

INFoCAT

PROMOTING WOMEN AND YOUTH-LED CLEAN AGRITECH INNOVATIONS IN AFRICA



2026



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INRA



Innovate For Clean
Agricultural Technologies
INFoCAT



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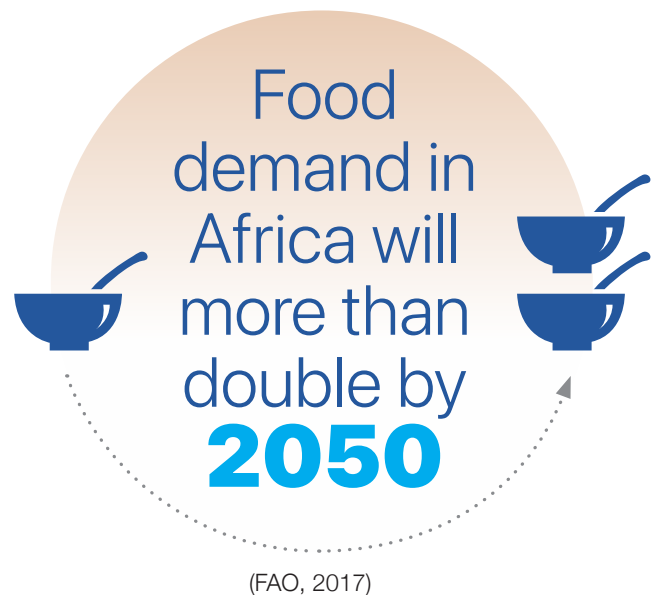
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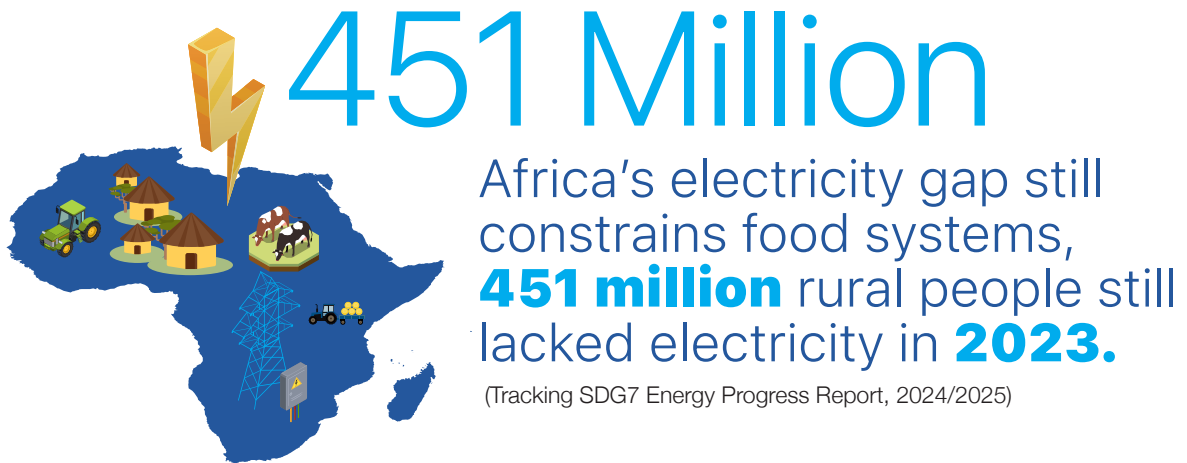


Introduction

Access to reliable, affordable, and sustainable energy is not only a development necessity for Africa, it is a strategic enabler of food systems transformation, poverty reduction, and inclusive economic growth. Yet the scale of the energy access gap remains a major constraint to progress. Around 600 million people in sub-Saharan Africa still lack access to electricity, and an estimated 451 million people in rural areas were without electricity in 2023. This limits irrigation, mechanization, cold storage, processing, and market access, while forcing farmers and agro-processors to depend on costly, polluting, and labour-intensive alternatives.

At the same time, Africa's agriculture sector must meet the needs of a growing, urbanizing, and climate-vulnerable population. Food demand is projected to more than double by 2050, and agricultural output in Africa will need to more than double to keep pace. Without stronger investment in climate-smart, energy-enabled agriculture, food insecurity, post-harvest losses, and import dependence will deepen. This underscores the urgent need for integrated solutions that connect energy access, agricultural modernization, and rural enterprise development.





Women are central to this transformation, yet they continue to face structural barriers that limit their productivity, earnings, and leadership across agricultural value chains. Women account for 49 percent of the agrifood systems workforce in sub-Saharan Africa, and 76 percent of working women are employed in agrifood systems. However, they remain disproportionately constrained by limited access to land, finance, training, technology, and decision-making opportunities. Across Africa, women also spend around 3.5 times more time than men on unpaid care and domestic work. Closing these gaps is therefore not only a matter of equity, but a policy and investment imperative for accelerating agricultural productivity, enterprise growth, and inclusive rural development.



49% of the agrifood workforce are **African women**.
76% of working women are employed in agrifood systems.



(FAO, 2025)

It is against this backdrop that the Innovate for Clean Agricultural Technologies (INFoCAT) project was implemented from 2023 to 2025 in Ghana, Senegal, and Côte d'Ivoire. INFoCAT was designed to address persistent barriers facing women and youth at the intersection of agriculture, energy, and technology. These include limited entrepreneurship opportunities, unfavourable policy environments for women-led MSMEs, restricted access to finance, inadequate skills development and mentorship, and under-representation of women and youth in decision-making roles.

Recognizing the close link between energy access and food systems transformation, INFoCAT strategically targeted systemic challenges in rural crop production and processing. These include the impacts of climate change, limited access to appropriate technologies, heavy physical labour and related health risks, high energy costs, and continued dependence on fossil fuel-powered equipment. By promoting clean, small-scale agricultural technologies, the project aimed to reduce drudgery, improve productivity, strengthen resilience, create jobs, and advance gender equality.

INFoCAT Objectives:

The INFoCAT initiative was created to empower women and youth in rural communities across Ghana, Senegal, and Côte d'Ivoire by promoting clean, affordable, energy-powered agricultural technologies that enhance productivity and income. The specific objectives were:

1. Support the development of affordable, labor-saving, clean-energy agricultural technology solutions to save time, reduce drudgery, enhance women and youth economic opportunities and well-being in a way that reduces gender imbalances in innovating clean-energy agricultural technologies.
2. Support clean-energy agricultural technology start-ups with a focus on women-led companies, and where possible refine and expand their product offering to meet the needs of rural smallholders through market intelligence. This was implemented in a way that reduces gender imbalances in the use of and access to clean-energy agricultural technology.
3. Inform gender-sensitive policy reforms that recognize the contribution of clean-energy agriculture technology start-ups to the energy transition and provide the necessary incentives for them to thrive and grow.



INFoCAT was implemented in phases:

Phase 1: Baseline Study

The baseline field-data collection was done in all three countries within a space of two months (March-April 2025). Specifically, field-data collection took place in Ghana Côte d'Ivoire and Senegal. To ensure data quality, the INFoCAT team organized questionnaire reviews and training sessions for all country teams on January 31, 2024 on interview guides for green entrepreneurs, policy-makers, farmers and processors.

A two-day training program was organized for the field investigators in Accra, Dakar and Abidjan. For Côte d'Ivoire, data was collected in Abidjan district, Yamoussoukro district, Béliér region (Toumodi), Sud-Comoé region (Grand-Bassam, Tiapoum, Aboisso), and Bagoué region (Boundiali, Tengréla, Kouto). In Ghana, data-collection took place in Gomoa East district in Central Region, and the team extended their survey to Yilo Krobo District in the Eastern Region and North Tongu District in the Volta Region. Finally, in Senegal three regions were picked: Fatick, Thiès and Louga.

In total, 52 Communities were covered in 9 Districts in all 3 countries. 1,392 Respondents (farmers and processors) were interviewed. 134 entrepreneurs, 16 policymakers and 23 focus-group discussions were carried out in all three countries within a space of two months (March-April 2025). To ensure data quality, the INFoCAT team organized questionnaire reviews and training sessions for all country teams on interview guides for green entrepreneurs and policy-makers, focus-group guides and structured questionnaires for farmers and processors.

“INFoCAT built its intervention on strong field evidence across **52** communities, **9** districts, and **3** countries.”

Phase 2: Expressions of interest for the Agritech challenge

The list of agritech problems (drudgery-filled agricultural activities handled by women) with a high priority was drawn up from the baseline survey.

An expression of interest was then developed and advertised by newspapers, social media platforms, television stations, virtual information sessions, websites and other media, to reach all young innovators and other interested parties.

The criteria for the promoted expression of interest, was curated to encourage women-led businesses and businesses with a high representation of women. Online information sessions were held twice to help applicants understand the criteria.

Phase 3: Selection Process for Agritech solutions

A total of 142 applications were received (81 for Ghana, 35 for Côte d'Ivoire and 26 for Senegal). The applications were collated and assigned to a vetting team comprising the experts and three other project members from each country team to screen the applications and shortlist.

A shortlist of 27 for Ghana, 24 for Côte d'Ivoire, and 20 for Senegal were taken through a capacity-building workshop. The next stage of the selection process was the final pitching of innovations to a panel of experts and project team members. This was a two-day event during which each contestant was allowed 10 minutes to share their innovations with the panel, after which opportunities were given to them to explain further details that may not have been made clear during the presentation through questions from the panel members.

Phase 4: Capacity-Building Workshop for Shortlisted INFoCAT Applicants

The project country teams organised a two-day capacity-building workshop in each country. The workshop was a crucial part of the selection process for the INFoCAT Innovation Challenge, as it was designed to provide an enriching platform for knowledge exchange, skills development, and networking, as well as preparing applicants for the final stage of pitching their innovations.

The workshop featured presentations on five key areas of clean agritech innovation, entrepreneurship, and project demands. The training involved interactive sessions, expert-led discussions, innovation design clinics for innovators led by experts, and opportunities for participants to present and refine their innovative ideas in collaboration with other leading minds in the field. The workshop brought together approximately 71 innovators in all 3 countries (27 from Ghana, 24 from Côte d'Ivoire, and 20 from Senegal).

There was then, another shortlisting process, where an initial grant of \$7,400 was awarded to selected innovators :10 in Ghana, 5 in Côte d'Ivoire and 5 in Senegal.

“ The baseline engaged **1,392** farmers and processors, **134** entrepreneurs, **16** policymakers, and **23** focus groups.

Phase 5: Formation of project's expert team

To assist the INFoCAT country teams with the innovation selection process, design, fabrication and piloting, 10 experts (Agritech and renewable energy and green entrepreneurship) were brought onboard the project.

Ghana: Mr. Joseph Amoah (Agricultural engineering expert); Dr. Gabriel Laryea (Renewable energy expert); Charles Lwanga Ahegbebu (Solar energy expert); and Dr. Bukari Dramani (Business and entrepreneurial development expert, GCIC).

Senegal: Safiétou Guéye; Mouhamadou Thiam; and Papa Saer Wade.

Côte d'Ivoire: N'GORAN Kouassi Dimitri Denis (Agronomist expert); KOBENAN Angui Sylvain (Energy expert); and N'cho Yapi Patrice.

Phase 6: Matching green entrepreneurs with scientist and innovators

As part of coaching and mentorship of the INFoCAT grantees, each innovator was paired to at least two (2) experts and in some cases three (3), depending on the type of technology being designed and the expertise needed to assist the team.

To keep policymakers in the innovation design process, each innovator was introduced to a representative from the District

Assembly, Ministry of Agriculture Directorate, for continued interaction and follow-ups.

Additionally, in Ghana for instance, Green Innovators were provided with technical and mentorship support with certain prominent centers in some universities such as AVIC International Engineering Workshop at Sunyani Technical University, Center for Applied Research & Innovation in Supply Chain-Africa, KNUST.

Phase 7: Design, fabrication, piloting and testing of prototype innovations

The agritech design and fabrication stage started with a field trip for innovators to meet up with various women farmers, to provide the innovators with a deeper understanding of the challenges faced by farmers and to ensure that the experts could guide them effectively in designing technologies that directly addresses these needs.

By engaging with farmers across different regions, the team gathered first-hand insights into their agricultural processes, constraints, and requirements, laying the foundations for practical and impactful technological solutions.

The innovators were further guided to complete the fine-tuning work on the technologies for approval and to start fabrication. The innovators were also taken through on-site training in basic procurement processes, bookkeeping, and reporting. Routine field-based monitoring was also put in place for continuous tracking of innovation fabrication, spending, and mentorship to keep the project objectives on track.

The innovators field trip was followed by finalization of innovation designs, procurement of materials and machine parts, design and manufacturing stage under the mentorship of the experts and the project team.

Phase 8: Special Sensitisation Training for Young Women on Agritech Innovations

INFoCAT country teams then organized a three-day Special Sensitization training workshop for Young Women on Agritech Innovations of (about 40 young women in each country). These young women were from Universities, TVET Schools, Senior High Schools. Some of them were also Apprentices, Innovators and Entrepreneurs in the agritech sector.

This training on “Renewable Energy Integration into Agritech Design for Climate-Smart Solutions” was to build the technical and entrepreneurial capacities of these young women, with a special focus on green designs principles and integrating renewable energy solutions into agricultural technologies, to promote sustainability, productivity, and gender-inclusive innovations. The training workshop was to foster peer-to-peer learning, promote mentorship between students, innovators, and experts, and build a network that supports continuous learning and collaboration.

Key topics covered by experts included: Climate-smart agritech design and green engineering principles; Energy-efficient innovations for rural settings; Solar energy systems and applications in agritech; Hands-on solar installation and system sizing and, Agritech business development.

The workshop also included practical trainings in clean energy-powered agritech technologies with sessions on solar energy installation and a field trip to some INFoCAT grantees. This was to provide the young women with hands-on practical experience, exposure to various agritech machines, and the opportunity to engage with established innovators.

Phase 9: Completion of Agritech Prototypes

With months of expert coaching, smallholder inputs and fine-tuning of selected agritech prototypes, the young innovators were guided in finalising their updated agritech solutions. This has been a unique feature of the INFoCAT project. Experts in the agriculture and renewable energy sector continuously provided their insights on how to make the selected agritech machinery more productive, effective and renewable energy powered, while maintaining affordability.

Phase 10: Agritech fairs and Technology promotion

Proactively, the teams also showcased developed agritech innovations. In Senegal, the innovators showcased their technologies at the Fourth edition of the Climate and Energy Week Innovation Exhibition in Dakar. Digital promotion of innovations and innovators on media platforms (both traditional and social media), and conference panels/seminars/workshops/side events (e.g COP28 &29).

Phase 11: Piloting and Testing of Technologies

Piloting and testing of the prototype innovations took place in smallholder communities in Bambèye, Toubacouta, Taïba Niassène, and Gapakh. Here, farmers and locals saw their own tailored solutions in action, including groundnut pluckers and dehullers, cashew nut crushers, a mobile solar-powered cool house for preserving harvested crops, a smart irrigation system, and a dynamo energy generator. In Ghana, installation of the innovations were held in: Namesi (in the Yilo Krobo District), Aveyime (North Tongu District), and Gomoa East District. Farmers watched and participated as solar battery-powered grain dryers, rice winnowers, groundnut plucking machines, mini maize combine harvesters, smart irrigation systems, and integrated cassava processing units transformed familiar farming routines.

In Cote d'Ivoire, installations and piloting took place in four (4) rural sites: Diatokro (South Comoé): solar peeler; Ayenouan (South Comoé): solar drying of food crops; Adzopé (La Mé): biodigestion of agricultural waste and energy recovery; Zatta (Yamoussoukro): smart solar irrigation for market gardening; and Tiébissou (région des Lacs): solar refrigerated storage of food crops.

In all the piloting and testing sites, the INFoCAT teams used collaborative and participatory approaches, where the testing involved the key stakeholders who have made significant contribution to the success of the INFoCAT Project. These included relevant Ministries, Innovators, INFoCAT expert team members, Community members, Local administrative authorities, National Media stations, Politicians and Smallholder farmers and processors (who are direct beneficiaries on the innovations).

Achievements

Supported the upscaling of Agritech Innovations (10 in Ghana, 5 in Senegal 5 in Cote d'Ivoire)

Following a series of coaching sessions with industry experts (renewable energy and agritech), the INFOCAT teams and conversations on the field with smallholder farmers in selected INFOCAT smallholder (rural) communities, the innovators fine-tuned and adapted their agritech to be renewable energy powered, while being productive and efficient.

Some of the shortlisted innovations in all three INFOCAT countries include:

- A solar powered irrigation system
- An efficient combine harvester to harvest and dehusk maize
- A solar dryer for harvested grains
- A cassava peeling machine
- A groundnut pod plucker/picking machine
- A multiple gari roaster /cookstove
- Agro waste briquetting machine
- A rice winnower
- Solar powered cool house for onion and potato preservation
- A cashew nut crusher
- A peanut thresher

“The project supported the upscaling of **20** clean agritech innovations.”

Awareness creation of Importance Green agritech in Sub-Saharan Africa

The first capacity-building workshop held in each implementing country, was to enable shortlisted applicants enhance their understanding of agritech solutions and the project's assignment. During these workshops, some of the innovators were introduced to greening their agritech. At the first capacity building workshop for the initial 30 shortlisted applicants, these young innovators were taken through key topics such as Green Entrepreneurship, Funding strategies, agritech innovations and practical trainings on ways of powering their agritech innovations with renewable energy sources.

Promoting Gender (Women's Inclusion in Green Agritech Sector)

INFOCAT prioritised addressing gender inequalities in three key areas: access to clean energy, access to agricultural technologies, and opportunities for business entrepreneurship (skills development, mentorship and career guidance). Gender-responsive considerations were made throughout the research cycle, from conceptualisation to the current stage of developing green technologies.

Though shortlisted applicants (of INFOCAT Innovation Challenge) had a male majority, during capacity-building workshops, shortlisted applicants were trained in the importance of gender inclusion and gender-responsive considerations in their operations. The selection process for finalists included the consideration of female representation in their teams and an analysis of the effectiveness of technology designs to address the needs of rural women smallholders. The composition of innovators from each country is as follows: Ghana; 7 Men-owned: 3 Women-owned; Côte d'Ivoire 4 Men-owned: 1 Woman-owned; Senegal 4 Men-owned: 1 Women-owned. This imbalance was compensated by encouraging various enterprises that had received an INFOCAT grant to include women in their team, and this was done.

To expand the number of women who benefited from the INFOCAT project, curated capacity building training workshops organised for young women in agritech in INFOCAT implementing countries was to show that women should not just be users of agritech-but potential entrepreneurs and innovators. These workshops also reiterated that empowered women in agritech can boost household incomes, strengthens food security within countries.

Easy to Use machinery, Increased productivity and efficiency in farming and agro-processing activities

With continuous coaching by renewable and agricultural experts, young innovators were able to adopt their agri-solutions to be more productive in that, drudgery was significantly reduced as use of this machinery required very minimum energy use than before (manual labor).

These improved machines with expert coaching were also efficient. Piloting showed ease of agritech use and decreased (processing time) for farming and processing activities (irrigation, threshing, storage).

Reduced Operating Costs in Farming and Agro-Processing

The adoption of solar energy in powering most of these agritech solutions means, there is little to no cost in operating these upgraded INFoCAT agritech machinery. This is a key improvement from farmers previously reporting spending large amounts of their income on purchasing fuel for powering their machinery and in cases, paying workers to harvest/plant /process crops manually.

Impact

Immediate Impacts

- Supported (finance and skills training) of 20 agritech innovators in 3 African countries
- Increased smallholders and agri-processors access and adoption and utilisation of agritech innovations, which have improved agricultural efficiency and sustainability.
- Enhanced economic opportunities for youth and women led agritech startups
- Promulgation and awareness creation of evidence-based gender-sensitive policy recommendations (with over 200 policy makers), to enhance enabling environment for women and youth led Agri startups.
- Knowledge and skills transfer workshops to enhance women and youth understanding of greening agritech and entrepreneurship.
- Over 1,000 smallholders and agri-processors in Côte d'Ivoire, Senegal and Ghana have access to clean energy powered agri-technologies in INFoCAT piloting communities.
- Increased visibility and promotion of clean agritech innovations in media campaigns across Ghana, Senegal and Cote D'Ivoire.
- With newly developed clean energy powered agritech (after coaching and input from farmers and experts), farmers reported increased output, efficiency in processing and harvesting and increased productivity (time used in farming processes).

Mid-Term Impacts

- Improved women's access to clean energy technology solutions for agriculture
- Reduced gender imbalances in agritech innovation, agritech use and access to clean energy.
- Improved participation of women and youth in clean energy technology innovation
- Improved enabling policy environment for women's and youth participation
- Increased visibility in Ghana, Senegal, Côte d'Ivoire and the sub-Saharan region (on the importance of clean energy powered agritech) through fairs, expos, media engagements, panels in seminars, conferences and workshops.

Long Term Impacts

- Gender equality and women and youth empowerment
- Long-term improvement of agricultural productivity and incomes for smallholder rural farmers
- Accelerated green transition and energy security
- Reduced emissions and increased resilience in Agriculture
- Expanded access and use of clean agritech in regional agri markets

“ INFoCAT expanded access to clean agritech for over **1,000** smallholders and engaged more than **200** policymakers.

INFoCAT Innovator Profile:

On 27th January 2026, newly improved clean agritech innovations were then taken through another round of vetting where 6 innovators were chosen (2 teams from Ghana, 2 teams from Cote D'Ivoire, 2 teams from Senegal). The INFoCAT project then awarded these 6 young clean agritech innovators with grants to scale up their innovations. The overall winners in each country won \$25,000 and the runner up team won \$12,000 each



Ghana Winners:

Business/Company name: Wobil Technologies Ltd.

INFoCAT Innovation Team Members:

1. Erica Adjoa Appiah
2. John Wobil
3. Charity Abena Azogmi
4. Gabriel Wobil
5. Solomon Akutinga

Innovation: Multi-Grain Winnower (Solar-Powered)

The Multi-Grain Winnower is a solar-powered grain cleaning machine designed to remove chaff, dust, stones, and other foreign materials from grains such as rice, maize, beans, and other cereals. It delivers cleaner, higher-quality grains that are ready for market, helping farmers increase their product value and competitiveness.

What does Innovation do?

The Solar-Powered Multi-Grain Winnower efficiently separates grains from unwanted materials using a controlled airflow system powered by renewable solar energy.

It:

- Cleans multiple types of grains (rice, maize, beans, etc.)
- Reduces grain loss during the cleaning process
- Operates without fuel (solar-powered)
- Is easier and safer to operate compared to traditional petrol-powered blowers
- Improves grain quality and market readiness.

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Villiam Star Ltd.

Innovation: Cassava peeling and washing machine.

INFoCAT Innovation Team Members:

1. William Mikado
2. Gifty Samani
3. Dorcas Fuseini
4. Barbra Osei-Mensah
5. Tracy Andor

What does Innovation do?

- The innovation peels the cassava and washes it simultaneously.
- Reduces labor-intensive processes that consume a significant amount of time.
- It lessens the physical burden on women, helping prevent health issues associated with pre-processing of cassava manually.
- Increases Productivity: By reducing the time and labor needed for peeling, women farmers can focus on other important tasks such as planting, harvesting, marketing, or improving farm management practices. This helps with efficiency in agri processing and increases productivity and income.

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Senegal Winners:

Entreprise Serigne Modou Bouso Mbacké

Innovation: The solar thresher-sheller “Firdou”

**INFoCAT Innovation Team Members (Names) :
Moussa NDOYE**

The “Firdou” is a dual-purpose machine powered entirely by solar energy. It automates both peanut threshing and shelling, eliminating manual labor and significantly reducing the physical burden on women during post-harvest activities such as threshing, winnowing, and shelling.

What does Innovation do?

With a shelling capacity of 7 tons/day and threshing capacity of 8.4 tons/day, the “Firdou”:

- Replaces manual, labor intensive processes.
- Reduces workload by Minimizing physical strain, especially for women in rural communities.
- Ensures sustainability: Operates 100% on solar energy, reducing reliance on fossil fuels.
- Ensures high productivity: Processes large volumes efficiently, boosting post-harvest output

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Afrik'Machines

Innovation: Compact renewable energy generator

INFoCAT Innovation Team Members: Amdy Moustapha Niasse

The "Firdou" is a dual-purpose machine powered entirely by solar energy. It automates both peanut threshing and shelling, eliminating manual labor and significantly reducing the physical burden on women during post-harvest activities such as threshing, winnowing, and shelling.

What does Innovation do?

Compact renewable energy generator - This agritech is designed to revolutionize agricultural activities. By producing its own electricity, it can simultaneously operate essential equipment such as water pumping systems, irrigation networks, food processing units, and preservation machinery.

- Energy independence: Generates its own power, reducing reliance on grid electricity or fossil fuels.
- Versatility: Can supply any electrical load compatible with its output voltage.
- Efficiency: Powers multiple devices at once—submersible pumps, irrigation systems, and more.
- Rural empowerment: Provides farmers with reliable energy for critical post-harvest and irrigation tasks.

By combining renewable energy generation with robust engineering, this mini power plant ensures farmers have the electricity they need to irrigate fields, process harvests, and preserve food—sustainably and efficiently.

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Côte d'Ivoire Winners

Ad Solar

INFoCAT Innovation Team Members Names : Achi David et Ahi Abel

What does Innovation do?

This is a direct and indirect solar dryer, which can dry vegetables, fruits, leaves, fish, meat, attiéké (cassava flakes), etc. It reduces post-harvest losses, allows for better preservation, and adds value to the product.

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www.adsolar.org

IMPLEMENTATION : S-GE²MEA



Lynays Corporation

INFoCAT Innovation Team Members (Names): Lognigué Emmanuel Yeo, Kobenan Simplicie Sie, N'guessan Konan Kevin What does Innovation do?

Innovation:

S-GE²MEA: Intelligent Precision Agriculture

What does Innovation do?

S-GE²MEA is a revolutionary climate-smart system that integrates a Unitary Full Direct Digital Controlled (DDC) Smart Electrical Panel. This microcontroller-driven brain manages the complex relationship between solar energy availability, water source health, and plant hydration.

S-GE²MEA represents a shift to Digital Agronomy, where a Full DDC Smart Panel ensures that neither a drop of water nor a watt of energy is wasted. This is the definitive solution for the West African farmer facing a changing climate.”

The S-GE²MEA agritech includes:

1. The DDC Smart Panel (The “Brain”)

- Sensor Integration: Processes inputs from soil moisture, water level, and weather sensors to make autonomous “smart decisions.”
- Water Source Control: Actively monitors and protects the water source (borehole or river) from over-extraction.
- Energy Optimization: Maximizes the duty cycle of the solar pump based on real-time solar irradiance.

2. Dynamic Water Movement (S-GMEA)

- Resource Savings: Achieves a massive 35% to 55% reduction in water usage.
- Disease Prevention: By avoiding over-saturation, the system prevents water-related diseases (root rot, damping-off, and fungal blooms), which are major risks in the Ivorian climate.

3. Energy Movement Management (TGIME-ES)

- Direct Control: Eliminates energy waste by matching pump load to solar output with millisecond precision, extending the lifespan of the electrical components.

Despite often being rain-fed, many tropical agricultural areas face water scarcity due to erratic rainfall, increased evaporation from higher temperatures, and inefficient water management systems. This directly affects irrigation and crop growth. The S-GE²MEA directly addresses water scarcity in agriculture and is created to provide consistent irrigation supply on smallholder farms.

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Challenges

Gender-Related Challenges in Acquiring Female Experts in Agritech

The project encountered challenges in recruiting female experts, particularly for capacity-building initiatives. While a female expert was successfully included in Ghana, the two other participating countries lacked representation of women in the team of experts. This gender imbalance affected the diversity of perspectives and expertise available for project implementation.

Less participation of women in green agri-businesses:

It is apparent that there are fewer women-owned green agri-businesses than anticipated in all three implementation countries. There are also fewer green businesses that have an equal representation of men and women in their staff. The project's research indicates that the lower participation of women in green agri-businesses is due to several factors. Including less interest in the sector, reduced access to funding, network gaps, gender biases, inadequate policy support for women-led green enterprises, and challenges in balancing family responsibilities with entrepreneurship. The project aimed to address these challenges through capacity-building and advocacy with policy makers for policy reform.

Limited Response to Calls for Innovation

While the overall response to the project's call for innovation was encouraging, the number of applicants remained relatively low. This was largely due to the limited number of agricultural technology innovators in each country. As a result, the call for innovation had to be extended across all three participating countries. In some cases, the selection process required direct identification and invitation of potential innovators to ensure adequate participation.

Challenge of Dealing with Young Innovators and Startups

A significant portion of the innovators involved in the project were young entrepreneurs or early-stage start-ups. Many had not yet fully established their businesses, lacked permanent structures, and had limited experience in agricultural technology development. This required the project team to conduct thorough due diligence, including field visits to assess their operational capacity, work locations, and living conditions, before approving funding for technology manufacturing. Also, business location distance limited frequent monitoring.

Unavailability of some machine parts locally

The lack of availability of some machine parts in the respective countries posed the challenge that innovators have to order these parts from outside the country, mostly from China. This posed great challenges to green agritech innovators, leading to delays in completing machines on time.

Lack of basic business processes such as basic bookkeeping among innovators

A majority of the businesses did not practice basic bookkeeping, applying for procurements or filing taxes. One factor contributing to this is that more than half of the INFoCAT enterprises are start-ups and lack adequate knowledge in this area. Agritech innovators focused on the development of their innovation, with little space for business development around their technology. They lacked adequate understanding of the business component of their trade or how to make technology market-ready.

Lack of patience on the part of innovators to go through green innovation development and maturity cycles

The green technology/innovation development maturity cycle differs from the cycle for brown (fossil fuel-powered) technologies. Innovators saw it as a challenge and time-consuming to go through procedures and structured engagement toward developing the green innovations to users' specifications and efficiency requirements in terms of energy and operation.

Poor understanding of how Agritech innovations can be powered by green energy

Entrepreneurs were either interested in agritech innovations or trading in green energy technologies such as solar technologies, but merging these two, where fossil-fuel engines are replaced with renewable energy, was lacking in the initial innovations. There appeared to be a poor understanding of how renewable energy could power agritech technologies. At the call for innovation stage, almost all the applicants had made some agritech innovation, but had not greened it. The capacity-building and expert mentorship were rolled into the project in order to close this gap.

Policy and Other General Recommendations

1. **Skills Development and Capacity Building** - Empowering young green entrepreneurs like INFoCAT participants is key because green businesses- which are still growing in Africa, need specialized knowledge in areas like renewable energy, sustainable agriculture and the use eco-friendly technologies. Coaching and training with industry experts is key to helping innovators adopt to the changing world while creating practical, effective and sustainable agri-solutions.
2. **Access to Finance** - With the high levels of youth unemployment in Africa, having access to finance is key for young innovators in order to help them not only start their SME's but also scale up their innovations, as well as serving as a buffer for seasonal climate cycles that can often affect growth of small agritech businesses. Also, access to inclusive finance/green loans can help innovators de-risk their small businesses and help attract further investment.
3. **Entrepreneurial Networking** - Through the INFoCAT project and other emerging green agri-initiatives on the continent, it has become evident that creating networking opportunities between experts/industry players and SME's in the green/agri-sector, can ensure value addition, mentorship opportunities and market linkages specifically targeting women and youth agripreneurs.
4. **Technology and Innovation Support:** Governments and private institutions should provide young green entrepreneurs with support to access innovative technologies and resources to enable them transform traditional farming into productive, efficient climate-smart, sustainable, and profitable businesses.

“Scaling clean agritech will require skills, finance, policy support, and stronger innovation ecosystems.”

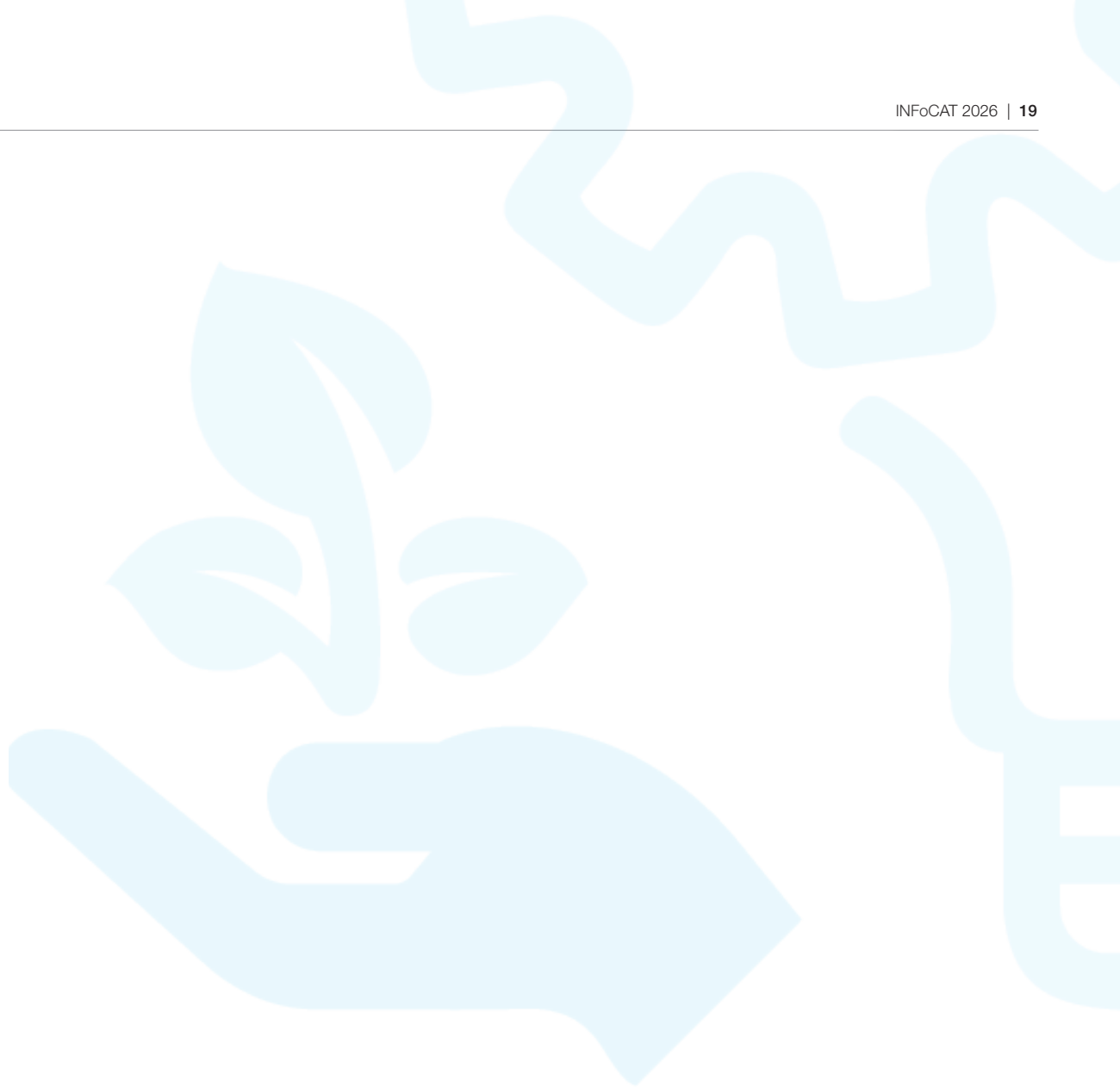
5. **Policy and Institutional Support:** Having policy frameworks that prioritize renewable energy, sustainable agriculture, and eco-friendly entrepreneurial practices are key in providing young entrepreneurs with a clear roadmap for innovation. With provisions like grants, subsidies for green technologies, tax breaks, young green agritech entrepreneurs may be more confident in venturing into this sector and creating innovations that address dire agricultural needs within the continent.
6. **Public-private partnerships (PPPs)** - Development partners and private entities need to prioritise the financing and skills training of youth in the green and agricultural space. INFoCAT is unique in that, it falls at the intersection of Agriculture, Technology and innovation, Entrepreneurship and Gender. Curating intentional projects like this, that cover multiple sectors in tandem, is a more effective way in financing development projects.
7. **Creating platforms for Co-Creation and Knowledge sharing** - INFoCAT is unique in its design and implementation because it involved co-creation and knowledge sharing opportunities from the start. From baseline surveys (smallholders and agri-processors), to consistent coaching and mentorship with industry experts, capacity building trainings and inputs from policy makers, INFoCAT covered all grounds in ensuring that various stakeholders had the platform to share their knowledge, insights and recommendations on how to effectively implement this project. *The co-creation network created in this project, included: Innovators, smallholders and agri processors, policy makers, agritech and renewable energy experts and INFoCAT country teams.*



Innovate For Clean
Agricultural Technologies

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Because of this collaboration, there is a future for clean energy powered agritech in Africa and most importantly, an avenue for productivity, efficiency and environmental stewardship in smallholder farming communities, while promoting agritech innovation and empowering youth to create sustainable, cost effective, efficient solutions in Africa's agricultural sector.



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