



# **IsDB Climate Action Success Stories**

## **Working Towards A Sustainable and Inclusive Future**

# SENEGAL



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## Speeding into the Future | West Africa First Regional Fast Train

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Senegal's capital Dakar has been challenged by growing urbanisation, created by increasing economic opportunities.

The city of three million people offers nearly 85 percent of nationwide jobs, prompting an influx of around 100,000 new residents from rural communities each year.

The lack of adequate transportation options places substantial pressure on the country's inadequate road transportation and networks, resulting in heavy traffic congestion.

To improve the facilitation of populations transiting to the capital Dakar daily, the Islamic Development Bank has committed US\$337 million to the construction of West Africa's first fast train railway network.



*“The Dakar - AIBD regional express train project is a solution to the mobility problem that has arisen in Dakar over the past decade.”*

**Meme Fall,**  
Head of Railway Systems and Rolling Stock Engineer

Modern transportation infrastructures expand the country's economic growth by reinforcing national cohesion and regional integration.

It can also help tackle climate change and is therefore central to every country's sustainable development. Senegal's Dakar to Blaise Diagne International Airport (AIBD) regional express train project is one of the flagship projects of the Emerging Senegal Plan (PSE) initiated by the President of the Republic, His Excellency Mr Macky Sall and is helping to redefine transportation standards in the region.

Head of railway systems and rolling stock engineer, Meme Fall says "The Dakar - AIBD regional express train project is a solution to the mobility problem that has arisen in Dakar over the past decade.

" Phase one of the 57 kilometres project covers 36 kilometres from the capital Dakar to the town of Diamniadio and began operation in December 2021.



## Senegal Region Fast Train (TER):

IsDB Contribution:

US\$337 Million

Total Distance:

57 kilometres

From Dakar to Blaise Diagne  
International Airport (AIBD)

Phase 01: 36 km / 13 stops

Phase 02: 19 km / 1 stop





It passes 13 stations according to Fall, “the first phase goes from Dakar station via Colobane, Hann, Dalifort, Beaux-Maraîchers, Pikine, Thiaroye, Yeumbeul, Rufisque, PNR; Bargny, and then Diamniadio station.

This route now facilitates the easy transportation of residents in these communities to the city says Bargny resident and TER passenger Abdul Hessam. “I see more people interested in spending their day outside the city. Before it wasn’t possible, but now you can live in Bargny, in Rufisque, come to work (in the city), and return home so it is an economic win,

” This is transforming urban populations and increasing economic productivity in rural areas as well.

“We are talking about a transport system that has completely changed the localities that it crosses,” says Fall. “People are finally coming to live along the corridor, which makes the local economies much more attractive.”



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**Meme Fall,**  
Head of Railway Systems and Rolling Stock Engineer

The second phase of Senegal's regional express train is expected to be completed in 2026 and will transport passengers 19-kilometer from Diamniado to the newly constructed AIBD airport.

These eco-friendly, hybrid fast trains operate on both electricity and diesel, helping the environment by allowing passenger traffic to switch from congested roads to a more sustainable transport option.

"There is less pollution," confirms Fall, "less release of CO2 gas into the atmosphere.

" According to Fall, each train can transport 500 people, the equivalent of 10 buses and since there are 196 journeys per day, the TER has the potential of eliminating the pollution of 1900 buses daily and decreasing CO2 emissions by an estimated 17,000 tons per year.

This mass transport system that meets international standards in terms of urban mobility consists of 15 trains and can reach a maximum speed of 160 km/hour, reducing the travel time between Dakar and the airport from 90 minutes to just 30 minutes, saving passengers time and money says passenger Amadou Thiam.

### 13 TER Stations:

- ◆ Dakar
- ◆ Colobane
- ◆ Hann
- ◆ Dalifort
- ◆ Beaux-Maraîchers
- ◆ Pikine
- ◆ Thiaroye
- ◆ Yeumbeul
- ◆ Rufisque
- ◆ PNR
- ◆ Bargny
- ◆ Diamniadio
- ◆ Blaise Diagne  
International Airport (AIBD)





“It is very useful for us. It makes our life easier and helps us save time. With traffic jams it is not easy to arrive anywhere on time, but with the train it is good. We arrive on time, do what we need and then leave on time, which helps us work better and be more productive.

” The first phase of this regional express train line sees upwards of 115,000 passengers a day, but once the second phase is complete, that number is expected to double.

“There are women, there are young people, there are students, and there are workers who also have subscription cards,” says Fall. “It is also wheelchair accessible. We can clearly see an upward trend in those using the TER, which means that the populations has adapted to this new means of transport.”



“ *The relationship with the IsDB is excellent. IsDB has a very strong sense of urgency and the usefulness of this project.* ”

**Meme Fall,**

**Head of Railway Systems and Rolling Stock Engineer**

115,000 Passengers a day along phase 01.  
230,000 expected when phase 2 completed.



Senegal's regional express train is also enhancing socio-economic conditions across the country by improving access to social services, such as healthcare facilities and schools.

On behalf of the TER executing Agency (APIX), Fall says "the relationship with IsDB is excellent. IsDB has a very strong sense of urgency and the usefulness of this project. We thank our financial partner IsDB for its involvement in the first phase and who is also accompanying us in the 2nd phase.

" The Islamic Development Bank Group is committed to improving and redefining transport infrastructure in all of its 57 member countries.

Senegal's regional express train is helping reduce travel time, improve the environment and promote regional integration and economies - putting the country 'on track' towards a resilient, climate conscious future.



***"The relationship with IsDB is excellent. IsDB has a very strong sense of urgency and the usefulness of this project.***

**Meme Fall,  
Head of Railway Systems and Rolling Stock Engineer**



# TÜRKIYE



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## Redefining Renewable Energy

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The damaging effects that climate change is having on our environment has become one of the most pressing challenges of our time.

This has led the Islamic Development Bank Group to prioritised projects that mitigate the critical impact on vulnerable communities and ecosystems in its 57 member countries.

In Turkiye, climate action is a top priority.

As a founding member of the IsDB, the bank has invested US\$740 million towards 35 renewable energy and energy efficiency projects that is helping transform and re-define the country's entire energy sector.

These projects have led to the installation of new renewable energy power generation capacity, thousands of gigawatt hours of energy savings along with the elimination of millions of CO2 emissions.

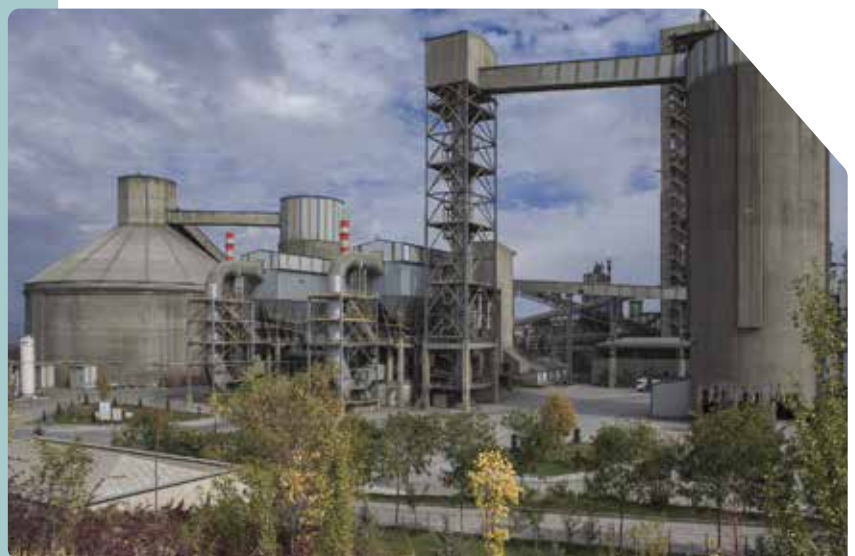
### IsDB Funded Renewable Energy Projects in Turkiye:

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**1,340 megawatts** of new renewable energy power generation capacity installed

**2,170 gigawatt** hours of annual energy savings

**3.2 million tons** of CO2 emissions eliminated per year



# ASAGI KALEKÖY HYDRO-SOALR

## POWER PROJECT

Bingol, Türkiye | Operated by: Kalehan Enerji

### Hydro Power Plant:

Asagi Kalekoy dam stretches **945 meters** long and **10 meters** wide

**5 Years** to build

**500 megawatts** hydro energy capacity

### Solar Power Plant:

**200,000 solar panels** making it the largest in Türkiye

Covers an area of **11,000 square meters**

**6 months** to build

**80 megawatts** of solar energy capacity

The Islamic Development Bank has financed US\$180 million towards the construction and operation of Türkiye's very first, and the world's second largest hydro-solar hybrid power plant.

The combined renewable energy production of the Asagi Kalekoy hybrid power station in the eastern city of Bingol, delivers 590 megawatts of electricity to the country's national grid annually.



Tahsin Yazıcı is the operations manager of Kalehan Enerji who run the facility. He says the Hydro Power Plant facility was the first to be built, followed by the construction of the solar park to cover the periods of little or no rain fall.





The completed Asagi Kalekoy Hydro-solar power plant began commercial production in early 2021 and now produces clean, environmentally friendly clean energy for more than half a million people in Turkiye.

According to Yazıcı, within one year of operations, this plant reduced the country's oil imports by more than 173,000 tons and natural gas imports by 207 million cubic meters, helping the country become more energy independent.

The plant has also improved the socio-economic conditions in the region by providing full time employment for well over 100 people, in addition to the hundreds of temporary/contracted jobs offered during the hybrid power plants construction.

New schools, health centres and mosques, have also been developed in the region says Yazıcı.



*In support of social projects, we offer scholarships to around 300 students in Bingöl every year and have built a student dormitory. We have also launched a technopark worth 30 million TL for the Bingöl University campus.*

**Tahsin Yazıcı,**  
Kalehan Energy's Operations Manager

# ÖZMEN GEOTHERMAL POWER PROJECT

Manisa, Türkiye | Operated by: Sis Enerji



## Özmen 1 Geothermal Plant:

IsDB contribution: **\$US18 million**

**24 megawatt** Organic Rankine  
Cycle (ORC)

Produces **172**

The Özmen 1 Geothermal Power Project (GPP) in western Türkiye was awarded \$US18 million in financing from the IsDB and began operations in September 2019.

Geothermal energy is green energy that is generated by harnessing hot water or steam from the earth to power electricity-generating turbines.

The water can then be injected back into the ground for reuse.

According to Suat Yüce, the Deputy General Manager of Sis Energy who operate the plant, the ÖZMEN-1 GPP is a 24 megawatt Organic Rankine Cycle system power plant that can produce 172 megawatts of energy annually.

The power plant itself sits 600 meters above sea level, while the geothermal wells are 400-450 meters below ground.

“From this lower level,” explains Yüce “the water is carried directly to the power plant, and after it passes through the ORC (Organic Rankine Cycle) again, it is re-injected into the ground from an even higher level”, making it “the first of its kind in the world”.

“*The ÖZMEN-1 GPP is the first of its kind in the world.*”

Suat Yüce,  
Deputy General Manager, Sis Energy

# ÇATALCAWIND

## POWER PROJECT

Istanbul, Türkiye | Operated by: Sanko Enerji



To further enrich the country's renewable energy infrastructure, the IsDB has invested US\$30 million into the operation of Çatalca Wind Power Project close to the iconic city of Istanbul.

20 wind turbines with the capacity of producing 60 megawatts of power were installed during the first phase of the project in 2008.

According to Evren Guvenc, the chief finance officer for Sanko Energy, who run the operation, the second phase added an additional 10 turbines in 2016 adding a further 33 megawatts of renewable energy potential.

Annually, the 30 onshore wind turbines of the Çatalca wind power project powers approximately 115 thousand households with 285 thousand megawatts hours of clean renewable energy, replacing thousands of metric tons of CO2 emissions every year.

### Catalca Wind Power Plant:

2008 - 20 wind turbines installed  
producing 60 megawatts

2016 - 10 wind turbines installed  
producing 33 megawatts

TOTAL = 93 megawatts of renewable  
wind energy capacity





Being a gold standard certified project, the Çatalca Wind Power Plant is also benefiting the local community says Guvenc.

“We collaborate with the local schools, with the department, with the municipality and with the local people. We also clean the forest area against any damage every year. So we maintain a very close and very good relationship with the local communities.”



“ *This is a very important project for Sanko Energy and it has contributed a lot towards the renewable energy generation in our country.* ”

Evren Guvenc,  
CEO Sanko Energy

# EGYPT







One of the most sustainable economic drivers for a country's socio-economic development is agriculture.

All over the world, rural communities depend on growing crops in order to obtain food security and/or a financial income.

Yet, the negative and destructive effects of climate change on our environment is threatening agriculture around the world.

That is why the Islamic Development Bank (IsDB), has been committed to promoting the sustainable development of the agricultural sectors in its 57 member countries.



“ *We have the idea that New Valley Governorate can solve Egypt's food problems, especially since it has the potential with vast lands and groundwater, that are yet to be utilised.* ”

Aymen Safwat,  
AFAQ Project Manager

The sparsely populated New Valley Governorate in south west Egypt has the potential of feeding the entire country of 104 million people according to The New Horizon Association for Social Development (AFAQ), a civil society organization in Egypt helping increase food security and employment opportunities for small farmers across the country.

Yet the arid landscape of Egypt's largest Governorate, has made it difficult to foster agricultural production, prompting the region to depend on the importation of fruits and vegetables from other governorates.

Together with The Sawiris Foundation for development, IsDB is co-financing a US\$ 242,000 project run by AFAQ in New Valley Governorate that is promoting the adoption of sustainable agriculture practices.

In addition to many hectares of farming fields, several greenhouses were also built to help protect the produce from the harsh environmental conditions all year round, ensuring the highest productivity rate possible



The space within them has been divided into several plots, which have been given to local farmers to plant a variety of crops not common before.

### Sustainable Agriculture Project:

Total project Cost: US\$ 242,00

IsDB Contribution: US\$96,820

Number of Beneficiaries: 1,870

Project Duration: 24 Months





Agricultural professionals are available for any questions or support to the local farmers require. Their harvest is then available for the farmers use.

According to Aymen Safwat, the project manager from AFAQ, local farmers used to rely on traditional crops, like wheat and alfalfa, but this project now allows them to grow different types of vegetables and fruits of higher economic value, such as eggplants, mango, grapes, oranges and pears. These enhanced varieties of seeds can then be distributed to other framers in the established seed nursery.

Local farmer Amal Ibrahim Mousa has been given two plots in the village of Balat. She says the project has changed her life.

At first it was difficult she admits, but seeing the fruits of her hard labour, made it all worth it. Now she is able to work and provider for herself and her loved ones.



***“ It has changed my life. I’m now working for myself, for my family, neighbours and friends. ”***

**Amal Ibrahim Mousa,  
Local Farmer, Beneficiary**



Sayyed Mansou Okasha is another project beneficiary. With a wife and child, he is happy to have found a stable and consistent way to support his family. Sayyed has been able to quit menial work and rely solely on the income he makes from his harvests.

Mitigating the effects of climate change is a constant consideration.

The use of organic fertiliser to reduce CO2 emissions as well as increase the organic matter in the soil, which helps retain water better - providing for a better harvest.

Additionally, other local farmers in the area are being provided financial incentives to conserve water and energy by switching to solar-powered drip and sprinkler irrigating systems.

The local production of chemical-free organic fruits and vegetables is contributing to the change of agricultural practices in New Valley and helping make the Governorate less dependant on food imports.

The goal of the project, says Aymen, is to increase food productivity to allow the governorate to become more self-sufficient.

***“I used to be a labourer, paid daily, but then I stopped working on other people’s land and the revenue here became sufficient for my needs. It has improved my income by 70%. ”***

Sayyed Mansou Okasha,  
Local Farmer, Beneficiary

***“The goal of the project is to increase food productivity to allow the governorate become more self-sufficient. ”***

Aymen Safwat,  
AFAQ Project Manager



# Harnessing the Sun:

In Egypt, the IsDB has also contributed US\$80 million towards one of the largest solar farms in the world; the SCATEC Solar Project located in the Ben Ban Solar Park in Aswan Governorate.

The 6 SCATEC Solar Photovoltaic Power Projects are helping Egyptians capture the benefits of their endless sunshine by producing 350 mega watts of renewable energy capacity to Egypt's national grid.

This helps to offset around 311 thousand tons of CO2 emissions annually.



The construction of this solar park also created upwards of 2,000 jobs and helped channel a significant amount of foreign direct investment into the Egyptian economy.

## IsDB Contribution to SCATEC Solar Project:

IsDB Contribution: US\$ 80,00

6 SCATEC Solar Photovoltaic Power Projects

Producing 350 Mega Watts



# Mali



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## Modernizing Agricultural Practices

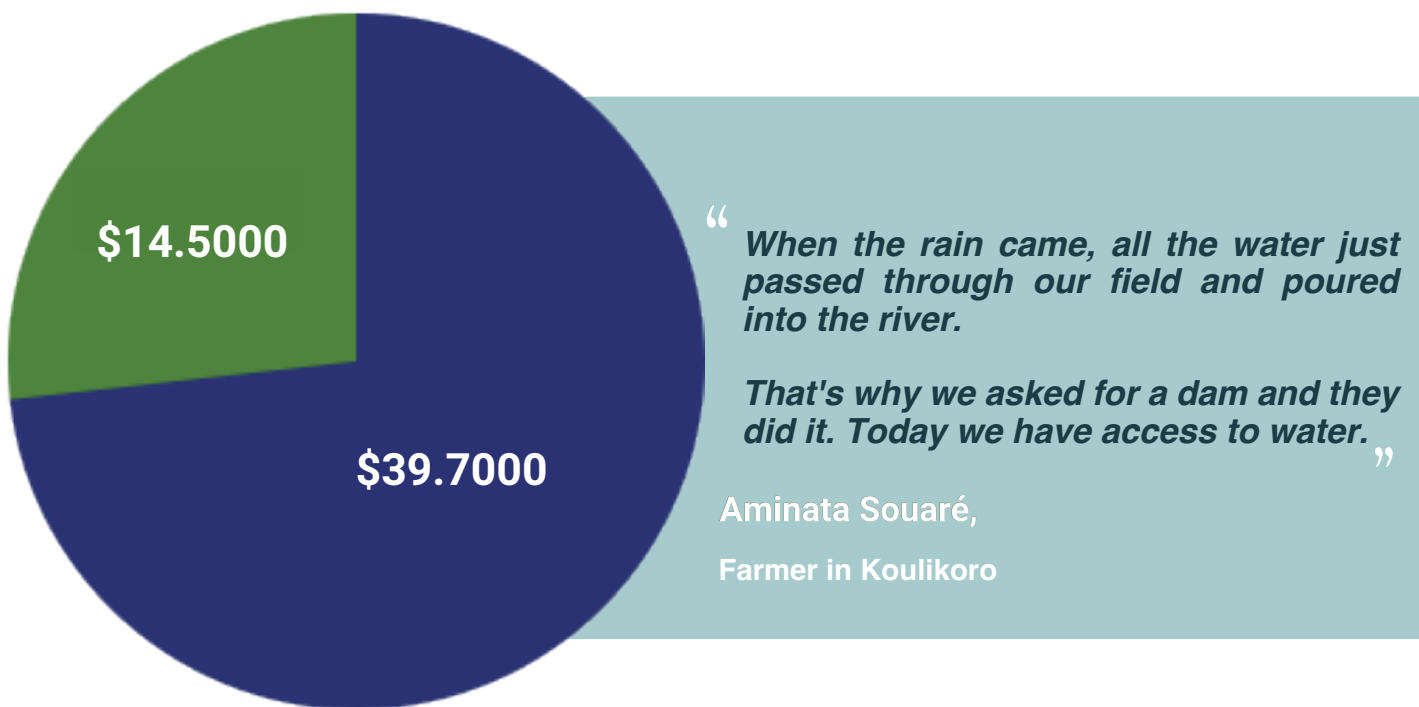
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All across Africa, rural populations depend on agriculture to provide food security and sustainable incomes.

The development of modern agricultural practices for these communities can help protect resources, improve harvests and help tackle climate change.

As part of the Islamic Development Bank Group's committed to the socio-economic growth of its 57 member countries, it has financed US\$14.5 million towards the enhancement of agricultural productivity in Sub-Saharan Africa, where the arid landscape and frequent droughts can make farming practices difficult.



IsDB Investment



Total Funding



A total of US\$39.7 million is being invested into projects that will help rapidly scale up staple agricultural yields and improve irrigation systems for small farmers in Benin, Burkina Faso, Cameroon, Mali and Niger.

In Mali, a team from Smallholder Agricultural Productivity Improvement Project or SAPEP has been focused on increasing the use of natural rainfall in the lowlands and plains.

This hydro-agricultural development has seen IsDB funding go towards the building of dams and gullies that can trap and store rainwater, which then improves the productivity of crops and makes them less vulnerable to climate shocks.

Improving irrigation, enhances the health of the soil which improves crop yields.

### Countries helped with IsDB funding for small farmers:

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- ◆ Benin
  - ◆ Burkina Faso
  - ◆ Cameroon
  - ◆ Mali
  - ◆ Niger
- 

**Rainwater trapped in dams and gullies. Provides water for irrigation during dry seasons.**





Diversifying seeds and fertilisers and improving access to them is another way of developing more efficient agricultural practices.

In five different regions across Mali, local farmers working with SAPEP have learned how to increase availability of seeds through the establishment of hybrid seed production plots in the regions.

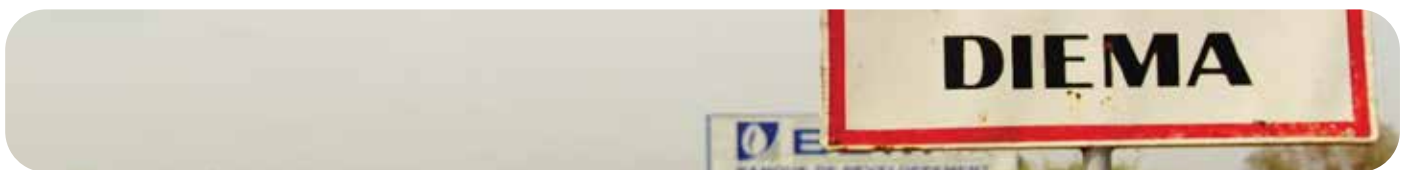
According to Mamadou Sissoko, the head of Agricultural in the small town of Diéma in the Kayes Region of western Mali, test fields were established where combined varieties of maize, sorghum, corn, and millet were planted.

These hybrids varieties offer different benefits from high yields to pest and drought resilience.

“We had our traditional seeds,” shares Sissoko “which did not give much yield but the project gave us very effective new seeds, which are fast and these seeds help us when the rainy season is shorter.”

It also helps to adapt practices that can fight against the effects of climate change.

“When it worked, we report this result to others,” said Sissoko.



*“The objective of the project is to adapt our practices for this period of climate change.”*

Mamadou Sissoko,  
Head of Agricultural, Diéma Western Mali

**Diversifying seeds and fertilizers enhanced varieties which are stronger against + more adaptable to against climate change.**





Storage is another important factor when it comes to the preparation required for climate change's unprecedented weather patterns.

That is why the IsDB funds have also been directed towards the establishment of several metal silos in addition to two 1,000-ton warehouses where farmers can leave their over supply during the prosperous months.

Korotoumou Sangare, is a farmer also in Diema, Kayes, western Mali. She says the projects has helped her and fellow small farmers a lot.

"If the rainy season has gone well for you, she says, "you can come and keep your grain here so you have a solution during difficult times."

### US\$14.5 million of IsDB Funding:

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- ◆ Develop modern agricultural practices
- ◆ Protect resources
- ◆ Improve harvests yields
- ◆ Tackle climate change
- ◆ Improve irrigation systems
- ◆ Diversifying seeds and fertilisers
- ◆ Drought resilience
- ◆ Storage
- ◆ Business Centres





IsDB funds also supported the construction of 24 Agro Business Centres across the five regions in Mali where SAPEP is active, which allows the small farmers a space to trade with each other, sell their excess crops and also network.

Another farmer in the Kayes region makes use of the store in his area regularly. Mamadou Magassa says the store has been very useful for him.

“Its first advantage is that it gives us the task of treating the seeds well. Anyone who can work on seed or who can reserve grain for another field season.”

Agriculture in the region Mamadou Sissoko, says that through the store “part of the harvest can also be sold, especially when the rainy season is fruitful. It helps us to be able to feed our families because if that is not done no one will be able to help us”

IsDB support in the development of agricultural productivity in lowlands and plains across countries in Sub-Saharan Africa is improving lives and highlighting the bank’s commitment to building resilient economies and sustainable future in all its 57 member countries.



“ *It helps us to be able to feed our families because if that is not done no one will be able to help us.* ”

Mamadou Sissoko,  
Head of Agricultural, Diéma Western Mali

# Uganda



## CLIMATE CHAMPIONS CARING FOR CLIMATE WITH BIOGAS TECHNOLOGY



Kimoombe Nyabongo is from the next generation of Ugandan farmers who are proving that organic waste is the new gold.

As high stagflation and limited growth opportunities crept into his city life, Nyabonogo, 53, had no choice than to call it a day. He moved into his family farmhouse in 2017 where he was beset with a different set of challenges like power failures, gas shortage, inaccessibility to food markets etc. With a growing family, Nyabongo had no end in sight to his economic dilemmas.

It was one day when Nyabongo was introduced to the multidimensional Local Economic Growth Support (LEGS) Project, funded by the Lives and Livelihoods Fund (LLF) and co-financed by the Government of Uganda. Since 2019, the LLF LEGS Project has been training small and medium scale farmers to increase their livestock production, diversify farm produce and develop sustainable sources of clean and renewable energy for domestic and commercial use.

Describing his experience of engaging with the LEGS project, Nyabongo said, "Truly speaking, the LLF project was like the light at the end of the tunnel. Not just my business or I, but the environment on my farm has also been on an upward trajectory."

During the design phase of the project, collaboration with technical experts to understand core issues sitting at the heart of Uganda's climate crises, informed LLF and stakeholders to devise climate mitigation strategies to help Uganda achieve affordable and clean energy.



### 150 FARMERS TRAINED

*on the construction of biogas units and institutional energy saving cookstoves*



### 3 BIOGAS STATIONS CONSTRUCTED

*to promote community biogas technology*



### 75 FARMERS TRAINED

*on the use of biogas technology*

LEGS single most important contribution to my farm life is training me on establishing a micro biogas plant, where we recycle biodegradable waste in a bioslurry to be taken back to pastures as manure. This has increased my capacity to grow food at commercial scale," told Nyabongo. "The biogas plant is attached to the kitchen for a regular supply of gas, which is actually a dream come true for my wife, to provide our family of ten with several warm meals every day," he added.

With its environment-friendly properties, biogas is writing into the DNA of future agricultural technology for rural agriculture and pastoral development in Uganda that is being supported by LLF through the LEGS Project.

The "ruthless deforestation" is endemic to the Rwenzori region that has led to drastic increase in mercury levels. However, the efforts put in by the LEGS Project to promote tree plantation for every tree cut and the use of promising biogas technology at the farm and household levels is now paying dividends.

"Our community has planted 1,000 trees after engaging with LEGS Project. Besides improving the air quality and oxygen levels, these trees have also decreased water evaporation, thus preserving our water reservoirs. My family income has increased by 20% in two years," tells Nyabongo

The Lives and Livelihoods Fund is doubling down its support for climate-smart agriculture across the agricultural value chains through responsive financing and integrated development programs to enhance productivity, improve resilience, and reduce GHG emissions.



The story of 59-year old Beti Namusisi would strike a chord with many coffee farmers who're reeling from erratic changes in temperatures and weather patterns in Uganda and across the globe.

The ancient forests and hills in the west are nurseries of Uganda's signature robusta coffee plant, making it one of the most intensively farmed crops. It is a source of livelihoods for as many as 1.7 million smallholder farmers. But, as greenhouse gases warm up the planet, these farmers are scrambling to save their precious lands and plantations from climate change.

Strength and nutritional value of the soil in Namusisi's plantation area has weakened over the last few years. While landslides – the latest in climate rollercoaster – have left her coffee fields and other crops awash.

"It's a seasonal struggle to save our coffee produce and other crops from one disaster after another. I've been surrounded by coffee my whole life, but the way weather has taken toll on our crops lately was unknown to us previously," recalls Namusisi, who owned eight acres of land at the time of her husband's death, but low farm yields and lack of production have cast a long shadow over her family asset.

She was forced to sell some of her land to provide for her children and marry them off.

Things began looking up for 1,883 coffee farmers like Namusisi when the Lives and Livelihoods Fund (LLF), in collaboration with the Government of Uganda, initiated a US\$ 33 million intervention, titled, Local Economic Growth Support (LEGS) Project, in 17 districts.

The coffee farming families in Nombe sub-county have been engaged in monoculture farming methods for decades. This has resulted in intensive farming having a direct bearing on the quality of coffee produce and availability of crop varieties in the region.

Earlier we were practicing the age-old tradition of 'kwaujuru', whereby all crops were mixed up and grown in an unplanned manner. LLF showed us how we were exhausting the soil nutrients which was also impacting our environment. In short, we were doing everything wrong and LEGS Project helped us correct our course," said Namusisi.



**2.6 MILLION CLIMATE-RESISTANT SEEDS**

*of coffee and other crops distributed*



**1,883 COFFEE FARMERS**

*benefitting from on-farm infrastructure*



**39,000 METRIC TONS**

*of coffee is being produced*

Working together with local government, extension workers and Nombe Storage and Millers Cooperative, the Fund has made strategic investments in building the capacity of local coffee growers, in addition to providing them with quality farm inputs. One of the key objectives of LLF's LEGS project is to prevent land from running into the ground, and helping farmers preserve and manage soil which is a vital and finite resource, integral to our ecosystem and human well-being.

The LEGS project has been a game changer for me and other farmers in my village. The incredible contribution that the project has made in our lives is empowering us with knowledge and skills. These are our new weapons against any onslaught of weather in coming seasons.

"We have been trained on new farming methods such as terrace-making for flood control and mulching for speedy growth. We have also learnt how to divide our lands to grow beans, maize, and cassava. This is allowing us to keep our land in production while protecting the environment," told Namusisi.

The hallmark of the LLF-funded LEGS project has been its integrated approach to ensure every farmer is a better steward of their land. This has been achieved by increasing coffee production without expanding farm footprint.

The use of organic fertilizer, access to clean water, construction of coffee processing facility and rural access road that brings different food markets to farmers' doorstep have all contributed to make coffee farming an economically sustainable and eco-friendly activity.

"LEGS is helping us in more ways than one. Previously, we were using contaminated water in the fields and at home. But the Gravity of Water Flow Scheme from Nyakatoke to Nombe and Itoja districts is protecting our water streams from pigs and dogs," said Namusisi, who was earning US\$ 180 per season before LEGS; now her income has increased up to US\$ 500. "With the newly constructed coffee processing facility and feeder road, I'm expecting to earn up to US\$ 800. Also, my farm acreage has increased from one acre to three acres over a period of two years. I cannot thank LEGS and LLF enough for giving us a lifetime opportunity," added Namusisi.

The Lives and Livelihoods Fund is doubling down its support for climate-smart agriculture across the agricultural value chains through responsive financing and integrated development programs to enhance productivity, improve resilience, and reduce GHG emissions.





## CLIMATE CHANGE & HIV/AIDS: A TWO-FRONT WAR Helping Cameroon mitigate climate change impacts in HIV-prone communities



As environmental niches are being prompted by erratic climate changes, they are predisposing people, especially those living with HIV/AIDS, to inevitable human migration, increased food insecurity and deadly air and water-borne infections and diseases. The extreme weather events are reshaping the health landscape in low and middle-income countries, thus overstressing their public health infrastructure which is the main vehicle for HIV/AIDS prevention and impact mitigation.

For Cameroon, it all began in 1985 when the earliest reported case emerged. Almost four decades into the HIV/AIDS breakout, the epidemic control is a constant struggle for the government of Cameroon, for the country's healthcare system, and for local communities. The situation is likely to exacerbate given Cameroon's 146th ranking on the 2020 ND-GAIN Index, making its diverse climatic zones more susceptible of long-term climate shocks. Cameroon is globally the 59th most climate-vulnerable country and the 16th least ready country.

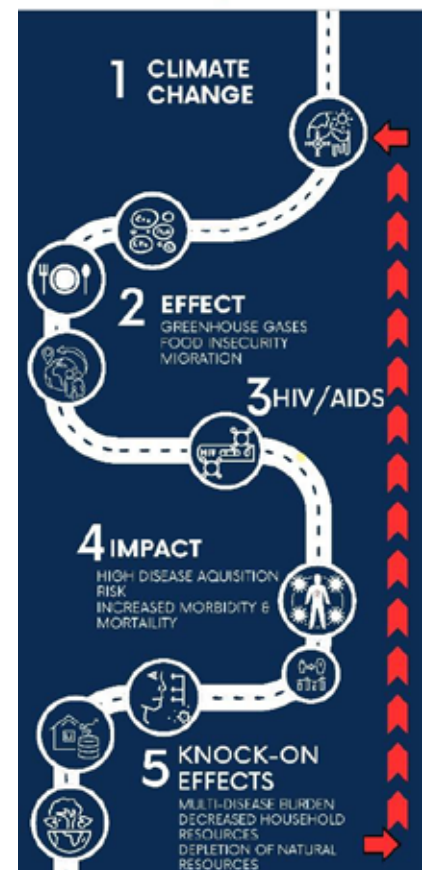
The Lives and Livelihoods Fund and the Government of Cameroon are funding a US\$ 40 million Support of Elimination of Mother-To-Child Transmission (eMTCT) of HIV/AIDS Project in 61 health districts through the Ministry of Public Health, UNICEF, and other local stakeholders.

Towards a holistic engagement with climate-health issues, especially for those living with HIV/AIDS, the LLF is implementing a range of measures in Cameroon. On the preparedness level, the LLF works

with women, youth, and health workers to anticipate and deal with climate-sensitive diseases and health risks. On the healthcare facility level, the LLF improves resilience and reduces emission from healthcare units.

Through clean water and energy availability well as providing low-emission systems for safe treatment of hazardous medical waste. The LLF approach is aligned with the global effort towards dependable, equitable, climate-resilient, and low-carbon, health systems.

### THE VISCIOUS PATHWAY OF CLIMATE CHANGE & HIV/AIDS



Based on the diverse epidemiological profiles, the project is targeting 332,240 pregnant women, which make 35% of the national target. However, since 2019, more than 350,581 women have received HIV testing and antiretroviral treatment. Similarly, more than 82,500 children and adolescents have received early diagnosis and care through case-based surveillance system and ARV resistance monitoring.

Besides economic and other social determinants, the environmental conditions such as, poor sanitation, unsafe management of waste and hazardous clinical materials and energy crisis, heighten HIV/AIDS acquisition rate in vulnerable populations. The LLF project is reversing the situation via three work streams.

### **POWERING UP HEALTH FACILITIES WITH WATER AND SOLAR ENERGY**

The eMTCT project, through UNICEF, is improving water and solar energy supply in the less equipped health facilities in all targeted regions and health districts.

Water supply through boreholes is ameliorating hygiene and sanitation system at health facilities, thus reducing the prevalence of nosocomial infections including HIV and Covid19. The availability of regular clean water is also ensuring that surgical instruments and other items are properly and systematically cleaned.

Our project has equipped health facilities with solar system as a renewable source of power. In addition to playing an important role in curtailing GHG emissions, these solar-power generation systems are also proving to be lifesavers in rural Cameroon where protracted power outages are a way of life.

The high-tech diagnostic device (Point-of-Care) that is crucial for HIV Early Infant Diagnosis and Viral Load Testing is greatly benefitting from uninterrupted supply of power for recharging purposes. Similarly, the maternity wards and laboratories are also powered up with solar energy, thus optimizing their services and ensuring timely diagnosis and safe deliveries, respectively.

### **DEMONSTRATING 'GREEN CREDENTIALS' THROUGH WASTE MANAGEMENT AND SOLUTIONS**

Health care provision, including laboratory activities produce considerable amount of biomedical waste including HIV, Hepatitis or Covid19 virus-infected syringes, which, if not properly disposed, can pose serious threats to environmental and human health.

In the absence of proper disposal and waste management system, the majority of health facilities use traditional measures to burn biomedical waste e.g. wood, which causes additional harm to the environment.

The eMTCT project is providing high-performing incinerators to 40 district hospitals to help reduce the use of fossil fuels as well as potential infectious properties and volume of medical and biological waste.

### **INSPIRING CLIMATE ACTION THROUGH ENVIRONMENT EDUCATION**

The project is supporting communities, especially adolescents and young people to include environment education and actions in their HIV prevention programs.

To this effect, an innovative Youth 3+1 initiative was launched to address several health threats in relation to HIV for Adolescents and Youth (Early pregnancy, Menstrual Hygiene management, Sexually Transmitted Diseases, Gender-based Violence, Anemia and poor Nutritional statuses).

The eMTCT's Youth 3+1 initiative uses four integrated platforms: School, Community, Health Facility, Digital Space to provide critical information, mentorship and psychosocial support to the most vulnerable adolescent girls and boys. These activities create synergy with our Youth 3+1 initiative to support pupils in understanding environmental issues and encourage them to plant and maintain trees in partnership with the Ministry of Environment Protection of Nature and Sustainable Development.

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## CLIMATE CHAMPIONS ENERGY-EFFICIENT STOVES ARE KEEPING ENVIRONMENTAL HAZARDS AT BAY

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At Nombe Senior Secondary Seed School in Rwenzori Region, young girls and their mothers are busy making smokeless charcoal briquettes from bio-degradable waste and energy-saving cooking stoves.

Upon completion, these eco-friendly bio coal briquettes and stoves will be used to pay for children’s school fees and one-time school meal.

This activity is being carried out under a US\$ 33 million initiative, called, Local Economic Growth Support Project, funded by the Lives and Livelihoods Fund and co-financed by the Government of Uganda.

Poverty, gender and education influence fuel choices for cooking among Uganda’s rural households. Clean cooking to protect human health and habitat is a concept that has not caught on with remote communities.

A large population in villages relies on biomass fuels, mainly extracted from firewood and charcoal, to meet their cooking, heating, and lighting needs. These solid fuels, coupled with inefficient cook stoves, are responsible for pollution causing grave health hazards, especially among women and young girls.

The growing demand for food, and the entire process of cooking food, is leaving Ugandan people bereft of forestland and other precious ecological resources. The knock-on effects of continued use of biomass fuels include school dropouts, women drudgery, and malnutrition.

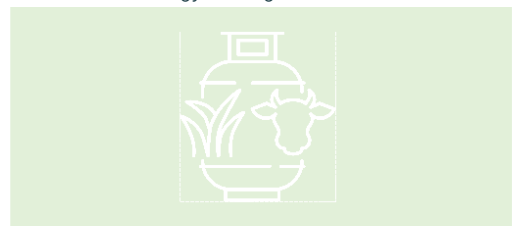
A similar quest for firewood to make coal for selling purposes in nearby markets, forced 19-year old Evelyn Masika to cease her studies midway and contribute to the family income.

“I wanted to complete my high school, but financial issues saw me trekking into the forests to forage for wood,” says Evelyn Masika.



**150 FARMERS AND ARTISANS TRAINED**

*on energy-saving cookstoves*



**3 BIOGAS STATIONS CONSTRUCTED**

*to promote community biogas technology*



**75 FARMERS TRAINED**

*on the use of biogas technology*

Masika is not just a story, but a reflection of the mindset that puts girls in harm's way and compromises their education, safety, and health.

Keeping sight of these complex and overlapping issues, the Lives and Livelihoods Fund and the Government of Uganda collaborated to implement Local Economic Growth Support Project, that is committed to invest in green solutions to substantially reduce environmental pollution and enhance economic performance.

The project has organized 150 local artisans, mainly mothers, into a cooperative and provided them with seed money and training to make mobile cook stoves and bio-coal briquettes.

The Biogas, Institutional Cookstoves and Briquettes Activity is not only reducing high dependency of firewood as cooking energy source, but the project's technical innovations are also ensuring that secondary school children living in extreme poverty have access to meals in school, complemented by a broader package of health and nutrition benefits.

"By participating in the Biogas, Institutional Cookstoves and Briquettes Activity through LEGS Project, I am getting the opportunity to not just earn a decent living to pay my school fees, but I'm also playing my part in conserving our environment. I call upon young people to come forward and join hands with LLF in protecting our environment," says Masika, who is enthused about not having to quit her studies anymore.

The Nombe Senior Secondary Seed school has witnessed 35% increase in the ongoing school year as reported by the Head of Studies, Eric Kyaligolza.

Echoing the sentiments of parents who are benefitting from Institutional Cookstoves Activity, Helen Chambongo, mother of two, says "LLF's LEGS Project is a major contributor to bring down household level inflation by showing us ways to take the pressure off our income. It has trained us on preparing institutional stoves for the schools which our children are attending. We can barter stoves for school fees, as well as ensure that our children are provided fresh and nutritious meals during their classes. LEGS is giving parents economic freedom, and health and education to our children."

The Lives and Livelihoods Fund is doubling down its support for climate-smart agriculture across the agricultural value chains through responsive financing and integrated development programs to enhance productivity, improve resilience, and reduce GHG emissions.



# Nigeria



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## CLIMATE CHAMPIONS YOUNG NIGERIAN FARMERS BEATING DROUGHT WITH CLIMATE-SMART AGRICULTURAL PRACTICES

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Ado Ya'u, a young agripreneur from a small farming community in Gezawa district of Kano State, proudly shows off his new improved farm produce that has stood the test of the long dry period this year occasioned by weather intensities and unpredictable rainfall.

Ado is evidently overwhelmed because the unthinkable has happened with assistance from the Kano State Agro-Pastoral Development Project – a five-year, US\$ 90 million crop value chain intervention, funded by the Islamic Development Bank, Lives and Livelihoods Fund and the Government of Nigeria.

"This year I have produced 40 bundles of sorghum from one hectare of land. I am amazed at how well my sorghum has grown despite the extended dry periods. My harvest is much better and earlier than I had ever expected."

Until a few months ago, Ado's mind was fraught with anxiety and stress. He knew that one more drought stint could spell the end of his business, which supports his mother and young siblings after their father's death.

This precarious livelihood is normal for hundreds of thousands of small farmers in Kano State, who are feeding the wider region with staples like sorghum, maize, and millet, but are increasingly racked with extreme weather on the front lines of climate change.



### REHABILITATING MAJOR IRRIGATION SCHEME

*to fight drought for additional production of 750,000 grains and 100,000 tons of paddy per year*



### 450,000 FARMERS IDENTIFIED

*across different high-profit agricultural value chains*



### 366,000 FARMERS' INCOMES

*have increased after engaging with KSAPD Project in 44 LGAs*

According to data from the Nigerian Meteorological Agency, average annual rainfall in Kano state has decreased by 10% in the past 50 years, with rain increasingly concentrated in shorter periods. The erratic rainfalls followed by severe drought spells over the long haul have disrupted planting and harvest schedules at the farm level, reduced crop yields, and increased food insecurity.

The once-fertile soils on Ado's farm had dramatically compacted, leaving them deprived of nutrients and below the level of organic soil carbon required for plant growth, thus reducing farm produce, and increasing susceptibility to pests and disease outbreaks.

It was only until Ado registered with the LLF-funded KSADP and started receiving intensive training on various aspects of good agro-pastoral practices that he found enabling and viable solutions to protect his crops against climate hazards.

Determined to help the farming communities in reversing the unfavorable impacts of weather irregularities, the KSADP has empowered young farmers with climate-smart agriculture practices.

"Through KSADP, I have gained valuable knowledge about drought-resistant, early maturing crop varieties, such as sorghum and millet, specifically chosen for their ability to withstand harsh environmental conditions. I have also replaced my traditional sorghum varieties with drought-resistant cultivars," shares Ado.

Ado's success story has inspired other farmers in the community to embrace drought-resistant crops, leading to a collective improvement in agricultural productivity and a decline in food insecurity.

Together, they demonstrate the resilience of farming communities in climate change, proving that adaptation and innovation are essential to sustainable agriculture.

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