
TUTEGRATED

Newsletter

2024



TUTEGRATED

- Resilient Enterprises
- Sustainable Livelihoods

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Project Implementation Regions



Meru
Embu
Kitui

About The Project

The Tujiinue Tena Integrated Project

TUTTEGRATED Project is a locally-led climate action intervention developed to address the vulnerabilities and challenges of climate change and COVID-19. The initiative, loosely translated as “We lift ourselves, once again,” aims to help communities, particularly those at the bottom of the pyramid, to overcome poverty and improve their lives.

The COVID-19 pandemic occurred during prolonged climate-related challenges in Africa and led to economic disruptions and widespread suffering. Lockdowns caused significant loss of life, disruption of livelihoods, and social upheaval. Additionally, the pandemic delayed global efforts to transition to low-carbon, climate-resilient development pathways.

So disruptive was the Covid-19 pandemic that all global processes to build consensus on the transition to low-carbon, climate-resilient, ecologically-just, fair, and equitable development pathways – notably the COP26 in the UK – had to be postponed by a year as countries instituted containment travel bans to contain the spread of the corona virus.

While the virus was contained through vaccination and lockdown measures, its impact will be long-lasting. This and the ongoing climate crisis present a significant challenge for governments and non-state actors. As a result, the authorities thus implemented adaptable strategies to support struggling small businesses and households and ensure food security.

The Tutegrated Initiative has evolved into a self-sustaining social enterprise with a focus on promoting green recovery for smallholder commodity producers after the COVID-19 pandemic. By implementing proven models, the initiative assists producers in making the most of their land and broadening their sources of income. The selection of a particular commodity depends on the unique ecological and economic circumstances of the community.

Tutegrated delivers a lasting impact because we address important needs

- » To diversify smallholder producer income streams for enhanced resilience to climate change and COVID-19 pandemic recovery.

Tutegrated is different because the initiatives

- » Mobilize smallholder producers and communities at the bottom of the pyramid to expand and diversify their income and livelihood options
- » Develop replicable public-private sector social enterprise models that can enhance the resilience and adaptive capacity of smallholder producers affected by climate change and COVID-19—the COVID-19 pandemic.

The solution

Catalyze partnerships in the commodity value chain for a rapid resilient, greener recovery from the twin shock of COVID-19 and climate crisis.

Our Locally- Led Climate action initiatives are focused on three key aspects:

Resilient Enterprises

Sustainable Livelihoods

Financial Inclusivity

Our Impact at a Glance

<p>5,101 farmers have enrolled and cultivated over 5930 acres of land in Meru, Embu, and Kitui counties of Kenya in the year 2021.</p>	<p>805 farmers were supported with 3000 Kg of seeds to cultivate 1500 acres of land in October to December 2021</p>	<p>150 Tons of sorghum produce was received from farmers</p>
<p>PACJA supported 2800 farmers with 8,122 Kg of sorghum seeds to cover 2707 acres of land in Meru and Embu counties of Kenya in the short rains from October to December 2022.</p>	<p>1,496 farmers were supported with 5,170 Kg of sorghum seeds in the short rains season of October to December 2023</p>	
<p>1,723 acres of land were cultivated in the short rain season of October to December 2023 and approximately 783,249 Kg of sorghum was harvested</p>	<p>283,249 Kg of sorghum produce was aggregated and is in the store awaiting delivery to our East African Maltings Ltd partners</p>	
<p>3,000 sorghum farmers have benefited from direct sales to the off-takers</p>	<p>500,000 Kgs were used locally to support the farmers' food and nutrition requirements and the local cottage industry at the community level.</p>	
<p>Ksh 380,000 was issued to 48 farmers as a crop maintenance loan</p>	<p>18 local businesses were supported through the renting of stores</p>	<p>26 jobs were created during the aggregation period</p>
<p>1,400 SME entrepreneurs in the SACCO to benefit from loans, savings and financial literacy</p>	<p>90% of small-medium entrepreneurs have received financial literacy training</p>	<p>Ksh360,000 was issued for crop maintenance</p>
<p>Ksh. 600,000 so far has been issued to small-medium entrepreneurs as short-term loans through Unity SACCO</p>	<p>Kshs. 13.5 million was received by sorghum farmers</p>	

From the executive Director's Desk



The world is experiencing a devastating climate-fueled catastrophe that has been building over years. Global climate change has already had a drastic and observable effect on various environmental ecosystems and, indeed, has exerted pressure on natural systems. The importance of stability and viability of environmental ecosystems to boost agricultural production cannot be gain said. As has already been witnessed, the climate crisis is increasing and deepening vulnerabilities around fragile ecosystems and communities with a resulting cocktail of epochal environmental and development challenges. As the climate catastrophe gathers pace, Africa - a hotspot for climate change is, and will continue to be one of the hardest-hit regions. Over the years, the modeled average temperature projections indicate that global warming will affect 90% of the continent's population.

The Covid-19 crisis has exacerbated the already delicate situation in the global South which is already engulfed by a myriad of other challenges, including, but not limited to, climate-induced droughts, floods, landslides, locust invasion and water scarcity, insecurity, deepening poverty and inequality.

The Tujiinue Tena (Tutegrated) Project is a well-thought social enterprise based on an agribusiness model that targets the most vulnerable and marginalized groups with contextual locally led and nature-based solutions to adapt to the changing climate. While appreciating the diversity of solutions, the project seeks to promote environmentally friendly technologies, marketable and high value enterprises. The project works with and within communities to identify initiatives that promote biodiversity and are adaptive to drought, pests and diseases. By engaging marginalized groups like the youth and women for jobs creation, the project enhances financial inclusivity by addressing endemic structural inequalities. The sustainability of the enterprises is ensured through mutual cocreation through open public participation in the initial stages of decision-making, planning and implementation.

The Project promotes and embraces dialogue with communities and seeks to come up with solutions that emanate from the grass-roots, which is essentially rich in indigenous knowledge to respond and cope with climate-induced challenges.

I am confident that the positive changes that have been witnessed in the implementation of this Project will inform further action in the scale-up to other Counties in Kenya, and Africa in general.

I call upon the stakeholders to join hands in support of the most vulnerable groups that are impacted by climate change. Our united actions will ultimately lead to the desired transition to low-carbon, climate-resilient developmental pathways that we all seek achieve.

I welcome you all to read this issue of our consolidated Tutegrated project, so that we can lift ourselves together!

Dr. Mithika Mwenda.

Executive Director, PACJA

Our Initiatives

RESILIENT ENTERPRISES

» Promoting Resilient for Smallholder Producers

The Tutegrated project focused on promoting the resilience of smallholder producers since they are actors in addressing challenge related to climate change, extreme poverty, inequality and food security. Commodity producers, the majority who are smallholder producers constituting 65% of any Country's labour force, have been largely unable to take advantage of opportunities in the changing economic and demographic landscape triggered by the inevitable global transition to low-carbon, climate-resilient economic development trajectory.

In the context of the changing climate and the COVID-19 pandemic, smallholder farmers who rely on rain-fed agriculture find themselves rendered destitute. They are faced with other challenges such as limited access to information, appropriate technology, access to business models for increased scales of production, and other means of production, including land and capital, but also markets for their produce. In addition, SMEs that are also dependent on nature for production such as Agro-industries are not spared.

While the companies might be frustrated by the lack of quantity and quality goods which are tied to seasonal cycles of production, the small-scale producers are stuck with large quantities of produce that lack competitive markets, infrastructure, and management of post-harvest losses. The direct link between the companies and the local producers is hampered by the lack of knowledge of one by the other, their locations, and ways of working.

This is exacerbated by the existence of exploitative intermediary buyers who have thorough knowledge of both operators and reap excessive profit at the expense of the local producers. Disintermediation that helps break the cycle of poverty can happen - facilitated by regulatory authorities, climate-conscious, responsible private businesses, and new technological solutions that enhance access to market information in partnership with development actors.

Complimentary commodities that withstand harsh climatic conditions and ones that are not susceptible to such crises as COVID-19 would enable people to have viable options. This would be enhanced through deliberate efforts to connect producers to the direct market, guaranteed prices for their produce, and ensuring that they get assurance of value for their investment.

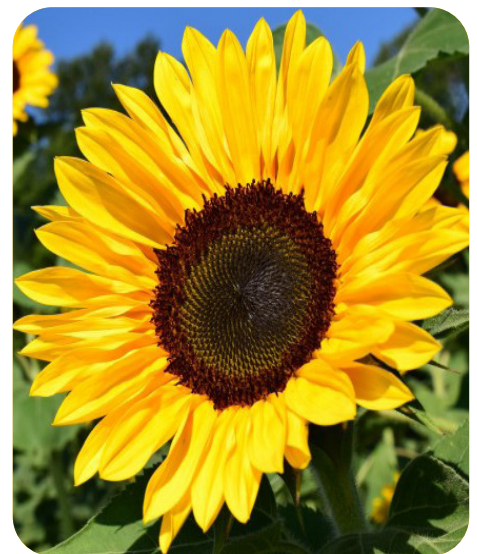
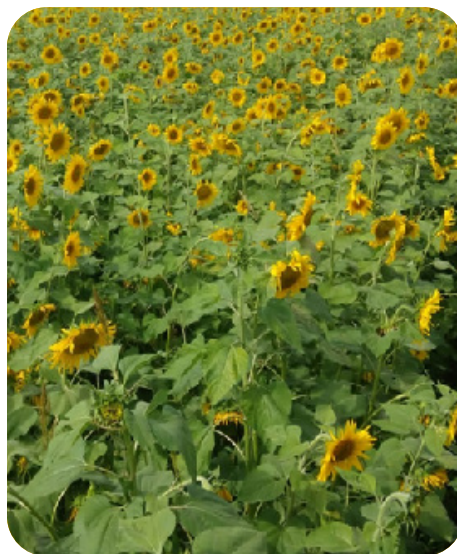
Through this, the Tutegrated project, dubbed "We lift ourselves, once again," was implemented in the semi-arid Northern Meru region, Embu, and Kitui with plans of scaling it up to other counties in the country and Continent. In the recent past, the regions in question have experienced erratic rainfall patterns occasioned by changing climatic conditions. Coupled with the adverse effects of Covid 19, the region's economy has been completely destabilized. Sunflower, an early maturing, drought tolerant, and high-value crop came as a reprieve to the communities residing in the lower belt of Meru North, a place ecologically viable for the crop.

◆ The Tutegrated Sunflower Value Chain Initiative

As one of the locally-led climate action initiatives, the sunflower value chain collaboration sought to encourage local people whose reliance as a commodity of choice is maize, and who have faced challenging times occasioned by exceedingly harsh weather events, to try other drought-resistant crops.

The target community used to experience adequate rainfall, but due to the changing climate, successive seasons have been characterized by erratic to no rainfall, thus affecting their crops. The sunflower value chain initiative started with consultation between PACJA and BIDCO-Africa, Africa's leading edible oil processor, which culminated in the signing of a memorandum of understanding between the two, to define areas of joint collaboration. Through this partnership, BIDCO assured farmers of a ready market, thus completing the entire value chain of sunflowers.

In the last half of the year 2020, the Tutegrated project was embraced by 3000 farmers who cultivated 5000 acres of land and grew sunflowers in the October- November short rains. The project, though in its infancy was a great success in that it saw over 200 tons of sunflower harvested in a single season. 60 Tons of the produce were delivered to BIDCO, a partner in the project to its factory in Nakuru, 40 tons were consumed locally by internal trade among farmers as livestock feeds, and 100 tons were used by upcoming Cottage Industries which locally processed sunflowers to edible oils.



» Mobilization and Awareness Creation

The mobilization and awareness creation of farmers through local leaders, especially Chiefs, and Members of the County Assembly in the target community, Meru County was done. Successive meetings were convened where trainings were conducted by extension officers and community volunteers (youth recruited and trained) seconded by BIDCO and recruited by PACJA. This was followed by the listing of farmers willing to cultivate the crop, realizing a record number of around 3000 with an average acreage of 5000.

PACJA and BIDCO-Africa combined their synergy as a way of enhancing the adaptive capacity of farmers through the Project using an agribusiness SME model that enabled them to grow Sunflower for sale at a guaranteed price. The partners sought to promote the formation of successful and sustainable rural farmer-led businesses well-placed to exploit market opportunities through greater linkages to buyers, businesses, and service providers. While PACJA used its known prowess in community and resource mobilization, BIDCO provided farmers with technical and extension services for crop cultivation. The company also guaranteed the farmers of the market all the sunflowers cultivated, at a guaranteed price.



» On-farm activities and Market Strengthening

To achieve its goal, the Sunflower initiative focused on strengthening on-farm activities through a systemic approach to market strengthening. Through this, jointly, PACJA and BIDCO periodically assessed the overall value-chain to gain a stronger understanding of where the gaps and challenges were that needed to be addressed in order for rural farmers to benefit. These revolved around not only production and quality but also farmers accessing kind of other related services to build confidence in the Project, such as financing, quality assurance, inputs, and processing.

The Project built on PACJA's desire to re-orient the private sector through a mutually-beneficial social enterprise partnership, facilitate access to the niche resources coming out of the evolving climate-resilient-low-carbon-green economy; including impact investors and social finance - and support the establishment of niche market-financing to groups thus cushioning them from climate variability and commodity price volatility.



These key achievements were realized through the Sunflower initiative

So remarkable was the Project's success that it saw a bumper harvest of over two hundred (200) tons of sunflower in a single season, enabling farmers to earn around 10 million Kenya Shillings (US\$100,000).

- Sixty (60) Tons of the produce were delivered to BIDCO-Africa, while internal-bilateral trade among farmers consumed forty (40) Tons locally as livestock feeds,
- Hundred (100) Tons were consumed by proliferating Cottage Industries that locally process sunflower into edible oils.
- Comparatively, farmers who opted to remain with the maize cultivation counted their losses, as the crop could not withstand the harsh weather conditions. This attracted more farmers to embrace sunflower farming in the subsequent seasons.
- The main achievement of the Project was the activation of sunflower farming in the area, which farmers are doing even after the Project ended. Sunflower farming, either for local cottage industry or livestock feeds, has been embraced.
- By diversifying the farm enterprises to include sorghum production alongside sunflower farming, Tutegrated Project producers remarkably increased their sources of income and moved towards food security to improve their standards of living.

» Market access

The partnership between PACJA and BIDCO Africa, Africa’s leading edible oil processor, assured farmers of a ready market, thus completing the entire value chain of sunflower. The prevailing drought and insufficient rainfall in the catchment made season II of the Project’s performance not very favorable, resulting in a poor harvest. However, compared to other crops – mainly maize which is dominant in the area - those who planted sunflowers were able to register some harvest, thus some income.



Initiative Newsbytes

- Launch of the sunflower farming received a big boost from the then CS agriculture Hon. Peter Munya who presided over the groundbreaking ceremony at an event held in Kanuni Ward, Igembe South.
- The launch also received key partners like Kenya seed company, Bidco East Africa, representatives from Africa Development Bank, Nissan Kenya, and National and local media among many others.



◆ **The Sorghum Value Chain: (Diversification Through Sorghum Cultivation)**

The project diversified to sorghum, a climate-resilient and fast-maturing alternative crop.

Sorghum is adapted to a wide range of agroecological zones and requires less water than other seasonal staple crops thus offering great potential for supplementing food and feed resources. It is a drought-tolerant and fast-growing crop, which requires minimum low initial cost outlay. It requires less amount of rainfall than alternative staple crops such as maize. It has a short life cycle of three to four months and hence has the ability to escape the adverse effects of low erratic rainfall and subsequent drought.

Therefore, it is a suitable enterprise for farm income diversification and promotion of biodiversity. Moreover, sorghum production ensures food and feed security to the community because of its multiple uses. Traditionally, the crop is ground and used for making gruel (special porridge for lactating mothers). The grains are also pounded with a motor and pestle to prepare a special nutritious diet known as “Muthikore” in the Meru dialect.

Thus, sorghum is an effective fall back plan to farmers in the event of another crop failure, evident in the Project area when maize failed due to insufficient rainfall. Farmers who planted sorghum had a field day as the price tripled, with the majority withholding the produce for domestic use.



Linkages and Partnership with EABL for produce market

The demand for sorghum is high in the local beer industry such as East African Breweries Limited (EABL).

Out of this, a series of consultative meetings between PACJA and EABL resulted in a partnership under the Tutegrated Project, where farmers mobilized to cultivate an additional crop, sorghum after the Project guaranteed producers a ready market and stable price in case, they opted to cultivate it.

Through a series of these linkages, collaboration, and partnership with Kenya Breweries, farmers were convinced and embarked on the registration process to reach a critical mass capable of producing the quantity sufficient sorghum to make business sense.



Seeds Support

Since introducing the sorghum crop in the Tutegrated project, 5,101 farmers have enrolled and cultivated over 5930 acres of land in Kenya’s Meru, Embu, and Kitui counties.

In 2021, the Tutegrated project supported 805 farmers with 3000 Kg of seed to cultivate 1500 acres of land yielding 150 Tons of sorghum produce.

In the short rains season of October to December 2022, PACJA supported 2800 farmers with 8,122 Kg of sorghum seeds to cover 2707 acres of land in Meru and Embu counties of Kenya.

In the short rains season of October to December 2023, the Tutegrated project supported 1496 farmers

with 5,170 Kg of sorghum seeds, who cultivated about 1723 acres.

Approximately 783,249 Kg of sorghum was harvested. 283,249 Kg of sorghum produce was aggregated and is in the store awaiting delivery to our East African Maltings Ltd partners.

The sorghum farming has benefited more than 3000 farmers through direct sales to the off-takers. Additionally.

Approximately 500,000 Kgs were used locally to support the farmers’ food and nutrition requirements and the local cottage industry at the community level.



Donor Visit

In March 2024, officials from Sida led by the PACJA Executive Director Mithika Mwenda, visited the project implementation area in Meru County, marking another milestone. During the visit, the delegation paid a courtesy call to the office of Meru County Governor and was warmly received by Governor Hon. Kawira Mwangaza.

Later the team took the donor to a project implementation site in Kanuni ward, Igembe South. This visit provided an opportunity for the donor to interact with enthusiastic project beneficiaries. The beneficiaries shared the positive impact of the sorghum and apiculture initiatives, which are helping them adapt to the effects of climate change.

Further, the beneficiaries testified that by diversifying the farm enterprises to include sorghum production alongside sunflower and aquaculture farming through the Tutegrated initiative, they have essentially increased their sources of income. This has helped them become food secure and improved their living standards.



From Drought to Abundance: Grace Kasinga's Story of Adaptation and Survival Through Sorghum Cultivation



Amid the stark realities of climate change that have ravaged the livelihoods of many families in Kenya, adaptation and resilience-building efforts are crucial.

For 40-year-old Grace Kasinga, a mother of three from Kianda village in Kanuni ward, Igembe South Meru County, the journey has been particularly challenging. Her family's primary source of income, the Miraa cash crop, was devastated not only by an enduring drought but also by the COVID-19 pandemic, which shuttered markets for years. Consequently, Grace's family had to rely on the meagre earnings from her cereal business in the Kianda market, as her husband's Miraa farming ceased.

"COVID-19 hit us so hard when we were already struggling with the prolonged drought which affected our Miraa cash crop and other sources of livelihood. The worst of it all, due to the pandemic, the market was closed for three years. Life became hard," Grace recounts.

The compounded effects of climate change and the pandemic led to the widespread failure of various crops, business closures, and pervasive hunger. "It is at this point we wished there was an alternative crop that would persevere the extreme weather and give us adequate food. Many families suffered from the pandemic, and the drought didn't spare our source of livelihood and businesses," she adds.

In 2021, the Tutegrated Initiative, spearheaded by the Panafrican Climate Justice Alliance, introduced sorghum as a climate-resilient crop in Meru, Embu, and Kitui Counties. Initially hesitant, Grace decided to observe the outcomes before joining. Despite the ongoing fears due to insufficient rainfall, those who embraced the initiative witnessed a bumper harvest. The crop's fast maturation and resilience to low rainfall proved advantageous. "Shock, to many of us who didn't grab the opportunity, farmers who had taken advantage, had bumper harvests since the crop was not affected by poor rainfall as it matures very fast and can thrive in low rainfall," Grace recalls.

By 2023, having seen the success of others, Grace joined the Tutegrated project, convinced of sorghum's potential amidst climate challenges to be among the 3000 registered farmers. The initiative provided seeds and training on cultivation and maintenance, along with a guaranteed market. For her seven acres of land, she received ten bags of sorghum seeds. Additionally, Unity SACCO—a financial inclusivity initiative under Tutegrated project, extended a crop maintenance loan of Ksh. 5,000, facilitating the purchase of necessary agro chemicals, weeding and other maintenance essentials. The SACCO has partnered with Kenya Breweries Ltd to contract farmers for sorghum production while guaranteeing a ready market at a predetermined price. The SACCO aggregates produce on behalf of the Kenya Breweries thus creating a link between farmers and the private company.

Unlike her previous disappointments with other crops, sorghum became a savior for Grace's family. Each acre produced 12 bags of 100 kilograms, resulting in a total harvest of 8,400 kilograms from her seven acres. At Ksh. 45 per kilogram, Grace earned Ksh. 378,000. "When I received this amount, I couldn't believe it, especially when we received it immediately after delivering to Tutegrated stores based in our markets.

Even with the cash crop we depended on for many years, I had never received such a huge amount of money at once. Tutegrated Initiative was God-sent to us. For me, there is no turning back," Grace testifies.

With her earnings, Grace was able to purchase land, build a family house, and ensure her children's school fees were paid. "For me, the sorghum initiative is more than I could have imagined. It has enabled me to build a house and purchase a piece of land, my children are no longer sent home because of school fees, and more so, my family's livelihood has improved, unlike yesteryears when I depended on our cash crops and other food crops," she shares with pride.

Grace's story underscores the numerous advantages of the sorghum initiative: low-cost seed provision, a ready market with cash on delivery, access to crop maintenance loans, and a crop that is drought-resilient and fast-growing. Sorghum not only enhances food security and nutrition but also boosts family incomes and living standards, making it a vital adaptation strategy against the adverse effects of climate change.



SUSTAINABLE LIVELIHOODS

◆ APICULTURE

The Tutegrated also initiated the apiculture program centered on bees for food, business, and environmental restoration.

PACJA, through the Tutegrated project, collaborated with the Kenya Wildlife Service (KWS) and Bornfree Foundation to spearhead this nature-based innovation in the Murera- Kianda Meru National Park border by introducing apiculture in the belt.

Beekeeping (Apiculture) is a livestock subsector with great potential to contribute to Kenya’s food basket as well as foreign earnings. Apiculture is essential for small-scale farmers and resource-humble communities due to the fact that it’s completely sustainable, has better income, and needs less input as compared to other agricultural enterprises. It is low in terms of initial cost outlay in that it requires low start-up capital, land, and labour.

Tutegrated initiated beekeeping since it enhances the environment through pollination hence increasing the crops yields and ecological regeneration. There is a direct link between honey production and environmental conservation since bees require trees for shade, nectar, pollen, propolis, and shelter. On the other hand, trees and crops need bees for sexual reproduction (pollination). This link has seen most beekeepers turn into environmental conservationists to boost their honey yields. There is a financial incentive for maintaining the ecosystem which in the long run, results in climate change mitigation since trees sink carbon dioxide; thus, reducing greenhouse gas emissions.



» Integrating Apiculture to Compliment Tutegrated Sunflower/Sorghum Initiative

Apiculture is a means of farm diversification, an important climate adaptation element. Honeybees need food (nectar and pollen) to survive, grow, and multiply. Thus, the provision of bee floral resources throughout different months of the year is a primary demand for bee farming. The success of a beekeeping enterprise depends on the provision of floral resources that are in bloom through different months of the year.

More honey yield is realized if apiculture is established in a region with an abundance of honey/ bee plants within a five-hundred-meter radius of the bee colony. Tutegrated Sunflower/ sorghum farms are thus a natural complement for bees. Therefore, integrating honey production in the farm complimented other existing enterprises since there is no competition among the enterprises.

» Apiculture has helped reduce human-wildlife conflict.

Recent studies have linked bees with addressing the human-wildlife conflict. Where hives are lined along the boundaries of game parks and reserves, a buffer zone is created in which elephants are prevented from accessing the farms. This has been a sustainable and long-term solution to animal-human conflict along the wildlife conservation areas.

Tutegrated Project borrows from Dr. Lucy King's model of bee 'fences' which is a cost-effective, nature-based solution to reconcile the elephant with people with whom they share the land.

The innovation provides direct incentives to keep farming communities from infringing on protected areas which would spark clashes with elephants and other native wildlife as a result of economic competition. Similarly, these buffers between human activity and designated wilderness areas eradicate much of the negative human/wildlife interaction. Notably, humans and wildlife are already intertwined, thus these deterrence methods successfully protect crops hence eliminating the need for poisons, snares, and rifles.



Bees to the Rescue: How a Widow Found Peace Amidst Wildlife Conflict through Tutegrated Initiative in Igembe South



When Ann Muthili's home in the Kindani location, Kiolu-Athiru Gaiti ward in Igembe South turned into a battleground between her family and elephants from the Meru National Park, she faced a dilemma that tested her resolve. Her once fertile land, crucial for feeding her seven children, became a danger zone. The elephants, drawn to her crops, created a life of constant fear and instability. "I had no choice but to consider fleeing with my seven children and renting a house in Kilili market. The elephants made my life a living hell, especially after the death of my husband in 2016," Ann, a determined 52-year-old widow, recounts.

Living just 45 meters from the park boundary in Murera, Ann's proximity to wildlife became her nightmare. "In 2017, the elephants invaded my land and destroyed all the crops I had planted. Everything I had invested in was destroyed in a single day. They made it a norm to come to my home, and at one point, they nearly killed me and my youngest child while raiding the banana plantation behind my house. It was a terrifying experience," she says.

Forced to abandon her first house she lived with her late husband, Ann built another one a few meters away, hoping to escape the elephants' route. However, the peace she sought remained elusive. As it was their routine, in 2019, the elephants returned fiercely surrounding her home.

"Not even banging pots and pans scared them off. They seemed to know I was just a helpless woman and weren't afraid of my antics. It was a night of terror for me and my children. We lived in constant fear, and my children's education was disrupted," Ann painfully recalls.

Desperation led Ann to consider moving into town, hoping to protect her family from the relentless invasions. Over seven years, the elephants forced her to relocate to three houses, pushing her deeper into poverty. However, a glimmer of hope emerged from her community. As treasurer of Maendeleo- Kiolu-Self-Help Group, Ann witnessed the introduction of beehives through the Tutegrated Project's Apiculture initiative to the group. The community, empathizing with her plight of battling wild animals for years, decided to establish the project near her home, creating a new strategy to deter the elephants.

Months after setting up the beehives, the elephants as usual returned to enjoy Ann's hard sweat attracted by the crops abundant. Unaware of the danger in their path, one elephant shook a tree with a hive and was fiercely attacked by bees that came out for their defence. The herd, in a frenzy of pain, fled back to the park. This innovative solution henceforth, brought an end to Ann's conflict with the elephants.

"The introduction of the apiculture project by the Tutegrated project in our community for sustainable livelihood became my family's salvation and security. Our source of livelihood has been restored, and now the entire village sleeps peacefully without fear of invasion. My farm is now abundant with food, unlike before when it was all consumed by the elephants. I am incredibly grateful to Tutegrated project for bringing this initiative, as it truly saved a destitute widow like me and my entire village," Ann joyfully testifies.

Ann Muthili's story is a testament to the power of community and innovative problem-solving. By leveraging natural deterrents like bees, the Tutegrated Project provided a sustainable solution that protected the Kiolu community's livelihood and restored a sense of security. This harmonious balance between human needs and wildlife conservation serves as a model for other communities facing similar challenges, proving that with proper initiatives and cooperation, human-wildlife coexistence is possible. Apart from conflict reduction, bees also help in pollination of crops thus increasing the yields. The crops provide nectar and pollen used by bees as food and in the making of honey; a valuable delicacy in many households in Kenya.



Ann celebrating good crop yield in her farm

Achievements

Three hundred (300) modern Langstroth beehives have been distributed to farmers who are members of the Project. Honey harvesting has commenced in some apiculture groups as the colonies keep building in other apiaries. Indications are that Apiculture is a suitable alternative to complement sunflower and sorghum production in the Project areas.

» Extending Partnership for Education, Research and Innovation

As the effects of climate change continue to adversely affect the livelihoods and health of the planet, there is a need to continuously innovate and forge new partnerships to beat the unrelenting forces of the crisis that has engulfed all sectors. Learning institutions, both basic and tertiary, are among the untapped potential in mooted creative technologies and lifestyles to ensure sustainable livelihoods, and to alleviate food insecurity occasioned by climate change catastrophe.

The use of regenerative and agroecology practices is a sure bet to mitigate and adapt to the effects of climate change. Regenerative techniques ensure the health of the soil which facilitates sinking of the Green House Gases (GHGs) while improving water infiltration and nutrient availability through natural processes.

Embracing recent disruptive technologies such as drought-tolerant, early-maturing, and disease-resistant cultivars goes a long way in building the resilience of communities at the frontline of climate change impacts. These high-yielding varieties with multiple uses, such as animal and human food, are being embraced not only by local communities and local cottage industries but also by agro-processors and manufacturing giants who use them for affordable value-added production.

In collaboration with Meru University of Science and Technology, the Tutegrated aims to progressively add value to the raw sorghum through animal feed manufacture and processing of composite flour for human consumption. This will essentially help fight the unscrupulous players who flood the animal feed and human food industry with inferior and unhealthy products that pose a health risk to both animals and humans, not to mention low productivity and loss of livelihoods.

The partnership will be a milestone in addressing post-harvest losses, income diversification, and food insecurity.

FINANCIAL INCLUSIVITY

◆ UNITY SACCO

Ensuring financial inclusivity for resilient enterprises & enhanced livelihoods.



Established in 2018 and registered as a Non-Deposit-Taking savings and credit outfit, the Unity Sacco Society Limited has enabled its valued members, primarily smallholder producers drawn from commodity associations, to access capital, financial products, and related services.

The Sacco was conceived out of the need for a more flexible, tailor-made, and inclusive financial system to provide solidarity support to largely underserved last-mile segments of the society whose sources of income and livelihoods have been affected by multiple global crises that have defied conventional Interventions.

This has ultimately helped members, primarily drawn from the Tutegrated Initiative, to build financial assets, promote entrepreneurship, and start enterprises within the value chain that have created jobs, helped restore hope, and dignity, build resilience, and dramatically transformed livelihoods.

As any other institution whose resilience was tested-and shaken-by the COVID-19 pandemic exacerbating the climate change-fueled drought that had plunged the agriculture-dependent population into despair, the Sacco endured and rose to overcome the turmoil triggered by the two crises that collapsed many organizations. It is important to remember that maintaining a strong financial position, especially during times of both prosperity and instability, is crucial for ensuring the financial well-being and upward socio-economic mobility of individuals, societies, and economies. This is particularly relevant for the integrated project's smallholder producers of sorghum, sunflower, and honey, as well as small micro-enterprises and Small Internal Lending Communities (SILCs) that are driven by these commodities.

Conscious that they ought to live in interdependence nature, adapt and build resilience to the unpredictably changing climate, the members actively participate in initiatives that contribute to national sustainable development and adaptation plans. The Sacco works with Forest Community Associations, Water Resources Associations, youth and women groups to develop tailor-made e-products to support their work. In addition to supporting members in their commodity value chain development, Sacco offers them innovative financial models that build knowledge, skills, and habits through coaching or counseling to help them define their financial goals, develop financial plans, and select and use our financial products designed for their context.

The Sacco compliments, and works in solidarity with the Technical Staff of the Tutegrated Initiative and members to jointly identify their needs, working together to define the niche and walking the journey towards realizing their dream, translating it into reality. Unity Sacco and its members and partners are risk-takers navigating through “unchartered waters” that conventional investors consider no-go zones - working with business people, and persons in informal employment, investment micro-groups (SILCs), and start-ups to co-create and incubate ideas that ultimately evolve into transformative initiatives and ventures.

The Sacco is currently engaged in a drive to recruit more members, expand the geographical coverage as well as putting in place structures to facilitate the running of its core business.

Through Unity Sacco

Ksh. 380,000 was issued to 48 farmers as crop maintenance loan	18 local businesses were supported through the renting of stores	26 jobs were created during the aggregation period
1,400 SME entrepreneurs in the SACCO to benefit from loans, savings, financial literacy	90% of small-medium entrepreneurs have received financial literacy training	
Ksh. 360,000 was issued for crop maintenance	Ksh. 600,000 so far has been issued to small-medium entrepreneurs as short-term loans through Unity SACCO	
Kshs. 13.5 Million was received by sorghum farmers		

Additional Newsbytes

» Sensitization Meetings

Three meetings were held in the Ugoti, Kianda, and Kanjoo areas to raise awareness about the importance of adopting sorghum farming. Sorghum is more resilient to drought compared to other crops like maize, which has been struggling due to low rainfall patterns in the region. Additionally, subsequent meetings were conducted to distribute seeds and provide financial support for crop maintenance.

» Farm Visits to Monitor Crop Progress

During the flowering stage, the team conducted a sampling visit to the farmers to monitor the progress of crop growth and assess the need for crop maintenance support. A total of 100 farms were visited, and as a result, 48 farmers received direct financial support from the Sacco



» AGM Meeting held in Maua, Igembe South

The Sacco Annual General Meeting took place in Maua on March 23rd, 2024, with a focus on sorghum farmers and other Sacco members. During the meeting, farmers received training on best practices for growing sorghum to increase productivity. The AGM also addressed rumors about the market coming to an end, reassuring farmers that the market is stable and encouraging them to plant more sorghum.



» Harvesting and purchase of sorghum

This exercise enabled the team to establish aggregation centers in Ugoti, Kianda, Murera, and Kanjoo areas. The purchase of sorghum from farmers was done and stored it before delivery to KBL. Through this, the Tutegrated was able to buy sorghum from 479 farmers totaling 283,249 Kgs, and prompt payment was made to farmers with the best price in the market, helping them pay school fees and purchase food.



Unity Sacco Financial Inclusivity Give Hope to Youths Amidst Financial and Climate Change Challenges



Overcoming all odds and making it in life is every youth's big dream

Financial access for any venture for African youths has always been a mountain to climb. Collateral is a very key factor in the deal. To those who also aspire to venture into farming, a piece of land is also another big challenge that has made many potential youths shelve their entrepreneurial ambitions.

Edward Kinoti, a 27-year-old from Kianda, Kanuni Ward in Igembe South, completed his Form Four in 2018, only to face the harsh realities of the COVID-19 pandemic shortly after. The pandemic hit African countries hard, exacerbated by a prolonged drought that disrupted traditional farming. Edward's family, reliant on the Miraa cash crop and other crops, was not spared. The pandemic and drought led to the closure of the Miraa market, the primary source of livelihood for Edward's father.

Despite his desire to pursue higher education, Edward chose to forgo his aspirations to support his eight siblings' schooling. "I knew how much I wanted to go to college but looking at how the drought and the COVID-19 pandemic had affected my family's source of livelihood, I decided to allow my other eight siblings to get an education. It is a sacrifice I don't regret even for a day," he reflects.

Life without stable income

In 2022, with his thoughts on farming, Edward considered plucking Miraa for pay, but the crop was scarce and the pay was very low. Recognizing his son's sacrifice, Edward's father gave him eight acres of land to start his farming venture. However, the lack of start-up capital loomed large, especially as a youth without collateral for a loan. After two seasons of struggle with various crops, he planted one crop- green grams in his eight acres of land which lifted his farming spirit. "Although the produce was not all that good due to low rainfall in the season, I managed to get 1300 kgs which fetched Ksh. 130,000," recounts Edward.

The Turning Point

"In 2023, during the rainy season of October-December, I saw how more farmers opted for sorghum farming and I diversified my crop from green grams to sorghum and this was my turning point. This was also triggered by how I saw my father and other farmers under the Tutegrated project implemented by PACJA harvest sorghum and cash good money out of it," Edward shares. Despite skepticism from his peers, Edward remained focused, especially after securing a crop maintenance loan from Unity Sacco -a financial inclusivity initiative under Tutegrated project, using his sorghum crop as collateral.

"Through the crop maintenance loan of Ksh. 25,000, I was able to manage my crop to the best agronomical practices it needs, and I never regret getting into sorghum farming. This has been the best decision I ever made as a youth," says Edward. His dedication paid off, with an impressive harvest of 9,600 kgs of sorghum sold at Ksh. 45 per kg, earning him Ksh. 432,000. The proceeds allowed him to buy two acres of land and build a house.

Celebrating Success of Financial inclusivity

Edward's success has not only brought him personal satisfaction but also inspired many youths in Kianda, Igembe South. "If I listened to the negative voices from my fellow youth who wanted me to join them in the Miraa crop business, I wouldn't be where I am today. Farming has money, and there is loan provision to maintain the crop unlike in other crops," testifies Edward.

Today, Edward is a role model, transforming the perception of farming and financial challenges among his peers. Through Unity Sacco financing, more youths are joining the farming venture and saving culture, realizing the benefits of sorghum farming, which is resilient to climate challenges and offers a ready market. "Comparing the youth of lower Kianda and the youths of the upper Igembe region who depend on other crops as a source of livelihood, our Kianda youth are far much better and developed because of opting for sorghum farming. This has demonstrated the potential for African youth to overcome financial barriers and thrive in climate-smart agriculture, proving that with support and determination, the future is bright., " Edward concludes enthusiastically.

Key Highlights of The Initiative To Date

Since its inception in the last half of the year 2020, Tutegrated can offer valuable insights into the promotion of Locally-Led Climate Action:

1. Proactive engagement of the local community in the Project design and decision-making at all levels is essential to ensure ownership and sustainability of the Project.
2. Drought-resistant, fast-growing crops, once produced in scale, are highly profitable since labour and management practices are minimal. Where disease and pest-resistant cultivars are used, it is cheap to produce the crops. These cultivars are also high-yielding.
3. In the emerging trends of climate-fueled, erratic, short rainfall cycles and prolonged drought, alternative commodities value chains based on context should be promoted by both state and non-state actors.
4. Any agribusiness model succeeds where there is a guaranteed market price and ready market for the produce. The Tutegrated Project's success is anchored on a private-public partnership that links farmers to market opportunities for the produce.
5. Different ecological zones have differing enterprise needs based on their ecosystems. It is imperative to tailor-make solutions that suit the context of a given zone through community participation and continuous innovation and market research
6. Profitability in Agricultural production is limited by the perishability and bulkiness of the produce. The tutegrated project will focus on the value addition of the produce to increase shelf life and increase profit margins.

Looking Ahead

- Value addition of the produce to increase shelflife and benefits.
- Integrate other sustainable livelihood enterprises such as cattle beef, fodder production and Aquaculture.
- Intensify landscape restoration activities for improved biodiversity, environmental conservation, and sustainable land use practices, leading to improved livelihoods through non-timber services
- Upscale the project to saturate and reach wider jurisdictions- Counties in Kenya and countries in the region
- Enhance the financial inclusivity aspect of the project in tune with the principles of locally-led climate action
- Cultivate more partnerships to reach wider markets, engage research institutions, seed production agents and financial service providers such as livestock and crop insurance.

Thank you

Donors and Partners



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