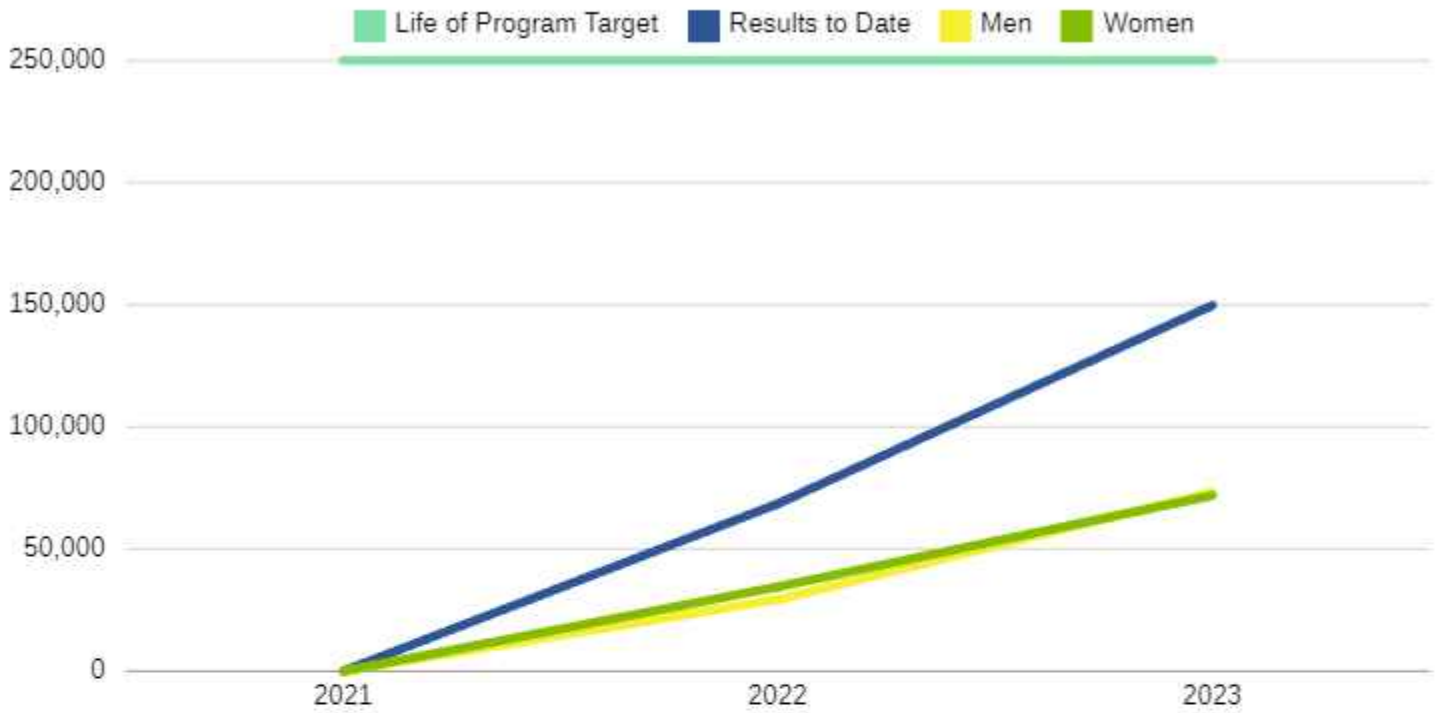


The S/CA RIH has exceeded its target of end users using financing mechanisms by 149,000 end-users. Out of the total 153,000 end-users using EUF mechanisms, 98,000 are women, and 55,000 are men. The accessibility of digital solutions like Kivu Green and FarmHut's technologies through affordable monthly subscriptions has enabled the hub to reach 95.9% of its total. Other technologies collectively contributed 5% to this target, with most innovators predominantly offering pay-as-you-go schemes.

Due to the popularity of pay-as-you-go models, the hub offers TA to help reduce the risk of innovator's customers defaulting on payment. For example, the hub assisted Solar Village in developing a risk mitigation and assessment tool. The tool helps them to rate customers on a risk matrix and significantly reduce the default rates on their innovation.



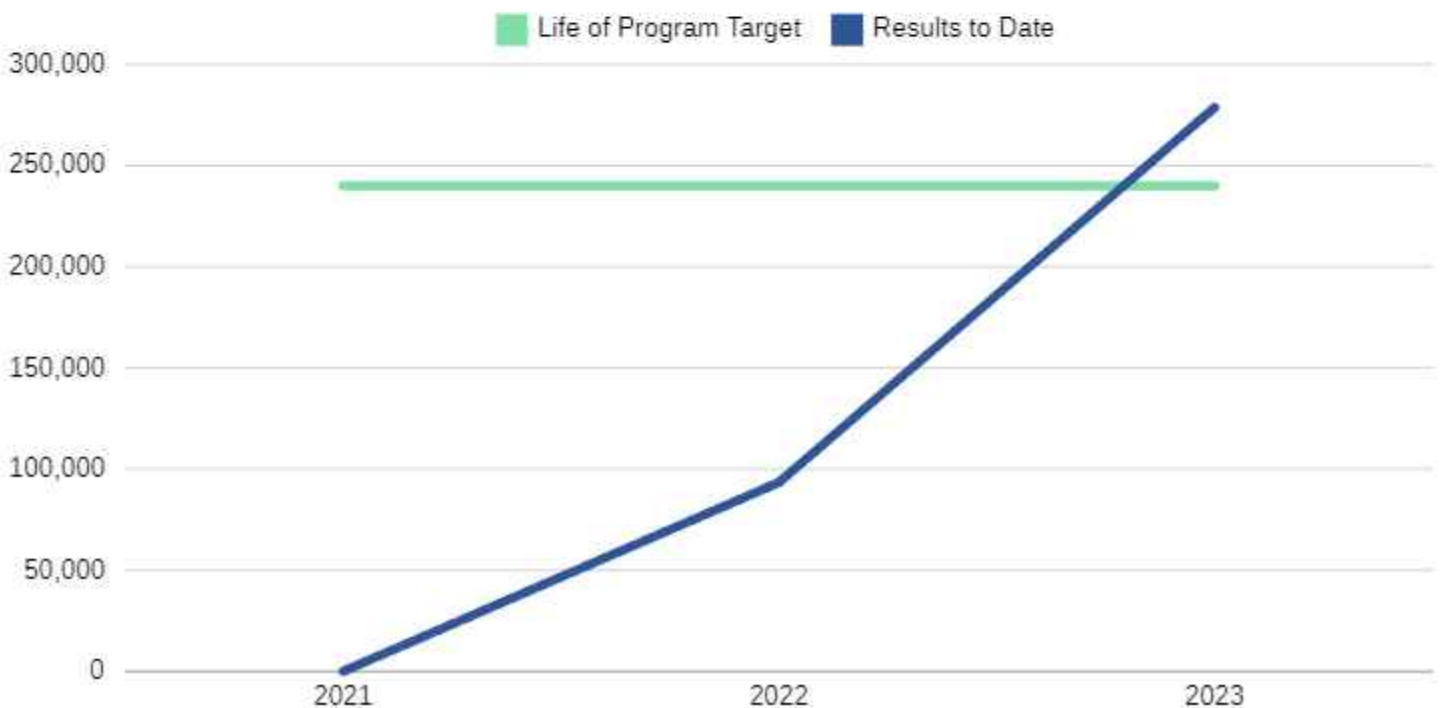
Number of WE4F Innovation End-Users with Increased Incomes



In the past year, the S/CA hub saw the end-users who experienced an increase in income more than double, reaching a total of 149,000 or about 30% of the total end-users. These end-users are spread across the DRC, South Africa, Zambia, and Zimbabwe. Two digital innovators (FarmHut with 56,000 and Kivu Green with 23,000) contributed almost half of the end-users who experienced an increase in income. The value-adding innovation that COMACO provides also heavily contributed to the result, with 54,000 of its end-users experiencing an increase in income.

GREENHOUSE GAS EMISSIONS REDUCED

Total Greenhouse Gas Emissions Saved by End-Users Through the Use of WE4F Innovations (tons of carbon dioxide equivalent (CO₂e))

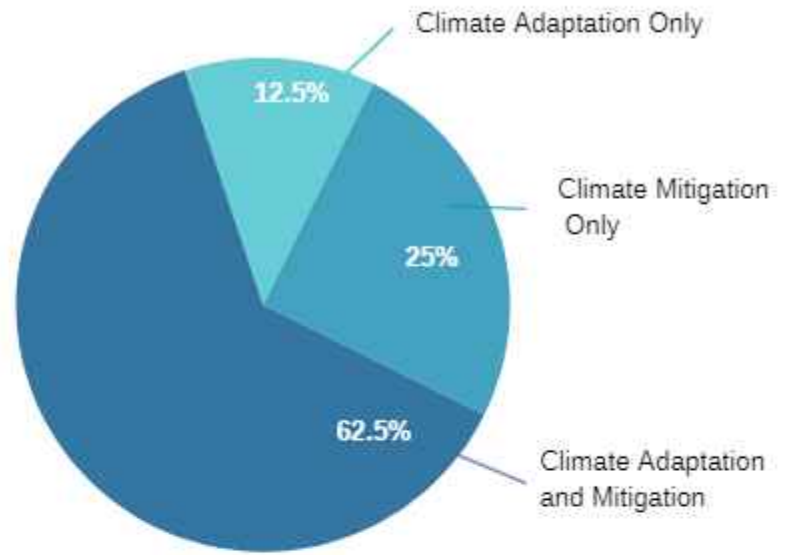


The S/CA RIH successfully surpassed the LOP target of 240,000 tons CO₂e, with a total of 278,000 tons CO₂e. Almost all innovators received support to understand their GHG emissions. This occurred through the development of a water balance tracker and a carbon savings tracker, a tool that established how their technologies support the drive to a net zero economy, or the development of an EMMP tracker.

While all S/CA innovators have climate adaptation and/or mitigation innovations, two innovators, Zonful and Lanforce Energy, stood out in their GHG emission savings. Zonful Energy saved over 53,000 tons of CO₂e. Their solution replaces petrol-powered pumps with more efficient and long-lasting solar-powered alternatives, significantly reducing GHG emissions associated with traditional farming practices. Their pay-as-you-go financing model makes this shift towards more sustainable farming practices accessible to a broader range of farmers, including those in off-grid rural areas. They also specifically target women-headed households and first-time users of solar-powered water pumps to promote inclusivity and economic sustainability.

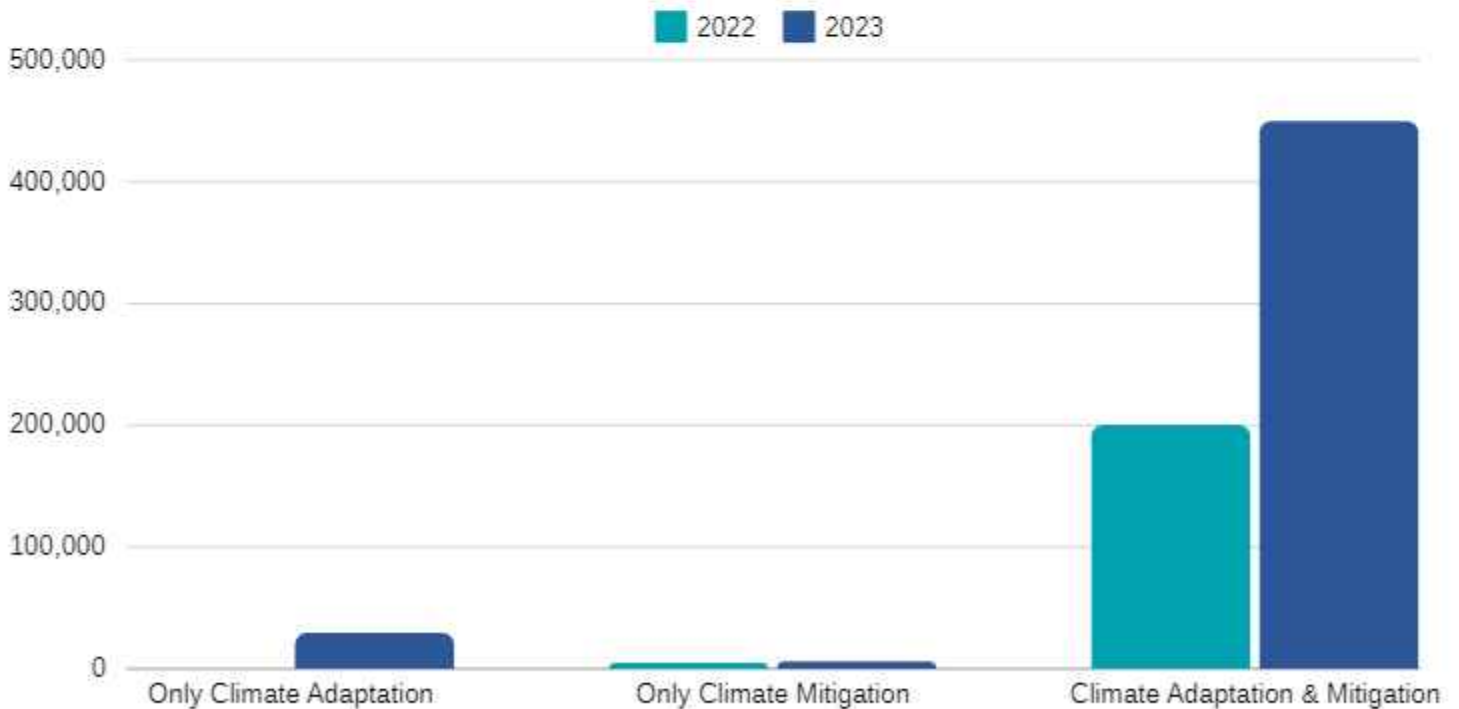
Women-owned innovator Lanforce saved 9,700 tons of CO₂e GHG emissions with their portable commercial biodigesters. These biodigesters have significantly reduced greenhouse gas emissions by replacing fossil fuels with renewable biogas for powering agricultural equipment. They also produce eco-friendly bio-slurry fertilizer to enhance crop yields and reduce reliance on chemical fertilizers. Internet of Things technology ensures optimal performance, even in remote locations, broadening the reach and extending environmental benefits.

Percent of Innovators Doing Climate Adaptation and Mitigation*



*Based on the 16 actively-supported innovators

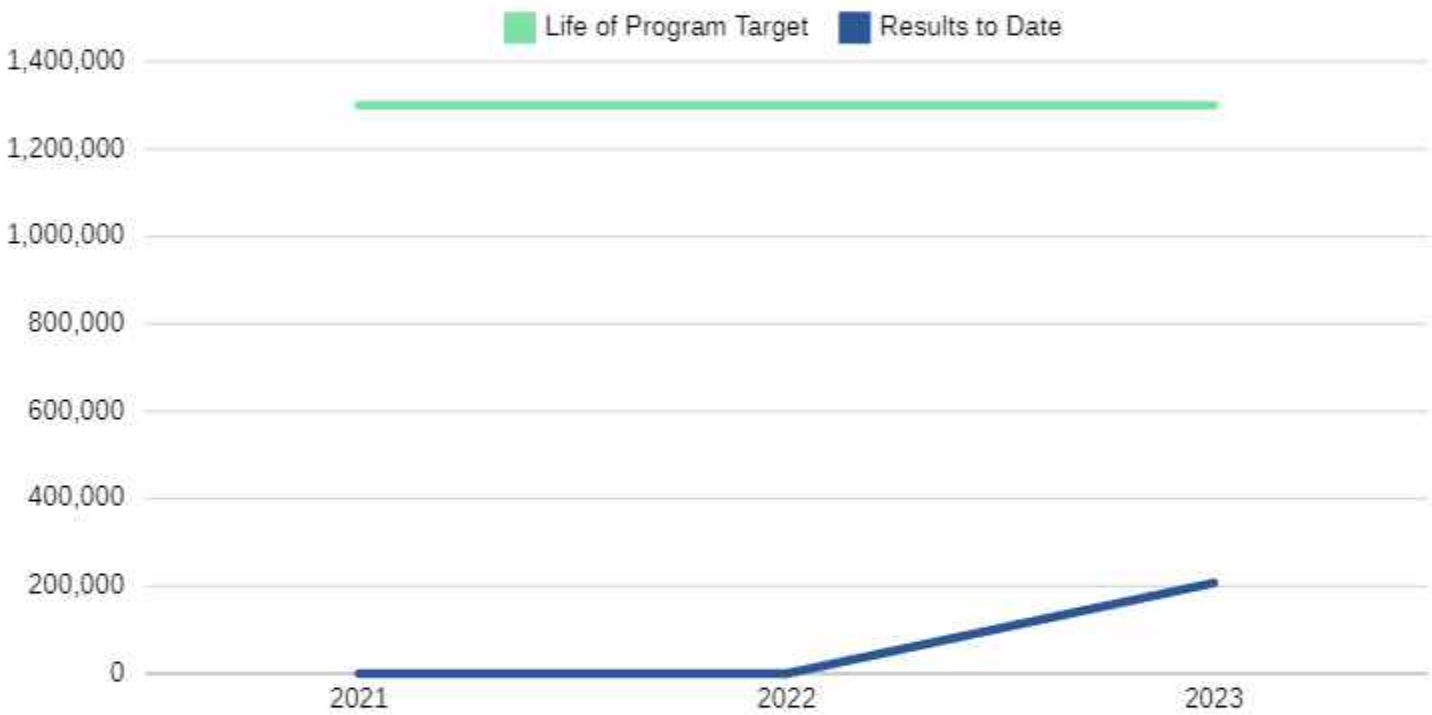
Number of Smallholder Farmers and Other End-Users Using a Climate Adaptation, Climate Mitigation, or an Innovation that Tackles Both



In the past year, S/CA innovators have received various TAs and support related to climate and biodiversity. The hub held two webinars aimed at capacity building for ESMS awareness and integrated waste management. The majority of the hub's innovators have innovations that focus on both climate adaptation and mitigation. Only two of its innovators, namely COMACO and Meat Naturally have innovations that only address climate adaptation. These two innovators support farmers through agroforestry and sustainable rangeland management respectively. Twice as many innovators have innovations that address only climate mitigation which consist of Phoenix Seeds, VIA, Solar Village, and Reel Gardening. Their innovations include providing drought-tolerant seeds, soil and moisture monitoring tools, a spinning disk sprayer, and seed tape for household gardening. Collectively, innovators that have innovations that tackle both climate mitigation and adaptation have more smallholder farmers and end users using their innovations. These innovations are predominantly digital solutions, renewable energy solutions, sustainable fish and apiary farming, and ecological briquette manufacturing.

PRODUCED AND PROCESSED MORE FOOD

Food Produced with WE4F Innovations (tons)

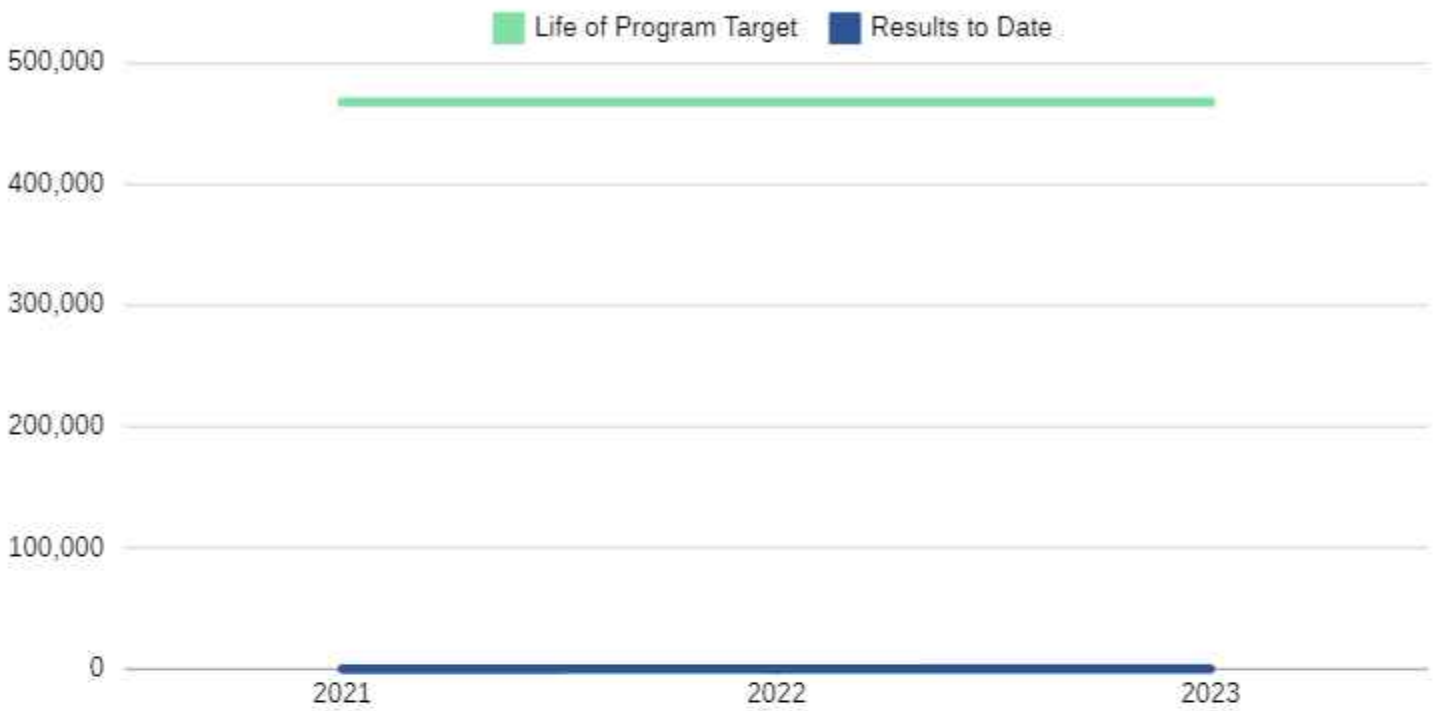


In 2023, the S/CA RIH made significant progress towards meeting its food production target, with innovators helping end-users produce 200,000 tons of food. Digital solution innovator FarmHut made the most substantial contribution, amounting to 165,000 tons of food. This was followed by Kivu Green, which contributed 20,000 tons, COMACO contributed 7,000 tons. FarmHut Africa contributes to food production through its digital marketplace and logistic service. The platform provides farmers with broader market access and valuable information on sustainable agricultural practices. The logistic service aggregates demand, streamlining produce transportation, reducing costs, and GHG emissions. FarmHut Africa empowers women as local aggregators and marketing ambassadors, promoting gender equality in the agricultural sector. These initiatives significantly contribute to increased food production efficiency and productivity.

Despite these challenges, the growth achieved by innovators, particularly for food production, is noteworthy. In the first year, the hub had almost no food production (6.5 tons). Achieving 207,000 tons of food produced in the subsequent period represents a significant leap forward from the initial starting point.



Total Mass of Food Processed as a Result of WE4F Innovations (tons)



The food processed target remains a challenge for the S/CA RIH with a total of only 48 tons processed, most of which was achieved by NFI and Zonal. The challenge is due to a limited number of innovators with an explicit focus on food processing and market access issues, particularly for Zambian innovators. To mitigate these challenges, the hub has adopted a two-pronged approach. Firstly, the hub plans to form strategic partnerships with governmental entities in Zambia and South Africa. These partnerships aim to navigate regulatory landscapes and establish trade relationships, thereby creating better conditions for the export and sale of processed food products. Secondly, the hub is focused on onboarding innovators that have an explicit food production focus. These can be either TA-only innovators or grantees. By bringing these innovators on board, the hub aims to enhance the region's food processing capabilities and overcome the current limitations.

USING LESS ENERGY AND WATER

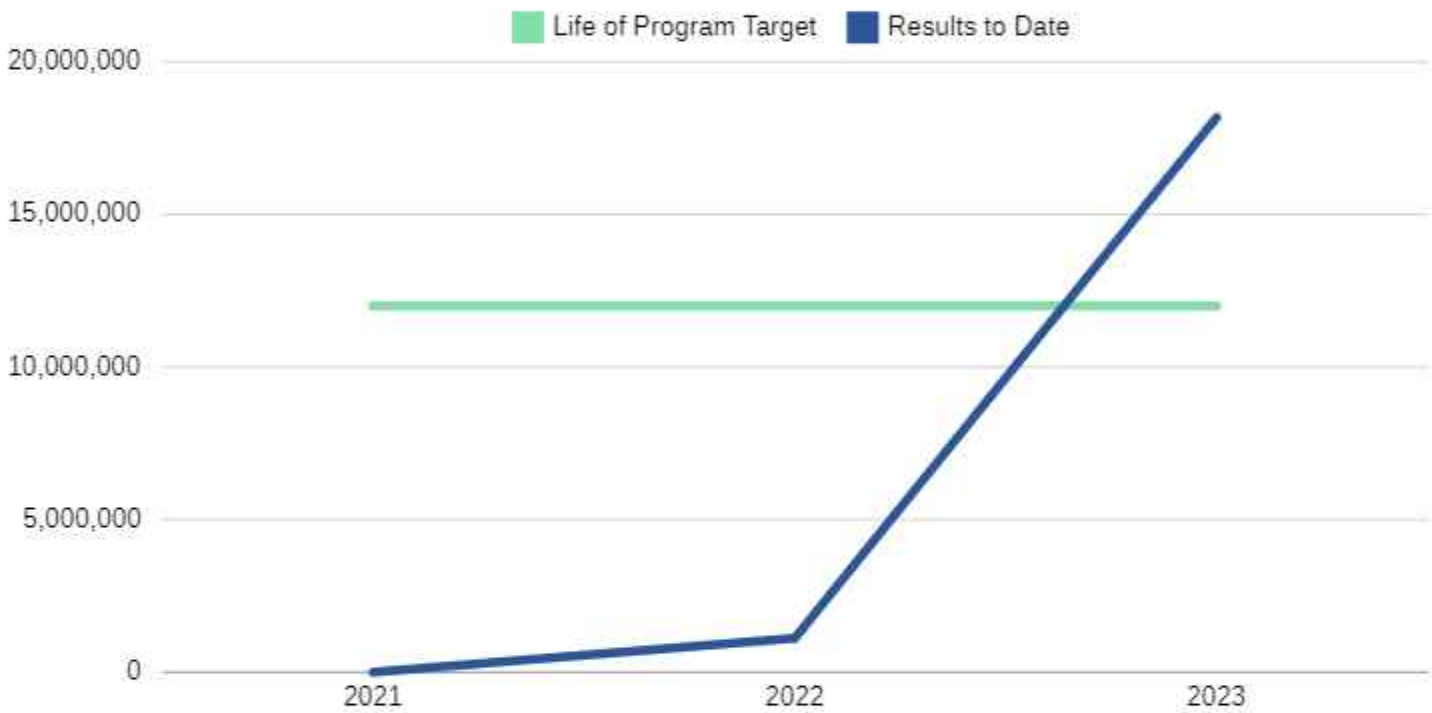
Energy Saved (kilowatt-hours)



Since 2022, S/CA innovators have more than tripled the amount of energy that they helped farmers save, reaching a total of 2.69 million kWh. This result also puts the hub on track to meet the LOP target of 3.2 million kWh. Working in energy-deficient Zimbabwe, innovators FarmHut and Lanforce have contributed significantly to this target, saving 1,857,000 and 367,000 kWh respectively. Zambian innovator, COMACO, saved 300,000 kWh which could be attributed to the assistance the innovator received in developing an energy-saving calculator. This tool helps the innovator understand its energy needs and implement strategies to conserve and utilize alternative energy sources.

FarmHut has received support from the hub in the form of an ESMS to ensure that they are able to monitor the impact that they may have on the environment as they scale up. The innovator is already making use of the tool that the hub developed to calculate their carbon emissions. Now they have managed to better aggregate the transportation of produce of farmers to the market.

Total Volume of Water Consumption Reduction (liters)



In 2023, the S/CA innovators helped reduce end-users' water consumption by over 16 times their 2022 result and surpassed the LOP target of 6 million liters. The 18 million liters in water savings is mostly due to Reel Gardening (South Africa) which saved 13 million liters through its seed tape. To help innovators improve their water savings, a water balance tracker was developed. This tracker helps all water-food and WEF innovators in the S/CA hub monitor their daily water use and savings.

One of the concerns highlighted in the program's Mid-Term Evaluation was the potential overuse of water by supported innovators. To combat this potential negative environmental consequence, the S/CA RIH and IWMI entered an MOU to develop a water accounting framework. Over the past year, IWMI worked to develop a customized water availability dashboard for the Zambezi Basin. This dashboard serves two main purposes (1) it provides evidence-based information on water availability and other water scarcity indicators that can be accessed online; (2) it helps assess the water potential for scaling investments funded through the hub. To ensure effective use of this tool, training sessions will be scheduled for 2024. This initiative represents a significant step forward in WE4F's commitment to sustainable water management and food production.



Share of Innovators Monitoring Water or Biodiversity



In 2023, 18.8% of S/CA innovators reported using tools, methods, or processes to monitor water protection or biodiversity. These innovators are namely Zonal, Zircon Energy, and COMACO. With two of the three innovators being from Zambia, this country has the most innovators contributing to the results. Most of the innovators who are currently not reporting to this KPI face capacity challenges either in the form of knowledge or lack of tools. The hub continues to provide TA to the innovators where they engage with the ESG Advisor and Water-Ag Expert about the importance of water protection and biodiversity. The ESG Advisor developed a water-saving balance sheet for innovators to assist them in monitoring their water use and how much they are saving.

INNOVATIONS SCALED

Innovator Investment Mobilized (in U.S. Dollars)



In the past year, the S/CA hub assisted twice as many innovators to mobilize capital, resulting in seven times the 2022 value and putting the hub on track to reach the LOP target. As of December 2023, four innovators, Solar Village and NDKay of Zambia as well as Powerlive and Lanforce Energy of Zimbabwe raised a total of \$5 million USD in investment. This is indicative of the comprehensive work done by the Brokering Unit and innovators in their investor engagements. Furthermore, the private sector has continued to show interest in investing in S/CA innovators, the results of which are likely to be seen in the coming year.

Women-led and/or -owned organizations formed the majority of innovators that raised capital over the year. The investment ecosystem for innovators and investors continues to develop in its inclusivity, with some investors eager to support women-led and/or -owned businesses and their impact on gender inclusivity. Lanforce and Powerlive, for example, have performed exceptionally well at fundraising, in the same economy with inflation and currency depreciation challenges compared to their counterparts. The hub has also assisted innovators like Phoenix Seeds to improve their investment appeal through market expansion assistance which equips them with empirical evidence of market share, a key element for investors.

Based on the current results, investors were leaning towards results-based financing and locally based traditional debt financing, given the early stage of innovators' businesses. The rationale for the results-based financing (RBFs) is its similarity in characteristics to commercial capital in its due diligence while enabling early-stage businesses to grow. Additionally, the RBFs act as a bridge to commercial capital and catalyze additional investments. They also incentivize the innovators to meet key growth milestones and inject cash into their operations.

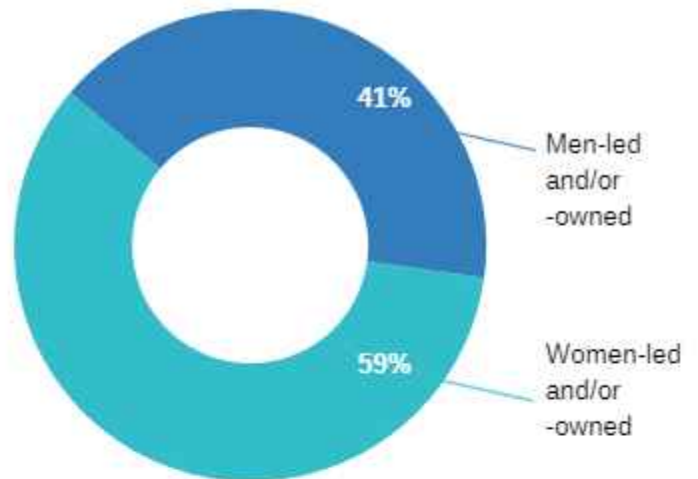
Despite the hub reaching more than half of its target for mobilizing investment, less than a quarter of its innovators have managed to do so. Innovators often encounter several obstacles when seeking investment for their ventures. One of the most common challenges is the lack of traction. Many promising businesses have not been operational long enough to demonstrate a track record of success. Investors often prefer to see a strong level of business operations before they consider investing. Innovators match investors' ethos but are unable to proceed due to their inability to meet certain investment criteria, so they are viewed as high risk.

Another major obstacle is regulatory challenges. Central bank policies and other regulatory frameworks can sometimes limit investment opportunities. For instance, interest rate regulations can affect the potential return on investment. This has proven to be the case in countries, such as Zimbabwe which has specific policies relating to foreign-denominated interest rates. Mozambique also has stringent policies regarding foreign investment, adding additional hurdles which can deter potential investors.

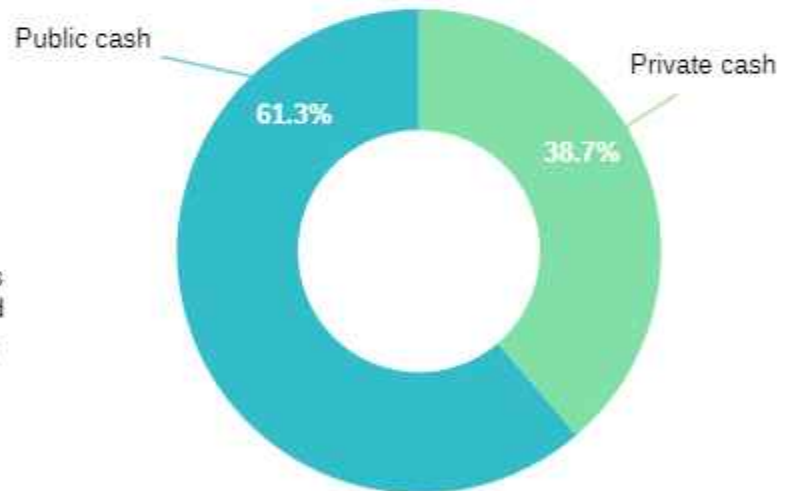
A third common challenge faced by many innovators is the inability to generate sufficient sales. This could be due to various factors such as market saturation, ineffective marketing strategies, or a product that does not meet market needs. Investors are less likely to invest in businesses that struggle to generate sales, as it indicates a lack of market demand or poor business execution.

To continue raising investment, innovators will need to continue improving operational efficiencies and maintain consistent rapid growth to better position themselves in the face of investors. The hub plans to engage with investors, highlighting the innovators who would be the best fit.

Investment Breakdown by Gender



Public versus Private Investment



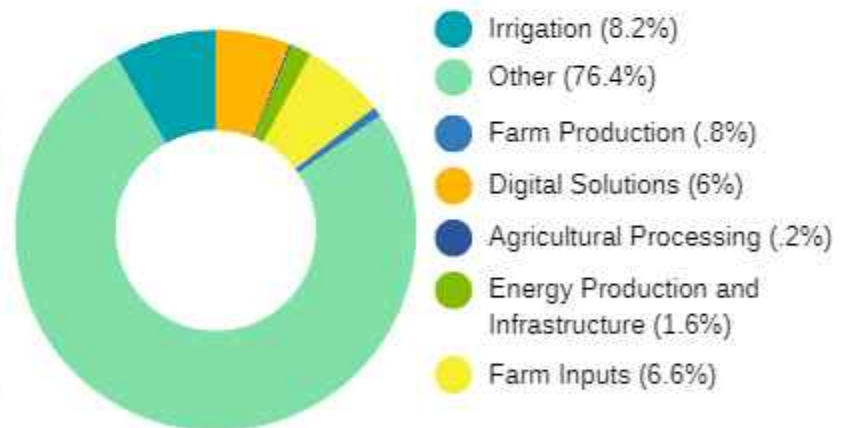
Innovator Gross Sales (in U.S. Dollars)



In 2023, S/CA innovators increased sales nearly 20 times the 2022 result. The majority of innovators who have had the most sales operate in Zambia, Zimbabwe, South Africa, and the DRC. To continue increasing sales, innovators need to expand their end-user reach. For digital innovations, like Kivu Green, the cost of subscriptions may limit their ability to increase sales. Through strategic partnerships, however, the innovators were able to reduce their fees to generate more sales.

The main innovators who typically struggle to make sales are those with capital-intensive technologies, like solar water pumps, as expensive innovations coupled with a lack of EUF schemes create inaccessible products that farmers are less likely to purchase. There is also a need for these innovations to have strong after-sales services where innovators interact directly with customers. Without EUF mechanisms, farmers are typically unable to afford to pay cash up front for the pumps, making it difficult for innovators to close a sale. S/CA solar water pump innovators apply these strategies to their businesses, with all innovators providing pumps through an EUF mechanism. They also have agents living in the communities where customers are based to ensure that after-sales services are accessible.

Gross Sales Breakdown by Innovation Type



Share of Supported Innovators that Successfully Marketed their Climate-friendly, Energy and/or Water-efficient Innovations with Profit

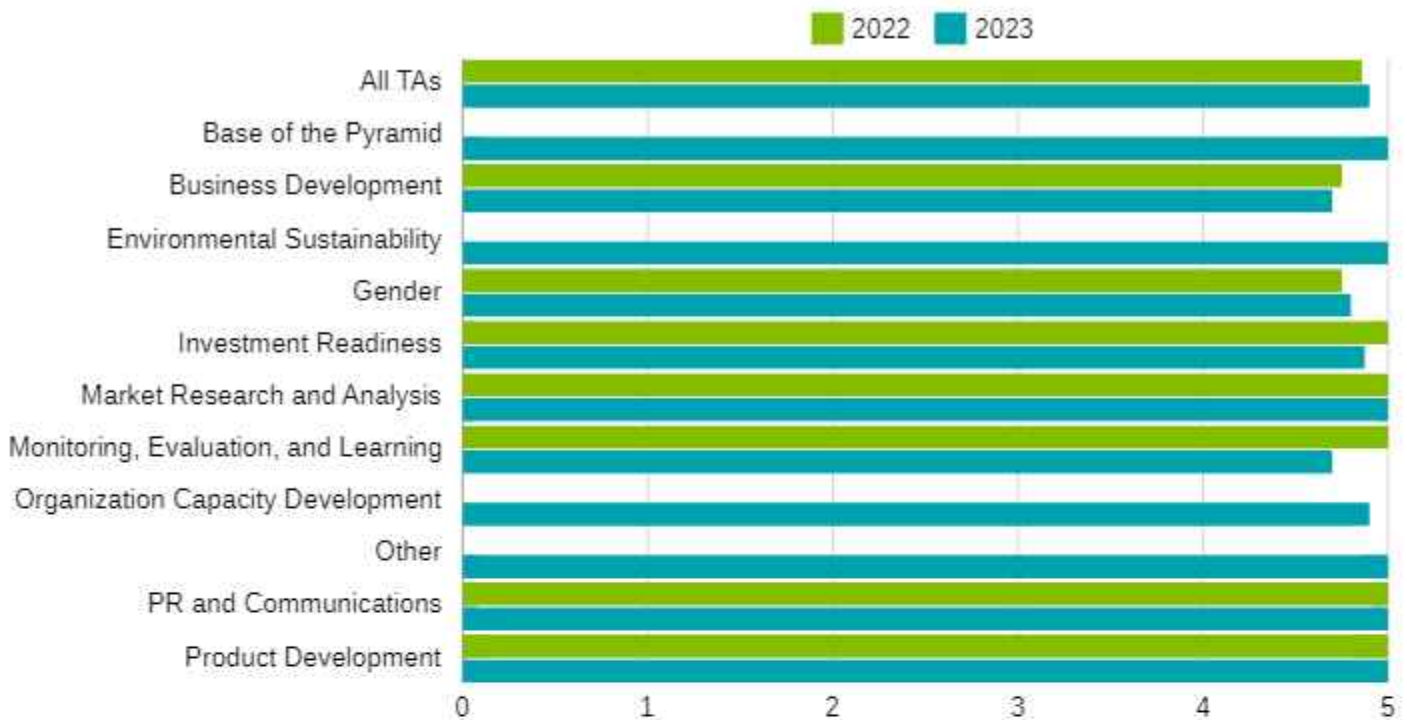


Since the start of the program, 21% of S/CA innovators have successfully marketed their innovation with profit. A key factor in innovators being able to achieve this result is a robust expansion strategy that outlines how their companies will conduct marketing and sales strategies to reach more customers. The hub has assisted innovators like Lanforce and Phoenix Seeds with their expansion efforts to expand into other countries. Phoenix Seeds received assistance with the development of an expansion strategy into Zimbabwe and, as of late 2023, started exporting their products as of late 2023. The expansion strategy that was developed for the innovator will also assist in making the innovator more attractive for investment as they show a growing market share. The hub has also assisted innovators like Kivu Green and Lanforce to improve visibility through the development and improvement of digital outreach strategies and websites.

Women-owned innovators, Lanforce Energy and Powerlive, have shown great success in marketing their innovations. These two innovators are also consistently being recognized for their work, accumulating multiple awards every year.



Average Technical Assistance "Quality of Service Survey" Score



Over the past two years, S/CA innovators have ranked TAs highly and consistently. As innovators have become more acclimated with WE4F, their TAs transition organically from simpler to more complex requests. This is due to the growth in operations and complexity of their businesses leading to a need for customized and sometimes niche TA, because of the initial support from the hub.

To maintain the quality of TA provided by the hub, the team consistently sets scopes of work with very clear deliverables and timelines, as these are the main areas of potential dissatisfaction for the innovator. Furthermore, the hub schedules weekly check-in calls during each TA support period to ensure that both the hub and the innovator remain aligned on expectations and progress. When a TA is to be completed by a service provider, the TA Facilitator ensures that the service provider develops a work plan that is agreed upon and approved by the innovator. The hub also provides a buffer in the timelines to cater for any eventualities that may affect timelines.

All onboarded innovators require gender and ESG-related TAs, although they may be at different levels. This has been necessitated because an increase in awareness among the innovators on the importance of gender and ESG lens focus helps attract impact investments.

Innovators from Zimbabwe tend to request TA support for issues affecting their operating environment. Through the EE Unit, the hub has managed to provide such support, in addition to other business-related TAs. For example, the EE Unit is currently supporting three Zimbabwe innovators working in the renewable energy space (Powerlive, Lanforce Energy, and Zonful Energy) to classify renewable energy components that have a tax rebate per the Zimbabwe regulations. The support will culminate in a training workshop for the innovators and is anticipated to increase innovator awareness on how to claim tax rebates when importing renewable energy components. The EE Unit also facilitated stakeholder mapping and partnership support to innovators, linking them to gender-focused organizations.

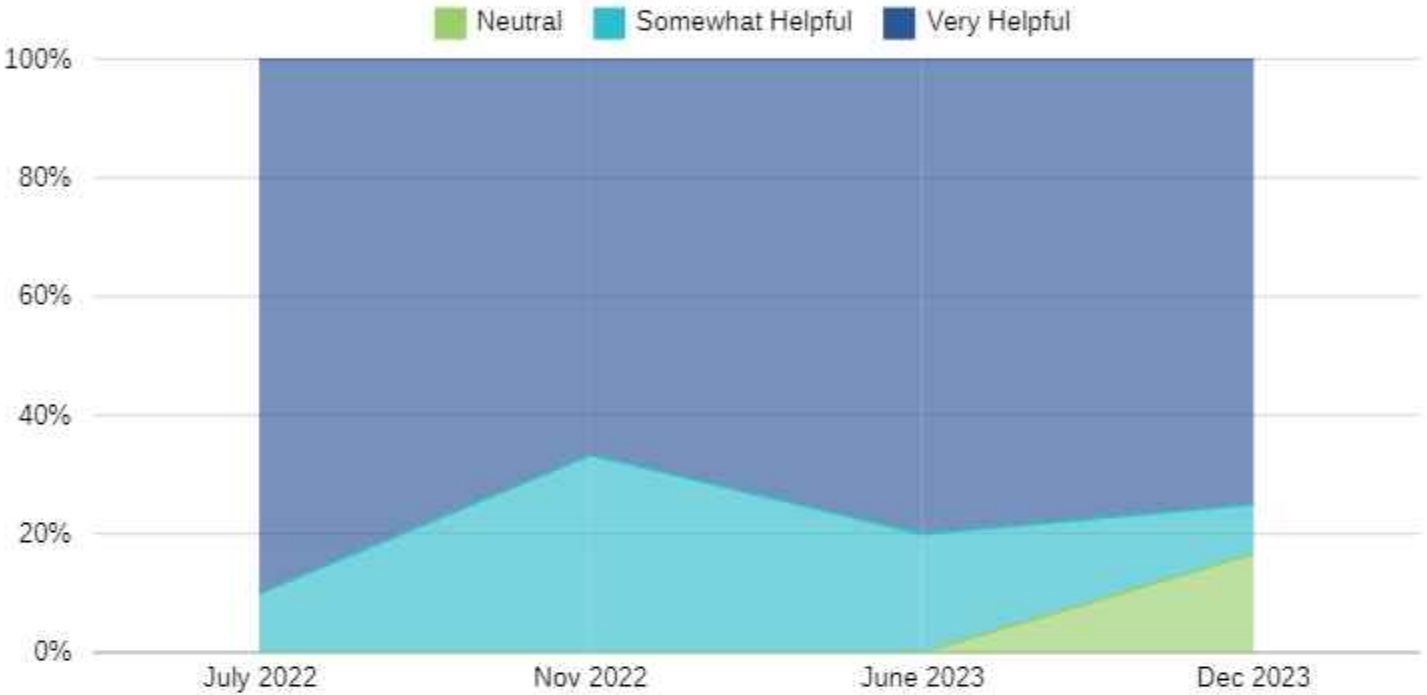


QUALITY OF SERVICE SURVEY

Conducted by the Secretariat Unit, the QoSS anonymously gathers all innovators' feedback on their experiences working with the S/CA RIH. The QoSS helps the hub improve problem areas and identify successful pivots that can be shared with the other hubs. This QoSS gathered results from all 17 active S/CA RIH innovators.

GENERAL HUB SUPPORT

Overall, how helpful has the S/CA Hub's support been to your organization's success?

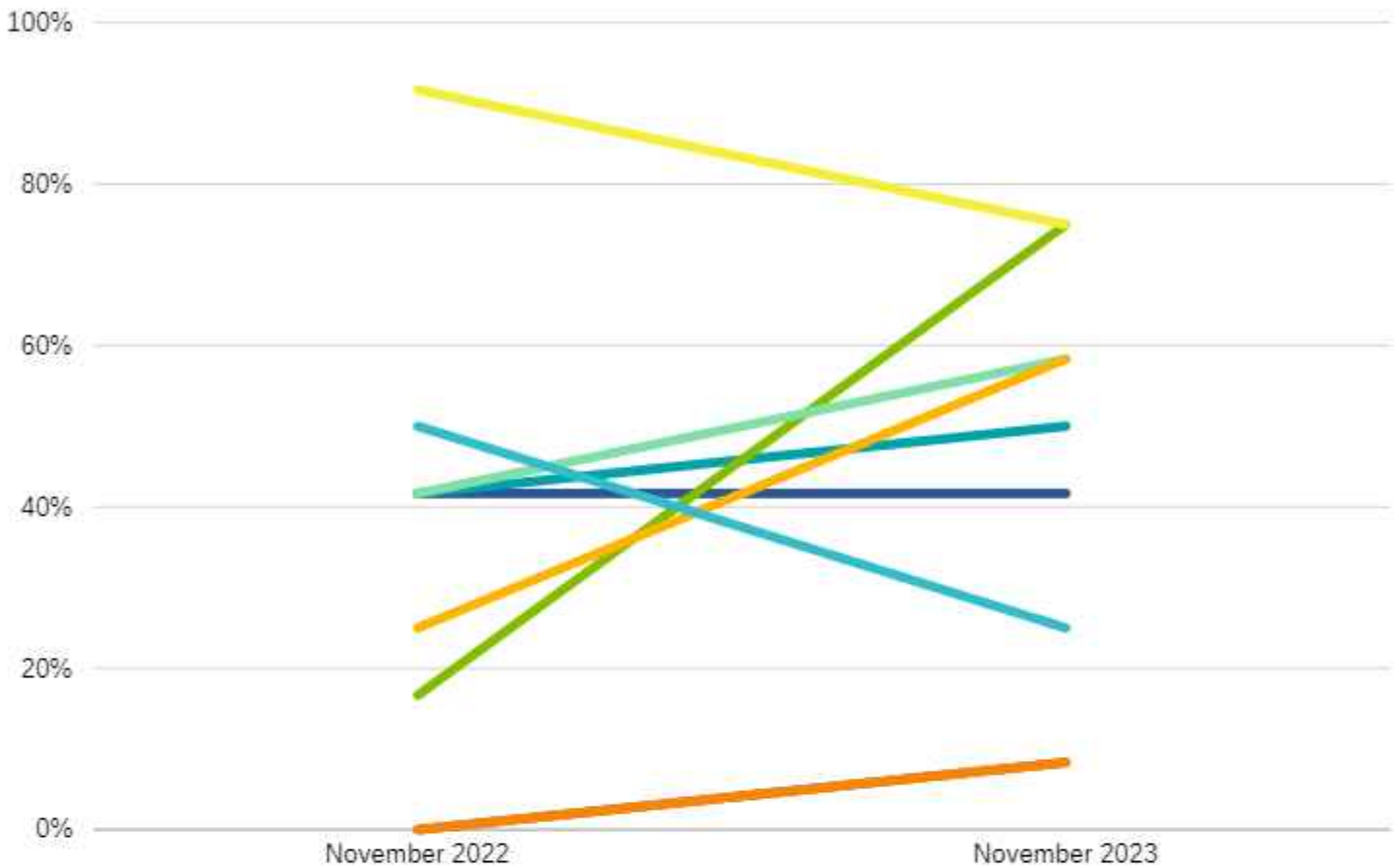


The S/CA hub developed and still enjoys strong relationships with most innovators. In 2023, 75% of innovators felt that the support they are receiving from the hub is very helpful. This is, however, a slight dip from the mid-year review where the hub scored 80%. Two innovators expressed neutrality over the hub's support to their organizations. These innovators also indicated that they needed reduced interaction with the hub so they could focus on other initiatives that provided them with grants. This reduced engagement, initiated by the innovators, could be the main basis for the neutrality score.

Country Coordinators also played a pivotal role in strengthening the relationship between the hub and the innovator and increasing subsequent satisfaction levels. This was achieved through each Country Coordinator scheduling weekly check-in calls with each innovator to discuss current and upcoming activities and troubleshooting any bottlenecks timeously. The Country Coordinators also spent time at innovators' business premises supporting them in compiling required documentation for reporting. This has been of immense help to the innovators as they managed to balance their day-to-day business activities while also meeting the reporting requirements of the program.



Reflecting on the support received from the S/CA Hub,
which of the following has been most useful to you?



The S/CA innovators have ranked TA highly and consistently in terms of support. Initially, the hub provided general TA to help the innovators establish strong and stable organizational foundations. This was mainly through IR as well as gender, BoP, and ESG generalized support. As the relationship with innovators developed and their needs became more refined, the hub started to develop innovator-specific and adapted TA support, commensurate with each innovator's expansion and scale-up plans. This support included facilitating partnerships with strategic partners, as well as addressing country-specific EE challenges. Most innovators found the transition to innovator-specific TA to be very useful and appreciated the targeted support. The few innovators who may have not yet managed to convert the support into MOUs, partnership agreements, or raise at-risk capital, may have felt that the support did not yield the desired results, yet it is just that support processes that involve external partners generally take longer to materialize. Innovators' interests have also moved slightly more towards market expansion strategy and market intelligence support to help them understand market viability.

Chart Key

- Addressing Enabling Environment Barriers
- Technical Assistance
- Gender Mainstreaming
- Investment Facilitation
- Monitoring and Evaluation
- Environmental Sustainability and Compliance
- Other
- None
- Partnership, Networking, and Ecosystem Building

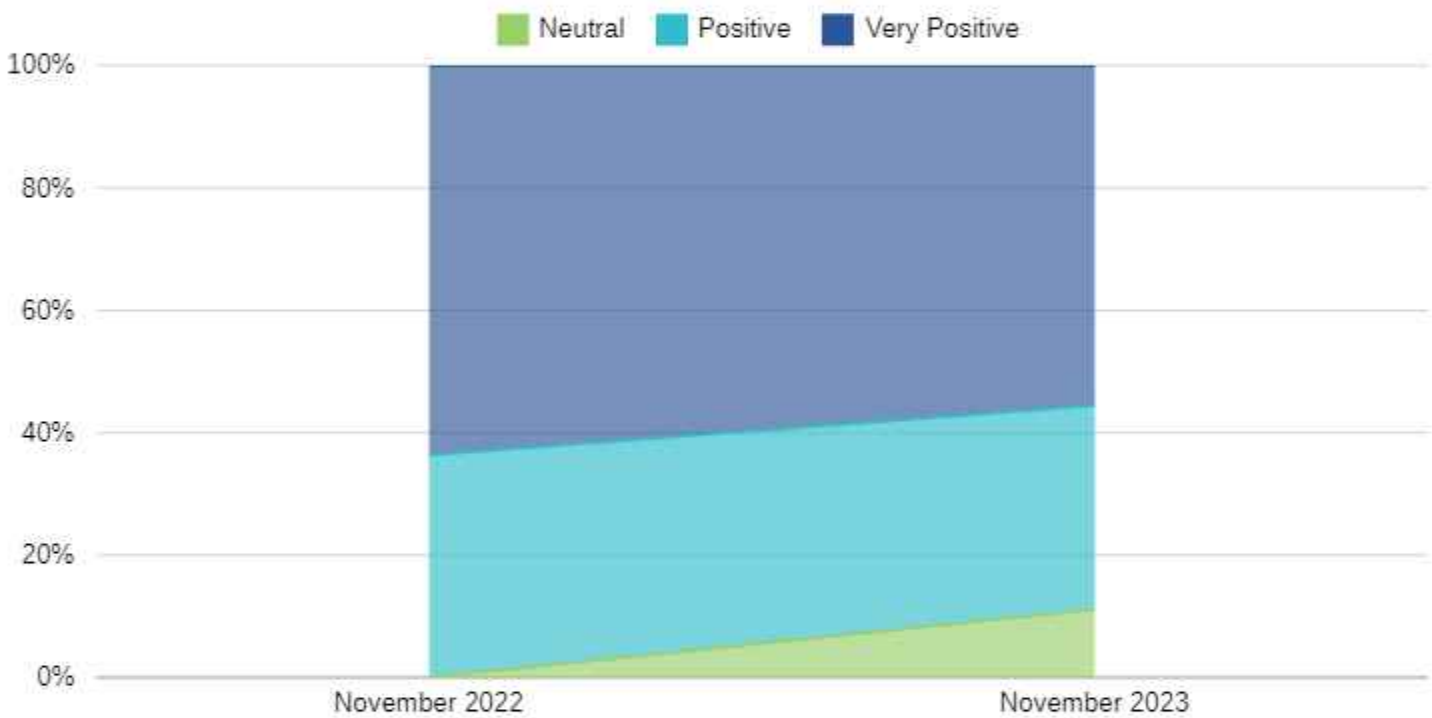
While TA does remain an important category for all innovators, there has been a significant increase in appreciation and a move towards investment facilitation. After most organizations received business development support to strengthen their internal processes, they felt ready to scale their operations, which required pursuing investment and the associated Brokering Unit support. There has also been an increase in support requests for partnerships and collaboration. Again, this was mainly due to organizations starting to scale into new markets that required strategic partnerships for rapid growth. Additionally, innovators had an increased appetite for environmental sustainability compliance, driven by the need to attract green investment.

As innovators were reporting semi-annually and annually, some of them realized the need for support to develop MEL templates and tools that would help them to report accurately and fully, hence the increase in the MEL support TA category. In a few instances, innovators have appreciated MEL support as it has better prepared them while pursuing external investment.

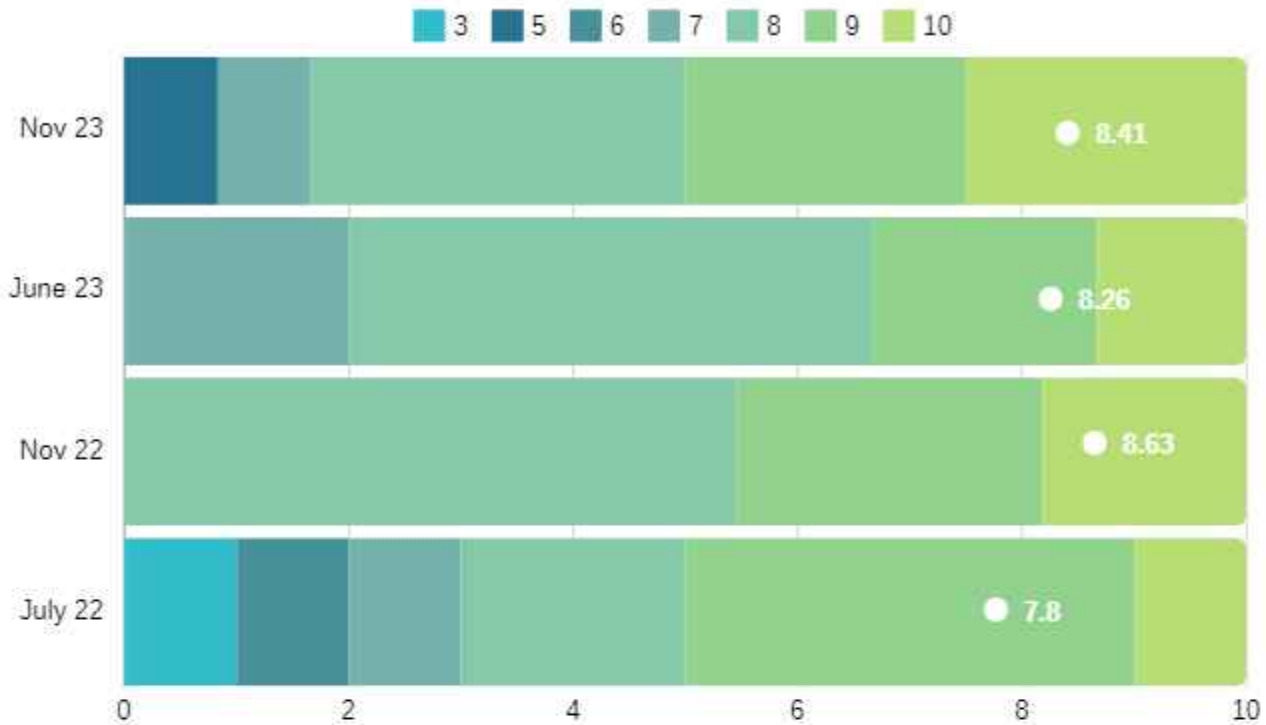
In the year ahead, the hub seeks to intensify strategic partnership facilitation for most innovators as they scale and expand their businesses into new markets. The hub will also continue to strengthen the deployment of Country Coordinators to work more closely with innovators, paying them visits at their offices, making quarterly field visits to assess various innovator activities, as well as helping the innovators to navigate through the in-country EE maze.

TECHNICAL ASSISTANCE

Reflecting on the technical assistance provided to you, what could be the impact of technical assistance in the long term (1+ years post-completion of the assignment)?



On a scale of 1-10, how satisfied are you with the S/CA Hub's Technical Assistance Unit (1-Extremely Dissatisfied to 10-Extremely Satisfied)



In 2023, the S/CA RIH recorded an all-time high of extremely satisfied innovators since the beginning of the program. This number nearly doubled from 13.33% to 25%. The improvement in satisfaction could be attributed to the hub's ability to better understand innovator needs and ability to deliver quality TA faster. In addition, the hub strengthened relationships that have now been formed between the innovators and the TA Unit team. Despite improving satisfaction levels, the hub also saw innovators express neutrality for the first time. This could be attributed to innovators transitioning from grantees to alumni and receiving fewer instances of TA. Additionally, some innovators who have experienced delays in the procurement of service providers for the TAs may have decided to remain neutral in their assessment of the hub. The delays were mainly in TA instances that required country-specific specialized expertise, where the hub struggled to procure an ideal service provider within the timelines stipulated in the scope of work. The hub would end up seeking approval from the Secretariat to procure these experts/service providers publicly, outside the hub's pre-vetted pool of service providers.

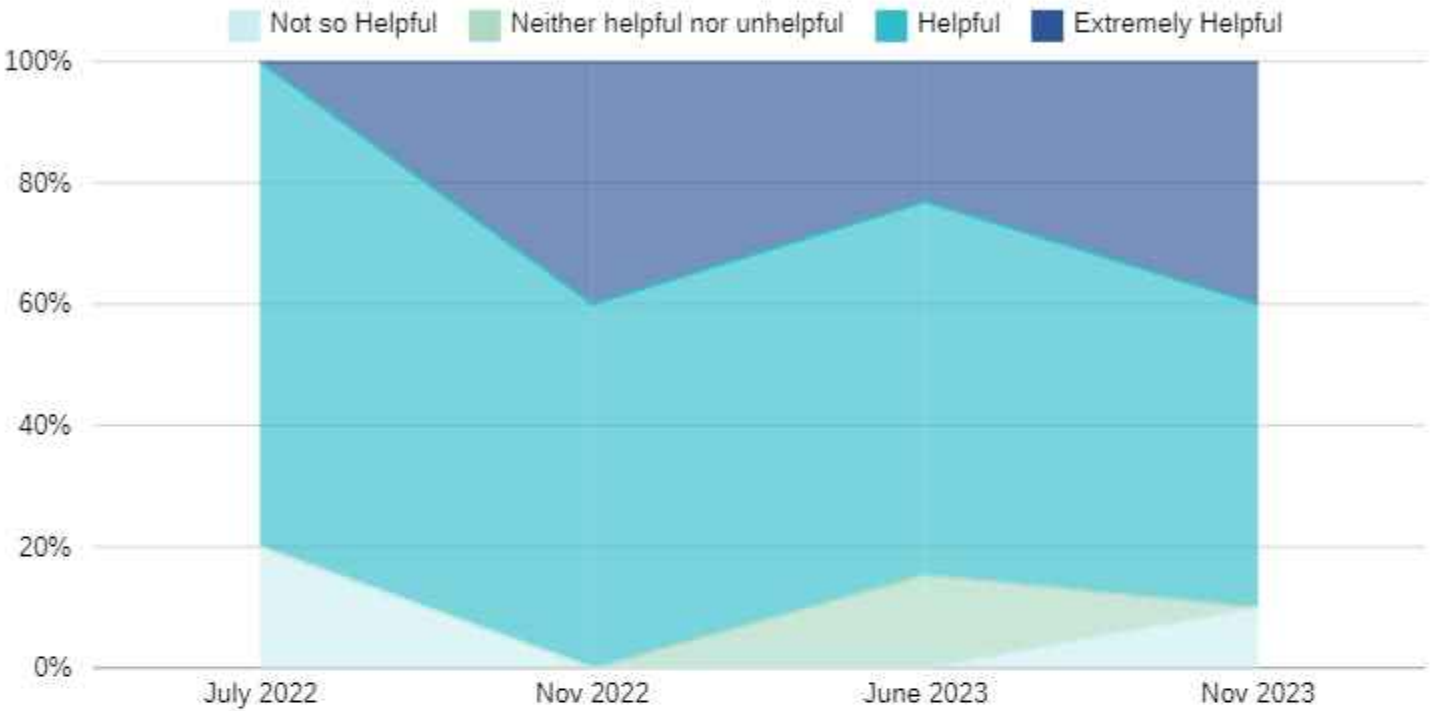
In relation to the increased satisfaction, this year, innovators started to proactively reach out to the TA Facilitator or their Country Coordinator to request support. Regional and Annual Convenings inspired innovators to identify areas of support and request specific support based on the information received during convening sessions. During the Annual Convening in Bangkok, the S/CA TA Facilitator co-led a session on carbon credits. Afterward, several innovators reached out and requested check-in calls specifically to discuss how the hub could help them capitalize on the carbon credit opportunity. The TA Unit is now in the process of providing this support.

Almost all innovators expressed that the TAs had long-term impact and value to their businesses and communities. Meat Naturally, for example, has managed to raise \$8.6 million USD which will fund the expansion and deployment of 1300 Eco-Rangers across a further 600,000 ha of communal land between now and 2028. This was after the innovator received support from the hub to develop their eco-ranger funding model in capital-raising efforts that they had begun on their own. Additionally, several innovators like Virtual Irrigation Academy, Lanforce Energy, and Reel Gardening, have managed to participate in other funded programs because of the TA support they received from the hub. Innovators like FarmHut Africa managed to expand from Zimbabwe into Zambia following the support they received to register in Zambia.

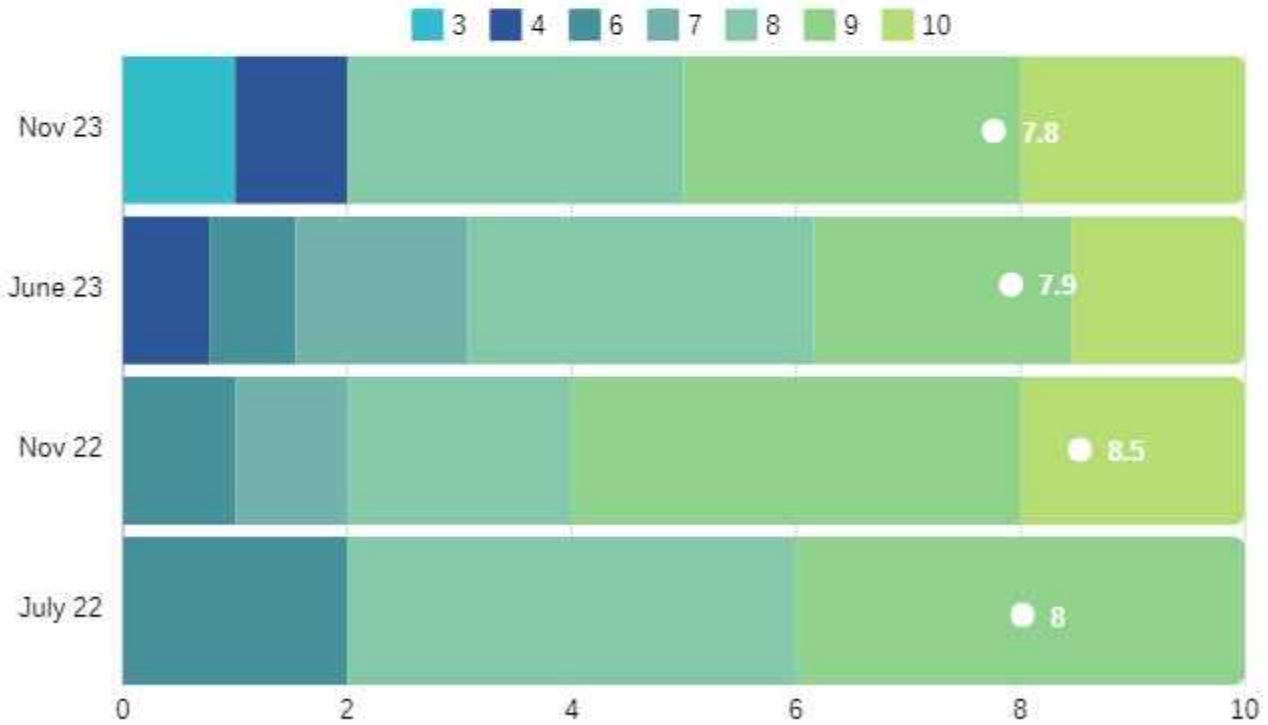
Generally, the innovators have expressed appreciation for the support they received. With respect to the proactiveness of the hub to identify innovator needs, one innovator shared: "Cross-cutting topics such as environmental impacts, gender integration, and end-users' calculation were not taken into account by the team at the beginning. The S/CA Hub technical support team diagnosed these aspects and assisted us in planning actions in these areas."

INVESTMENT FACILITATION

How helpful has the investment readiness team's support been in moving your organization toward your goal of raising investment?



On a scale of 1-10, how satisfied are you with the S/CA Hub's Investment Readiness Team (1-Extremely Dissatisfied to 10-Extremely Satisfied)



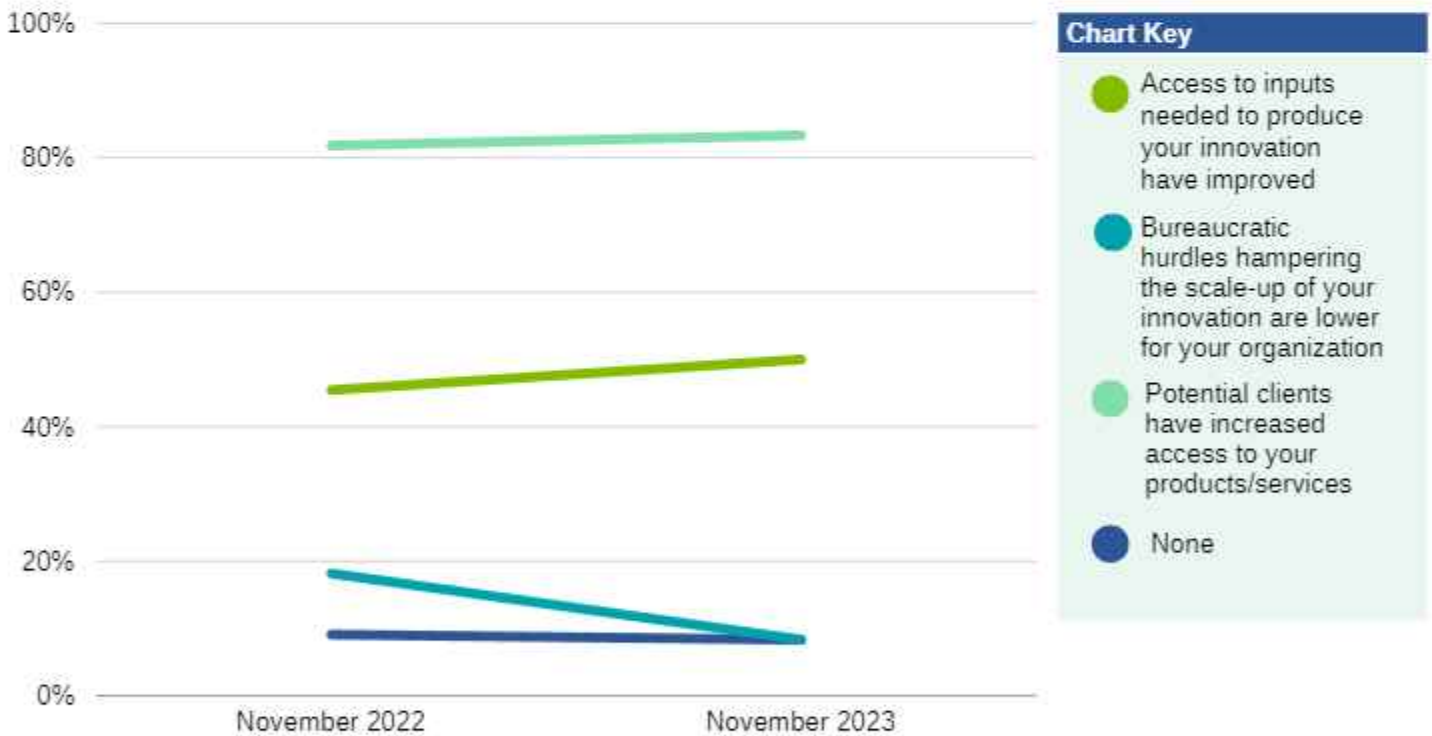
Between November 2022 and November 2023, innovators' satisfaction with investment facilitation support has decreased by slightly over 7%. This may have been due to innovators' expectations that, after receiving support from the Brokering Unit for the completion of investor materials, the innovator would quickly raise capital. Also, there were instances where overall responsiveness may have lagged due to external circumstances including conversations with potential investors that affected the ability to mobilize capital. After discussions with innovators and investors, there is starting to be a slight improvement in satisfaction levels. Additionally, fireside chats between the innovators and investors allowed the innovators to hear investors' expectations and improve their knowledge base.

To improve the Brokering Unit's inclusivity and provide better, localized support, the team added a francophone team member to support French-speaking innovators, particularly NFI, in understanding the provided financial model. Additionally, the hub increased the customization of the support provided to innovators to ensure that their needs were met, this included having more specified investor material suitable for innovators.

Innovators' expectations of raising capital have evolved over 2023 due to an increased understanding of investors' processes and business needs, including due diligence and having direct discussions with investors in informal settings. Conversely, some innovators had expected more introductions to investors, however, that hinged on their responsiveness to requests from the hub and alignment to investor requirements, particularly in minimum ticket sizes. It has been noted that managing innovators' expectations to raise capital for the smaller ticket sizes has been a challenge, as such emphasis has been placed on raising RBFs. Going forward, in such instances, the hub will look to broaden its investor pool to match innovators with smaller ticket requirements.

LEGAL, POLICY, AND REGULATORY SUPPORT

Since joining WE4F, which of the following have occurred? Select all that apply.



**On a scale of 1-10, how satisfied are you with the S/CA Hub's
Enabling Environment Unit (1-Extremely Dissatisfied to 10-Extremely Satisfied)**



The S/CA hub saw, for the first time, EE Unit satisfaction levels decrease. Several protracted EE issues raised by innovators cannot be easily resolved by the hub within a short period of time. For example, EE issues related to policies and regulatory procedures are challenging to change in the short-term as they involve many parties and processes, sometimes even navigating legal regulations. As such, many EE TAs provided to innovators are on policy/regulatory change, and while the TA is time-bound, the effect of the support may lead to favorable outcomes for innovators noting the fact that the EE support effort is ongoing and outlives the timeframe of a specific TA SOW. To reduce some of these issues, the hub will engage innovators to suggest areas for support that can be in the short-term for quick wins. The hub is also optimistic about a resolution regarding the engagements between the South African Department of Agriculture, Land Reform, and Rural Development and the Zambian Department of Veterinary Services which will see honey producers Nature's Nectar and COMACO exporting more of their honey to South Africa.

The presence of many parties in solving EE-related issues (e.g., government departments, associations, and the private sector) is very often time-consuming as many parties are unresponsive and/or subject to their own bureaucratic processes and protocols, making it difficult to provide specific and timely recommendations to the challenges they encounter. Other external factors such as wars, violence, and civil unrest (as mentioned by some innovators), particularly in Central Africa, contributed to the challenges faced by innovators. The above issues, however, are often beyond the control of the hub as solutions can only be externally driven.

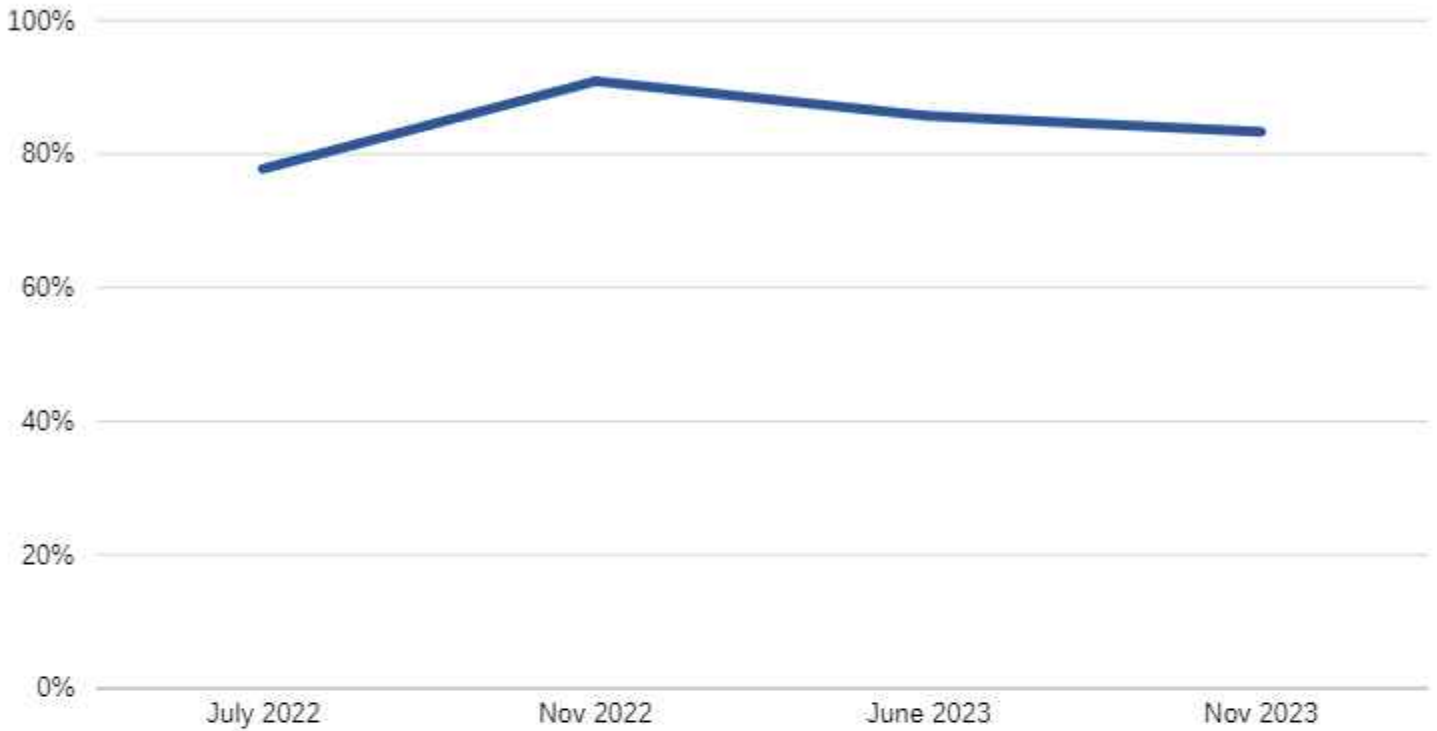
The hub has contributed positively towards additional EE issues, increasing innovator's satisfaction with market intelligence for their products. For example, Nature's Nectar received a market expansion report on honey export that helped the innovator understand the top export destination of Zambian natural honey, trade agreements when exporting Zambian honey, and other areas for consideration. This information will help them make informed decisions about product exportation and stay informed about product valuation trends.

The EE Unit also guided innovators in building partnerships and networks for their businesses. Their interest in having growth strategies for expansion and partnership building enabled some innovators to expand to other countries (e.g., NDKay expanded from Zambia to Tanzania). For Lanforce, Farmhut, and Powerlive, their interest shifted to embracing strategies for gender-inclusive business partnerships that allow them to network with women-led businesses. Meanwhile FarmHut, as well as VIA, also embraced gender-inclusive partnerships to help with their need to assess their innovations' level of digital inclusivity.



KNOWLEDGE SHARING AND MONITORING AND EVALUATION

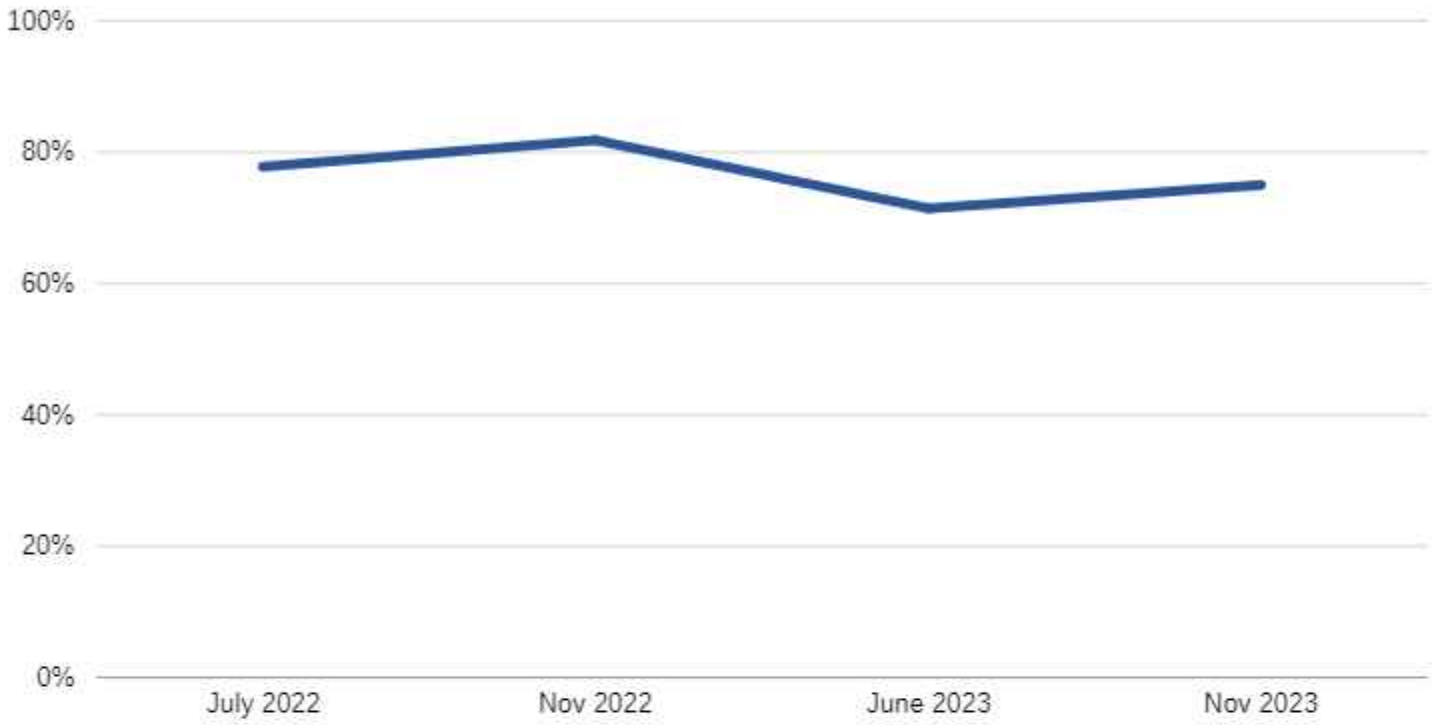
Has the engagement with WE4F led to an increase in knowledge about gender integration?



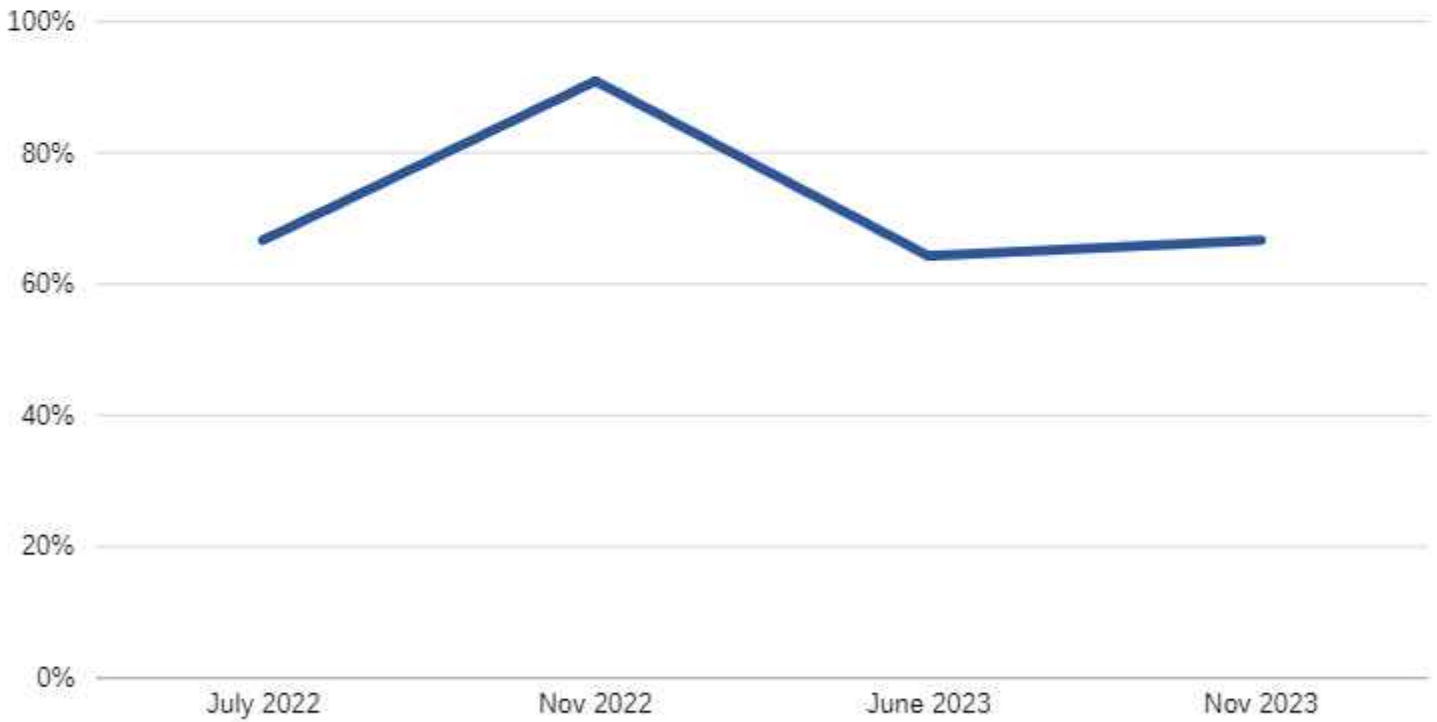
To improve the innovators' perception, the hub has taken advantage of Regional Convenings as well as Annual Convenings to foster deeper relationships with innovators. Additionally, the hub launched a series of webinars and workshops for innovators that covered a range of key themes. These included: gender lens IR support; gender and BoP integration support; ESG through training on integrated waste management; the development of ESMS; an HR capacity building workshop with a tailored workbook to implement and track HR activities and policies; and tailored diagnostic reports with areas of improvement. These webinars and workshops have proved to be valuable in identifying key opportunity areas of support for each innovator. This has led to innovators receiving adapted solutions to address their business challenges.



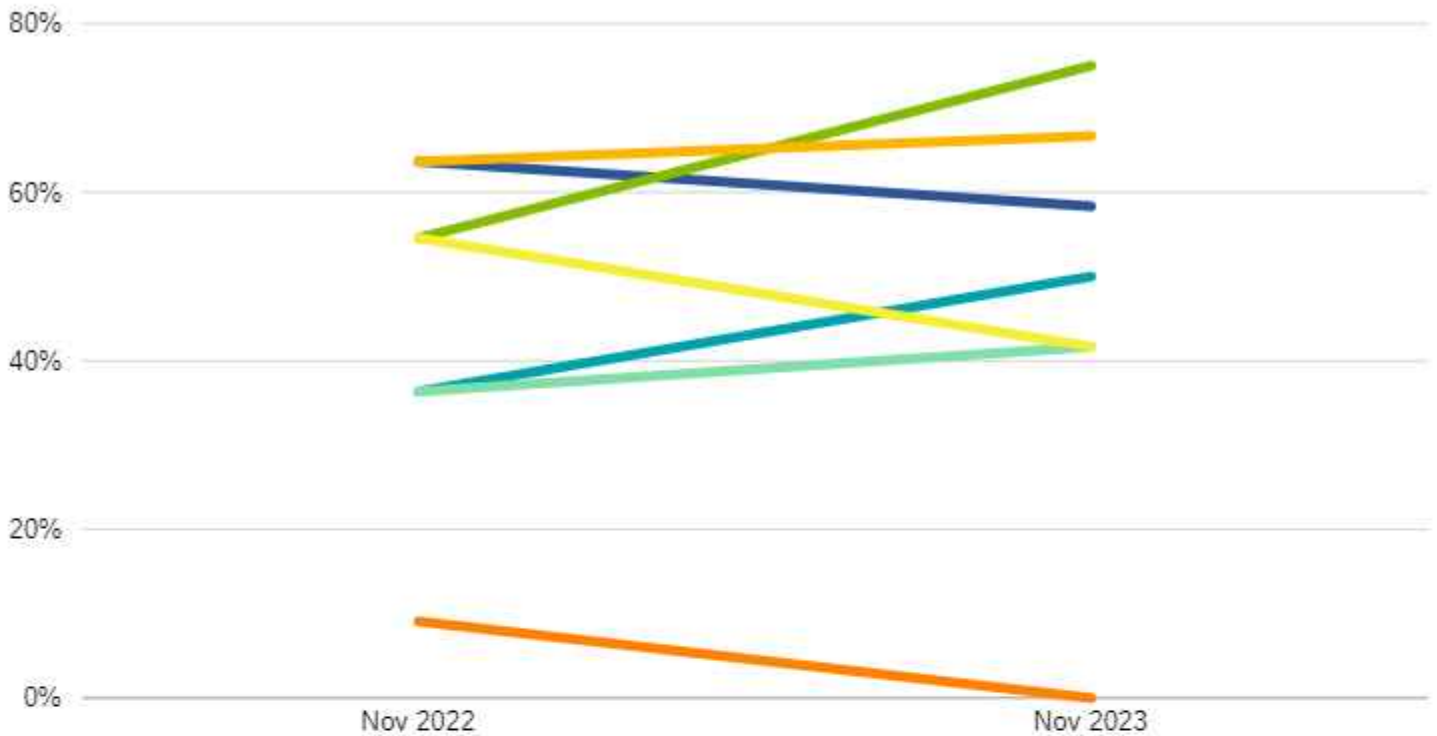
Has the engagement with WE4F led to an increase in knowledge about environmental sustainability, including climate resilience and biodiversity?



Has the engagement with WE4F led to an increase in knowledge about Base of the Pyramid (BOP)?



Does M&E data collection for WE4F support any of the following aspects of your business/organization?



Over the past year, S/CA innovators increased their use of MEL data usage across key themes: strategic decision-making, fundraising, managing partners, and publicizing impact. This perfectly aligns with the trends shared by the TA, EE, and Brokering Unit teams, that innovators are looking to expand and to scale their business. The decrease in customer analysis and sales/marketing is not necessarily a concern as innovators have received TAs for PR and communications in 2023. Such TAs are only useful after an innovator understands who they are trying to communicate with or trying to bring into their customer base. With a 0% response for "Don't use WE4F data outside of reporting," it becomes clear that innovators are further buying into, and leveraging, all potential resources that the hub provides.

Chart Key

- Customer analysis
- Fundraising
- Managing partners
- Publicizing impact
- Sales/marketing
- Strategic decision-making
- Don't use WE4F data outside of reporting

The S/CA innovators have overall experienced a slight decrease in knowledge about gender integration while knowledge on environment sustainability has increased marginally. The hub continues to build capacity on these topics through webinars and is transitioning to a more customized support to improve knowledge. Innovators have particularly highlighted how in-person convenings had the greatest impact on increased knowledge. To capitalize on this insight the hub will make use of its convening in the coming year to further refine knowledge gaps. Most S/CA innovations innately are BoP centric and it is possible that their knowledge increases as they are onboarded as innovators but reaches a ceiling the longer that they are in the program. Overall, innovators have shown great appreciation towards the diverse set of support that they receive in this program. Even those who have transitioned to TA-only innovators, remain engaged and active.

Generally, the hub received great feedback from innovators, mainly related to strengthening innovator internal systems and processes, management capacity, and facilitation of networking and partnership opportunities.



CHALLENGES AND SOLUTIONS

Challenges	Solutions
Open Call for Innovations	
Failure to secure quality innovators to join the program.	Actively promoted RIH opportunities through existing mechanisms, leveraged through its vast network, and executed a robust outreach strategy developed and implemented by the Communication and Knowledge Management Specialist and the Country Coordinators. The hub also conducted country-specific networking to reach out to more innovators.
The investment ticket sizes are bigger than the innovators are ready for.	Actively work with the innovators to scale their products and provide IR TA, while working with grant capital providers, with the aim to get innovators ready for bigger ticket sizes.
The newly introduced "matching funding" requirement for OCFI may pose a risk to innovators in terms of meeting or delivering on this requirement.	Conducted a rigorous due diligence process focused on the matching fund requirement. It also required innovators to provide monthly check-ins and proof of the matching requirement as part of every payment milestone. The matching requirement is not "cash only". innovators can also match in-kind thereby making it easy, but also keeping their skin in the game.
Reporting of certain targets lagging.	The hub identified the need to provide innovator specific data collection and reporting templates to make sure that each innovator can report accurately and fully. The hub will continue to strengthen the deployment of Country Coordinators to work more closely with innovators.
Conflict	
Some innovators are experiencing instability/war and failing to meet their targets.	<p>Closely monitored and implemented proactive risk mitigation strategies that included strengthening relationships with local partners, so they could continue operations during periods of instability.</p> <p>Ensured that there was sufficient flexibility built into the project plans, including contingencies for different risk scenarios combined with regular risk assessments at the monthly calls with indicators operating in the country.</p>
Implementation and Administration	
Project implementation disruption due to staff turnover.	Hub members routinely share knowledge and insights and have regular updates on progress, challenges, and lessons learned. The hub continuously documents and records processes with Tetra Tech home office to ensure that they have a deep institutional knowledge repository that they can lean on. In addition, the consortium partners have a talented recruitment team that stands ready to provide support in getting the right talent quickly.
Enabling environment constraints limiting WEF technology scaling will not be resolved within the project's time frame.	The hub will explore partnerships with external organizations or service providers that can continue to advocate for WEF nexus innovators and support in navigating policy challenges in the absence of the hub.

LOOKING FORWARD

The S/CA RIH has an ambitious agenda for the upcoming year. Specifically, the hub aims to onboard 13 new innovators through the OCFI and Zimbabwe biogas OCFI process as well as focus on onboarding TA-only innovators.

One of the key objectives for the year is to facilitate farmers' access to financing. This is a crucial step in making the innovations more accessible to them and ensuring that the benefits of these innovations reach those who need them the most. To this end, the hub is engaging with financial institutions that provide EUF. For example, the hub is in the process of exploring the possibility of signing an MoU with Equity Bank in DRC so that DRC-based innovators can access EUF resources from the bank. In Zimbabwe, the hub is in the process of developing an MoU with Zambuko Trust to provide EUF to subsidize solar powered irrigation systems.

The hub is also planning to procure a service provider to carry out an assessment for relevant innovators who are interested in pursuing the carbon credits business line. Several innovators, all at different levels, have expressed significant interest in this area, and would benefit from receiving a tailored assessment indicating where they are, what they need to do, and what opportunities they could exploit from carbon credits.

In addition to these initiatives, the hub plans to host a regional convening. This event will serve as a platform for innovators to learn from each other and for experts from various fields to share their industry knowledge, with a particular focus on the theme of investment and inclusive development. Such gatherings are invaluable for fostering collaboration and sharing insights for a healthier SME ecosystem in Southern and Central Africa and facilitate capacity building on the CFR 216 application to the innovators.

The hub will be assisting innovators in other countries (i.e., the DRC and Mozambique) who are now actively looking to raise. The Brokering Unit will continue providing support to innovators as they look to further engage investors ahead of potential capital raises.

Several comments have been recorded by the hub, as shared by the innovators, in the quest to provide them with support relating to the taxation of some solar products that tend to increase the pricing of some solar solutions. For example, a hybrid solar inverter (battery and inverter in one) is charged VAT while a solar battery and an inverter that are separate are zero-rated.

The hub will provide TA through external personnel (consultants) to provide clarity on how challenges regarding this legislation can be navigated. The hub will coordinate and facilitate two dialogues between government representatives, agencies, and innovators on barriers to WE4F enterprise development as raised in the Needs Diagnostics from innovators. These are barriers like regulatory and policy inconsistencies, scaling mechanisms, digital inclusivity, and product licensing.

In the coming year, the hub will be providing policy and regulation navigation support to innovators, focusing on ESG, gender, and BoP. The hub will continue with needs assessments with the individual innovator to provide solutions that are relevant to their needs. The hub also intends to provide support through webinars and workshops where, in some cases, consultants will be brought on board to provide technical support where skills are lacking. This will be based on the themes and needs of the innovators.

The hub will continue to support innovators to comply with the CFR 216 by assisting innovators with developing the Specific Initial Environmental Examination, the EMMP, and the EMMR. In addition, the hub will continue to engage with the innovators to identify environmental and sustainable gaps (which include climate risks) and assist the innovators to close some of those gaps through TA.

The planned support and activities for the year ahead are not only aimed at improving certain targets that are lagging but scaling innovations even further. The hub learned from the past reporting period that some innovators may have been unable to fully report on all their KPIs due to lack of verifiable and credible data collection and reporting templates. As a result, the hub will provide innovator specific data collection and reporting templates to make sure that each innovator can report accurately and fully. Accurate and full reporting towards hub targets will fast-track the attainment of contractual targets by both the innovator and the hub.



RECOMMENDATIONS FOR POLICY AND PRIORITY DIALOGUE

Most S/CA innovators face significant policy challenges that governments, the private sector, and other actors should focus on. For the region, the following issues still prevail; digital inclusivity, taxation policies and licensing for renewable energy products, lack of supportive policies for biogas products, business expansion/new market penetration, and the need for scaling models/strategies, partnerships, and networking, as well as EUF. Most of these challenges require long-term support, which WE4F-provided TAs are ill-equipped to handle, as TAs are time-bound. Furthermore, working with different parties to influence change at the policy and structural level can be difficult, especially when some stakeholders become unresponsive.

The S/CA innovators would most benefit from external stakeholder engagement on numerous issues but mainly on taxation and regulation policies, licensing for renewable energy products, policies for biogas products, and how to review existing or create new digital marketing tools that expand market segments to women farmers. For example, Lanforce, Zonful Energy, and Powerlive all indicated the challenges experienced during customs clearance where other renewable components are considered not to be exempted at different ports of entry into Zimbabwe. This is despite the country having tax rebates for renewable energy products.

