



SEE - Clean Cooking

**African Biodigester
Component Project - Uganda**

NEWSLETTER - **MARCH 2023**

Foreword



Dear esteemed readers,

Welcome to the first edition of the 2023 African Biodigester Component Project Newsletter. We are excited to share with you the latest news about the project and insights into the biodigester industry in Uganda. The biodigester market in Uganda is on an upward trajectory with regards to attracting private investment. We are increasingly seeing the entry of aggressive private sector players in the market, especially the prefabricated/tubular biodigester companies. This trend promises to increase vibrance, competitiveness

as well as knowledge and technology transfer to the country labour force and companies in the sector. Building on this effort, ABC's priority for the year is capacity building of biodigester enterprises through supply-side interventions such as the results-based financial incentive and business development services training. We believe that a satisfied customer stems from an empowered supplier.

I wish you all a nice reading.

Esther Nyanzi
African Biodigester Component
Project Manager in Uganda

ABC Uganda celebrates milestone implementation



The ABC team and Beatrice Musulube partake in the ribbon cutting ceremony.

ABC NEWSLETTER

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Stay Tuned

The African biodigester Component project in Uganda is hosting the first annual knowledge exchange event in Kampala. The project is welcoming policy makers from Eastern and Western Africa, key sector players across the world and fellow ABC implementers across sub-Saharan Africa.

Do not miss the highlights of the 3-day event including high-level policy discussions on the biodigester sector, in-depth insights into topical areas such as access to finance, carbon finance and innovations in the market in the next issue of our newsletter.

Approximately 500 people benefit from clean cooking and fertilizer as Uganda's African Biodigester Component (ABC) project celebrated its 100th biodigester installation on January 17, 2023.

Biodigesters are technologies through which biogas and bio-slurry (organic fertiliser) are produced. Of the 100 plants, the majority are the six cubic metres family-size biogas plants, which benefit a family of four people. Other constructed

biodigesters include the 13m³, 9m³ and 4m³.

Beatrice Musulube, a retired teacher, paid for the installation of a biodigester after witnessing testimony of its benefits from friends in the neighbourhood.

Visit: <https://www.snv.org/update/biogas-project-uganda-celebrates-milestone-implementation> for details of the celebrations.

ABC UGANDA FLAGS OFF PAYMENT OF RESULTS-BASED FINANCING INCENTIVE



David Okwii, in brown shirt (c) conducts a farmer training in Sironko district.

“I was extremely happy to learn that Biogas Gurus was the first company to receive the results-based financing incentive under the African Biodigester Component project in Africa. I was even happier when the money hit the account because it relieved a lot of our business pains,” David Okwii, the managing director Biogas Gurus Uganda Limited recounts.

Okwii sits at the helm of Biogas Gurus Uganda Limited, a biodigester enterprise registered with the African Biodigester Component (ABC) project in Uganda. Biogas Gurus is a brainchild of the forty-year-old civil engineer by profession, who registered the company in 2020, prior

to the onset of the covid-19 pandemic.

The biodigester enterprise is the first recipient of the RBF incentive across all the five ABC countries of implementation in sub-Saharan Africa.

RBF is an innovative business support mechanism under the ABC project, in which enterprises are paid an incentive upon successful verification of installation/ construction of a biodigester. The RBF aims to support businesses with working capital for day-to-day operations and further investment for growth.

Biogas Gurus received UGX1,050,000(\$280) for 3

plants reported under the ABC project in 2022.

According to Okwii, the funds have been very instrumental in addressing the key demands of the business.

“When we construct biodigesters, we attach the required fittings and appliances such as stoves in order for the farmer to use it. The cost of the appliances, like the biodigester are catered for by the farmer. However, due to financial constraints, we sometimes connect the appliances using business funds and allow the farmer to pay at a later date,” he explains, adding that this offer comes at the peril of the business.



However, introduction of the RBF under the ABC project has created a sigh of relief to Biogas Gurus as the business has managed to procure appliances in bulk.

“When we received the RBF, it helped us to have a running stock for appliances. Gone are the days when we would have to borrow money from the bank or lenders, to procure appliances and fix them, and at a later time when you are paid, you pay off the money you borrowed with interest,” Okwi narrates.

“So when I received the money, I knew I had to use it carefully to relieve me from borrowing, so we decided to have the appliances pre-purchased and that is what I used the money for,”

Okwii encourages all biodigester enterprises in the ABC project who will receive the RBF to invest it into the business to further promote the sector.

Challenge of financing in the biodigester markets

Uganda’s economy predominantly comprises micro, small and medium enterprises (MSMEs), which make up 90 percent of the country’s private sector. Similarly, businesses in the biodigester market in Uganda are SMEs. However, growth of these businesses is stunted in part by limitations in access to affordable finance for scaling. A Financial Analysis report of Green Micro, Small and Medium Enterprises/Local Green Enterprises in Uganda conducted by Advocates Coalition for Development and Environment in 2021 found that MSMEs are struggling to get affordable business loans against rising commercial bank interest rates averaging 18%-23%.

As a result of this gap, there is a proliferation of money lenders exploiting the existing weak

financial regulatory frameworks and the growing unmet financial demands. The report also notes that there are cases of inadequate utilization or limited demand for the available green financial products partly due to information gaps and high set minimum thresholds.

About Biogas Gurus

Biogas Gurus is a brainchild of David Okwii, the managing director. The engineer has 12 years of experience in the renewable energy sector. Okwii quit working for another biodigester enterprise to form Biogas Gurus as his own, which he registered in 2020.

Despite the rocky start, Biogas Gurus has stood the test of the pandemic blows and continues to operate to date. The company employs 2 and 12 full-time and part time staff respectively, operating in the northern and eastern districts of Uganda.

One year of ABC: Project focuses on businesses and farmers



Esther Nyanzi
Project Manager of the African Biodigester Component in Uganda

Forging strategic partnerships aimed at driving biodigester uptake is a key focus for ABC as it embarks on its second year of implementation. Esther Nyanzi, the project manager of the African Biodigester Component in Uganda, a 4-year project(2022-2025) housed under the Strengthening Entrepreneurial Eco-system for Clean cooking programme (SEE-CC) tells us more.

1. Congratulations on making the first year of implementation as the African Biodigester Component. How is the project progressing?

Thank you very much, we are steadily progressing through the implementation phase of the ABC project. As some may know, ABC seeks to commercialise the biodigester market in 5 countries across sub-Saharan Africa including Uganda; through a threepronged approach centred on stimulating demand, strengthening supply and fostering an enabling environment. On the demand-side, awareness creation of biodigesters and their benefits is taking centre stage, targeting farmers while an array of support is provided to the biodigester enterprises.

The project has trained and fortified the capacity of the businesses to conduct quality biodigester construction and reinforced their marketing skills. We are also glad to note that we paid out the project's first result-based financing incentive to a biodigester enterprise and anticipate even more to come. This RBF will support business operations. On the enabling environment, with support from Ministry of Energy and Mineral Development, we contributed towards the development of the national biogas strategy, which draws a roadmap for biodigester market growth in Uganda.

Within a year, a lot has been done, and in that spirit, I would like to thank our partners, Biogas Solutions Uganda Limited, GIZ and MEMD for the combined effort towards achieving a commercialized biodigester market.

Strengthening Entrepreneurial Ecosystem for Clean cooking programme (SEE-CC) is a programme focused on clean cooking that introduces a new private-sector approach to promote clean, affordable cooking solutions.

The program comprises 2 components: the African Biodigester Component (ABC) and the Higher Tier Cooking Component (HTCC) which promote clean-cooking solutions including biodigesters and higher-tier cookstoves such as e-cookers and advanced biomass stoves.

2. What would you say are some of the milestones you have registered in the past year?

For any project or business, the first year is usually turbulent. A learning curve so to speak. However, I am glad to note that earlier in this quarter, we celebrated our first 100 biodigesters installed under the ABC project. For ABC, this was indicative of the potential of biodigester technologies in Uganda. We are also happy to note that within the first year, we identified and recruited over 20 biodigester enterprises that we are working with to increase energy access in Uganda. We hope to continue to register even greater milestones as time goes by.

3. What lessons have you learnt so far?

We have learnt that there is a lot of potential for biodigester uptake driven mainly by biogas and bio slurry organic fertiliser. However, this potential needs to be met by increased awareness raising and access to finance to bridge the affordability gap.

4. What strengths do you seek to capitalise on?

As a project, identification of potential business cases remains top priority as we seek to drive biodigester market sustainability. We have seen that collaborations and partnerships are key strategies for achieving various tenets of ABC's scope.

We have seen those partnerships, be it with government or private sector play a key role in catalysing and deepening impact of interventions, so moving forward, this is something we plan to leverage more.

5. What is the project's focus for its second year(2023)?

ABC in its second year continues to prioritize strengthening the biodigester supply-side through multi-faceted interventions including business development services and the Results-Based-Financing incentive. Awareness raising about the biodigester technology aimed at driving demand is another area that the project is strongly focusing on.

CELEBRATING WOMEN IN THE BIODIGESTER MARKET

Meet Adrinah, the mason breaking barriers in biodigester construction.



Inspired by her family of engineers, Adrinah Kiconco decided at a young age that she too would become an engineer. She looked in awe whenever her father and brother were addressed as engineers. Soon after receiving her senior four certification, Kiconco announced her engineering career ambitions. Her father was not pleased. He believed that construction work was not meant for females.

Determined to prove her father wrong and gain ground on her dream profession, then-young Kiconco embarked on an engineering certificate in a technical institute. It was no walk in the park.

“I knew that I had no choice but to perform my best in school to show my father that I could do engineering. He wanted me to choose another course, but I wanted construction. I wanted people to call me an engineer. As a result of my passion for the course, I was among the best in my class. My father got excited and started believing in me,” she narrates.

Backed by her father’s newly gained confidence, Kiconco completed her certificate 1 and 2 in engineering. However, financial limitations

stopped Kiconco in her education tracks.

In 2012, Kiconco was introduced to the biodigester construction business at a friend’s invitation to attend a training. Soon after the training, Kiconco took up a job as a mason in a biogas construction company. She was deployed to construct biodigester systems for farmers, an experience that exposed her to a lot of criticism based on gender bias. End-users are sceptical of her capacity to efficiently construct the biodigester technology. Undeterred by the scepticism, Kiconco has leveraged her workmanship to challenge the stereotype amongst farmers. She is breaking barriers for women and creating new possibilities in the biodigester market.

“A client once called the office to have me switched for a man. The office declined his wish with the assurance that I would execute my job. I am glad to say that to this day, the client calls to thank me for the job well done. He even calls me for other construction jobs,” she narrates.

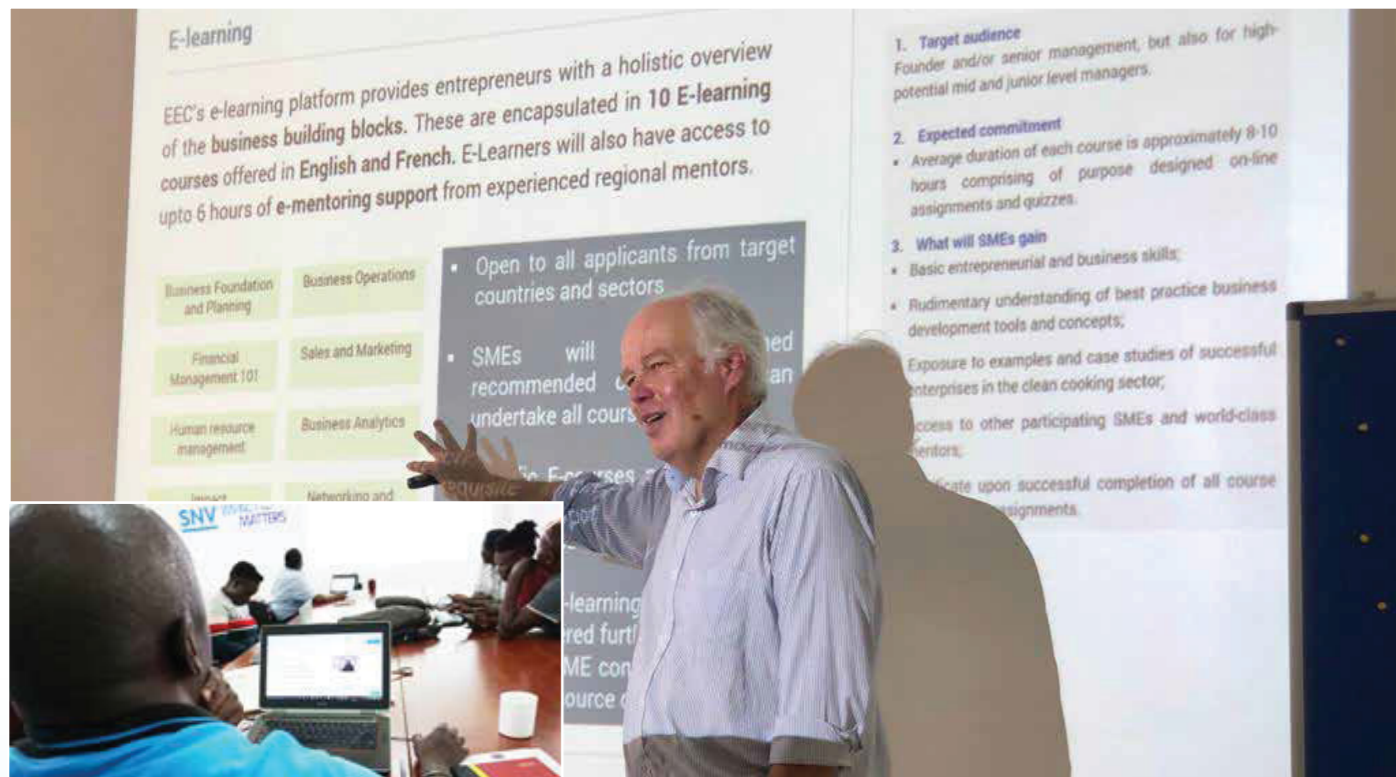
The biodigester market in Uganda is male-dominated with minimal participation of women in the supply chain. Under the African Biodigester Component project, gender equality and social inclusion is a prioritised intervention area, aimed at enhancing knowledge and attitude change amongst stakeholders for equal opportunities and participation in the sub-sector.

Thanks to her resilience in biodigester construction, Kiconco has generated income, enabling her to cater for her needs. “I paid for my sister’s education while also meeting my individual needs such as rent. Most of all, I was very happy to have supported my father in buying land when he ran short of money. He was very surprised,” she says.

Now an ambassador for women in the biodigester market, Kiconco encourages women especially youth, to go against the grain and embrace jobs as a solution to the unemployment dilemma faced in the country.

Kiconco encourages women especially youth, to go against the grain and embrace jobs as a solution to the unemployment dilemma faced in the country.

Business Development Services implementer launches in Uganda



Digital marketing is a key subject for businesses in the post-covid era.

Small and medium enterprises (SMEs) in the renewable energy sector are set to benefit from quality business development services (BDS) training. This follows the launch of the African Biodigester Component(ABC) business development service implementer through a virtual event in Uganda on 20th March.

The business development service implementer, commonly referred to as the energy enterprise coach(EEC) is a flagship initiative conceptualized and funded by the Netherlands Enterprise Agency (RVO) and implemented by NIRAS and Intellectap.

The EEC aims to support professionalisation of renewable energy enterprises(encompassing atleast 25% women-owned) aspiring to scale operations and become investment ready in Africa and Asia.

The BDS support will be delivered in three phases:

- **e-learning** through an online platform including online mentoring.
- **Cohort trainings** through group-based physical and digital training services
- **Individual mentoring** which involves mentoring of an individual business by a seasoned mentor.

Speaking at the virtual launch event, Maarten Susan from the Energy Enterprise Coach noted that the renewable energy sector operates in a loop-sided spectrum.

“On the one hand, there are few very large players and, in the middle, a big missing gap, and relatively small SMEs, some have a background of masonry. What we don’t have is robust, resilient mid-sized companies and that is the gap we are trying to fill,” he said.

A call for applications was publicized to notify companies interested in the training to apply in the 3-week window provided. The EEC has received a number of applications and trainings are expected to kick off next quarter.

Uganda is the second country in Africa where the EEC has launched, following the implementer’s launch in Kenya earlier. The EEC will also operate in the Sahel region, Ethiopia and Malawi in Africa.

Thanking the EEC and development partners for organising the event, Herbert Abigaba, from the Ministry of Energy and Mineral Development lauded the SEE-CC program for introducing the EEC business development services for renewable energy SMEs noting that capacity building is well aligned with the ministry’s strategic direction for the sector.

Ruth Komuntale, ECOCA East Africa

“Many of us find ourselves in spaces where we practice business but are not properly trained to practice it. Through EEC, you get so much information and get to practice it. You get knowledge exchange from other companies’ experiences. It is so many advisors, coaches with different experiences in accounting, management, fundraising. It is an opportunity like no other. I have not had this training before. I am looking forward to seeing Uganda improve the clean cooking sector.”

E-learning is open to all companies. 10 modules, business foundation and planning, financial management, human resource management, impact measurement, fundraising, sales and marketing business analytics etc

Cohort/group training – addresses business fundamentals, what every company needs to have to scale, value proposition, unique selling proposition, product differentiators.

Individual mentoring: This suits companies that already have business fundamentals. It is a tailor-made program on areas such as performance improvement plan and linkages with financiers and strategic partners.

Biodigester awareness raising at Harvest money Expo in Uganda

The African Biodigester Component was honoured to have participated in the 7th edition of the Harvest Money Expo organized by Vision Group. During the 3-day expo held at Kololo Airstrip in February which attracts about 20,000 participants, ABC

displayed an array of biodigester systems and appliances and raised awareness on the use and benefits of the technology. The project was also fortunate to be profiled by Bukedde Television, a leading local television station with nation-wide reach.



“Manyi Felix, participant at harvest money expo 2023

“I came for the harvest money expo at Kololo and happened to see the Biogas

Tent. I was very interested in learning about biogas because nowadays, firewood has become a problem, it is no where to be found. However, if someone has his or her two or three cows, they are able to cook. It is very healthy, as one can cook without the smoke. It is also very fast. So now I know that in the near future, I will call them to install a biodigester for me at home.”

First-ever National Biogas Strategy and Action Plan in the offing

Biogas technology play a significant role in promoting energy security, environmental protection, and resilient livelihoods due to the benefits of biodigesters. These benefits include improved health from clean cooking, increased rural employment, decreased deforestation, increased agricultural yields, reduced workload, especially for women and girls, as well as reduced costs of energy for domestic and agricultural use.

Global Environment Facility (GEF) through the Integrated Waste Management and Biogas in Uganda project, and under the Ministry of Energy and Mineral Development (MEMD), is developing a Uganda National Biogas Strategy and Action Plan - NBSAP (2023 to 2033). The strategy and action plan will offer direction to the scale up deployment of biogas technology in Uganda at the household, commercial, institutional, and industrial level.

The NBSAP aligns with Government of Uganda's plans, and targets to increase access to clean energy, and achieve 80% modern access to clean energy by 2040, as outlined in the National Development Plan (NDP) III and Uganda's Vision 2040 respectively. The NBSAP also supports ongoing interventions in Uganda's energy sub-sector, championed by private actors, development partners and others.



Consultative meeting for the Uganda National Biogas Strategy and Action Plan held in Northern Uganda recently

The strategy and action plan was enriched with baseline data on biogas technologies, attitudes, and practices. It was further enhanced by insights on gender influences on the uptake of biogas technologies. This data was collected through stakeholder engagements undertaken in Eastern and Central Uganda, facilitated by the [African Biodigester Component \(ABC\)](#), with support

from [GIZ-EnDev](#) and other ABC partners. The ABC Uganda Programme, implemented by [SNV](#), [GIZ](#) and [BSUL](#), is a 4-year project that supports growth and sustainability of a commercial biodigester sector in Uganda.

To achieve objectives of the NBSAP, efforts from stakeholders, including private sector and development partners, in the areas

of program design, mobilisation of financial resources, and provision of technical advisory/ assistance will be needed. This will help ensure that home, commercial, and agricultural enterprises can have access to affordable, reliable, and sustainable energy for cooking, lighting, and production, through the adoption of biogas technologies.

Underscoring the importance of Gender and social inclusion in project implementation



A woman and man prepare a meal using biogas in Eastern Uganda

Gender mainstreaming in the African Biodigester Component ABC is critical if we are to deliver the project where women and men have equitable and transformative opportunities to own biodigester systems or lead enterprises.”

That was one of the lessons registered during the five-day gender equality and social inclusion training held in Nairobi, Kenya.

Implementing partners of the ABC projects in Kenya and Uganda met in Nairobi on 30th January for a training of trainers facilitated by Energia, the Gender, Equality and Social Inclusion thematic implementer.

The training followed a gender assessment study undertaken in Uganda during the last quarter of 2022 which provided insight into the gender and social inclusion gaps in the

biodigester market at both household and supply-side. For instance, findings indicated that gender equity was not a specific consideration for Biodigester Enterprises during recruitment. The companies, which on average comprised 5-7 employees, had few female representation who typically held administrative roles while men were preferred especially masonry work.

At a household level, men funded the construction of biodigesters while women were responsible for the use of biogas, application of bioslurry in the gardens, and operation and maintenance. However, men have

more access and control over economic activities associated with bioslurry, financial profitability and decide on how to use the income made. The gender gaps are mainly influenced by cultural, social norms and economic constraints.

It was against the findings in the gender assessment that the ToT was held in Nairobi. The overall objective of the training was to build the capacity of the ABC

project implementers to gain a foundational understanding of gender mainstreaming and how the measures can be incorporated in project activities.



Implementing partners of the ABC projects in Kenya and Uganda in Nairobi on 30th January for a training of trainers facilitated by Energia, the Gender, Equality and Social Inclusion thematic implementer.

Through heavily interactive sessions of knowledge exchange, group discussions, fictional and real case studies, the project implementers were able to:

- Recognise gender inequalities in their work and communities of operation and analyse how such inequalities affect outcomes of ABC interventions.
- Identify and share key experiences and lessons that would be applied in the implementation of ABC activities

to address gender and social inclusion.

Subsequently, the training paved way for the development of evidence-based gender action plans(GAP) that details activities, resources, and processes for bridging gender gaps in project activities.

For ABC-Uganda, the long-term GESI goal is to reduce gender gaps and empower women in the biogas sub-sector and biodigester entrepreneurship.

Gender mainstreaming in the energy sector



Soma Dutta

Technical Advisor and member of the Advisory Board, Energia

“Gender inequalities cut across most social and economic spheres of life, and are institutionalized in formal and traditional laws as well as unwritten norms and values. As a result, women have limited financial means of their own and are unable to influence decisions in what investments should be made in energy services, at government level, in their communities and in their homes. This is unfortunate given that energy, as a critical enabler to development, can play a transformative role in the lives of men and women by enhancing their productivity and effectiveness at home and at work. For example, when women gain access to and use energy services, the poverty reduction impacts are multiple, on health, income generation, and family.”

Adopted from [Hivos](#)

Experts tip farmers on bio slurry organic fertiliser in Uganda



Bio slurry Organic fertilizer experts visit a farmer in Uganda using bio slurry and packaging it for sale.



A week shy to the end of quarter 1 of 2023, experts in value addition of bio slurry organic fertiliser under the African biodigester component project visited Uganda.

The three-person delegation visited four farmers spatially located in the central district of Wakiso during their three-day visit in Uganda. During their

visit, the experts, whose intervention area under the ABC project is the organic fertiliser valorisation (enhancement), tipped farmers on the best practices of bio slurry management. The OFV team also recommended cementing and roofing of the bio slurry compost pits to mitigate nutrient loss in the fertilizer.



The ABC Uganda team poses for a photo with the Organic Fertilizer Valorisation implementer after a planning meeting.

Recycling cow dung for green energy

By [Daily Monitor](#)

Many livestock farmers in Uganda are struggling with how to deal with cow dung. Most cowsheds have heaps of unattended cow dung swarming with houseflies. In most rural areas, some farmers still use cow dung to pave floors, while others use it as manure. Yet there is so much more cow dung can do. Dr. Moses Mwesigwa, the programme leader in dairy research at the National

Livestock Resources Research Institute (NaLIRRI) in Nakyesasa, says it is possible for livestock farmers to have a complete dairy value chain with zero waste. To address this issue and recycle cow dung, various means have been implemented bringing into focus traditional composting to produce fertiliser and modern anaerobic digestion to extract renewable energy and so much more. Visit <https://www.monitor.co.ug/uganda/magazines/farming/recycling-cow-dung-for-green-energy-4078826#:~:text=Experts%20contend%20that%20carbonised%20cow,and%20environmentally%20friendly%20electrode%20material> for details on how a biodigester can promote circular farming and improve farmer livelihoods.

Sistema.bio Kenya signs an agreement with ABC- RBF



On 20th February, 2023, GIZ-EnDev Kenya signed a 3-year ABC-RBF agreement with Sistema.bio Kenya. The Energising Development (EnDev) programme is a strategic partnership of like-minded donors to promote energy access. The

programme is implemented in close cooperation with leading international organizations and key local stakeholders; and comanaged by the German Agency for International Cooperation (GIZ). The ABC intervention in Kenya (2022 to 2025) aims

at facilitating a shift of the biodigester market from its pioneering to the expansion phase with focus on the installation of over 20,000 small-scale and 250 medium scale biodigesters. For details Visit: <https://sistema.bio/blog/q1-2023-news/>

BIODIGESTER CHECKERS
How much do you know?

A	I	E	T	O	T	S	T	O	V	E
D	F	L	A	M	E	B	Z	K	L	U
H	B	A	A	B	C	I	K	H	U	T
I	M	I	J	O	H	O	P	F	G	D
D	I	N	O	E	N	G	T	X	R	W
G	R	E	N	S	O	A	Z	E	T	Q
I	C	C	T	M	L	S	K	R	S	F
S	R	T	Y	L	O	U	D	O	D	Y
S	T	O	C	K	G	A	R	E	U	C
K	E	V	U	N	Y	H	V	R	X	N
C	G	R	U	G	A	N	D	A	Y	O

Responses: Technology, bio slurry, stove, biogas, flame, stock, ABC, Uganda, DGIS, RVO

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Your feedback is valuable to us, as we strive to improve our newsletter, increase clean energy access and ensure food security. Please share your views via email to ckasemiire@snv.org.

Thank you!

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