

WATER AND ENERGY FOR FOOD

Executive Summary

January 2021–December 2021





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This report was written by the GIZ and USAID Secretariat Units with input from the Regional Innovation Hubs in East Africa, MENA, South and Southeast Asia, Southern and Central Africa, and West Africa.



WE4F VISION AND IMPLEMENTATION

Water and Energy for Food (WE4F) is the world's first multi-donor initiative that works on all levels of the water-energy-food nexus (local, national, regional, and global). We connect farmers, businesses, investors, governments, researchers, and other stakeholders to open dialogue and communication between the usually separate development and private sector professionals in water, energy, food, financing, and climate change.

WE4F aims to support innovations that impact the water-food, energy-food, or water-energy-food nexus, leading to increased sustainability in agricultural production and food value chains, as well as increased economic opportunities and gender equality in developing countries and emerging markets. The program places a particular focus on base of the pyramid, youth, and women, and helping them overcome barriers they face in the agricultural sector, including access to land, financing, and other means of production.

WE4F aims to:

- **Increase food production along the value chain through a more sustainable and efficient usage of water and/or energy**
- **Increase income for the base of the pyramid women and men in both rural and urban areas.**
- **Sustainably scale innovators' solutions to meet the challenges in the WE4F nexus.**
- **Promote climate and environmental resilience and biodiversity through the sustainable, holistic management of natural resources and ecosystems.**

In developing countries and emerging economies, agricultural production often increases through land expansion instead of increased productivity, putting pressure on biodiversity and natural ecosystems. This situation is expected to worsen, as 60% more food will need to be produced to feed the world's population in 2050. WE4F believes that by supporting water-energy-food innovations and strategies, the program will be able to help these innovations reach sustainable, wide-scale adoption with smallholder farmers and other end-users in the agri-food value chain and improve agricultural productivity, increase food security, increase incomes, create jobs, and increase resilience to climate change and other economic shocks and stressors.

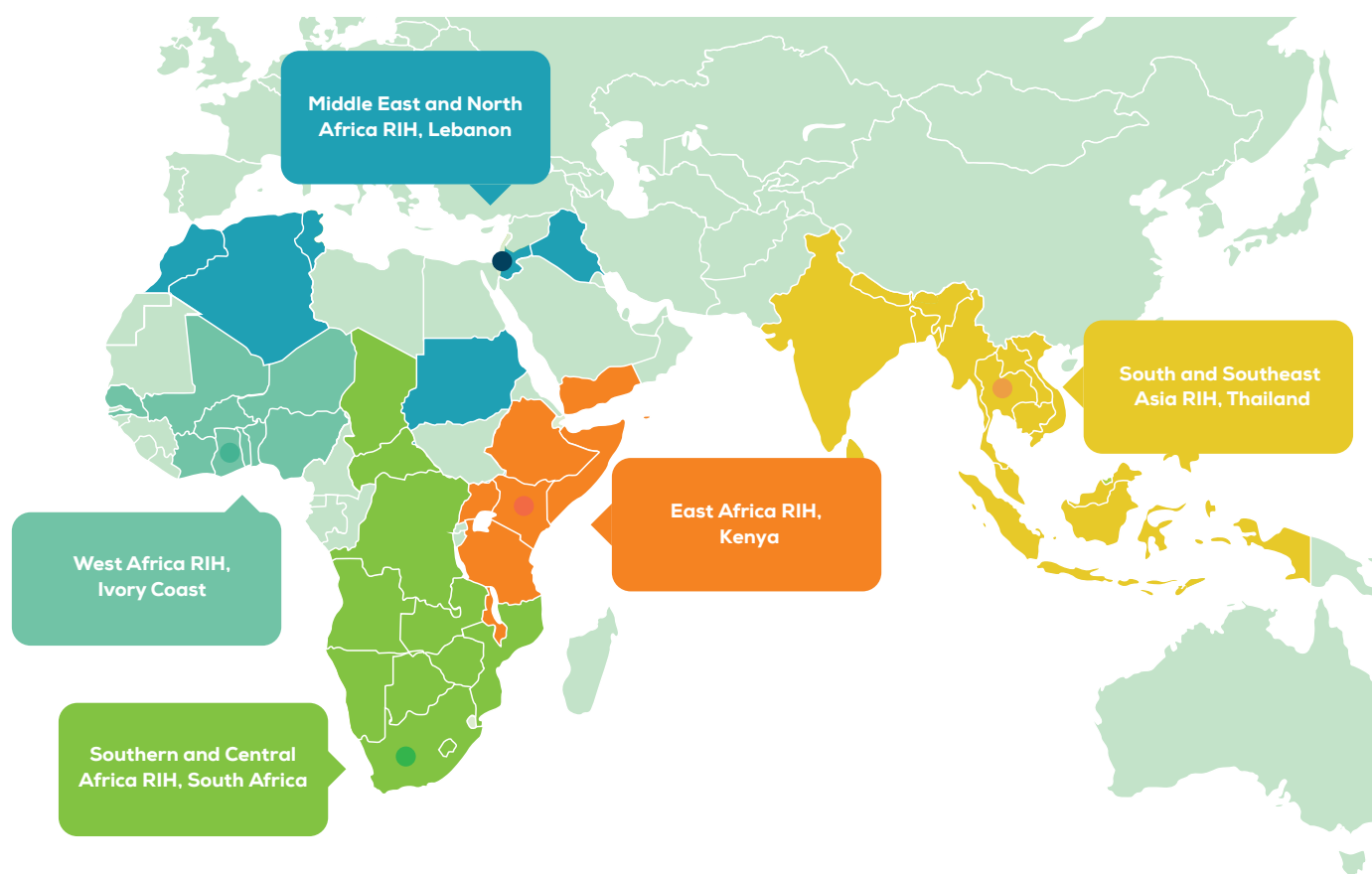
Sustainable transformation is necessary as impacts from climate change severely affect agricultural productivity, biodiversity, and the availability of natural resources. The climate crisis is also a water crisis due to changing rainfall patterns, drought, and flooding. As a key agricultural input, limited access to sustainable water sources can become a food crisis and affect rural development and healthy livelihoods. Additionally, the global agri-food sector depends on direct energy inputs. The sector not only needs pumps to operate irrigation systems and refrigeration units for cold storage, but it also relies on energy-dependent fertilizers and transportation.

Through innovation calls, WE4F supports small and medium-sized enterprises (SMEs) to diversify and grow. A largely unproductive agricultural sector, with low prospects to increase living standards, will increase unemployment rates and the number of people at the base of the pyramid – particularly among the youth and women, who make up to 70% of the

agricultural workforce. To combat this, after organization selection, WE4F provides technical and financial assistance to facilitate access to greater markets and customer groups, to expand into new countries, and to spread their innovative solutions for a more climate-friendly, water and/or energy-efficient food and agriculture system.

Through the South and Southeast Asia, the Middle East and Northern Africa, Southern and Central Africa, East Africa, and West Africa Regional Innovation Hubs, WE4F plans to work with 120 SMEs to reach farmers and other end-users to bridge the gap in lack of access to knowledge, agricultural inputs, finance, technology, and markets. Additionally, WE4F helps these SMEs unlock their potential for positive impact by producing more high-quality food with less resources and by promoting the holistic management of natural resources and circular and biodiversity economy business opportunities.

The supported innovations can come from both profit and non-profit organizations, as well as organizations in academia with a for-profit arm that are working in the water-energy-food nexus and want to promote market-based and entrepreneurial solutions. WE4F gives priority to innovations that have a focus on the base of the pyramid, and those that specifically target women and youth to increase both access and financial viability of these innovations.



KEY PERFORMANCE INDICATORS - GLOBAL TARGETS, CURRENT RESULTS, AND STATUS

Key Performance Indicator	Life of Program Target (2020-2025)
 KPI 1: Share of supported innovators that successfully marketed their climate-friendly, energy and/ or water-efficient innovations with profit	 8% (of which at least 1/4 are led by women)
 KPI 2: Number of smallholder farmers and other end-users using energy-efficient, water-efficient, or climate adaptation related WE4F innovations in their activities	 3,000,000 end-users, of which 30% are women
 KPI 3: Total mass of food produced as a result of WE4F innovations	 6,000,000 tons
 KPI 4: Total mass of food processed as a result of WE4F innovations	 2,340,000 tons
 KPI 5: Total energy saved in the food value chain as a result of the use of WE4F innovations	 700,000,000 kWh of energy saved
 KPI 6: Total volume of water consumption reduction in the food value chain as a result of WE4F innovations	 2,500,000,000 liters
 KPI 7: Number of smallholder farmers and other end-users that experience an increase in income	 700,000 end-users
 KPI 8: Share of innovators and other stakeholders that use tools, methods, or processes to monitor the protection of water or biodiversity	 80% of supported innovators
 KPI 9: Value of investment in US Dollars that WE4F innovators have mobilized from external sources	 \$40,000,000 US Dollars
 KPI 10: Number of strategies, guidelines, or projects of international, regional or local organizations adopting and disseminating lessons learned from WE4F publications, events, or presentations	 20 strategies, guidelines, or projects

Global Y1 Target (2020-2021)	Global Year 1 Results (2020-2021)	Current Status
8%	0%	in progress
107,500 end-users	64,000 end-users	on track
271,250 tons	255,000 tons	on track
42,000 tons	36 tons	in progress
N/A	8 million kWh	on track
44,000,000 liters	0 liters	in progress
65,000 end-users	18,500 end-users	in progress
80% of innovators	72% of innovators	on track
\$7.8 million US Dollars	\$6.7 million US Dollars	on track
0 strategies, guidelines, or projects	1 strategy, guidelines, or projects	on track

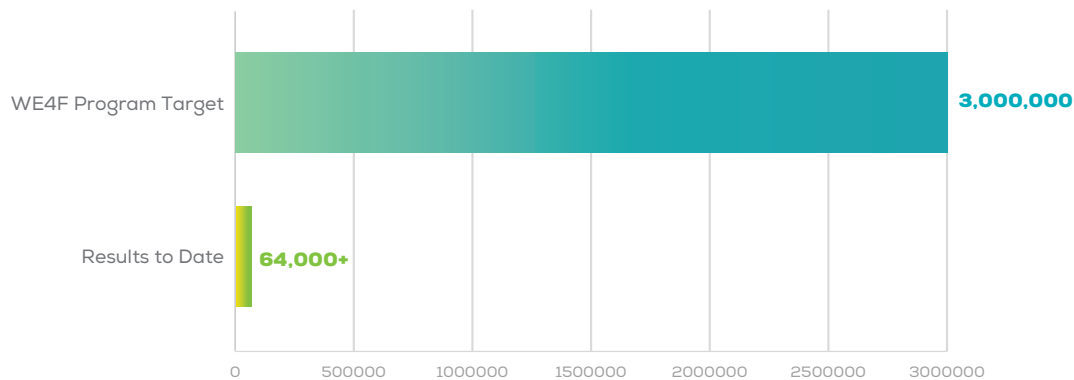


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2021 IMPACT

NUMBER OF WE4F INNOVATION END-USERS

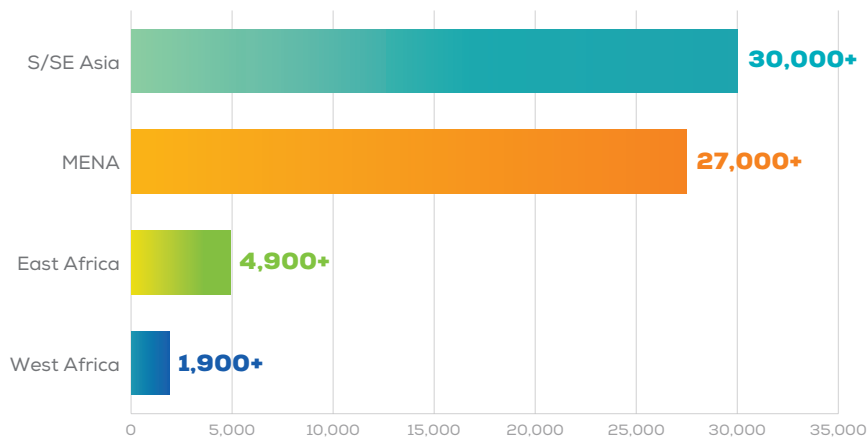
WE4F LOP Target vs Results to Date



As of January 2022, WE4F innovators impacted nearly 64,000 end-users in total - over 30,000 in S/SEA and 27,000 in the MENA region, and nearly 5,000 in East Africa and 2,000 in West Africa. The number of end-users represents those impacted since the innovation joined the program and not their previously existing end-users. Digital solutions are the leading innovation type associated with the end-user impact and may help address challenges associated with the COVID-19 pandemic.

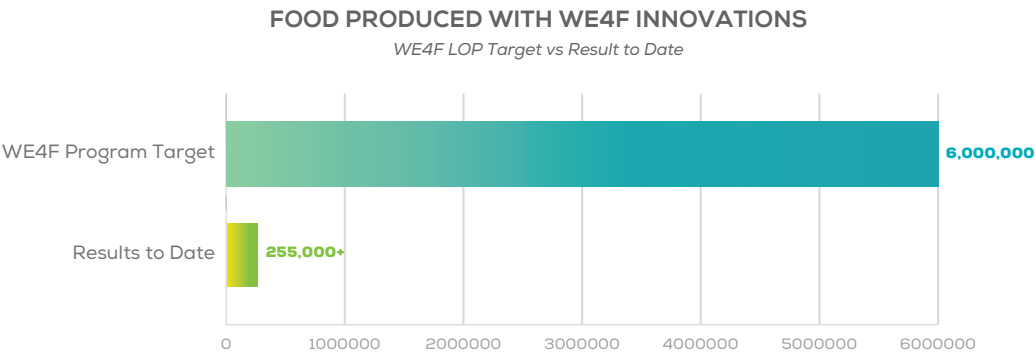
NUMBER OF INNOVATION END-USERS

Results to Date by Region

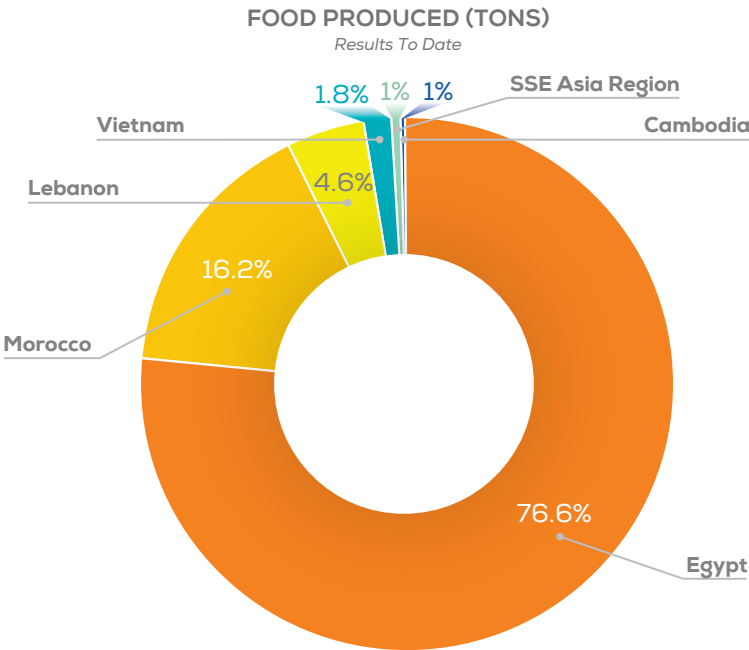


The types of end-users targeted by WE4F innovators vary widely and include smallholder farmers, medium-large scale farmers, cooperatives, medium-scale companies, and large-scale companies involved in food processing activities, or other enterprises in the agricultural sector. For example, Prometheus Power Systems in India and Eveline in Western Kenya provide milk chilling technologies – a form of food processing – to rural dairy farmers to increase outputs and incomes.

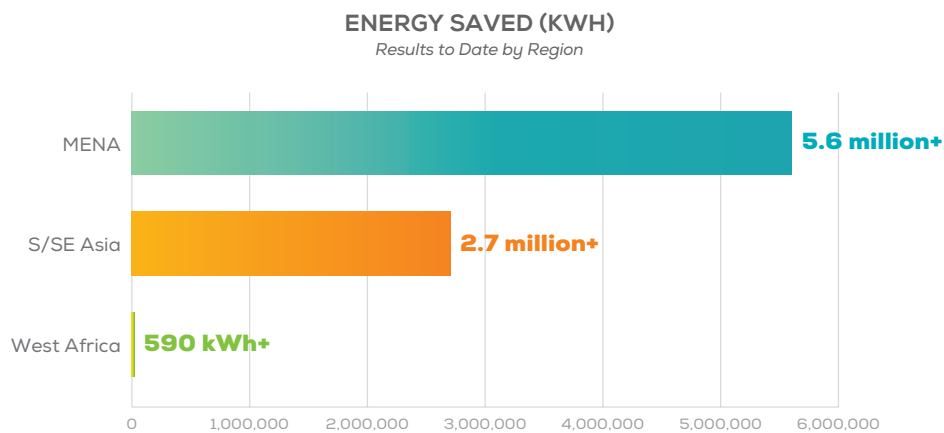
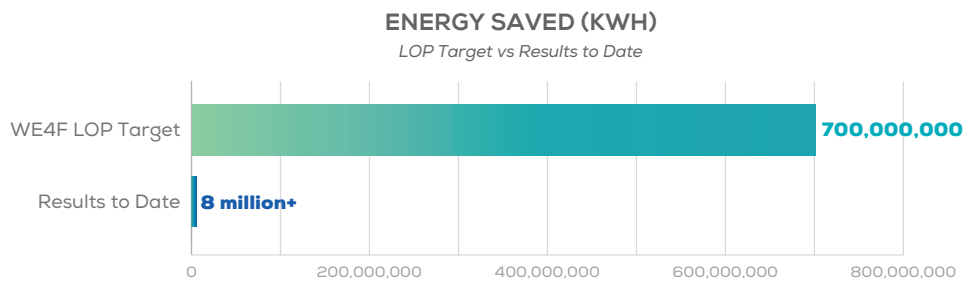
Innovators have developed business models that focus on supporting and providing solutions to women in the water-energy-food (WEF) nexus. Over 75% of innovators plan to focus on integrating gender across the food value chain.



At its core, WE4F aims to increase food production along the value chain through the innovations it supports. As of January 2022, WE4F innovations have produced more than 250,000 tons of food and almost all innovators who reported results had achieved more than half of their Y1 annual target for food production. Several of those innovators (Compost Baladi, SuWaCo, MimosasTEK) reported food production results well above their Y1 targets.



As many WE4F innovators have not yet completed their first year, it is too early to report the amount of food produced with their innovations. In addition to their focus on increasing food security, 47% of innovators at the MENA, S/SEA, and S/CA RIHs provide solutions that aim to improve nutrition along the food value chain.

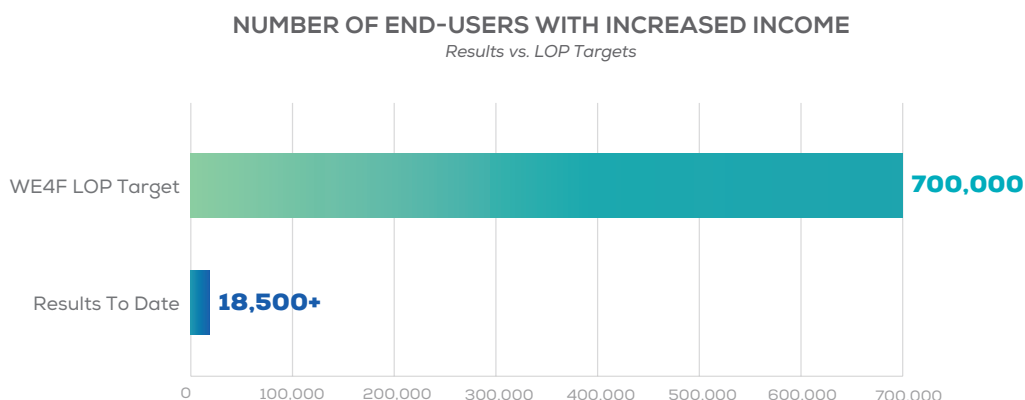


In addition to improving livelihoods through expanded adaptation of innovations and increased food production, WE4F also aims to increase climate resiliency and lessen dependency on fossil fuels through the usage of renewable energy and reduced energy consumption.

Several innovators (RDO, High Atlas Foundation, and IRSC) have surpassed their total annual target for energy savings, despite reporting these results only six months into their reporting year. Innovators operating in Egypt, Lebanon, and India reported most of the energy saved during the measurement period.

Though most East and West African innovators reporting toward this indicator will begin to show results in 2022, East African innovators with processing companies have completed energy audits to identify and implement conservation measures totaling potential energy savings as high as 2.76 million kWh per year and in West Africa, audits have taken place in rice mills to reduce energy consumption by 600,000 kWh per year.

Energy savings and greenhouse gas (GHG) emission reductions are key metrics reported by innovators, measuring the impact their innovations have on climate change. At the S/SEA, MENA, and S/CA RIHs, 47% of innovators contribute toward climate adaptation and 50% offer climate mitigation innovations.

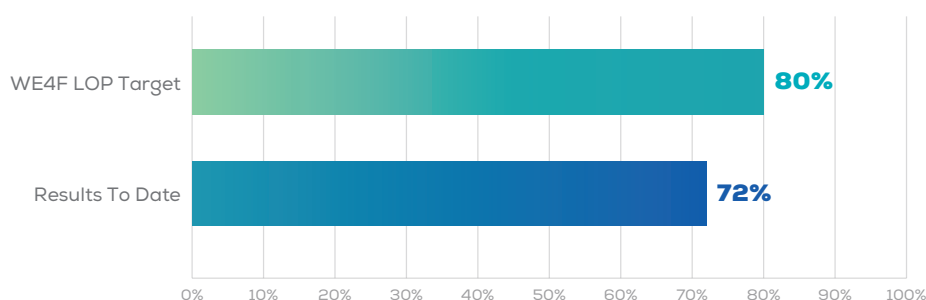


WE4F supported innovations are expected to impact end-user income in a variety of ways. For example, innovations may increase overall yield for farmers, thereby increasing their potential income from selling agricultural goods. Or, owing to their ability to improve water or energy-efficiency, innovations may decrease the overall cost of end-users' agricultural activities by replacing costly energy sources or reducing the amount of farm inputs needed.

As of January 2022, nearly 19,000 innovation end-users have experienced an increase in end-user income due to WE4F innovation use, even though only 15 innovators had data to report at this time. Most of this impact on end-user income was reported by innovators at the MENA RIH. However, the results are an early sign that WE4F innovators as a group will be successful in increasing end-user income.

SOWIT, which is based in Morocco and provides a digital solution, accounts for the highest reported largest number of end-users experiencing increased incomes. This innovator's results highlight the prominent role digital technologies can play in reaching a large number of end-users and creating opportunities for significant BOP end-user results throughout the WEF nexus.

SHARE OF INNOVATORS MONITORING WATER OR BIODIVERSITY



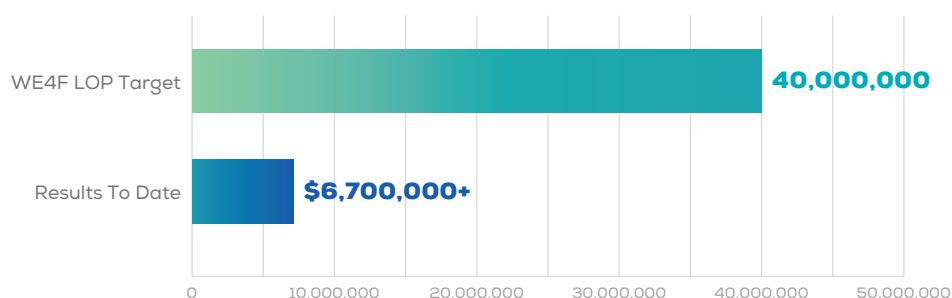
To ensure that innovations not only improve energy- and water-efficiency in agriculture, but also prevent negative impacts on the environment, innovators monitor their innovation's impact on water resources and biodiversity.

Currently, 72% of MENA, S/CA, and S/SEA innovators monitor water or biodiversity using accepted methodologies. The innovators are interested in monitoring and mitigating the environmental effects of their innovations and for those who need monitoring support, S/SEA RIH has provided technical assistance to identify and calculate data for indicators such as water use, greenhouse gas emissions, and energy consumption and savings. The MENA RIH offered workshops that helped build the capacity of innovators and educated them on the importance of resource and biodiversity protection for their work and for the sustainability of their businesses.

In East Africa, though the innovators have only just begun their onboarding process, there are currently six innovators who monitor water. The percentage of innovators is anticipated to increase as the innovations develop with support from the Regional Innovation Hub.

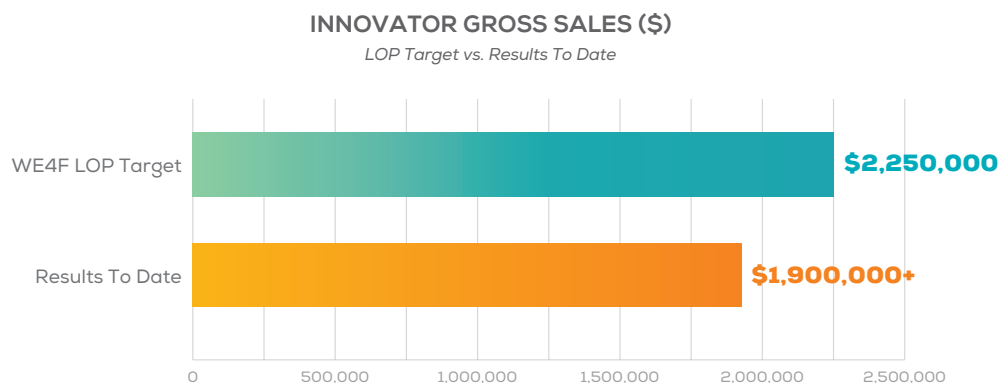
INNOVATOR INVESTMENT MOBILIZED (\$)

Targets vs. Results To Date



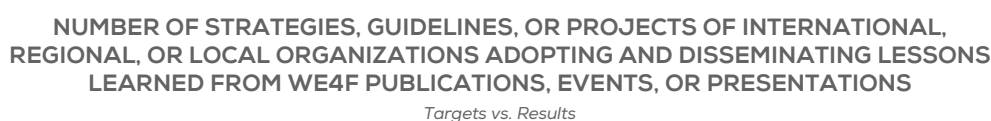
To encourage SME growth, innovators seek outside investment to ensure long term sustainability. To date, innovators have mobilized nearly \$7 million from external sources – \$1 million shy of the Y1 target of approximately \$8 million. The MENA and S/SEA RIHs are optimistic about the next six months and the likelihood that they will surpass the target.

Investment sizes ranged from \$40,000 to \$1.1 million, highlighting the “missing middle” of investment ticket sizes. Small and medium-sized enterprises have expressed an interest in receiving such mid-size investments. The current results also illustrate the interest of investors in pursuing external fundraising in the MENA and South Asia and Southeast Asia regions.



Gross sales are another key measure of growth, especially for innovators that are small or medium enterprises (SMEs). SMEs represent 97% of the innovators working with the MENA, S/SEA, and S/CA RIHs.

The LOP target is \$2.25 million which reflects the S/CA RIH’s LOP target since the S/SEA and MENA RIHs have not yet set their RIH-level targets for this indicator. As of January 2022, S/SEA innovators had reported \$1.9 million in gross sales. Innovators in East and West Africa will report toward this indicator in 2022, after innovator onboarding is complete.



The results of this indicator reflect WE4F’s impact on the broader enabling environment and WEF nexus through the dissemination and uptake of lessons learned by other nexus actors.

As of January 2022, one reported adoption was the USAID/Nigeria COVID-19 Food Security Challenge. The challenge relied on lessons learned from the S/SEA and MENA CFIs and the Asia EDGE Ag-Energy Prize (i.e., outreach and communication strategy, application design, evaluation and judging of applicants) to conduct their activities. Specific team members from the Secretariat Unit helped implement the lessons learned by providing templates and support throughout the challenge.

Currently, there are also strategies and projects in progress that will integrate WEF nexus lessons on a broader scale. For example, in Kenya, the East Africa RIH is working with the Lake Basin Development Authority to develop an Integrated Regional Development Master Plan. In Ivory Coast, the West Africa RIH is working with ECOWAS ECREEE to formulate policy framework conditions at a subregional level.



CHALLENGES AND SOLUTIONS

Despite a favorable international political environment and movement toward integrated approaches, shifts in social, economic, and environmental conditions have resulted in implementation challenges. Innovators supported by WE4F have faced additional challenges related to climate change, pressure on natural resources, and rising energy prices. In spite of these challenges, throughout 2021, WE4F continued to successfully implement its activities and support local SMEs while developing, or pursuing, appropriate and sustainable solutions.

CHALLENGES	SOLUTIONS
COVID-19 PANDEMIC	
Lockdowns resulted in human resource constraints, limitations on business development activity, and innovator expansion delays.	The hubs discussed the situations and the changing government policies with innovators and partially extended milestone completion dates.
Travel restrictions prevented different activities from occurring (i.e., reaching duty stations, conducting visits to sites and target groups in partner countries, and holding an in-person annual convening).	The hubs leveraged existing networks of regional organizations to gather information about end-user demand, local enabling environments, and other data.
Capacity development activities had to be rescheduled, and the hubs reached only a fraction of the expected number of participants.	As of January 2022, continued implementation seemed possible. WE4F aims to have contingency plans in place in case future in-person events cannot be held.
RIHs and innovators were affected. • Government budgets were reallocated to handle the pandemic. • Staff of many innovators contracted COVID-19. • Hub staff contracted COVID-19. • Local and international markets saw significant decreases in demand. • Some investors chose to delay investment decisions, given market demand uncertainty. • Some innovators chose to delay their investment raising cycles because they felt their firm's valuation was undervalued. • Procurements were delayed due to supply chain interruptions.	• The hubs engaged with innovators to adjust short-term plans, such as considering raising working capital financing and keeping track of market trends. • The hubs organized peer-to-peer learning sessions among innovators, allowing the companies to share their experiences in dealing with COVID-19 effects.

CHALLENGES	SOLUTIONS
WORKING IN POLITICALLY UNSTABLE AREAS	
East Africa: • Volatile security situations in Ethiopia and Somalia (armed conflict, civil unrest, and communications disruptions).	The security situation meant that some activities and the support of three SMEs had to halt until the situation became clearer.
West Africa: • Coups' d'états were staged in Mali, Guinea, and Burkina Faso, and there was an attempted coup in Niger.	Eleven of the 16 selected innovators are based in one of these countries. The WA RIH continued supporting innovators to allow them to advance their economic development efforts and provide jobs.
South and Southeast Asia: • The civilian-led Myanmar government was overthrown in a military coup in February. • The Taliban regained control of Afghanistan after U.S. military forces withdrew.	• The team is discussing business model adaptation and expansion strategy with all Myanmar-based innovators. • Operations in Afghanistan are ceased, and the program's focus is on the 15 other countries in the region.
Southern and Central Africa: • There was a military transfer of power in Chad.	• The S/CA RIH, led by Tetra Tech, conducted a Facility Risk Assessment and receives regular security briefings.
Middle East and North Africa: • Escalation of political turmoil in Lebanon, with hyperinflation, collapse of the banking system, and fuel shortages. • Egypt experienced high interest rates, an increase in production and supply costs, and a slowing of digital development. • In October, a military coup in Sudan resulted in a rapid decline of political stability and security. Protests are ongoing.	• Short-term mitigation is difficult, but the hub tried to find alternative funding sources in the banking sector. • SMEs received optimization support to compensate for transportation costs and diversify international inputs. • The RIH shifted its focus to those in reach (Khartoum area) and provided webinar information by phone. Sudanese applicants were allowed to submit offline applications.
CLIMATE CHANGE & NATURAL RESOURCES	
A delayed rainy season in Ivory Coast led to two months of power rationing.	This spurred new public attention and political interest in alternative energy solutions and an improved energy mix, as well as more attention for the management of water resources, therewith creating political momentum for WE4F activities.
The South Africa national energy utility implemented rolling blackouts, resulting in power outages of up to six hours a day.	For the hub, Tetra Tech secured offices with a backup generator and installed in uninterruptible power supply (UPS) for the Internet router to ensure uninterrupted connectivity.
There has been a general lack of awareness of innovations' negative environmental impacts and climate risks.	The hubs discussed the potential negative impacts with innovators and raised their awareness of environmental compliance, sustainable consumption, social responsibility, biodiversity conservation, and climate.
A general lack of incentives and motivation to implement mitigation measures affected innovators' willingness to reduce negative environmental effects.	In meetings and workshops, the hubs emphasized the importance and benefits of innovators mitigating negative environmental effects (i.e., improving their image and increasing their chances of obtaining investment).
PROGRAM IMPLEMENTATION AND ESG	
Challenges with the strategic coordination of the International Initiative and in the implementation of the program.	Donors and implementers adjusted the steering and coordination priorities to create a common understanding of differences between GIZ and USAID and their implementing approach and procedures.
Difficulty implementing environmental, social, and governance (ESG) recommendations, especially discussions about gender and environmental sustainability.	The hubs and ESG teams plan to raise innovators' awareness and discuss problems in mainstreaming gender, set concrete ESG milestones in their transformational plans and document lessons learned and best practices, although more financial and technical support for serious changes is needed.



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LOOKING FORWARD

In the coming year, WE4F looks to pursue key activities and strategies that will help innovators reach more smallholder farmers and improve smallholder farmers' livelihoods. These activities will cover promoting end-user financing models, partnership building, knowledge sharing through events and knowledge products, technical assistance to innovators, and onboarding of new innovators. Key activities that WE4F will focus on in 2022 include:

Supporting local SMEs directly by providing technical assistance, business development advice, and bootcamps and trainings through Regional Innovation Hubs

Key Activities:

Technical and financial review of the hubs during the regional bootcamps. The USAID Secretariat Unit aims to visit the S/SEA, MENA, and S/CA RIHs during the first half of the year to conduct its technical and financial review of the hubs' operations and attend the regional bootcamps for innovators.

Innovator onboarding, support, and further calls for innovation. The regional hubs will support innovators and their innovative solutions through capacity development and technical advisory services as well as through disseminating knowledge about finance and business opportunities. The hubs will conduct and adapt trainings to each region's needs, challenges, and conditions, focusing on innovative technologies such as solar powered irrigation systems (SPIS). The East Africa and West Africa Regional Innovation Hubs will complete the onboarding process for 46 innovators in 2022 and will begin their technical, financial, and business development support.

IMPROVING ACCESS TO FINANCE FOR END-USERS

Women and men smallholder farmers are at the base of our food systems and critical to feeding the coming billions. However, they still lack access to knowledge, agricultural inputs, finance, technology, and markets. Through WE4F and supported future-proof innovations, smallholder farmers are able to access those missing resources – especially financial resources.

Key Activities:

Matchmaking between finance institutions and innovators to advance access to finance. Limited access to finance for SMEs remains a main barrier in scaling climate-adapted, water- and/or energy-efficient innovations. Therefore, WE4F plans to strongly focus on innovative financial products and business models, which help democratize access to finance, while looking after environmental awareness and climate adaptation measures in the financial sector. WE4F plans to continue fostering finance institutions in the different regions, as well as improving administrative processes for better access to finance for end-users.

Publication of the end-user financing research. WE4F aims to publish the outcomes of end-user financing research, which portrays the landscape of end-user financing in the WEF nexus, describes end-user financing models being implemented across the regions, and reveals best practices for implementing these models effectively.

STRENGTHENING POLITICAL MULTISECTORAL PARTNERSHIPS AND DONOR COOPERATION

Key Activities:

Contribute to the enabling environment and build multisectoral partnerships. WE4F will continue to monitor trends in the WEF nexus from the policy perspective and plans to keep contributing to the global policy dialogue by sharing the hubs' approaches and results, along with the overarching vision and takeaways from the program implementation. On a high level, the donors plan to strategically discuss the program's way forward, while considering global challenges in the nexus such as climate change, rising energy prices, and other topics on the international political agenda. Additionally, WE4F aims to continue to identify and engage with potential partners at the global and regional levels.

CONTRIBUTING TO GLOBAL AGENDA SETTING BY PARTICIPATING IN INTERNATIONAL AND HIGH-LEVEL EVENTS CONCERNING THE WEF NEXUS AND CLIMATE CHANGE

By using WE4F's water- and energy-efficient innovations, renewable energy, and climate-resilient practices, farmers and food companies can enhance their climate resilience, reduce CO2 emissions, and support the goal of limiting global warming to 1.5 degrees Celsius.

In order to have healthy environments, we need to have environmentally friendly businesses. Through grants and technical assistance, WE4F helps small and medium enterprises unlock the potential for positive impact by producing more high-quality food with less resources and by promoting the holistic management of natural resources and circular and biodiversity economy business opportunities.

Key Activities:

Participate in events such as the World Water Forum, World Water Week, and the United Nations Climate Change Conference (COP27) in Egypt. These events offer opportunities to share the experiences and knowledge of both the program and the innovators on a regional and international level. During the World Water Forum in March 2022, the East Africa, West Africa, MENA, and S/CA RIHs will present the program's activities and host a panel discussion on end-user finance, because it is still one of the main barriers in scaling innovative WEF solutions. A similar theme will be addressed at the World Water Week, where WE4F will discuss the linkages between end-user financing, climate adaptation, and smallholder farmers' access to resources. Building on WE4F's participation in the 2021 European Development Days and United Nations Food Systems Summit Pre-Summit, WE4F will pursue hosting sessions at these events and will continue to maintain a multisector approach when contributing to the sustainability of food systems.



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ANNEX

EXECUTIVE SUMMARY – EAST AFRICA

Introduction to WE4F and the East Africa Regional Innovation Hub

The global project Water and Energy for Food (WE4F) supports local innovative SMEs in the dissemination of climate-smart, energy and/or water-efficient innovations for more productive and sustainable food production. The support is channeled through two Regional Innovation Hubs (RIHs) located in East and West Africa with the aim of producing more high-quality food with fewer resources. The East Africa RIH supports innovators with business development advice, results-based financing, and investor matching. The Hub also works with other ecosystem actors, such as financial institutions, policymakers, research and media organizations, to break down barriers hindering the adoption of innovations, and to create a vibrant local economy for the innovators to thrive.

Call for Innovations

In 2021, the East Africa RIH organized a Call for Innovations to create new partnerships with local SMEs requiring support in scaling their sustainable and innovative solutions. The Call attracted 153 applicants of which 20 were chosen for long-term support. However, due to the security situation in Ethiopia and Somalia, three of the SMEs have not yet been contracted. Figures 1 and 3 give further information on the selected innovators, their thematic areas, their impact, and more.

EAST AFRICA INNOVATION CALL

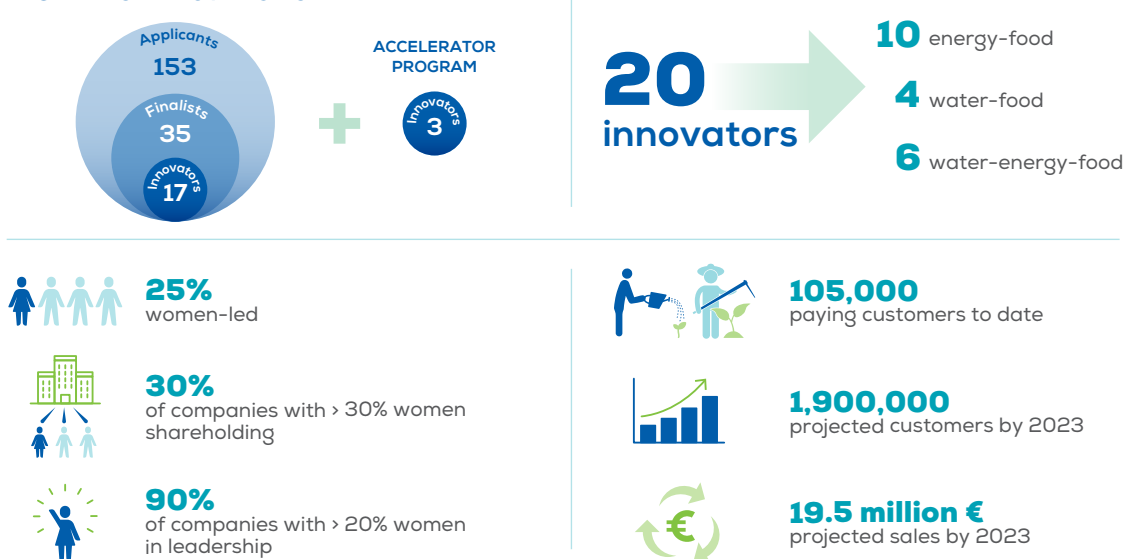


Figure 1. East Africa innovators overview

Further Partnerships and Measures for Capacity Development

In addition to the Call for Innovations, the East Africa RIH has other mechanisms through which local SMEs are supported. The RIH works with three Integrated Development Partnerships with the Private Sector (iDPPs) and another three SMEs that are supported through an investment accelerator program. The East Africa RIH has conducted a series of specialized trainings for young entrepreneurs, energy professionals, factory workers, smallholder farmers, and others. The aim is to share knowledge and demonstrate best practices for resource-efficient, productive, and sustainable food production and processing. Figure 2 illustrates the number of people who benefitted from trainings conducted by WE4F East Africa's partners in 2021.

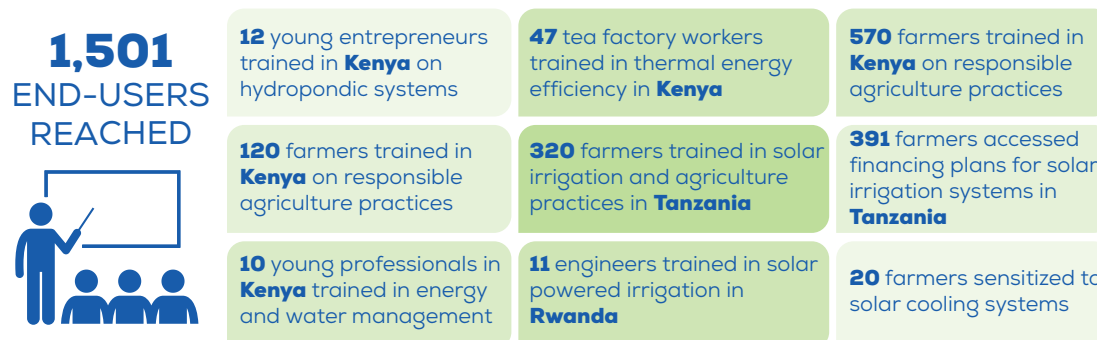


Figure 2. End-Users reached by WE4F trainings

The East Africa RIH and its partners also established outreach and awareness campaigns. For example, the RIH staff developed and were featured in a seven-part edutainment program on a national Kenyan TV show focused on solar-powered irrigation. Overall, the program reached around 6 million viewers. Another example is the roadshows organized by Energy for Impact (E4I) in Tanzania to raise awareness of the potential of solar irrigation, which reached 3963 farmers.

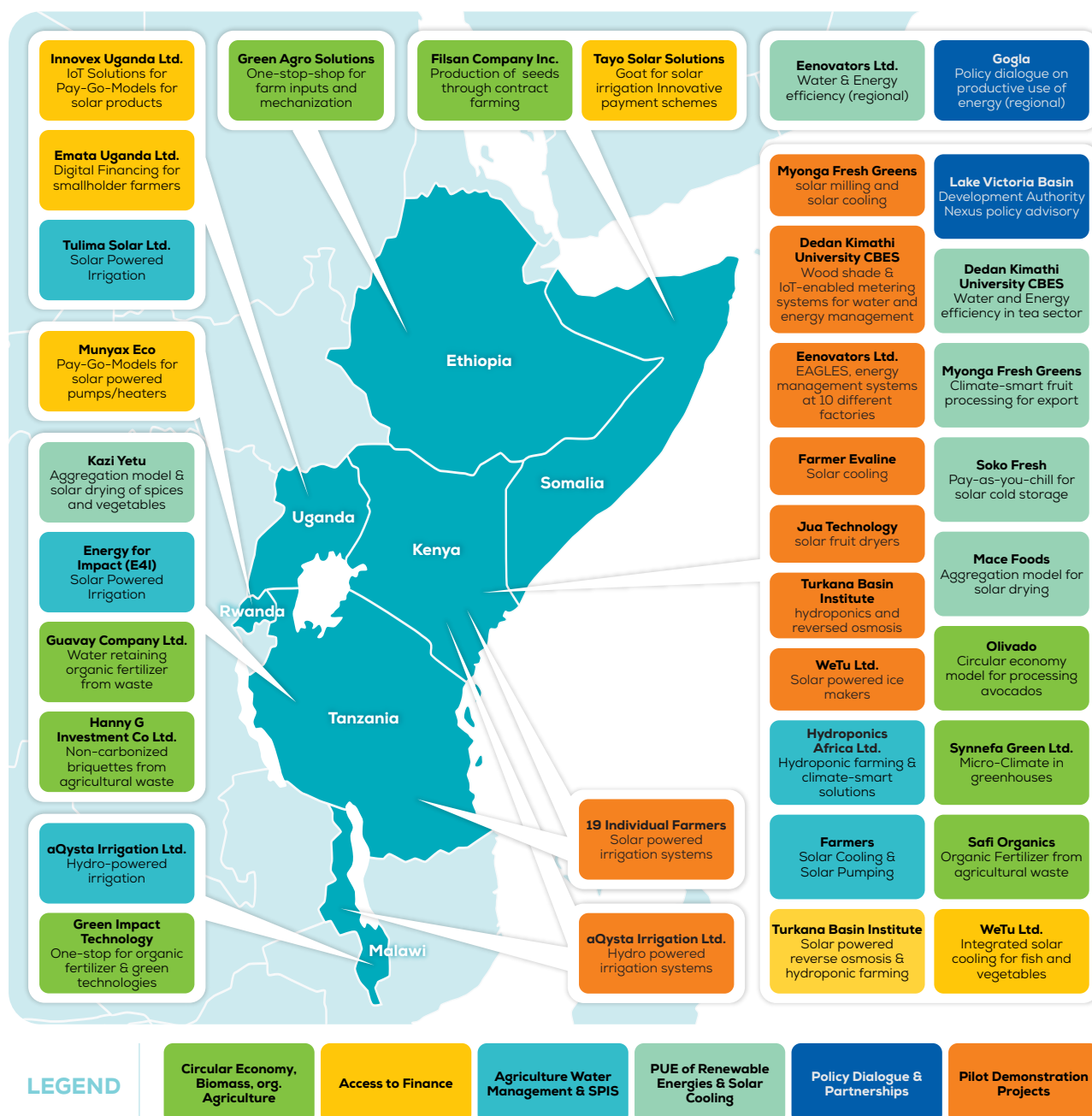
In the past year, several themes emerged that have a particular relevance to the region and show significant growth potential including hydroponics, organic fertilizer, productive use of energy technologies, as well as pay-as-you-go payment solutions. Moreover, customer finance remains a key barrier for uptake and therefore much of the upcoming work will focus on facilitating access to suitable financing options for smallholder farmers.

Participation in Events

The East Africa RIH participated in several international, regional, and national events to share findings and lessons learned while raising issues on the global political agenda, such as improved access to finance for small-holder farmers, the importance of sustainably transforming global food systems, and the dissemination of innovative solar-powered irrigation systems in the region. Events in 2021 included the European Development Days, the Pre-Summit of the United Nations Food Systems Summit, the Kenya Innovation Week, Sankalp Africa, and the World Energy Day.

Global Agenda Setting

In 2021, the activities of the East Africa RIH were in alignment with both the German government's initiative "One World – No Hunger" and the WE4F's approach to global challenges. By focusing on local private sector development, it is possible to establish sustainable use of resources through best practices, thereby contributing to Agenda 2030 for Sustainable Development. Furthermore, through the multi-donor partnership and a Team Europe approach, WE4F is a role model in delivering Nexus solutions and leading a sustainable transformation of regional food systems.



WE4F-supported Innovators, demonstration projects and partnerships map

EXECUTIVE SUMMARY – WEST AFRICA

Introduction to WE4F and the West Africa Regional Innovation Hub

The global project Water and Energy for Food (WE4F) supports local innovative SMEs in the dissemination of climate-smart, energy and/or water-efficient innovations for more productive and sustainable food production. The support is channeled through two Regional Innovation Hubs (RIHs) located in East and West Africa with the aim of producing more high-quality food with fewer resources. The West Africa RIH supports innovators through partnerships and a range of activities, such as improving access to finance, technical advice, result based financing, grants, knowledge dissemination, and the improvement of framework conditions. The West Africa RIH also sets up demonstration projects in collaboration with enterprises, universities, and NGOs. Additionally, the West Africa RIH supports ministries in the implementation of national policy guidelines on the organization and coordination of the agricultural sector.

Call for Innovations

In 2021, the West Africa RIH organized Calls for Innovations on both the regional and national level to create new partnerships with local SMEs requiring support in scaling their sustainable and innovative solutions. The regional call attracted 171 applicants of which 16 were chosen for long-term support, whereas the national Call attracted 18 applicants of which four were chosen. Figures 1 and 3 give further information on the selected innovators, their thematic areas, impact, and more.

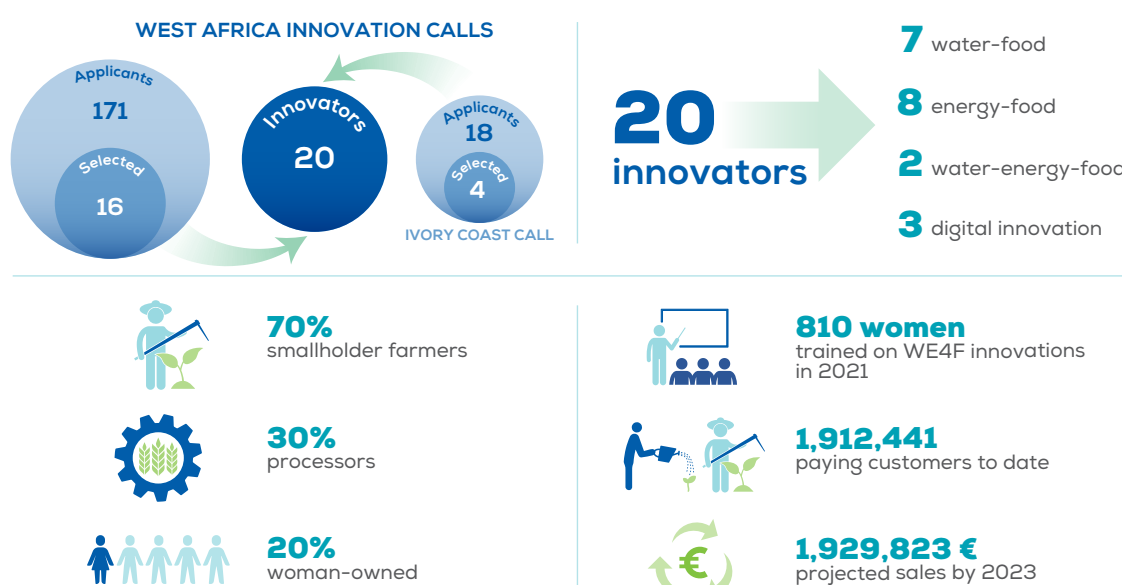


Figure 1, West Africa innovators overview

Further Partnerships and Measures for Capacity Development

In the past year, several themes emerged that have particular relevance to the region and show significant growth potential including sustainable irrigation practices, productive use of energy (PUE) technologies in the agricultural sector, circular economy, solar drying and cooling to increase shelf life, biogas systems, organic fertilizer, and microfinancing.



Figure 2, End-users reached by WE4F trainings

The West Africa RIH also established demonstration sites where agricultural practices were showcased and knowledge was disseminated. For example, female farmers in Niger have been trained in using a solar-powered irrigation system and female as well as mixed farmers groups in Senegal and Benin learned how to use similar systems as well as solar processing units. Additionally, the RIH established technical trainings for smallholder farmers, technical advisors, and researchers in the WEF Nexus to disseminate knowledge and best practices on water and energy-efficient food production. Figure 2 illustrates the number of people who benefitted from trainings conducted by WE4F West Africa's partners in 2021.

Participation in Events

The West Africa RIH participated in several international and national events to share findings and lessons learned while raising issues on the global political agenda, such as improved access to finance for small-holder farmers, the importance of sustainably transforming global food systems, and the dissemination of innovative solar-powered irrigation systems in the region. Events in 2021 included the Stockholm World Water Week and a Webinar Session on access to finance co-organized with the Food and Agriculture Organization (FAO). Additionally, the West Africa RIH organized a regional business to business event for matchmaking between innovators and financial institutions.

Global Agenda Setting

In 2021, the activities of the West Africa RIH were in alignment with both the German government's initiative "One World – No Hunger" and the WE4F's approach to global challenges. By focusing on local private sector development, it is possible to establish sustainable use of resources through best practices, thereby contributing to Agenda 2030 for Sustainable Development. Furthermore, through the multi-donor partnership and a Team Europe approach, WE4F is a role model in delivering Nexus solutions and leading a sustainable transformation of regional food systems.



WE4F-supported Innovators, demonstration projects and partnerships map