

ACReSAL Impact stories

Promoting Sustainable Landscapes Practices



**Agro-Climatic Resilience
in Semi-Arid Landscapes**

...greening the environment, saving lives

No.16, Biodun Olorunfemi Street, Cadastral Zone,
Wuye District, Abuja, Nigeria



**Agro-Climatic Resilience
in Semi-Arid Landscapes**



THE WORLD BANK

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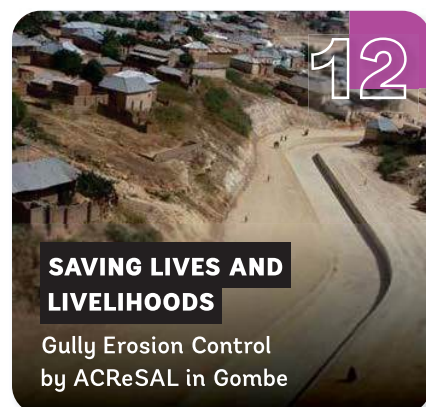
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Hajiya Fati Othman, a staff member of the University of Jos who resides opposite the park, vividly remembers the struggles the park faced before the ACReSAL intervention.

“Before the ACReSAL project interventions, many areas of the park were struggling to support wildlife due to habitat loss.”

But with ACReSAL's support, the park has undergone a remarkable transformation. The project has prioritised conservation initiatives and community involvement, recognising the crucial role local populations play in wildlife conservation.

To safeguard the wildlife and ecosystem of Jos Wildlife Park, Plateau State ACReSAL provided crucial support. The project constructed 17.1km of perimeter fencing to secure the park's boundaries and prevent encroachment. Additionally, ACReSAL supplied uniforms, walkie-talkies, and motorcycles to enhance security measures. The park management also received desktop and laptop computers to streamline operations, as well as a Toyota Safari van for transportation.

Furthermore, ACReSAL provided raincoats, rain boots, and grass-cutting machines to facilitate maintenance activities. The installation of 20 Solar street lights promotes sustainability and ensures the park's illumination. These provisions collectively aim to ensure the effective protection and management of the Jos Wildlife Park ecosystem.

The ACReSAL project has also focused on promoting sustainable tourism as a means to protect forest reserve areas and generate revenue for the park and surrounding communities. The remodelling and renovation of facilities, including the animal museum, parks, restaurant, café, kitchen, bar, chalets, tractors garage, workshop, and public toilets, solar powered boreholes and lights have enhanced the visitor experience.

The impact of the ACReSAL project support is evident in the park's increased revenue and tourist arrivals. The annual income from tourism has doubled, from 13,042,635 million to over 26 million, and tourist arrivals have surged from 379,783 in 2023 to approximately 1 million.

The increase in tourism has had a positive impact on local businesses and vendors, stimulating the local economy and creating jobs. Local vendors have seen a rise in demand for their products, leading to higher sales and potential for expansion.

The ACReSAL interventions have also fostered cultural exchange, allowing local vendors to showcase their crafts and traditions, enhancing community pride and cultural preservation. The project's impact extends beyond the park's walls, benefiting the local community and promoting sustainable development.

Through publicity and enlightenment programs, ACReSAL has engaged local communities in sustainable practices that benefit both the environment and their livelihoods.

Emmanuel Dogo, a local farmer in Dong, is one of the many beneficiaries of the project. “The sensitisation we received has changed how we farm,” he said. “We are now able to grow crops that are more resilient to climate change, and we understand the importance of protecting our environment.”

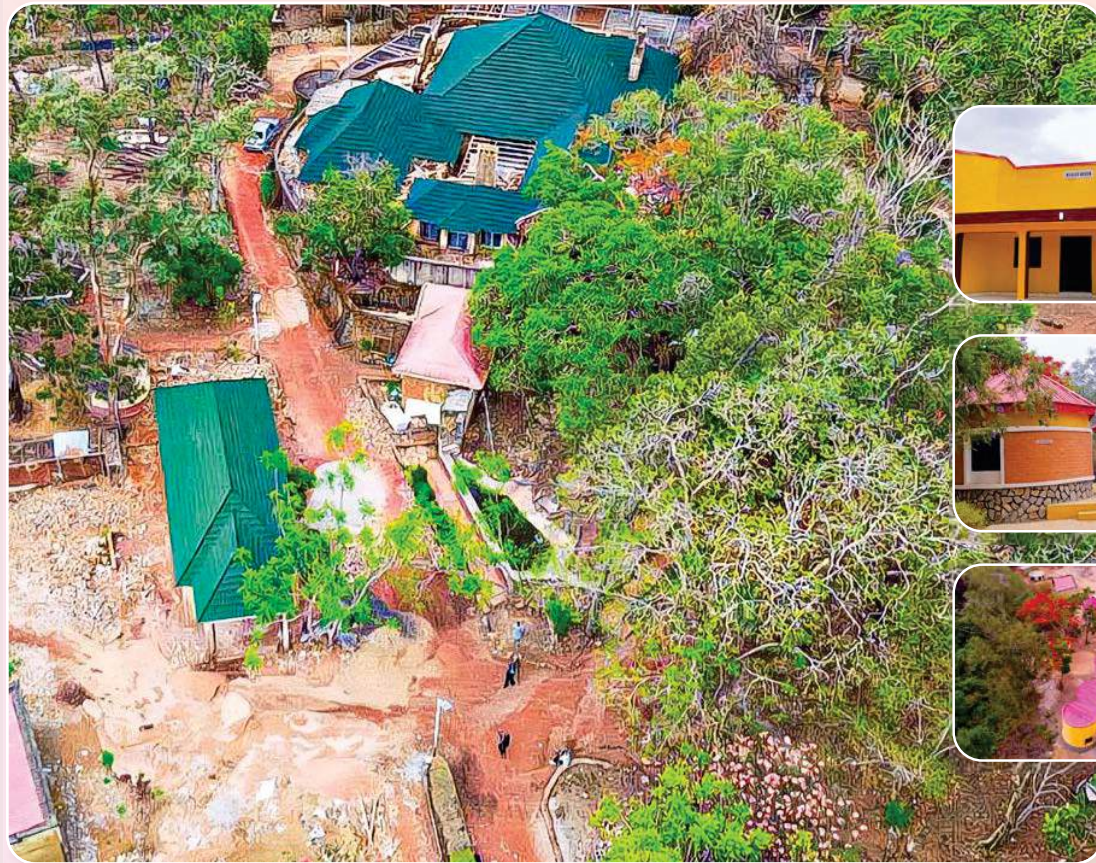
As the ACReSAL project continues its interventions, stakeholders remain optimistic about the long-term benefits. Mr. Chuwang Pwajok, General Manager of the Plateau State Tourism Corporation, expressed commitment to ensuring the Jos Wildlife Park remains a sanctuary for wildlife and a source of pride for the state.

“The progress we've made so far is encouraging, but there is still much work to be done,” he said. “We are committed to ensuring that the Jos Wildlife Park remains a sanctuary for wildlife and a source of pride for the state, all appreciation to the World Bank and ACReSAL project.”

The future looks bright for the Jos Wildlife Park, and the ACReSAL project is poised to make a lasting impact on the park's ecosystem, local communities, and economy.

With its focus on sustainable practices, community engagement, and conservation, the project is a shining example of what can be achieved when stakeholders come together to protect and preserve our natural heritage.





REVIVING A SANCTUARY

ACReSAL's Transformative Impact on Jos Wildlife Park

The Jos Wildlife Park, a key ecological and tourist site in Nigeria, had faced significant challenges in the past.

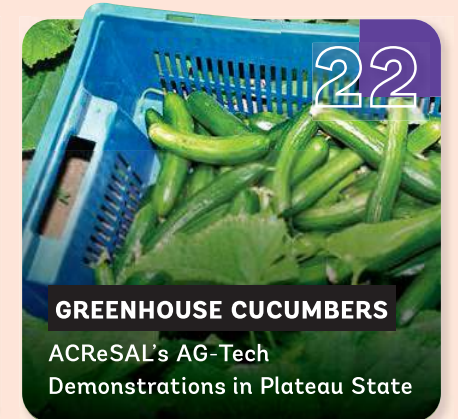
These have taken a toll on the park's ecosystem and wildlife. However, everything changed with the intervention of the Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project.



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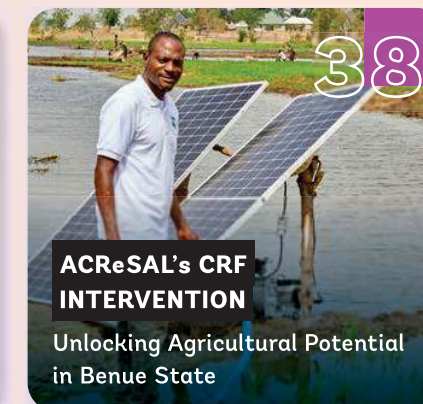
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REVIVING A SANCTUARY

ACReSAL's Transformative Impact on Jos Wildlife Park

Nigeria's Huge Potential and Significant Constraints



A multi-ethnic and diverse federation of 36 autonomous states, Nigeria is Africa's largest country with over 200 million people, and its largest economy.

With abundant resources and a young and dynamic society, Nigeria has the potential to be a giant but it faces significant challenges of poverty, slow economic growth, insufficient public sector capacity, and poor performance on many human development indicators.



Climate change is affecting Nigeria's economy profoundly, threatening to reduce agricultural productivity by 10–25 percent, and shrink GDP by 4.5 percent by 2080. Agricultural yield has already fallen by 50 percent in some parts of the north, and the country faces high-water scarcity, with droughts expected to occur at least every five years. Water scarcity not only threatens food security, livelihoods, and productivity, but also exacerbates fragility and increases the risk of violence. Inaction (business-as-usual) could cost 6-30 percent of GDP by 2050, affecting the livelihoods of millions of households.



They had often faced the challenges of inadequate capital to purchase farm inputs and improved varieties for optimal yield, thus operating on a smaller scale despite their ambition to increase their production. Having failed severally to access loans to enhance their rice production, Kentors Multipurpose Co-operative Society Limited heard about the Community Revolving Fund (CRF) loan when Benue ACREsAL was sensitizing the pilot watersheds in the State.

They quickly jumped on board and applied. Following the rigorous training and screening, the co-operative was fortunate to have been selected as one of the 5 beneficiary Community Interest Groups (CIGs) in the North Bank Community. After the Presentation of CRF ACREsAL cheques to benefiting communities/CIGs by the Executive Governor of Benue State, His Excellency Rev. Fr. Dr. Hyacinth Iormem Alia and the World Bank Team, the Governor encouraged the citizens of the state to increase agricultural production as this will bring about improvement of their livelihoods.

Kentors Multipurpose Society Limited put the 7 million Naira loan they had accessed into their rice farm. Receiving the loan in 3 tranches, the co-operative increased their farm size from 3 to 10 hectares and harvested 200 bags of rice, 100kg each, even though 3 hectares of the farm had been submerged due to flooding from the River Benue.

The cooperative is waiting for commodity prices to go up a bit so that they can sell their produce and make a bullet payment to offset their CRF loan. Following the training received from Benue ACREsAL on Climate Smart Agricultural (CSA) production, the cooperative, after the initial harvest, went into dry season farming, taking advantage of the dam in their community.

They have cultivated 2 hectares of rice near the dam and acquired solar powered irrigation pumps for use on the farm and are expecting a bumper harvest with at least 80 bags of 100 kg at the end. Kentors Multipurpose Society Limited has expressed their desire to increase their farm size to 15 hectares in the coming rainy season.

The impact of the ACREsAL CRF loan intervention has been significant, resulting in an increase in farm size from 3 to 10 hectares, an increase in rice yield/production from 60 to 200 bags of 100kg each, and the adoption of Climate Smart Agricultural practices. This has also led to climate resilience and expansion of members of the co-operative from 25 to 57 members, as well as an increase in inter-lending within the cooperative.

The success story of Kentors Multipurpose Cooperative Society Limited is a demonstration to the power of targeted interventions and community development. ACREsAL's CRF loan has not only improved the livelihoods of the cooperative members but has also built their resilience to climate change.

As the cooperative continues to thrive, it serves as a shining example of what can be achieved with the right support and resources.

ACReSAL's CRF INTERVENTION

Unlocking Agricultural Potential in Benue State

Comrade Philip Swende, 41 years old, married with 3 children, is the President of Kentors Multipurpose Cooperative Society Limited in North Bank Community Makurdi, Benue State. The Co-operative has been involved in rice production over the years, with a farm size of 3 hectares per annum and a yield of about 60 bags of 100kg.



THE CHALLENGE OF THE NORTHERN DRYLANDS

Most people in the northern parts of Nigeria's drylands, which cover around half of the total land area of 92 million hectares (ha), derive their livelihoods from extensive, mixed rainfed cropping and livestock production systems, augmented where possible by off-farm income sources. Poverty rates in the north are strikingly higher because of more erratic rainfall, more variability and changes in the climate, relatively less developed poor rural infrastructure and social services, and hostilities which have caused hundreds of thousands to migrate, and destroyed productive assets.

Nigeria's drylands have supported human communities for many centuries. Historically, farmers and pastoralists had access to large areas of land, permitting long fallow periods and mobility to exploit forage and water resources both seasonally and in times of drought. With a quadrupling of Nigeria's population in the last five decades, a worsening of water resource availability, and a steady decline in agricultural productivity, and with increasing seasonal rainfall variability, loss of biodiversity and deforestation, traditional strategies to adapt to drylands are becoming less feasible, increasing vulnerability. With less land to farm, farmers must reduce fallow periods, resulting in a vicious cycle of soil degradation, desertification and habitat loss.

Agricultural expansion into forestlands and rangelands reduces access to valuable forest products and to livestock forage, while also increasing erosion, biodiversity loss, and further fueling land degradation.

Desertification exacerbated by drought and climate change continue to push cattle herders further south in search of grazing land with sufficient forage yield. This change has caused friction between cattle herders migrating from the north and farmers in the south leading to the death of at least 10,000 people between 2011 and 2018. This region has seen ongoing conflicts (through the mobilization of local militias), increased competition over natural resources, and opportunistic crime in a weakened security environment. These conflicts have led to devastating consequences for the civilian population with large-scale displacements (estimates show about 2.2 million people displaced in the north-east), destruction of productive assets and livelihoods creating widespread food insecurity and humanitarian needs.

Beyond their human toll, these conflicts have often exacerbated the exploitation of dwindling natural resources, resulting in worsening cycles of misuse of resources and further conflict in these agriculture-dependent drylands. And climate change will only worsen this situation.

THE AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACReSAL) PROJECT

The six-year USD 700 million ACReSAL Project of the Government of Nigeria, supported by the World Bank, aims to increase the implementation of sustainable landscape management practices in targeted watersheds in northern Nigeria and strengthen Nigeria's long-term enabling environment for integrated climate-resilient landscape management.

Nearing its mid-term, ACReSAL already has over 1 million direct beneficiaries (half being women) and over 13 million indirect beneficiaries across the 19 states of Adamawa, Bauchi, Benue, Borno, Gombe, Jigawa, Kaduna, Kano, Katsina, Kebbi, Kogi, Kwara, Nasarawa, Niger, Plateau, Sokoto, Taraba, Zamfara, and Yobe, and the Federal Capital Territory (FCT).

Key benefits to individual beneficiaries include no-interest loans, farm inputs, and clean cookstoves while those to communities include solar-powered boreholes and streetlights, improved drainage and erosion control measures. These have reduced mortality, morbidity and stress, and improved health and incomes. Other significant project achievements are listed below, under each component.



A. Dryland Management, supporting integrated watershed management planning to address challenges of large-scale watershed degradation in northern Nigeria, with three sub-components.

A1. Strategic Watershed Planning to create large-scale integrated watershed management plans for 20 large watersheds, covering all of northern Nigeria, using a participatory planning process

- Created 9 out of 19 Strategic Watershed Management Plans

A2. Landscape Investments in *water resources; nature-based solutions; and large-scale agriculture*, for effective rangeland management and agricultural extension services.

- Restored 178,235 out of 870,000 ha and placed them under sustainable landscape management; nearly completed civil works for erosion control in Katsina and FCT (> 90 percent completion)

A3. Special Ecosystems including *wetlands, desert oases, and protected areas* to be managed sustainably

- Strengthened national park management and forest conservation in Yankari Game Reserve, Jos Wildlife Park, and Gombe's Department of Forestry
- Cleared 400 ha of invasive typha grass choking the Nguru wetland
- Set up a multi-state Strategic Action Plan among 6 riparian states to coordinate wetland management

Everything changed when ACReSAL stepped in. The project upgraded the centre's facilities, providing shaded workspaces, secure fencing, hygienic toilets, and a reliable water supply through boreholes. Solar-powered lighting extended their working hours, and cemented floors improved sanitation. With the new facilities, the women can now work daily instead of at three-day intervals.

The impact was staggering. The women's income skyrocketed, with some earning up to ₦300,000 per month – a far cry from the ₦50,000 they used to make. They no longer had to trek long distances for water, allowing them to focus on their businesses. Their children could attend school regularly, and the women could invest in their futures. The number of women engaged in the business grew from 50 to over 100, with more than 200 people working daily.

Justina Ibrahim, Chairperson of the Women Cassava Processors, said,



“The ACReSAL intervention has been a game-changer for us. We now have a clean and safe environment with reliable water and sanitation facilities. Our production and sales have increased significantly, and we are earning higher incomes.”

Medina Ezebike, a member of the Women Processors Group, echoed this sentiment: “Since the intervention, more women have registered at the centre... We no longer spend money on water, and health challenges from sun exposure have reduced. This allows us to use our income for other needs.” Medina Nzebuike, a 48-year-old cassava processor, said “One of the challenges we've been having is water problem and shade. Also, lack of good drainage system. Previously, we were not able to wash cassava every day because the floor was not cemented. It makes it hard for water to dry off and at times it takes almost three days for us to come back and wash. But now, it is cemented, making the place neater and safer for us.”

She added that their business has improved significantly, with increased profits and more customers. Medina's income has also increased dramatically, from ₦10,000-15,000 weekly to ₦150,000 daily.



Priscilla Abraham, a 47-year-old cassava processor, said, “When the intervention was not here, I struggled to earn ₦10,000 in two days but, as at now, I make ₦80,000 daily.”

Grace Enoch, the Secretary of the processing centre, thanked ACReSAL for the intervention, saying, “Before the intervention, this business was all about water. We had to force our children to go and fetch water from the stream, neglecting their studies, but with the intervention of ACReSAL, things have changed and businesses have improved.”

The impact of ACReSAL's intervention extends beyond the centre. Mrs. Titilayo Awe, owner of Mana T. Restaurant, shared her experience: “The upgrade of the centre has significantly boosted my business. With more people working there, I have seen an increase in patronage at my restaurant. I would say my income has doubled!”

The Etsu of Sheda, Isa Abdullahi Yani, noted a significant reduction in cases resolved in the palace, attributing it to the intervention. “Most cases we resolve here involve domestic disputes, often stemming from economic hardship. However, thanks to ACReSAL's intervention, many women are now engaged in productive activities, reducing tensions.”

The ACReSAL project plans to build on this success, facilitating access to financial support, introducing solar-powered processing machines, and conducting capacity-building programs.

The Sheda Cassava Processing Centre is a testament to the power of targeted investments and community engagement. It's a story of hope, resilience, and empowerment – one that will continue to inspire and uplift for generations to come.



FEDERAL CAPITAL TERRITORY (FCT)



FROM STRUGGLE TO SUCCESS

How ACRoSAL Empowered Sheda's Women Cassava Processors



In the heart of Nigeria's Federal Capital Territory, a revolution was brewing.

The Sheda Women Cassava Processing Centre, once a hub of struggle and hardship, had become a beacon of hope and prosperity. Thanks to the Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project, the lives of over 100 women and their families have been transformed.



B. Community Climate Resilience to increase community resilience to climate impacts in targeted micro-watersheds, and focusing on two key aspects.

B1. Community Strengthening for sustainable natural resource use and management, peace-building and social cohesion, through a participatory and gender-inclusive micro-watershed-based planning process targeting the needs of vulnerable and marginalized groups.

- Completed 55 Micro-watershed management plans
- Conducted community engagement sessions, fostering ownership, social cohesion, and peacebuilding
- Registered 3,187 Community Interest Groups (CIGs) and trained 2,987 CIGs

B2. Community Investments, based on local priorities, in *landscape restoration* of community-selected degraded areas; *rainfed climate-smart agriculture* (CSA) by supporting individual farmers (especially women); and *farmer-led irrigation development* (FLID), by supporting individual farmers with small-scale solar-powered irrigation to use the rich resources of shallow groundwater available; and supporting local farmers through a Community Revolving Fund (CRF).

- Procured and distributed 239 tractors and 1,450 hand power tillers to 58,616 farmers, in addition to drought-resistant seedlings, organic fertilizers, and solar irrigation pumps
- Restoring 350,000 ha of land through community-driven landscape restoration, along with FAO
- Finalizing a collaboration with the International Institute of Tropical Agriculture to restore 410,000 hectares of land using cutting edge CSA techniques;
- Signed an MoU with the Nigeria Electrification Project to drive FLID
- Disbursed US\$ 8,775,000 to 351 communities benefiting 10,398 individuals (including 4,636 women), who have invested in agricultural production, processing, marketing, and storage.



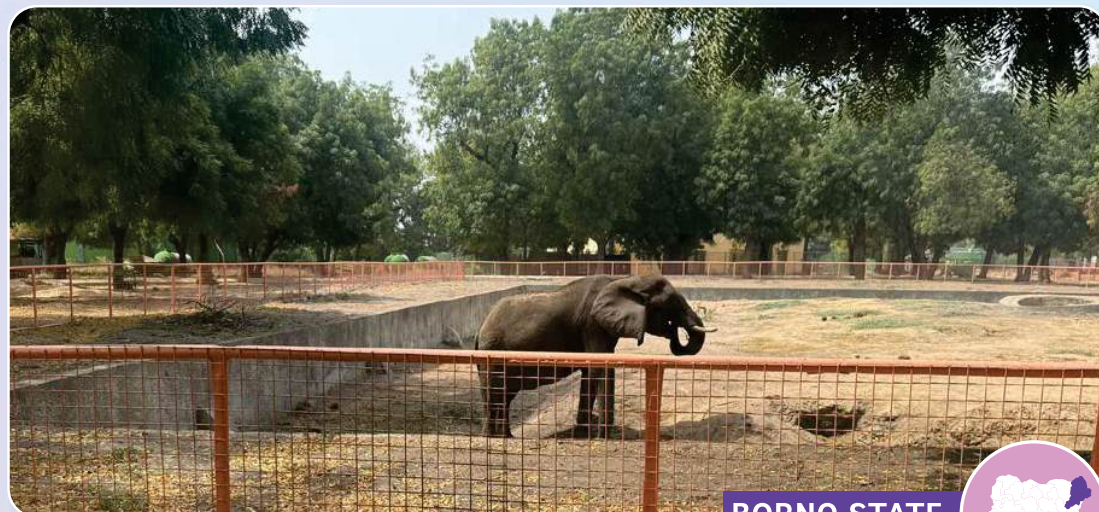
C. Institutional Strengthening and Project Management to improve the enabling institutions and policies for multisectoral integrated landscape management and climate resilience, and project implementation.

C1. Institutional and Policy Strengthening with an initial focus on ACRoSAL activities but also for a longer-term enabling environment for dryland management at state and federal levels

- Equipped 12 Federal MDAs with 20 KVA solar electricity facilities, cutting utility costs, greenhouse gas emissions, and fossil fuel use while boosting operational efficiency
- Signed an agreement with the Nigeria Bureau of Statistics to conduct Nigeria's largest agricultural survey under the 50x2030 initiative
- Identified policy and institutional reforms necessary at federal and state levels, including development/review of 4 sustainable landscape restoration policies at Federal level
- Ensured that women-led/owned enterprises, cooperatives and farmer groups are 39 percent of all groups assisted (exceeding the target of 20 percent)
- Set up an operational Nigeria-wide integrated knowledge and analytics platform
- Set up an effective multi-sector landscape management coordination mechanisms in all states, meeting the project's Result Framework targets.

C2. Project Management for effective and efficient implementation, better monitoring, transparency and outreach, and to learn lessons and identify activities that can be scaled-up.

- Disbursed USD 334 million (51% of total IDA financing)
- Supported all but 3 states to move Phase II in the investment staging framework.



BORNO STATE

ACReSAL revitalizes Sanda Kyarimi Park Zoo after devastating floods

After a devastating flood that left animals, visitors, and park officials in distress, the zoo has undergone a remarkable transformation... Thanks to the rehabilitation efforts of the Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) Project, the nature and safety of the zoo have been fully restored, attracting a diverse crowd of men, women, and children from all walks of life.

This revitalization is a testament to the project's commitment to enhancing the well-being of both the environment and the people.

The ACReSAL Project, a flagship initiative of the Federal Government of Nigeria, is funded by the World Bank and aims to tackle the pressing issues of land degradation and climate change in 19 states of Northern Nigeria and the Federal Capital Territory (FCT). With a six-year timeline set to conclude in 2028, the project is comprised of four key components that work in tandem to drive meaningful change.

Beyond its focus on land management, ACReSAL's conservation efforts prioritize ecosystem restoration, recognizing the intricate relationships between the environment, wildlife, and human societies. By adopting a holistic approach, the project seeks to create a lasting impact that benefits not only the zoo's inhabitants but also the broader community, promoting a culture of sustainability and environmental stewardship.

A recent remarkable milestone is the rehabilitation of Sanda Kyarimi Park, a zoo in Borno State, which has significantly improved the living conditions of the animals. Additionally,

ACReSAL has provided support to other conservation areas, including Jos Wild-life Park in Plateau State, Yankari Game Reserve in Bauchi State and the National Prak Services. This support has included the rehabilitation of facilities, distribution of game viewing trucks, and provision of equipment, all of which contribute to the overall goal of enhancing ecosystem restoration and promoting biodiversity conservation.

"We used to buy water from water sellers at N700 per truck, and sometimes during fasting periods, the price would rise to N1,000 to N1,200 per truck," she said. "We would buy four to five trucks in one day, which was a significant expense." However, with the borehole provided by ACReSAL, Suwaiba's business has flourished. "Getting water has become easier, and we're not buying water anymore," she said. "Before, when we were fetching water from the river, because of the contamination of the water, our kunun zaki would spoil overnight, resulting in significant losses. But now, with the clean water from the borehole, we don't have that problem."

Suwaiba reported an increase in her profits, saying, "Before, we could lose N500 or N1,000 in a day, but now we're getting more gain than before because of this clean water." She praised the quality of the water, saying "it's a very good water" with "no problem at all."

Yakubu Yambai, Chairman of the Borehole Management Committee in the community, expressed his gratitude to ACReSAL for providing a borehole in their community. Before the borehole was constructed, residents had to trek 4-5 kilometers to fetch water, which made it difficult for children to get to school on time. "As a result of this borehole, our people are getting it easier," Yakubu said. "Children can now fetch water and go to school without delay. We are benefiting from this water more than before." The community previously relied on river water, which was often contaminated, leading to frequent cases of cholera and typhoid fever. However, with the borehole, the incidence of these diseases has significantly reduced. "We don't have typhoid and cholera like before," Yakubu said.

“Many are benefiting from this water, and it's made life easier for us. People can now clean their environment, go to school, and go to work without delay.”

The borehole has also helped the community save money on water. Yakubu reported that households used to buy 3-4 trucks of water per day at N700 per truck, but now they no longer need to do so. Moreover, the community no longer experiences disputes with herders over water. Yakubu recounts his personnel experiences when community members relied on water from the stream, herders would often put their animals in the water, contaminating it and causing conflicts. But now that problem has been solved."

The community is grateful for the borehole and for sustainability, the community is working to maintain the facility. They contribute money to repair the tap when it breaks and ensure the area around the borehole is clean. The borehole serves not only Angwan Baraya community but also neighboring areas. Yakubu expressed his gratitude to ACReSAL and prayed for their continued support.

His Royal Highness, Alh. Abba Tukur, a traditional Ruler, expressed his gratitude to ACReSAL for providing a borehole in their community. Before the borehole was established, the community struggled to access clean water, but now, he believes it has solved about 70% of their water needs. The borehole has brought significant relief to the community, with many residents benefiting from it.

HRH Alh. Abba Tukur noted that the water is clean and hygienic, and the community no longer experiences water-borne diseases like cholera and typhoid fever. "We are happy with this one, but we need one more," he said. "If we can be given another one, I think it's good to go, very helpful to us and will assist more and relieve more people in this community."



The community takes pride in maintaining the borehole, with a strong committee in place to safeguard the facility. HRH Alh. Abba Tukur emphasized that the borehole is a treasure to the community and that they would fiercely protect it. He praised ACReSAL for their work, saying, "ACReSAL is a blessing... They have changed the lives of our people here, so to me, I want to say we are grateful first to God and we are grateful to ACReSAL for coming to our aid in Taraba state." He further added, "Whoever brings water brings life, and that's why if you say ACReSAL, ahh, we all open our doors. Because somebody who brings life to you has brought everything. Water is life, we are happy and look forward to seeing them in many more projects."

HRH Alh. Abba Tukur concluded by expressing his hope that ACReSAL will continue to work with the community, addressing their needs and solving their problems. "We look forward to seeing them in action again and in many more projects that have a direct bearing on our needs. The community's story is that of resilience and hope, and the impact of ACReSAL's intervention.

ACReSAL's solar-powered borehole has not only improved the health and well-being of the community but also boosted their economic prospects and reduced conflicts over water resources. The community's gratitude and enthusiasm for ACReSAL's intervention are palpable, and their stories serve as a powerful reminder of the impact that development initiatives can have on people's lives. The ripple effects of ACReSAL's intervention in Galadima Muri Kaswan Yelwa community are a powerful evidence that access to clean water is a fundamental human right.

As the community continues to thrive, their stories serve as a testament to the transformative power of community-driven project. With each passing day, the impact of ACReSAL's work will only continue to grow, bringing hope and opportunity to more communities in need. As the people of Kasuwan Yelwa Anguwan Galadima Muri community look to the future, they do so with renewed hope and optimism. The borehole has brought them more than just water – it has brought life.

As they continue to benefit from ACReSAL's intervention, they serve as a shining example of the difference that can be made when organizations prioritize the needs of communities and work tirelessly to improve their lives.

WATER OF LIFE

How ACRéSAL's Solar-Powered Borehole Transformed a Community



In the scorching heat of Jalingo, Taraba State, lies the community of Kasuwan Yelwa Auguwan Muri Galadima, where access to clean water was a luxury few could afford.

For years, residents had to walk long distances, often up to 5 kilometers, to fetch water from streams. The struggle was real, and the consequences were dire, because the cleanliness of the water was not even guaranteed.

Jamila Abubakar, a resident of Galadima junction, recalled the hardships her community faced. "Before, we were suffering about water," she said. "Our children would go to the river to fetch water, and when they brought it, they would fall sick after two days."

The economic burden was also significant. Many community members, like Jamila, had to spend a substantial amount of money – N700-1400 – to buy a truck or two trucks on a daily basis at 700 per truck.

However, everything changed when ACRéSAL installed a solar-powered borehole in the community. Jamila expressed her gratitude, "We thank God, we thank ACRéSAL, for this borehole you brought for us. No more sickness, no problem." The borehole has brought relief to the community, providing them with access to clean water and improving their overall well-being. The water is not only used for drinking but also for washing and bathing. The population of Galadima community stands at approximately 6,586 people, who have long struggled to access clean water.

According to Isa Muhammed, the Ward Head of Angwan Baraya Sarkin Dawaje, the community's quest for this essential resource often leads to conflicts with herders at the stream, where humans and animals compete for water, but now they community has left the stream for the herders. He said, the Agro-Climatic Resilience in Semi-Arid Landscapes (ACRéSAL) project has brought significant relief to communities in Northern Nigeria.

Before ACRéSAL's intervention, the community faced significant challenges with access to clean water, relying on a stream 5 kilometers away.

The water from the stream was contaminated, leading to frequent cases of water-borne diseases like malaria, typhoid, and diphtheria. However, with the provision of a borehole, the community now has access to clean water, and the incidence of water-borne diseases has reduced by 99-100%.

Isa personally benefited from the intervention, as he used to spend a lot of money every month on malaria treatment for his children. With the reduction in malaria cases, he now uses that money to buy food and other essential items. Additionally, the community can send their children to school without the burden of fetching water from a distant stream every morning before going to school.

This has positively impacted on the children who now spend more hours in school, and learn more without the early morning fatigue of fetching water from a 5 kilometer stream.

According to Isa, the community has formed a committee to manage and maintain the borehole, ensuring its sustainability. Isa expressed gratitude to ACRéSAL, saying, "Greening the environment, saving lives" is more than just a slogan – it's a reality for our community.

With a population of 6,586, the community is now able to access clean water, and the impact is evident. The borehole has been operational for almost a year, and the community is thriving. For Suwaiba Ayuba, a local businesswoman from Baraya community, she expressed her gratitude to ACRéSAL for providing a borehole in their community. She sells kunun zaki, zobo, and kunun aya, and previously struggled to access clean water for her business.

Malam Goni Ibrahim is the father of Abuna and Mabur, who were brought to the zoo to celebrate their healing from circumcision. "I brought them here to watch the animals and enjoy the serene atmosphere. The park has turned into a mini heaven, more beautiful than ever," he said.

In the heart of Maiduguri, Borno State, Nigeria, lies the Sanda Kyarimi Park Zoo, a 42-acre zoological garden and wildlife sanctuary that has been a beloved destination for locals and tourists alike since its establishment in 1970. The zoo is home to a diverse range of animals, including lions, ostriches, crocodiles, pythons, elephants, white hyenas, buffalos, and numerous bird species.

However, in September 2024, the zoo faced an unprecedented challenge when the Alau Dam collapse caused devastating floods, killing some of its animals and destroying its infrastructure.

Mrs. Fatimah Pius Birima, the Manager of Sanda Park, recalled the dire situation, saying, "Before the intervention of ACRéSAL, the zoo was not as good as now and we have been suffering in the course of taking care of the animals, even the enclosures were all bad, source of water was bad, the cages were broken. ACRéSAL has done many things. Before we don't have the interlocking, we don't have any good-looking cages like this, and before the enclosure of the elephants was full and after the coming of ACRéSAL it has been taken care of, and the cages of the crocodiles have been fixed, even the walkway which was not there before was constructed by ACRéSAL.



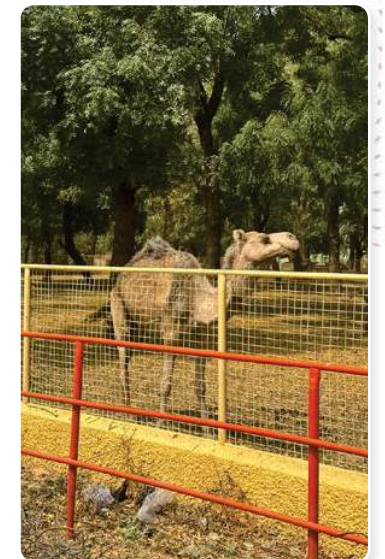
“After the flood, we never thought the zoo would function this soon due to the severity of the damage. The zoo was in bad shape with just a few animals that survived.”

"We now have iron and concrete seats beautifying the park and making our visitors more comfortable" "During the flood, no one can come inside the zoo, All the animals were stranded, some got missing, some were rescued and some died. Staff officials were using canoe to rescue animals because the flood level was above 8 feet. For three months there was no visitor. Everything has been put into proper perspective now by the ACRéSAL Project"

"The Government has been very supportive since the establishment of the zoo in 1970, aside that we have not received any aid except from ACRéSAL, you have made it possible for us, even in the maintenance of the zoo itself on painting, building back the falling fence and many more"

"Before the intervention of ACRéSAL people do visit the park. On working days, we record about 50 people and weekend we received over 200 people. But after the intervention we now record 100 people on working days and over 500 people mostly weekends, the numbers usually increase during festive period.

As a manager I will make sure all infrastructure is effectively managed and maintained. The economic impact has improved, even those that have shops in the zoo now have more customers that is to say it has increased the economic purpose. The park management carry out radio jingle and advert to encourage more visitors because the park is now beautiful." She spoke.



The Agro-Climatic Resilience in Semi-Arid Landscapes (ACRéSAL) Project, intervened in the zoo's renovation, carrying out a comprehensive infrastructure overhaul. The project renovated the cages to ensure the safety of the animals, park officials, and visitors. The entire zoo was painted, giving it a fresh and inviting look. Comfortable iron and concrete seats were provided for visitors, and a solid walkway was constructed to ease movement. The fence that fell was also built back to secure the park.

The renovation has had a significant impact on the park and its vendors. Mohammed Sherriff, a soft drink seller, reported a substantial increase in sales: "Before the flood, I made N6,000 on working days and N15,000 on weekends. After the renovation, I now make N9,000 on working days and N20,000 on weekends.

Halima Shani, who prepares noodles and sells soft drinks, also saw a significant increase in sales: "Before the ACRéSAL intervention, I made N5,000 on working days and N10,000 on weekends. After the renovation, I now make N15,000 on working days and N20,000 and above on weekends" she said.

Other beneficiaries, Saleh Adamu a photographer, is not left out of the benefit of ACRéSAL renovation: "I used to take pictures of visitors and animals at the zoo, but I stopped because of the flood. But now, with the zoo's new look, I can take beautiful pictures again and sell them to visitors. Before the flood, I made N2,000 on working days and N3,000 on weekends. But after the renovation, I now make N6,000 on working days and N7,000 to N9,000 on weekends."

The transformation of the Sanda Kyarimi Park Zoo is a testament to the power of collaboration in effective project delivery. The park's rehabilitation has not only boosted economic activities but also highlighted the importance of environmental conservation and ecosystem restoration. As a beloved destination for locals and tourists alike, the zoo is once again thriving, providing a unique opportunity for visitors to learn and appreciate the region's rich biodiversity. With the help of ACRéSAL, the zoo is poised to become a major tourist attraction in the region, creating jobs and stimulating economic growth.



KOGI STATE

EMPOWERING WOMEN, ENHANCING NUTRITION

ACReSAL's Impact in Kogi State

The Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project is making a significant impact in Kogi State, Nigeria, through its Community Climate Resilience component.

This initiative supports community strengthening and investments in targeted micro watersheds, focusing on climate-smart agricultural activities.



KEBBI STATE

Dalijan sits 19 km from Gwandu town and approximately 45.5 km from Birnin Kebbi, neighbouring a 16,000-hectare grazing reserve. While this reserve was established to support livestock grazing, years of overuse, invasive species and lack of proper pasture had left it barren. The consequence? Prolonged seasonal migration of herders, competition for land, crop destruction, and in tragic instances loss of life.

The intervention of ACReSAL Kebbi SPMU, Dalijan is fast becoming a beacon of peaceful coexistence and climate-smart innovation.

The rangeland project, launched in April 2024 is nearing completion, it is more than just an agricultural effort, it is a peacebuilding tool, a community development strategy and a climate adaptation model rolled into one. It integrates local participation, environmental engineering and social innovation to reimagine how farmers and herders can thrive together.

Powered by three solar boreholes and 3 animal drinking points, the rangeland is planted with nutrient-rich, climate-adapted grasses such as Kyasuwa, Gamba, and Stylosanthes selected for their contribution to livestock nutrition and soil health. The rangeland includes water access points for animals and the surrounding community, ensuring both ecological restoration and human dignity.

What makes this initiative ground-breaking is its impact across sectors:

For Education: With fewer families forced into seasonal migration, children like Hauwa's son can return to school. The empty classrooms in Mashekarin Fulani may soon be filled again.

For Livelihoods: Over 2,108 direct beneficiaries and 7,500 people stand to benefit directly or indirectly. Local residents were hired during implementation, women supported with food vending and vocational training is underway. For many like Hadiza Aliyu, whose husband migrates for pasture, this is a turning point.

For Nutrition & Gender Empowerment: Milk extraction techniques, fura processing support and food diversification trainings will equip women to provide better meals, reduce workload and increase income.

For Peace: With access to reliable, local pasture, the conflict triggers of crop encroachment and resource disputes will drastically reduce. The Magaji of Danjema noted this will improve harmony and fewer fears of external disruptions.

For Climate Resilience: The rangeland mitigates desertification, addresses seasonal feed scarcity thereby supporting Kebbi's biodiversity, aligning with long-term climate action goals.

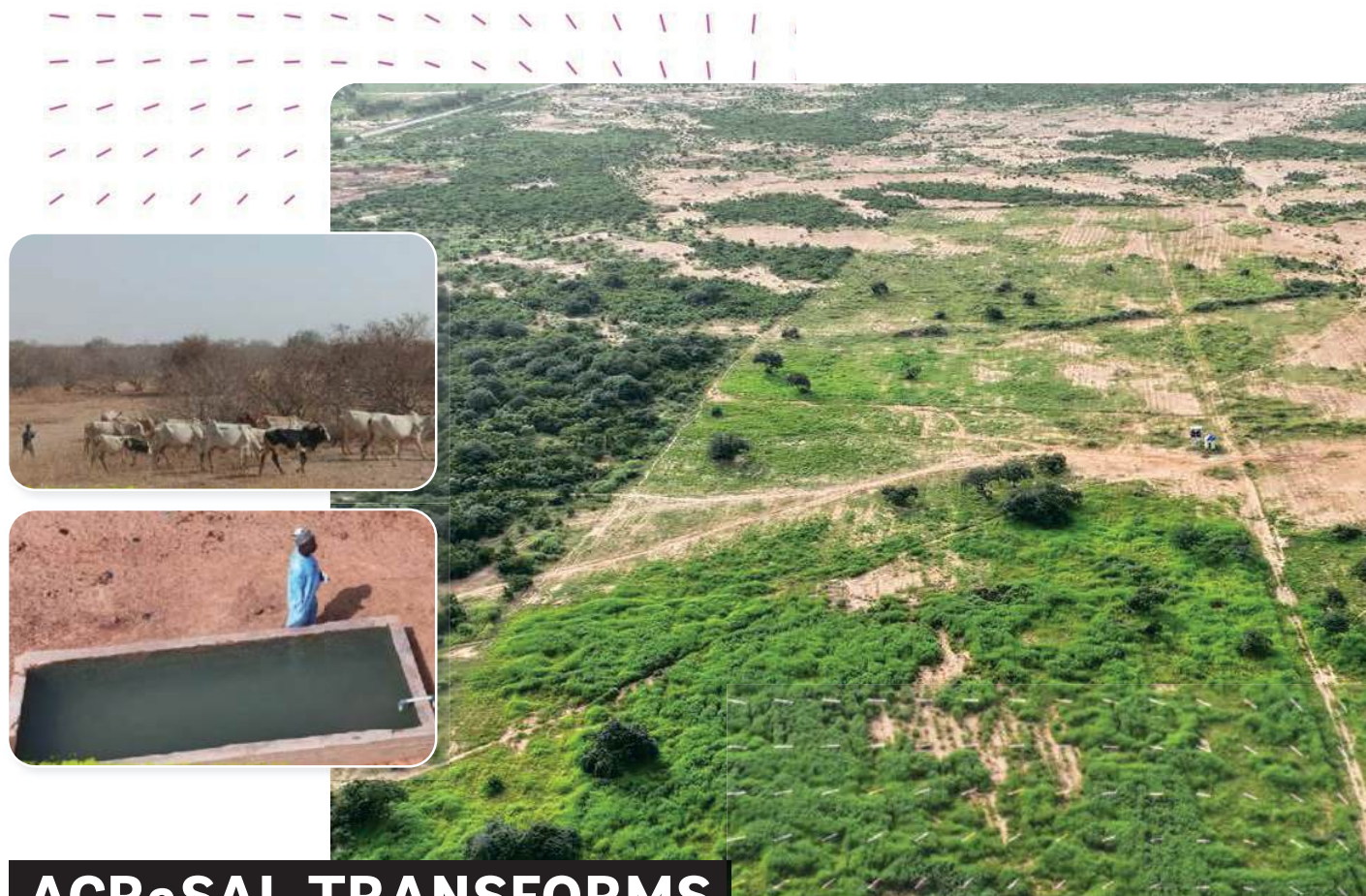
Additionally, the Faculty of Agriculture at KSUSTA is positioning the rangeland as a research hub, complementing its new greenhouse initiative. Together, these projects will make Kebbi a leader in climate-smart, integrated crop-livestock systems.

The Dalijan rangeland is more than an expanse of land, it is a living solution to the human and environmental pressures caused by climate change. It is proof that with the right investments, stakeholder collaboration and vision, communities can shift from conflict to collaboration, from migration to stability and from survival to sustainable development.

With 22 grazing reserves across Kebbi, the success of Dalijan offers a replicable blueprint. A model that does not just restore land, but restores lives.

Dalijan Fields is no longer a place of departure, but a destination of hope.





ACReSAL TRANSFORMS DALIJAN FIELDS

A Model of Peace and Progress Through Sustainable Rangeland Management

At the heart of Kebbi State's climate-vulnerable landscape, a powerful story of resilience, innovation, and hope is unfolding in the quiet outskirts of Dalijan.

Once plagued by frequent farmer-herder conflicts, erratic grazing patterns and ecological degradation, the community is now at the center of a landmark transformation; the establishment of a 100-hectare rangeland under the ACRoSAL project.

The Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project is making a significant impact in Kogi State, Nigeria, through its Community Climate Resilience component. This initiative supports community strengthening and investments in targeted micro watersheds, focusing on climate-smart agricultural activities.

In Kogi State, the first phase of the community revolving fund (CRF) has benefited 20 Community Interest Groups (CIGs) in 10 communities, with 208 beneficiaries, 176 of whom are female. These groups have engaged in various agricultural value chain activities, including food production, processing, and marketing. Notably, the CRF contributes to a sustainable environment by promoting climate-resilient practices.

Raji Mary, a beneficiary in the processing group, expressed gratitude to ACRoSAL and the World Bank: "What ACRoSAL is doing here today is a benefit not just to us, but to the entire community. You have lifted us out of poverty and opened our eyes to new possibilities." Abdulsalam Safia Ehenesie, chairperson of the Cassava and Maize Processing CIG in Okene, highlighted the benefits of collaborative effort and ACRoSAL's support: "We are two groups – cassava and maize processing groups. We came together to acquire land and equipment, making the job easier. We bought this land and other equipment from the fund received from ACRoSAL. That very day we started the processing, and before the next day, everything had finished – there were no leftovers, as it was all bought. We produce garri of different types, both white and red, in a hygienic environment."

National Project Coordinator Abdulhamid Umar praised the commitment and hygiene of the processing mill, emphasizing the importance of women's empowerment: "This means a mother or sister can feed her home without relying solely on men." Dr. Joy Iganya Agene, Task Team Leader for ACRoSAL and Senior Environment Specialist at the World Bank, congratulated the CIG members: "We're super proud of you. Your resilience and efforts contribute to Nigeria's nutritional agenda. You've demonstrated ownership of investment, and we'll support you to push this further."

Kogi State Project Coordinator, Barr. Ladi Ahmed Jatto-OON, emphasized the importance of community ownership and support during a courtesy visit to the Ohinoyi of Ebiraland:



“We appeal to the communities for support and ownership of project investments. This will ensure the project's sustainability and maximize its impact.”

As the Ohi of Adavi noted, "The project's success is thanks to the support of His Excellency, Governor Ahmed Usman Ododo, and his predecessor, who prioritized the benefits and took the loan for the people of Kogi State."

The ACRoSAL mission team also engaged with communities in Okene, inspected project sites, and received assurances from local authorities on their commitment to owning, safeguarding, and sustaining the project.

Hon. Nuhu, the chairman of Okene Local Government Area, praised the project's impact, emphasizing protection and project investments its role in enhancing food security and economic empowerment.

The ACRoSAL project is indeed making a tangible impact in Kogi State, empowering women, enhancing nutrition, and promoting sustainable environmental practices.





YOBE STATE

HEALING THE HEART OF THE SAHEL

ACReSAL and the Nguru Wetland restoration initiative

The Nguru wetlands deep in the northwest of Yobe state in Nigeria are a vital segment of the larger Hadejia-Nguru wetlands in the southern edge of the Sahel Savanna. **One of the few freshwater ecosystems in northern Nigeria, the wetland is known internationally as the first Ramsar site in Nigeria.**

Once spanning an impressive 3000 km² and supporting an astonishing array over 250 species of flowering plants, 136 types of aquatic flora and fauna, 13 species of fish, and 378 species of birds, the Nguru wetlands were a true natural wonder. Tourists and researchers came to explore the park and its wildlife, including the migratory birds from Europe. The wetlands were also a major source of fish, it contributing approximately 6% of Nigeria's inland fish catches, with a market value of nearly US \$300,000 per annum,¹ and supporting over 1.5 million people.

The invasion of Typha grass since the 1970s devastated this delicate environment, overtaking hectares of fishing zones, agricultural lands, grazing regions, ponds, canals, and channels, and causing flooding, sedimentation, siltation, and pollution downstream. The once-thriving recreational boating, swimming, and diving ceased, and mosquito-borne diseases like malaria, cholera, bilharzias, and dysentery increased. The drying up of the water led to the construction of illegal dams and increased deforestation and diversion of the water ways, as people struggled for livelihood – further contributing to the shrinkage and desiccation of the wetlands. Climatic changes and habitat loss reduced soil quality, further affecting people's livelihoods.

'The wetland used to experience both flooding and drought in different areas, particularly in the downstream areas of the Nguru Community. Why was this happening? The water channel that brings water from the upstream Nguru-Hadeja Axis was clogged by the invasive Typha grass. This invasion caused siltation along the water channels, leading to blockages that hindered the free flow of water from upstream to downstream'.

As a result, some farm areas experienced severe flooding, and grazing lands were also affected. In some areas, fish catch decreased, and farmers avoided farming' Noted Harry Hamson JR, Project Officer of the NCF/Hadeja-Nguru WETLAND conservation Project, Nguru Yobe Project.

The devastating effects got steadily worse. Farmers who used to collect more than 20 bags of rice from a hectare, now harvested just 5 bags. More than 400 farms of between 2 and 10 hectares in size along the water course were left uncultivated between 2019 and 2024. Many farmers gave up farming. Fishermen migrated to neighbouring states or countries to survive – or found a new profession.

'This area used to be called Bulaburin (Yan Kifi) meaning the center of fishing activity, because this area had abundant water', recalls Zanna Maidala Abdu Gazali, the District Head of Ngilewa in the Nguru Local Government Area (LGA) in Yobe State, 'but, unfortunately, about 11 years ago we couldn't see water here due to blockage of channels by Typha grass.'

'I've been fishing for 20 years', said Haruna Mohammed, a fisherman, 'and we haven't seen water in Bulaburin Yan Kifi for about 11 years. We faced many challenges ... migrated to neighbouring villages for jobs, and some of us, including myself, switched businesses because, without water, there's no fishing. It was hard to make ends meet. Paying school fees for my 11 children was difficult. Imagine, a fisherman who once earned 10 – 15,000 Naira (~USD 6-9) daily struggled to get N2,000 (~USD 1).'



ADAMAWA STATE

For Rebecca James, her story underscores how regenerative agriculture can restore not just land but dignity. An internally displaced person who fled Boko Haram's violence in Bitiku, she found refuge at the Salama IDP camp in Yola. Widowed and caring for her children alone, Rebecca was offered an opportunity by ACReSAL she never imagined: free access to one acre of farmland, complete with essential inputs, seeds, training, and technical support.

The result? Rebecca harvested six bags of rice, corn, groundnuts, and vegetables—without spending a single naira. She sold two bags to send her daughter to the Federal College of Education in Yola and used the rest to feed her family. Even more remarkably, she qualified for Payment for Ecosystem Services (PES) by taking care of the trees on her land, allowing her to pay her son's school fees in Gombi. 'I now have land, seeds, and the knowledge to make my farm fertile. I'm not just surviving—I'm thriving,' she said.

While Rebecca's and Fadimatu's stories shine with success, the tale of Umaru Musa from Dadiri, Ganye LGA, paints a contrasting picture. Umaru, who relied on conventional farming, borrowed ₦100,000 to plant maize, rice, and groundnut. He applied chemical herbicides and agreed to repay the loan with seven bags of produce. Then came the drought. His entire farm failed. With nothing to harvest, Umaru is now saddled with a ₦450,000 debt and no food for his family.

'Umaru's experience highlights the challenges faced by farmers relying on conventional methods. Despite his efforts, the drought led to crop failure, resulting in significant financial strain. His story contrasts with Rebecca's and Fadimatu's, illustrating the potential benefits of sustainable agricultural practices.' Now, I'm worse off than before,' he said, reflecting on the difficulties many farmers face in an unpredictable climate.'

To institutionalize this shift, the Adamawa State Government—through the ACReSAL project—is investing in tools and systems to support sustainable agriculture. The recent technical learning mission, attended by delegations from the World Bank, Federal Government of Nigeria led by the Hon. Minister of State Agriculture and Food Security, and all ACReSAL participating states highlighted this progress.

The mission featured practical field sessions in Girei LGAs Regenerative Agriculture sites. A key highlight of the mission was the Honourable Minister's visit to the 256-hectare Regenerative Agriculture Demonstration Site in Girei. Along with the World Bank delegation, the Federal Project Management Unit, and other dignitaries, the Minister interacted with household beneficiaries who have adopted regenerative practices. In a moment that resonated deeply with the farming community, he took part in digging a Half-Moon structure. This act symbolized the commitment of national leadership to sustainable farming practices and reinforced confidence in the project's long-term goals.

ACReSAL Adamawa is also receiving critical infrastructure including borehole drilling rigs, tractors, amphibious swamp buggies, water tankers, and farm implements to boost institutional resilience.

With over 376 hectares of RA farms allocated to landless farmers being developed in two locations—276 in Girei and 100 Kesio, Yola-North LGA, Adamawa is leading the charge toward climate-resilient farming.

With the over 20,000 farmer households (holding about 80,000 indirect beneficiaries) trained in all 21 Landscape Management and Farming Skills Acquisition Centres, these farmers are now more equipped, informed, and empowered to transform their lives and landscapes.

As the stories in "A Tale of Two Realities" reveal, regenerative agriculture is more than a technique—it's a lifeline. One that replaces debt with dignity, scarcity with sufficiency, and despair with hope.

And this is just the beginning.

¹ Birdlife International (2015)

RESILIENCE ROOTED IN THE SOIL

ACReSAL's Regenerative Agriculture Transforming Lives

Located in the heart of Northeastern Nigeria, Adamawa State has a rich history of agricultural heritage, with its fertile savannas and diverse climate supporting a wide range of crops. However, years of drought, soil degradation, and limited access to resources have taken a toll on the state's farmers, making it challenging for them to eke out a living from the land.

But a game-changing intervention has brought new hope.



ACReSAL's Regenerative Agriculture initiative has trained over 20,000 farmers and provided them with 10 years of free land use, free agricultural inputs empowering them to transform their livelihoods and communities."

With the support of the World Bank-funded ACRReSAL (Agro-Climatic Resilience in Semi-Arid Landscapes) project, farmers in Adamawa State are transitioning towards a more sustainable and resilient farming approach, embracing the timeless principles of Regenerative Agriculture (RA). This innovative approach enables them to break away from resource-intensive methods, fostering a more environmentally friendly and future-proof way of farming."

At the heart of this transformation are stories that breathe life into data. Real faces. Real farms. Real impact. And nowhere is this better seen than in the lives of beneficiaries such as Fatima Tanimu, Rebecca James, and the many resilient farmers who shared their voices in "A Tale of Two Realities", A comparison of how differently farmers were affected by a devastating drought.

In mid-2024, Adamawa State experienced an unexpected climate shock: over 40 days without rainfall during the crucial growing season. For conventional farmers, the impact was catastrophic. For those practicing regenerative agriculture, however, it became a litmus test that validated everything they had learned and implemented.

Fatima Tanimu, who adopted ACRReSAL's climate-smart practices, including water harvesting structures like Zais and Halfmoons, shared her moment of astonishment: "I thought the drought had wiped out everything. "But when I finally visited my farm, I found it green. All my crops were thriving where others had failed. The Halfmoons saved me."

These low-tech, cost-effective structures capture and retain rainwater, helping to rehydrate the soil and extend moisture retention during dry spells. Complemented by multi-cropping, composting, and agroforestry, these interventions have proven both practical and transformative.

“ In Nguru, over 20,000 fishermen and two-thirds of the population rely on farming and fishing for their livelihood ”



said Adamu Isah BBC, also known as Baba Alhaji, 'Our people were forced to travel to Chad, Cameroon, and Libya in search of food. To farm, we had to venture into another local government, Bede, incurring significant transportation and labor costs, leading to poverty."

As the greenery dried up, clashes arose between farmers and herders over the remaining grass. The lack of food led to widespread livestock deaths. Baby animals also fell ill or suffered malnutrition due to inadequate milk production. The cost of fish skyrocketed, becoming unaffordable for ordinary people. Some farmers could not afford to pay school fees and their children had to drop out of schools. Fishermen divorced their wives, as dwindling incomes could no longer support families. Worsening poverty and food scarcity also fueled drug abuse, especially among those unable to migrate.

AReSAL

Following several unsuccessful efforts by individual groups, organizations and governments to clear the typha grass through manual methods, the World Bank supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project of the Government of Nigeria began an initiative in 2023.

Heeding suggestions from local stakeholders to find a lasting solution to their problem, the Yobe State Project Management Unit (SPMU) of ACRReSAL planned a comprehensive intervention including dredging and clearing blocked channels, restoring degraded areas, large-scale de-silting (including engineering and bioremediation), as well as erosion, flood and Typha weed control, to restore and conserve the wetland ecosystems to better sustain flora, fauna and livelihoods. The intervention plans to restore about 5000 hectares (ha) benefiting over 1 million persons living in a corridor spread across 8 LGAs.² The intervention began with the SPMU procuring an amphibious weed excavator ('Swamp Buggy'), and starting work on 30 May 2024.

The impact

Even though only 385 of the targeted 5,000 ha since been cleared, the impacts are already visible and tangible: Fishermen have returned to their boats, farmers have gone back to their farmlands, migrants are making their way back to Nguru to return to their previous jobs; downstream farmers can now irrigate their land; fish catch and harvests have increased, improving incomes and related livelihoods. Haruna Mohammed, a fisherman who saw his income plummet, now earns more – 15 -20,000 (~USD 9-12) per day – and also says: 'The fish in my basket are more diverse now, unlike before when we only had tilapia.'

Baba Alhaji feels the benefits are higher: fishermen now earn even more: 20 – 30,000 Naira (~USD 12-18) daily, allowing them to buy food, clothing, and medicine.

Personally, he has seen output from his own farms go up from the 85 bags of rice he struggled to grow, and the 10 bags he got to keep – after paying more than 10 million Naira on petrol to pump water to his farms. Already, from just one farm, he has harvested 128 bags of rice.

Young Yahaya Abdullahi, who spent 1.5 million Naira in 2023 but almost lost his capital due to a lack of water, has already earned 2.5 million Naira from just 1 of 3 farms, after expanding his cultivation from 2 to 4 hectares because he now has water to irrigate. Khadija Ahmad Liman also expects huge returns: After seeing wheat yields fall from 100-150 bags to 40-70 bags over the last 11 years due to a lack of water, she anticipates at least 300 bags in 2024.

The Chairman of the Nguru Rice Farmers Association confirms that his data shows that the restoration has already benefited nearly 60,000 farmers, 15,000 herders and 5,000 fishermen directly, with more than 500,000 indirect beneficiaries. Also, as the waterways have been cleared, traders from neighbouring communities in Jigawa state have begun coming to Nguru. And the number and diversity of the bird population are increasing including migratory birds from Europe, once unable to land or stay during winter because the water was completely covered by grass.

With channels excavated, water no longer accumulates in farmlands and grazing areas, allowing farmers to cultivate and grazers to utilize the dry areas for their cattle. Not only have the grazing Fulanis communities living in the 8 LGAs reclaimed their restored grazing lands, but nomadic people from neighboring countries like Niger and Chad have also begun to return to graze their cattle. A community leader recalled seeing, during earlier dry seasons, no less than 65-70 cattle herds, each with 20+ herders, totaling a group of 1300 – 1500 including wives and children. With news spreading of better grazing in the Nguru wetlands, herders are likely to return in larger numbers

Yet, there has not been a single conflict between herders and farmers since the intervention. If this newfound peace between farmers and herders continues, despite increasing numbers on both sides, it would perhaps be the most significant impact of the intervention.

Next steps

The full scope of the planned intervention will take at least another 12 months to be completed, and the impacts will have to be maintained, and benefits sustained.

Also, although the middle and lower catchments of the Nguru wetlands are in Yobe state, its upper catchment is in neighbouring Jigawa State – which has a similar challenge and intends to replicate the same intervention.

² The communities covered by the initiative include Bombori, Dere, Dogon Kuka, Dumsai, Garin Bukar, Isari, Kachallari, Kakuri, Maja-Kura, Nagamma, Ngarbi, Ngurodi Wachakal, and Wuga.



SAVING LIVES AND LIVELIHOODS

Gully Erosion Control by ACReSAL in Gombe

“The gully ripped away part of my house during the rain. Transportation is very difficult. For example, if you want to take a pregnant woman to a health facility, it is a very hard process. The difficulties accessing the community affect all socio-economic activities in the area. This includes access to health facilities and schools for the children.”

Adamu Danji, The Juaro Abare community leader, was recalling the havoc wreaked on his community by the widening gully formed by soil erosion and heavy rains. His counterpart in Wuro Ladde, Jauro Adamu, had similar recollections about the deadly gully:

“In 2023, more than 10 people could not get home because of the heavy downpour ... In 2022, 5 people drowned trying to cross a makeshift bridge constructed by the villagers”

They are both from the seven low-income communities living in and around the 21-km gully corridors stretching from the Federal College of Education (Technical) [FCE (T)] to the railway station in Gombe town, the capital of Gombe state. The 200+ active gullies in the town have flooded and killed at least 11 people every year, including women and children, and a total of 297 people since 1996, according to the Overseeing Senior District head of Gombe – despite State and Federal Government efforts.

Every year, the rains widened the gullies and advanced them several kilometers, consuming entire farms, small and large ruminants, hundreds of homes, and critical infrastructure, and thus perpetuating poverty, hunger, and despair among the residents. Each rainfall triggered widespread panic; halting businesses, making children miss school, and leaving expectant mothers worried about their delivery dates.

The gullies affected life in these communities even when they were not flooded or expanding. Thieves used it as a hideout, emerging to rob, rape, and harass those who had no option but to cross the gully, or to rob nearby houses and vanish into the maze of gullies. Water stagnated in pools that bred waterborne diseases and mosquitos. It became a site for open defecation and dumping wastes.



Hauwa, a married woman and dedicated rice processor, faced significant challenges in her business due to limited capital. Previously, her production was constrained to just 2 bags of rice, making it difficult to reinvest and grow her business. However, with the support of the CRF, Hauwa from Jigawa state has seen a remarkable transformation. She can now produce 4-5 bags of rice, allowing her to make substantial progress and even extend support to other women in her community. With this newfound success, Hauwa and her peers are taking significant steps to uplift their community. They are not only able to support their children's education but can also provide funds to take them to the hospital when the need arise. Inspired by the positive changes, they are planning to establish a school aimed at empowering married women with knowledge and combating illiteracy.

Jumai Kwantu, a 40-year-old mother of four from the Kasachia community in Gujba Local Government, Yobe State, shared her story. 'Before I received the loan from ACRReSAL, I was farming and also selling wrappers. My income margin was N60,000 naira per harvest season. I usually got 8 bags of groundnut and guinea corn. I had insufficient fund and no knowledge on how to boost production.

"However, with the intervention of ACRReSAL, Jumai planted rice and guinea corn and harvested 50 bags of rice and 4 bags of guinea corn. She noted that there were 14 members in her group, 8 females and 6 males, and she has been able to pay up over 80% of her loan with a profit margin of over N400,000. Jumai expressed her gratitude, saying:

“My life has completely changed for good. We feed well, and our children now go to school. I will invest more in farming, acquire my own land, and also go into the wrapper and groundnut business as a distributor. I will pay up my loan because I want others to benefit from this life-changing intervention by ACRReSAL.”

In the rural of Kasachia community in Gujba LGA, Yobe state, Fannami Grema was living a simple life, rearing goats and cows, and farming food crops such as Guinea corn, beans, groundnuts, and maize on a small one-acre plot. Despite his hard work, his profit margins were modest, ranging from ₦200,000 to ₦300,000 per season. But everything changed when Fannami encountered the ACRReSAL project. With a loan of ₦804,000 and invaluable technical support, Fannami's farming endeavors were transformed. He expanded his operations to six acres, and with just one harvest, his profits soared to an astonishing ₦2,295,000!

Not only did Fannami reap financial rewards, but he also gained a newfound sense of pride and independence. He promptly repaid his loan by January 13, 2025, and with his improved financial status, he was able to pay his children's school fees on time, freeing himself from debt. Fannami's success is a testament to the impact of ACRReSAL's interventions. With access to improved seeds, farm inputs, and training, Fannami's farming skills have been significantly enhanced. His story serves as a shining example of how ACRReSAL is empowering rural communities to break the cycle of poverty and build a brighter future.”

The ACRReSAL agro-based Community Revolving Fund (CRF) have been a game-changer for Mr. Adamu's business. With increased patronage from ACRReSAL Community Interest Group (CIG) members, Mr. Adamu, an agro-chemical shop owner, has expanded his shop, employed three additional staff, and even purchased a motorcycle to boost his operations. But that's not all - Mr. Adamu has also opened a second shop at a new location, creating more jobs and opportunities for his community. He credits the CIGs' loyal patronage for his business's remarkable growth. Mr. Adamu's success story is a testament to the positive impact of ACRReSAL's initiatives. By empowering local communities, ACRReSAL is creating a ripple effect of economic growth, job creation, and improved livelihoods.

During a tour to Kasachia community, the testimonials from beneficiaries were impressive and encouraging, especially their understanding of the purpose of the CRF and the need for repayment of the loan to maximize benefits and impacts. The ACRReSAL CRF initiative is truly making a positive impact on the lives of farmers and community members, and its success is a testament to the power of community-led development and the importance of access to finance for smallholder farmers.

The ACRReSAL Community Revolving Fund initiative is a shining example of how innovative financing models can be used to drive agricultural development and improve the livelihoods of smallholder farmers. With a total target of 2800 communities to be reached, the initiative has already made a significant impact in 361 communities, and it is expected to continue transforming lives and improving agriculture in rural communities.

By providing access to finance and technical support, ACRReSAL is empowering communities to take control of their own development and build a more sustainable future. As the initiative continues to expand, it is clear that the impact will be felt for generations to come. With its focus on community-led development and climate-smart agriculture, ACRReSAL is paving the way for a more resilient and prosperous future for farmers and communities across the region, and serving as a model for sustainable agricultural development that can be replicated and scaled up to benefit even more communities in the years to come. With the intervention, the quality of lives of farmers in over 300 communities in the ACRReSAL participating states have been improved through the provision of access to financial resources, improved agricultural practices, and support to economic stability.

Both measurable and measurable impacts have resulted in the creation of job opportunities, particularly in farming, processing, and associated sectors like agro-chemical businesses. It has also led to significant increase in food production, particularly rice and wheat, cassava, etc., due to better access to finances (CRF), and knowledge of modern farming techniques and improved infrastructure.

The intervention has served as a booster and encouragement for greater participation and inclusion of women in the project; it has also enhanced gender equity and contributes to more balanced and sustainable outcomes. Another notable success of the CRF intervention is the high level of understanding and compliance among beneficiaries.

Encouragingly, many have begun returning the funds, allowing others to benefit and maximizing the initiative's impact.



NIGERIA

EMPOWERING FARMERS, ENRICHING COMMUNITIES

The Impact of ACRReSAL's CRF

Across communities in all the 19 states and the FCT, farmers have been facing challenges in farming production as a result of several factors such as droughts, land degradation, desertification, these are the effects of climate change.

With loss of farmland to these natural disasters, poor farming practices, lack of modern farming skills, limited access to funds, lack of modern farming tools, gender inequality have all been traced to major factors limiting local farmers in various communities, especially in the northern states of Nigeria. This was the story of NAMO A.A. AKPALAKPO, a rice farmer from Yelwa Community in Doma of Nasarawa State and many other farmers across the 361 communities that have so far received the ACRReSAL Community Revolving Fund (CRF).

Due to limited access to finance, lack of modern skills and techniques, the farming communities had continued to experience very low crop yields. Farmers were only able to cultivate a very small portion of a hectare of land in most cases, and production and profit margins remained very minimal.

This poor production has led to widespread food insecurity, limited economic opportunities, and a perpetual cycle of poverty among the farming communities.

The CRF intervention by ACRReSAL is designed to support small-scale farmers in optimizing climate-smart agricultural production, processing and marketing activities. This timely intervention addresses significant economic challenges faced by these communities. The Community Revolving Fund (CRF) is bringing newfound hope to farmers and communities, enabling them to envision a prosperous future.

With the CRF, they can thrive economically, feed their families, send their children to school, expand their agricultural businesses, and explore new ventures. This support also enhances their resilience to climate change. Moreover, the CRF is promoting a culture of sustainable agriculture, empowering communities, and contributing to a more sustainable environment.

The CRF is a non-interest, community-level revolving fund that supports ACRReSAL-registered community Interest Groups (CIGs). Each target community receives a CRF of US\$25,000 to enable them undertake investments in climate-smart rainfed crops interventions.

Registered community/farmer groups prepare investment/business plans and apply for loans from the Community Revolving Fund Management Community (CRFMC). These plans are appraised to ensure that they are profitable, sustainable and contribute to environmental management. The fund is designed to revolve across communities, allowing many farmers and community members to benefit from it.

To date, the CRF has been disbursed in 361 communities, with a total target of 2800 communities to be reached. The impacts and feedback from beneficiaries have been overwhelmingly positive.

One such beneficiary is Mohammed Sani Umar, a dedicated farmer from the Gamahue community in Jigawa State. Prior to receiving support from ACRReSAL, Mohammed struggled to secure essential inputs, limiting his harvest to just 7-10 bags of rice each season. However, everything changed when ACRReSAL intervened, providing him with 280,000 Naira through his community's cooperative. With this financial boost, Mohammed was able to purchase quality seeds, fertilizer, and herbicides, ensuring the protection and growth of his crops. He now expects to harvest up to 20 bags of rice, a remarkable increase that translates into greater financial stability for his family. Mohammed's success has also enabled him to invest in his children's education, purchasing uniforms and school supplies, and even buying bicycles to help them get to school on time.

ACRReSAL

In January 2023, the Gombe State Project Management Unit (SPMU) of the World Bank supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACRReSAL) Project organized a community interaction in the gullies around the FCE(T) in Gombe Town. It was clear that there was an overwhelming need for an intervention.

ACRReSAL signed a contract for gully erosion control in November 2023, and work began the next month. The intervention involved structural and non-structural, solid and flexible, engineering and bioengineering measures, including excavation, earthwork, construction of reinforced concrete channels, bioremediation using gabions and reno mattresses for gully and channel bank protection, as well as other civil works such as backfilling of gullies, provision of proper drainage and retention structures, and stabilization of gully banks.

Although only 65 percent complete, 65 hectares of degraded land have already been recovered through concrete work and backfilling, and the remaining 35 hectares will be recovered by the end of 2024.

The Impact

The Gombe State ACRReSAL Project Coordinator, Dr. Sani Adamu Jauro, estimates that 8,640 people from 720 households were directly benefitted as they were at risk of losing their houses, and were also affected by diseases and flooding. In addition, over 1.6 million people from two local government councils, Akko and Gombe, and other parts of the state who had to cross the gully benefitted from having a usable road to cross the gully. Property saved included houses, schools, and infrastructure was valued at 45 billion Naira (~USD \$27 million).

Skilled and unskilled workers received short term employment to work on the gully rehabilitation project, while some received compensation for land used or damaged as part of the intervention. A total of 390 million Naira (~USD 235,000) was paid as compensation to Project Affected Persons (PAPs), while 60 vulnerable and elderly people (more than 60 years old) were paid 291,500 Naira (~USD 175) each on compassionate grounds. Some used the compensation to good use.

Alhaji Usman Galadima, a local resident, credits a series of lectures organized for the residents by ACRReSAL on financial management gave people ideas and ways and means of utilizing the new funds:

"Most of my neighbors were compensated well because you could not buy their houses even if it was free of charge, but the compensation helped them to move from the ghetto to better places. They put the remainder of the money to profitable uses – started new businesses, bought machines and started a new life."

Livelihood activities are reportedly thriving, and local traders confirm that commercial activities in the area have improved due to an increase in patronage. Rising profits have helped the traders send their children to school, while social cohesion and interaction among the hitherto divided communities have also significantly increased.



Finally, with the gully restored, flooding controlled and vegetative cover restored, land values in the area have begun to rise.

Ibrahim Abdullahi Gurama, a shop owner in London Maidorawa who moved to a new space after receiving compensation for his old shop on the project affected site, narrated his benefits:

"My previous shop was edging very close to getting taken out by the flood and I was losing hope when suddenly people from ACRReSAL came and brought this massive intervention. My sales have doubled since I relocated to this new shop after receiving compensation. This gully erosion control project is a game changer for businesses around here as people's purchasing power has increased. Even plots of land and homes have appreciated in value and goods are easily conveyed to my shop without hassles. Even the waste disposal culture of the people of this area has tremendously improved because of the enlightenment".

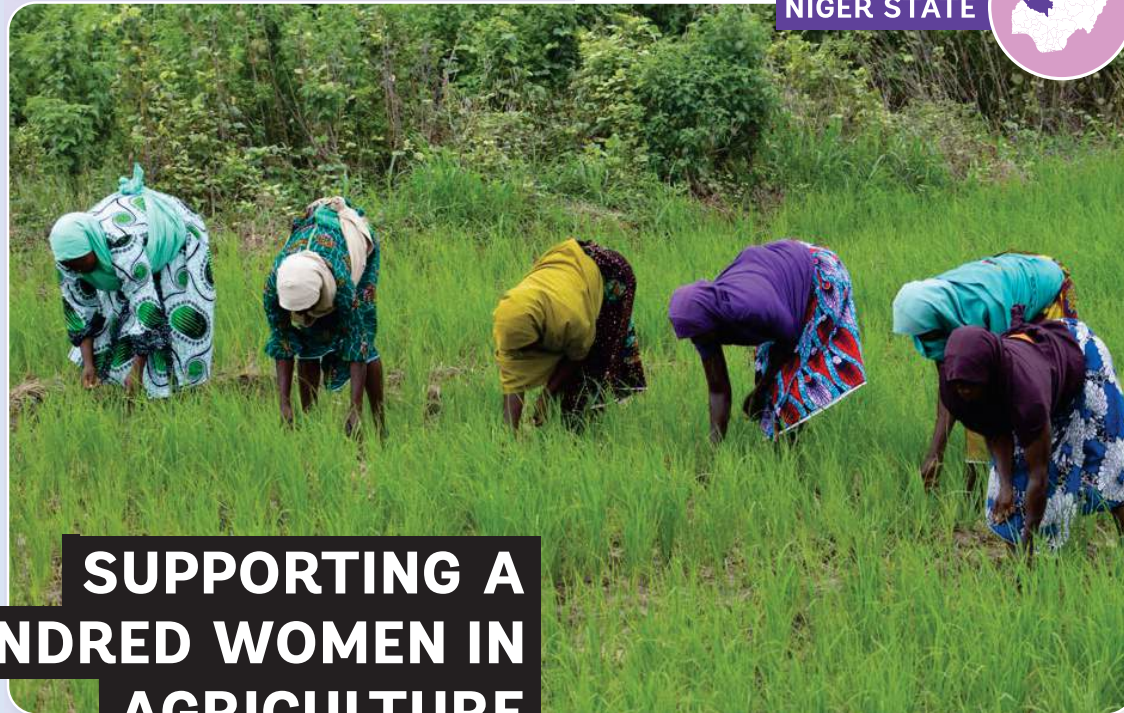
Abubakar Abba, a 32-year-old youth leader from London Maidorawa, sees other benefits: "Now the law enforcement agencies can respond to distress calls quickly and surveillance has also improved. This development has forced miscreants out of the area ushering in a regime of peace and quiet".

There are fewer mosquitoes now, and malaria cases have reduced. People can visit their loved ones across the gully more easily because of the new roads and pedestrian crossings across the stormwater drains. Conveying sick patients in vehicles is easier and open defecation has reduced.

What next?

ACRReSAL is providing support to the communities to protect the facility. Local guards have been engaged by the project to provide security. Community members have been trained to plant trees and look after the ones to be planted. Waste collection centres have been built around the gullies to help communities dispose of waste appropriately. And residents are telling the world about the intervention that ended their days of sleeping with their eyes open because of the fear of flooding.

NIGER STATE



SUPPORTING A HUNDRED WOMEN IN AGRICULTURE

Niger State ACRReSAL Activity in Nigeria

Women in twenty-five communities spread across nine Local Government Areas (LGAs)³ of Niger State in Nigeria cultivated and sold agricultural produce but had been chronically vulnerable economically. **For more than 15 years these women had been growing groundnut, cowpea, soybeans, rice, melon, and maize on small holdings of less than half a hectare each.**

Without support from the government, NGOs, or development partners, they faced several challenges, ranging from lack of formal titles to their land to a lack of funds to buy improved seeds, fertilizers, pesticides, tools and even to hire labor. Unsurprisingly, all their hard work produced only low yields, and they could not afford cultivate more land to increase production.

They lived precariously, barely able to feed their families, and with any change in rainfall patterns like droughts or floods plunging them into food insecurity.

Earlier in 2024, the FCT ACRReSAL Project made significant strides by drilling 60 tubewells across 7 communities of Wako, Tekpese, Pukafa, Ashara, Yaba, Gbauji, and Ike. All seven communities are situated along the floodplains of River Gurara, River Bobo, and River Afara Bakwai.

These locations are strategically critical for year-round irrigation but remain vulnerable to climate variability.

The sinking of the tubewells was complemented by the distribution of 60 solar-powered pumping machines to Farmer-Based Community Interest Groups (CIGs), benefiting around 455 individual farmers who are now able to have a source for a reliable and sustainable water supply, enabling them to irrigate their fields even during the driest months.

This initiative aligns perfectly with one of ACRReSAL's Project core objectives under Component B: Community Climate Resilience. The intervention first of its kind in FCT has encouraged smart agricultural practices even during the dry season, thereby increasing agricultural productivity and strengthening resilience against climate variability.

During a recent oversight visit, the FCT ACRReSAL Project Technical Committee witnessed the profound impact of these tubewells. The Communities in Pukafa, Tekpese, Ike and Wako, once constrained by rain-fed agriculture, now enjoy uninterrupted farming, thanks to the solar-powered irrigation systems.

In Pukafa Community (Kwali Area Council): 17 solar-powered tubewells have been installed, benefiting 90 farmers cultivating 20 hectares of crops such as okro, fresh maize, garden egg, cucumber, pepper, plantain, and banana.

While in IKE Community (Kwali Area Council): 5 solar-powered tubewells are now operational, supporting 45 farmers irrigating 10 hectares of rice, fresh maize, garden egg, spinach, plantain, banana, and sugarcane.

In Tepkese Community (Kwali Area Council): 6 solar-powered tubewells have been installed, benefiting 60 farmers cultivating 30 hectares of farmland.

Also 5 solar-powered tubewells are in place in Gbawuci Community (Kwali Area Council): aiding 45 farmers managing 20 hectares of crops, including rice, fresh maize, garden egg, spinach, plantain, banana, cucumber, pepper, and okro.

12 solar-powered tubewells have been installed in Wako Community (Kwali Area Council): supporting 90 farmers cultivating 50 hectares of fresh maize, garden egg, sugarcane, pepper, and green vegetables.

In Ashara Community (Kwali Area Council): 5 solar-powered tubewells are now operational, benefiting 45 farmers irrigating 35 hectares of sugarcane, green vegetables, garden egg, cucumber, and rice.

10 solar-powered tubewells have been installed in Yaba Community (Abaji Area Council): empowering 80 farmers to cultivate 87 hectares of rice, sugarcane, pepper, green vegetables, garden egg, sweet potatoes, plantain, and banana.

In Wako, Alhaji Yusuf Usman, the Chairman of the Community-Based Agent (CBA) and a local farmer, shared his remarkable story: "Before ACRReSAL, I harvested just 10 bags of corn and millet. Now, with water from the tubewells, I expect to harvest 20 bags of each!" His experience reflects a trend across the other communities, where farmers have expanded their fields, diversified their crops and are anticipating record-breaking yields.



At Pukafa, Mr. Samson Shaaban, the Community-Based Agent (CBA) chairman and farmer, revealed his testimony: "ACRReSAL has revolutionized our farming practices. We no longer have to wait for the rainy season. The tubewells have empowered us to cultivate throughout the year, leading to increased yields and improved livelihoods. Also, because they are solar-powered, the cost of production has reduced as we no longer need to buy fuel."

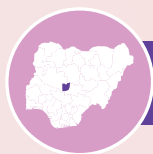
In Tekpese, Suleiman Tsoho a member of the CIG, expressed her joy: "You know, as a woman, we have to support our husbands, so the wells have changed our lives. We can now grow vegetables we need, such as tomatoes, pepper, and ugu. Before, we struggled to grow crops during the dry season, but ACRReSAL's intervention is a dream come true for us."

The story is the same in Ike, where Mrs Anthonia James another CIG member, shared his gratitude:

“Thanks to ACRReSAL, our community is bustling with agricultural activities. The tubewells have provided a consistent water supply, allowing us to cultivate a variety of crops. We are growing vegetables, corn, beans and even rice. We will be able to earn more income to improve our livelihood.”

At Yaba in Abaji Area Council, one of the farmers, Ibrahim Sokodeke, proudly showcased his cornfield, mentioning that he is engaging in dry season farming for the first time thanks to the solar power facilities provided by ACRReSAL. "Now that we don't have to buy diesel to power our pumping machines, we are able to save a significant amount of money for other uses," he noted.

³ These 25 communities of Beji, Chibo, Dagodnagbe, Dan Zaria, Dankuwagi, Doko, Edozhigi, Emiworo, Etsutsagi, Kakakpangi, Kasakogi, Kodo, Kontagora, Kpatsuwa, Lanle, Magandu, Makusidi, Masaha, Ndayako, Tungan Gari, Tungan Kawo, Tungan Wawa, Wushishi, and Zungeru are located in the 9 LGAs of Bosso, Chanchaga, Gbako, Katcha, Kontagora, Lavun, Mokwa, Paikora, and Wushishi.



FEDERAL CAPITAL
TERRITORY (FCT)



FROM BARREN TO BOUNTIFUL

ACReSAL's Solar-Powered Tubewells Transform FCT Farming Communities

At the height of Nigeria's dry season, when farmers once faced barren fields and dwindling hopes due to the lack of rain, communities in the Federal Capital Territory (FCT) are now bustling with agricultural activity.

This remarkable transformation is thanks to the construction of solar-powered tubewells by the FCT ACReSAL Project—a groundbreaking initiative turning dry landscapes into lush, green fields.

ACReSAL

In July 2023, the Niger State Project Management Unit (SPMU) of the World Bank-supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) Project of the Government of Nigeria, began an intervention in these communities. In collaboration with Niger State Agricultural and Mechanization Development Agency (NAMDA), the Niger SPMU identified one hundred poor and vulnerable women farmers, and provided each with improved seeds, fertilizers, and pesticides for one cropping season.

In total, ACReSAL distributed 2,000 kgs of rice seeds, 4,550 kg of soyabean, and 200 kg of maize seeds, 140 fifty-kilo bags of NPK and 70 bags of urea, 550 bags of organic fertilizers and 400 liters of herbicides.

The Impact

Despite receiving no training, the women relied on their farming experience and produced a bumper harvest in December 2023. Most women harvested around ten 65-kilo bags per hectare – when they used to get less than two bags.

Thus, Jummai Yabagi, a beneficiary farmer from Kodo community in the Bosso LGA, harvested ten 65-kilo bags of soyabean from her 1 ha farm – instead of her usual 2 bags – and earned 450,000 Naira (~USD 275). A grandmother of triplets from her widowed daughter, who had lost one to malnutrition, she was able to nurse the two remaining children back to health and even send them back to school.

Another beneficiary, Fatima Abubakar of Edozhigi, a 52-year-old mother of six, and a rice farmer for over 30 years, spoke of her pregnant younger sister who bled to death 7 years earlier because they could not afford to take her to a hospital to deliver her baby. Where she used to harvest ten 50-kg bags of paddy every year on her one-hectare plot of land, she harvested thirty 50-kg bags in January 2024 and another thirty bags in August 2024. Selling 30 of these 60 bags from the 2 harvests at 60,000 per bag, Fatima used the 1.8 million Naira (~USD 1,100) she earned to put her adopted niece in school, send her elder son to the University and the younger one to senior secondary school (both in Minna), and to buy a second-hand rice milling machine and 5 sheep for rearing young. She also contributed money to help her husband buy a motorcycle.



Each of the 100 women recount similar stories: with better harvests from better agricultural inputs, they have been able to feed their families better, earn more money to enroll their children in school – or send them back to school, buy assets, expand the area cultivated – and improve their social status.

At an average of six members per family, these one hundred women were able to feed and support another five hundred indirect beneficiaries, buying other crops and vegetables to supplement what they had grown – and thus improving nutrition and food security for their families.

Some women beneficiaries also reported joint investments: The women from the Kakakpangi community, for instance, bought ten hectares of farmland, and cows, sheep & goats for fattening, while those from the Edozhigi communities bought machines to mill rice and to grind cereals and cassava, and also opened a provision store.

In general, the increase in income enabled the women to expand their farming activities and agribusinesses, to pay their bills, afford hospital care for their families, support their husbands, and send their out-of-school children back to school. It has helped them make their own decisions and seek the guidance of their menfolk only when needed.

The women beneficiaries of Kodo community were even able to contribute to pay the hospital bill of a non-beneficiary, Zuwaira Mohammed, when she fell critically ill – and save her life.

What Next?

All the beneficiary women farmers have kept seeds to replant, and each has a dream. Fatima, for instance, wants to save money for a new milling machine to earn money to hire farm labor to cultivate her farm when she is too old to do it herself.

The Niger SPMU plans to expand the initiative to include all women in these twenty-five communities, supporting them with more inputs, including power tillers and knapsack sprayers. And these other women are now eager to go into farming – because seeing is believing.



BEFORE CONSTRUCTION

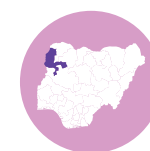
KATSINA STATE

TAMING THE FLOODS

Making Katsina and Jibia Safe with ACRoSAL Support

Malam Suleiman Isah, a respected community elder in Katsina town, still shudders as he recalls the once-common sight of lifeless bodies being carried away by the floodwaters in town.

Every rainy season, streets in many parts of the bustling towns of Katsina and Jibia would become rivers and quickly overflow, causing death and destruction worth millions of Naira due to flooding because of non-existent or badly constructed drains, or drains choked by rubbish.



KEBBI STATE

The Urgency for a Solution was clear

Recognizing the pivotal role of a greenhouse in agricultural research and education, the ACRoSAL Project, a World Bank project through the Kebbi State Government (Kebbi State Project Management Unit – SPMU) took the initiative to establish a state-of-the-art greenhouse at KSUSTA.

The project commenced in September 2024 and according to the DVC Academic, it is set to be one of the largest and most modern greenhouse facilities across universities in Nigeria.

As the project nears completion, its impact is already evident. The new greenhouse will enable year-round agricultural experiments, allowing researchers and students to study crop adaptation, climate resilience, and pest control in a controlled environment. Hands-on training in modern farming techniques will equip students with practical skills, increasing their employability and contributions to sustainable agriculture.

Additionally, the greenhouse will provide opportunities for revenue generation through the production and sale of seedlings and organic vegetables, supporting further research and student-led projects as disclosed by the ACRoSAL Project Coordinator (PC), Kebbi state, Ahmad Isa-Tela.

Sustainability is a key focus of the initiative. KSUSTA aims to strengthen collaborations with Kebbi State Ministry of Agriculture and Natural Resources and other institutions to ensure effective utilization of the facility. Professor Saadu Umar, DVC Research and Innovation, emphasized that the university has the technical expertise to manage and sustain the greenhouse efficiently.

Looking ahead, the ACRoSAL project envisions this initiative as a stepping stone towards enhancing research, education, and sustainability in the agriculture.

In a nation striving for food security, institutional support projects like the establishment of this greenhouse will play a crucial role in boosting agricultural research and production, making Nigeria more resilient.

Overall, the establishment of a functional greenhouse at KSUSTA marks a significant milestone in agricultural education and research. It sets the university on a path of excellence in agriculture, environmental science, and sustainability, ensuring that research and innovation thrive while contributing to food security, biodiversity conservation, and climate resilience.

The greenhouse is not just a facility; it is a gateway to knowledge, innovation, and a more sustainable future for Nigeria's agricultural sector.

ACRoSAL.... greening the environment, saving lives.



OLD GREENHOUSE



OLD GREENHOUSE



GREENHOUSE SITE



GREENHOUSE IMPLEMENTATION



GREENHOUSE IMPLEMENTATION

SOWING SEEDS OF INNOVATION

ACReSAL Greenhouse Support Lays Groundwork for Future Research and Learning

Aliero town in Aliero Local Government Area, a vibrant onion farming hub in Kebbi State, is home to the Kebbi State University of Science and Technology, Aliero (KSUSTA).

Located 46.5 km from the state capital, Birnin Kebbi, the university was established in December 2006 through Kebbi State Law No. 6.

This initiative arose from the need for a state university to accommodate the growing number of qualified indigenes who could not gain admission into Nigerian universities due to limited capacity.

Licensed as Nigeria's 79th university, since its commencement in January 2008 with 404 students, KSUSTA has grown to host 8,813 students, including 8,466 undergraduates and 347 postgraduates.

Despite its expansion and academic diversity, KSUSTA's Faculty of Agriculture has long struggled without a functional greenhouse, an essential facility for advanced agricultural research and education.

The then Vice-Chancellor Professor Bashir Ladan Aliero, highlighted the urgency of this infrastructure, emphasizing that a greenhouse would significantly enhance teaching quality and research capabilities. "This greenhouse is poised to become a critical asset in improving the university's academic offerings and research output, ultimately benefiting the broader agricultural community," he stated.

For years, the absence of a greenhouse forced faculty researchers to relocate their experiments to an orchard, significantly limiting their ability to conduct controlled agricultural studies.

Deputy Vice-Chancellor (Administration) and Dean of the Faculty of Agriculture, Professor Musa Augie, noted that this limitation hindered essential research on climate change adaptation, crop resilience, and soil health.

Without a controlled environment, studies on disease resistance and modern agricultural practices were nearly impossible. Consequently, students in agriculture, botany, and biology programs missed critical hands-on learning opportunities, reducing their skill acquisition and employability in modern farming.

The challenge became even more pressing in November 2023 when an accreditation team visited KSUSTA and raised concerns over the faculty's lack of a greenhouse. Professor Maikasuwa, Deputy Vice-Chancellor (Academic), remarked:

“You cannot have a standard Faculty of Agriculture without a functional greenhouse.”



Malam Suleiman Isah, the Head of the Unguwar Ambassador Ward, said that his Ward used to receive at least 15 dead bodies and countless animals in flood waters, every year, causing fear and grief in the community. Also, every year, farmers in his Ward lost farm produce worth over 500 million Naira (~USD 300,000) while the community as a whole suffered over 1 billion Naira (~USD 600,000) worth of losses to houses and other properties.

Similar stories had unfolded in other areas in Katsina and Jibia towns: Kofar Sauri, Kofar Durbi, Kofar Marusa, Sabuwar Unguwa/Gadar Nayalli and Tudun Matawalle. According to Aliyu Ibrahim Lara of Kofar Durbi, 700 farmers lost a total of N1,750,000,000 (~USD 1 million) worth of farm produce every year for the last ten years due to flooding along Kofar Durbi – Kafar Sauri river. The Ward Head of Sabuwar Unguwa, Malam Danjuma, stated that his community lost a pregnant woman and a child in flood waters a year ago.

ACReSAL

The Katsina State Project Management Unit (SPMU) of the World Bank supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project of the Government of Nigeria, noted that a predecessor project, the Nigeria Erosion and Watershed Management Project (NEWMAP) had designed and implemented Phase I of the two towns' stormwater drainage. But death and devastation had not been eliminated. The Katsina SPMU and the State Government therefore proposed Phase 2 to address flooding, protect lives and property and maximize economic opportunities within and around the affected areas.

Accordingly, in November 2023, ACReSAL began a 16-month intervention in Katsina and Jibia towns, ending by May 2025. Katsina Town Stormwater Drainage Management covers over 9 kilometres, recovers 2,050 hectares, and benefits 1.5 million people directly and indirectly (60% female). Riverbank Protection in Jibia recovers 1,518 hectares, benefits 0.87 million people (60% female).



In November 2023, ACReSAL began a 16-month intervention in Katsina and Jibia towns, ending by May 2025. Katsina Town Stormwater Drainage Management covers over 9 kilometres, recovers 2,050 hectares, and benefits 1.5 million people directly and indirectly (60% female). Riverbank Protection in Jibia recovers 1,518 hectares, benefits 0.87 million people (60% female).

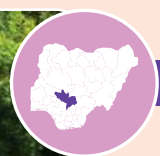
The Impact

Even though the project is not yet complete, the impacts were clearly visible in the 2024 rainy season: Not a single death, not a single house destroyed and no agricultural losses due to floods in the targeted areas in either Katsina or Jibia towns.

Malam Suleiman Isah, the Head of Unguwar Ambassador Ward, is deeply thankful because people in his Ward can now live without the constant fear of floods.

Today, Aisha Adamu, a female vegetable farmer in Kofar Durbi is hopeful. Where once she despaired that she would have to stop cultivating her flood and erosion ravaged farmland, she hopes to make about 2 million Naira (~USD 1,200) this year when she harvests her vegetables and other crops.

The new drains have not only saved lives but have also restored dignity and hope to a community that once lived in the shadow of tragedy.



KOGI STATE

**WATERING
THE SEEDS OF
GROWTH**

ACReSAL Support for Dry Season Farming in Kogi



“We had little food and a lot of challenges because of poverty – and absolutely no knowledge of dry season farming.”

Yakubu Suleiman was one of many farmers in Ankpa and Kabba Bunu Local Government Areas (LGAs) in Kogi State who had rivers flowing near their land but no idea of how to irrigate. Dependent on just one rainfed crop a year, he was unable to ensure even two meals a day for his family, leaving them unemployed, hungry and poor for most of the year. Unable to pay school fees, children of school-going age were out of school, working menial jobs or hawking goods to earn money for the family.

Planting the Seeds

Garba Gowon Gonkol, Plateau State Project Coordinator of the World Bank supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) Project of the Government of Nigeria, noted that although his team at the Plateau State Project Management Unit (SPMU) had conceived the idea in 2021 they only managed to get it operational in late 2023. The major challenges were to get land and organize the farmers.

Starting in December 2021, Nanbal Hassan, Acting Natural Resource Officer, ACReSAL Plateau SPMU recalled that while they had chosen Vom due to its favourable weather and proximity to the NVRI, they had to appeal to the Plateau State Ministry of Agriculture for land. Nearly two years later, they were ready: They had been granted four plots of land on lease, and ACReSAL's focal NGO in Plateau State had managed to mobilize sufficient farmers.

Friday Bako, a service provider, was contracted in September 2023 to construct a 25 x 25 metre greenhouse, drill a borehole, install a pump powered by one hundred 200-watt solar panels, and plant 1000 seeds of pest-and disease-resistant hybrid seedless cucumbers.

Reaping the Benefits

Ten weeks later, the first harvest was ready, and thereafter, twice a week, the seventy-five farmers continued to harvest. Offtakers lined up. They sold as fast as they harvested, and at a good price. Jerry Olufo, Chairman of the DCFMPCS, states proudly, “What we grow here are seedless, they are succulent, they are very fresh, and this is the quality that is demanded and is not there in most of our supermarkets.”

Dr. Grace Edward Gyang, Chairlady of the DCFMPCS sees in this pilot the potential to empower women, noting that there is money to be made in farming and that many women dropped out of farming in the previous year because they could not afford fertilizer, and other inputs. “So [for this pilot] we mobilized younger women, we have graduates in our group, we have women direct agriculture, we have agronomist in our midst, we have mid to aged women that are just farming”, she declares with pride, “All the women we have in our group are women that have passion.”

Apart from the financial benefit, stakeholders also see the potential in reducing the sheer drudgery of traditional farming.

Isifanous Donung, Secretary, DFMPCS, notes:

“When I was growing up, source of livelihood was farming. And it is through this farming that some of us were able to go to school. We have never had any assets of mechanized form of agriculture, so most of the things were done manually.”

Recalling the sheer labour and risk of the traditional cultivation she had been doing since the age of 5 with her parents, Janet Pwajok, was particularly fascinated by the drip-irrigation system: “Many women were not into agriculture because of the way the agricultural farming system were done in the past. When they mounted this gadget here, like the piping, you know, where you can just ON water from the tank and water would just go round underneath the plants, it makes it easier, and that really gave women the courage to see that agriculture can be done with ease.”

Visioning the Future

These are early days yet, but still the stakeholders can see greater benefits.

Janet feels that widening the operation to include more women and farmers from neighbouring areas (who have been coming ‘begging’ to be allowed to join), as well as growing crops like cabbage, green pepper, and strawberries, can reduce unemployment, theft and crime in society.

Dr. Grace has, perhaps, the widest vision: ‘I feel this project, if every woman, we are almost 50, and every woman will have a small farm, you know, hunger is conquered from feeding smaller parts of the family before going higher. If a woman that has 5 children, with the funds she has she can feed her children, and another one, that 50, you discover that in fact we wipe out hunger ... There is a common adage that says, “A hungry man is an angry man”. So where there is hunger, there is conflict.’

Although Plateau SPMU is constructing more greenhouses across the state, spreading the innovation and realizing its potential benefits across Plateau State and Nigeria, will depend not only on ACReSAL but on the enabling environment created by the State and Federal Governments of Nigeria. During the remaining project period (till 2028), however, ACReSAL can guide participating states to create the supportive policy and operational measures necessary for effective scaling up.





PLATEAU STATE



GREENHOUSE CUCUMBERS

ACReSAL's AG-Tech Demonstrations in Plateau State

“ I thank God for the project that they brought into this community. It has really made so many women, so many graduates who are jobless, to be active. ”

Bola Lawani, a former researcher at the National Veterinary Research Institute (NVRI) in Vom township in the Jos South Local Government Area of Plateau State, Nigeria and now a member of the Dop Community's Farmers Multi-Purpose Co-operative Society (DCFMPCS), she was convinced that the demonstration greenhouse with solar-powered borehole and drip irrigation system could have far-reaching benefits for their local community, for Plateau State and indeed for Nigeria. The 35 men and 40 women who were part of the demonstration pilot had harvested around 230 kgs of seedless cucumbers in just a week, and sold them for a profit of around 110,000 Naira (~USD 73) as at 2024.

ACReSAL

In December 2023, the Kogi State Project Management Unit (SPMU) of the World Bank-supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project of the Government of Nigeria stepped in. Aware of the plight of these communities, the SPMU held a stakeholders' meeting and identified 150 farmers (of which 17 were women) from the four communities of Mabolo, Offejiji and Ogaji in Ankpa LGA and Okeola/Otu in Kabba Bunu LGA, who showed interest in learning how to do irrigated farming during the dry season.

Community Interest Groups (CIGs) were formed, with 17 members in Mabolo, Offejiji, and Ogaji, in Ankpa LGA, and 50 members in Kabba Bunu. A total of 5.3 ha was obtained by the CIG groups in Ankpa LGA, and 4.25 ha by those in Kabba LGA. These smallholder farmers planted only hybrid maize on their plots, which averaged around 0.1 hectares in Ankpa and 0.085 ha in Kabba Bunu.

ACReSAL helped in the land preparation, engaged a consultant to guide them through their first dry season of farming, organized a training on irrigated and climate-smart maize cultivation, and provided them with farm inputs which included seedlings, knapsack sprayers, organic fertilizers, pesticides, safety boots and gloves.

The Impact

“ We used to produce two 100 kg bags of maize per hectare; but this time we produced ten bags! ”

Mr. Obasaju of the Kabba Bunu CIG captured the essence of the impact on farmers' yields after the harvest in April 2024. After setting aside the seeds needed for replanting, the 150 farmers had enough maize for their families to eat, and even to sell in the local market.

Apart from farmers, around 1400 household members, workers and transporters (850 women and 550 men) also benefited indirectly from the intervention.

Even after just one season, residents in all four communities can glimpse a better future with multiple harvests, food around the year, higher incomes, more jobs, better livelihoods, and less hunger and poverty. Such job and food security, enhanced awareness, knowledge and capacities, and greater earning potential will of course enhance their resilience against future climate change, but a lot more needs to be done to achieve such a vision. Production needs to increase, which means greater effort, while even sustaining these gains will mean more attention to basics.



What next?

The local communities have realized the value of the agricultural inputs that the project has provided for free. The CIGs have arranged to safeguard their new farm implements and pumping machine and reserved maize seeds from their harvest for next season's sowing. CIG members are contributing a token 300-500 Naira every week to pay for the operation and maintenance (O&M) of the irrigation channels, pump, sprayers and other equipment, in case any future repairs. Their future plans include tractors, water pumps, drip irrigation, transportation tricycles, and storage silos.

Apart from continued sensitization and capacity building, the ACReSAL SPMU in Kogi realizes that sustaining and expanding benefits requires them to procure additional water for dry-season irrigation – either from new borewells or from external sources. Thus, there are plans to tap the rainwater channeled from the under-construction gully erosion control site at Etahi to the Aku-Obanyi river in the lower catchment. This will provide enough irrigation for dry season farming for at least some of these communities.

If successful, the model can be extended to other parts of Kogi state with water bodies that can support irrigation to nearby fields for dry-season agriculture.



REVITALIZING THE YANKARI GAME RESERVE

The Bauchi ACRoSAL Project Intervention



Our safari driver recounted a terrifying story of being stuck in the middle of the Yankari Game Reserve in Bauchi state of Nigeria, surrounded by wildlife, in a decrepit vehicle with terrified tourists.



Set up in 1956, the 2,244 square kilometer wildlife sanctuary with natural warm water springs and a beautiful savanna landscape was home to a stunning variety of animals and plants. Beyond its wildlife, Yankari also tells the story of ancient human history, with remnants of old iron-smelting sites and caves. Despite its closeness to local communities, the reserve itself has remained untouched by human habitation for over a century, allowing it to thrive as a natural treasure. Yankari has drawn tourists from all over the world and for decades it was a top tourist destination in Nigeria, and a cornerstone of ecotourism in West Africa.



But by 2023, it had suffered from years of neglect, which affected tourist numbers. Visitors complained about the lack of reliable safari vehicles and trained guides, and poor condition of facilities, such as the changing rooms and toilets at the famous Wikki Warm Springs. The Rangers responsible for protecting this massive landscape lacked proper uniforms, first-aid kits, and essential tools for their jobs.

ACReSAL

In April 2023, the Bauchi State Project Management Unit of the Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) project of the Government of Nigeria and supported by the World Bank, stepped in: New game-viewing trucks were purchased, facilities at the warm springs rehabilitated, proper first-aid measures introduced and the park's 150 rangers provided with new uniforms, night-vision goggles, walkie talkies and torches. The all-male group of rangers were also trained in interpretation, social engagement, dialogue, and patrolling techniques, improving their communication with tourists as well as their ability to protect the reserve.

All these interventions fostered a new sense of purpose among the staff. Soon enough, the investment began to show results. Service units began to compete to improve standards, and suddenly, what was once seen as a burden turned into an opportunity for growth.

The Impact

Today, the impact is visible. The rangers, once ill-equipped, now patrol with pride and confidence and are able to patrol more effectively at nighttime, cutting down poaching incidents significantly. Their interpretation to tourists is clearer and makes better use of the language of conservation. While this has enriched the overall visitor experience, it has also boosted the morale of the rangers: They are no longer just protectors of wildlife but have become ambassadors of the reserve.

The new safari trucks charging N15,000 (~USD 20) per trip have completely changed the visitor experience. College students on a research trip were able to get up close to wildlife with the new vehicles, an experience that left a lasting impact. "It was incredible to observe animals in their natural habitat, something we had only seen in textbooks," one said.

By September 2023, tourists had increased from around 500 to 2,000 per month, while the improving tourism benefitted around 10,000 food vendors, photographers, fuel station operators, souvenir sellers and others. Also, although it did not fund the Reserve, the state government provided 30 motorcycles to facilitate the rangers' movement, renovated the restaurant, some Executive Rooms and some other areas (with a second renovation planned for October 2024).

The new safari trucks charging N 15,000 (~USD 20) per trip led to a 25% increase in tourism revenue. Dr. Yusuf the General Manager of the Yankari Game Reserve confirmed that they collected more than 48 million Naira (~ 65,000 USD) in the 9 months from October 2023 and June 2024 from fees for tickets, safari rides, warm spring visits and toilet facility use. All of this meant that the Reserve was able to not just pay its casual workers, and utility, medical and maintenance bills, but also to clean the warm spring, upgrade restrooms, add picnic areas, and recruit around 40 new staff members from the local community.

What next?

The intervention wasn't just about providing equipment—it was about long-term change. All maintenance and repair costs have been incorporated into the Bauchi State Ministry of Tourism and Culture's budget, ensuring that the improvements at Yankari are here to stay. A Baseline Study and a ten-year (2025-2035) Management Plan are being developed to ensure that Yankari remains a leading ecological and tourist destination for years to come.

This Yankari story shows that with the right tools, training, and support, even the most neglected places can be revitalized. Today, the Yankari Game Reserve is not just surviving—it's thriving, and its best days are ahead.

