

ZERO HUNGER SPECIAL
AUTUMN 2023

VICE
VERSA
GLOBAL

journalism for
social change

Africa can feed herself

Charting the continent's path toward food security

VICE VERSA GLOBAL

Journalism For Social Change



YOUTH IS POWER

Africa through the eyes of the African youth

We are the authors and curators of our own stories; the authentic, positive, untold and superior African story. Our aim is to inspire a youthful social movement through media and journalism. We seek to impact how media shapes the dominant cultural, social and political picture by bringing in a new and youthful viewpoint on issues.

Your support is paramount. By becoming a member of the Vice Versa Global community, you help to generate more unheard stories from the entire African continent. Stories told by young African authors who live in the context and aspire to contribute to a better African narrative.

Vice Versa Global is a platform spearheaded by young African journalists who are keen on telling the African story from the youth's point of view by creating socially conscious content through vlogs, columns, video, articles and discussions in order to share ideas and spark dialogue about social change. Follow us on Twitter and Facebook.

<https://web.facebook.com/viceversaglobal/>

<https://twitter.com/globalviceversa>



ZERO HUNGER 2030

Contents

6. Tales from the dinner table

Memories of a fish head
by Elizabeth Kameo

8. Creating a hunger-free Africa

Assessing Africa's progress towards zero hunger by 2030
by Tina Byaruhanga

10. Uganda's farmer field schools

Reviving neglected crops for food security
by Elizabeth Kameo and Nicera Wanjiru

18. Let's fight hunger

by Pinkleen Oinokwesiga

19. From fish to fresh produce

Rusinga island's journey to child nutrition
by Eunice Mwaura and Cynthia Omondi

22. The donkey project

How donkeys are revolutionising agriculture on Rusinga island
by Eunice Mwaura

26. From theory to practice

Practical approaches to sustainable agriculture
by Elizabeth Kameo

29. South Sudan's resilience

A blueprint for food security
by Emmanuel Mandebo

32. Food for thought

A journey through Kibra's food chain
by Nicera Wanjiru

34. Tanzania's agrarian renaissance

Morogoro's rising agricultural stars
by Cynthia Omondi

37. Bridging the food security gap

Harnessing innovation for food security
by Eunice Mwaura

40. Transforming potato agriculture

Innovative hybrid seed technology in Africa
by Alice Nduta

41. From drought to food security

Insights from Kenya
by Alice Nduta

42. From survivors to thrivers

Women's response to climate challenges in Chikwawa
by Nicera Wanjiru

44. Bugs on the plate

The secret nutritional treasure of Uganda
by Martha Nalukenge

46. The landlord of hope

Empowering refugees through land
by Pinkleen Oinokwesiga

49. Farming with heart

The visionary blind farmer transforming lives
by Eva Nakato

54. Reimagining food systems

The quest for holistic food system thinking
by Tina Byaruhanga

57. Bridging the gap

A Nigerian perspective
by Tina Byaruhanga

59. Agricultural innovations across borders

A global partnership success story
by Tina Byaruhanga

62. Local solutions for global nutrition

The battle against child malnutrition
by Pinkleen Oinokwesiga

68. A path to food and nutrition security

Kenyan farmers battle against GMOs for food sovereignty
by Alice Nduta

74. The agroecology initiative

Nigeria's journey towards SDG 2
by Emmanuel Mandebo

76. From soil degradation to abundant harvests

The Gewocha forest restoration project
by Eunice Mwaura

78. A story of transformation

Malawi's response to the climate crisis
by Cynthia Omondi

82. Nurturing growth

The impact of agricultural entrepreneurship in Sinende
by Elizabeth Kameo

86. Meet the contributors

The people behind the stories
by Elsie Najuma



EDITORIAL

Colophon

Publisher Vice Versa Global

Editor-in-chief Eunice Mwaura

Production and coordination Zero Hunger special

Elizabeth Kameo and Nicera Wanjiru

Final editing

Elizabeth Kameo and Pius Okore

Contributors to this issue

Abdulwadud Bayo	Alice Nduta
Tina Byaruhanga	Pinkleen Oinokwesiga
Elizabeth Kameo	Cynthia Omondi
Emmanuel Mandebo	Michael Timonah
Ramlah Mustafa	Nicera Wanjiru
Eunice Mwaura	Henry Williams
Eva Nakato	McWilliams Wasswa
Martha Nalukenge	Bio Séké

Special editorial advisor

Marc Broere

Art direction, design and layout

Najuma

Cover McWilliams Wasswa

Printer Veldhuis Media and Tuliza Ventures

Website www.viceversaglobal.com

Email info@viceversaglobal.com

This special was produced in cooperation with and financed by Fair, Green and Global (FGG) Alliance; the Hunger Project Netherlands; Netherlands Food Partnership (NFP); Sowing Diversity= Harvesting Security (SD=HS); SNV; Wageningen University and Research (WUR); Woord en Daad; World Vision; and ZOA

Zero Hunger SPECIAL
AUTUMN 2023
Year 2, Issue 2



Eunice Mwaura
Editor-In-Chief
Vice Versa Global

We are excited to present to you yet another Special Edition. It speaks true to the words of the African Development Bank president Dr Akinwumi A. Adesina; **Africa can and must feed herself.** In this special edition, we capture an inspiring journey through the challenges and creativity of various individuals, communities, and organisations. Through this, a diverse tapestry emerges, highlighting our shared mission of achieving food security. With each lens focused on local heroes, we capture initiatives that embrace traditional wisdom. We then fuse it with cutting-edge technology, demonstrating that progress can be rooted in heritage while embracing the future. This edition unveils a vibrant narrative that extols not just the hurdles faced, but the resourcefulness and determination that fuels transformative change. A narrative that inspires a shift in perception and portrays Africa as a continent of solutions rather than problems.

This shift in narrative is not just a celebration of local solutions; it is a call to action. By disseminating these stories far and wide, we hope to cultivate a web of awareness that transcends geographical boundaries. That beckons us all to recognise that solutions are rarely one-size-fits-all; they are as diverse and nuanced as the communities that craft them.

It prompts us to embrace a collaborative approach, where knowledge is shared, ideas are nurtured, and innovation is fuelled by the collective wisdom of the global community.

In closing, the journey of *Vice Versa Global* should remind us that narratives are not merely stories; they are the building blocks of transformation. As we bear witness to this shift in the narrative, we are calling you to be active participants in fostering a world where challenges are met with determination, solutions are born from ingenuity, and every individual's story is a thread woven into the fabric of progress.

ZERO HUNGER:

TIME TO EMBRACE SUSTAINABLE APPROACHES

Welcome to the second edition of the *Vice Versa Global Magazine*, the *ZERO HUNGER SPECIAL* - about Africa and its food basket. In this issue we highlight answers to questions on whether Africa can feed herself and if she can indeed be hunger-free. We look at what is happening toward achieving a food-secure continent, the challenges faced and solutions found.

The prevailing narrative of the hunger problem in Africa is not only outdated but also insulting. Through this Special, *Vice Versa Global* aims to highlight stories of hope as Africans find African solutions to end hunger. From the vast plains of Chikwawa in Malawi to the fertile fields of Adjumani in Uganda, there is proof of the resilience and resourcefulness of African people in their pursuit of food security. The stories within are evidence that Africa has the means to feed herself and become a Global Agricultural Powerhouse. Communities in Adjumani exemplify the unwavering spirit of farmers against the background of fertile land, innovation, and hard work as populations lay the groundwork for bountiful harvests. They have found smart practices through research by the farmer field schools and are defying challenges posed by climate change and securing their livelihoods.

In Chikwawa District, Malawi, communities are breaking free from the shackles of food insecurity as they tackle challenges brought on by recurring floods. Their unwavering spirits shine through as they embrace resilience and adaptability.

Throughout Tanzania, Benin, Nigeria, Ethiopia, and Kenya, communities are finding ways of changing the narrative. Young women and men are going back to the rural areas to become farmers. Communities are turning their attention to previously overlooked local food crops to enhance food security and improve nutrition. And they are finding winning solutions.

For Africa to become food secure, the continent must invest in agricultural research and innovation to drive transformative change. Local research institutions need to be supported—as does knowledge sharing and imparting—if Africa is to continue developing specific solutions to its unique challenges.

The role of women in Agriculture—and ensuring their access to resources and decision-making—is crucial and must be recognised. Empowered women farmers can drive change and boost Africa's agricultural productivity.

The time has come for the world to see Africa through a new lens; an Africa that can feed herself and has the potential to attain Zero Hunger. It is time to embrace sustainable approaches that ensure locally-produced food is available for the people.



Elizabeth Kameo and Nicera Wanjiru,
Coordinators - *Vice Versa Global Zero Hunger Special*

Why it is #morethanjustafishhead for me

One of my favourite childhood memories is of our walks after an afternoon nap—over the weekend or during the holidays. The goal was always the same; find fruit trees and feast. We never waited for fruits to be bought at home, we found them. Our neighbours and friends would call us over when their trees were ripe with fruit. Unknowingly, even as children growing up in an African country, we ensured we had the recommended fruit intake to stay healthy. That is how I know one does not have to be rich to eat healthy.

by Elizabeth Kameo

Whenever I sit at the top of a short flight of stairs, I am taken back 30 years. I remember a young skinny girl with long hair, watching and waiting patiently as her mother ate the flesh off a fish's head.

Then the mother would lovingly pass on—first the fish eyes—to the young girl, which she would pop into her mouth. Then the gills, and finally the fish head bone, from which the little girl would suck the delicious juices and chew on the soft bone. Mother always told the little girl the gills would make her more intelligent, while the fish eyes would give her strong eyesight.

That little girl was me. While my mother was spot on as far as the intelligent part was concerned, if she were still alive, I would have told her she got the eyesight part wrong; I can barely see without my glasses! On the rare evenings when she was home (she worked for Uganda Airlines), she always asked for a fish stew to be cooked. Then I knew I was in for a treat. Just before the stew was ready, she would settle down on the top stairs that led to the terrace. This was at the front of our small-town house in Entebbe.

She would watch passersby and sometimes call out greetings before asking to be served the fish head. That was my cue! I would rush from wherever I had been playing, wash my hands, sit down, and wait patiently. Sometimes in silence, other times telling on my siblings. I would watch as she ate all the flesh on the fish's head and then get the cherry on top, my favourite parts—the eyes, gills and head bone. It was more than just eating fish.

The meal was always fresh. Entebbe is surrounded by Lake Victoria so fresh fish is always in abundance. Sometimes it was delivered still flapping by the local fishmonger. I never understood

why my mother always ate fish heads *hors d'îner* and I reckon I never will. All I know is that these moments have made me love food a little more. They have also influenced how I look at and respect fresh produce and healthy food.

It is from these very stairs that I remember how we looked forward to fruit seasons. From here, we monitored the progress of the ripening of the jackfruits that grew in the compound at the back of the Uganda Electricity Board (UEB) office building.

I do not think I have, nor will I ever taste jack fruit that sweet. Entebbe at the time was a place where everyone knew everyone. When the fruits were ripe, the guards would pick them, slice them up, and share with those close by.

Growing up, our fruit intake was supplied with homegrown fruits. Each season had different fruits that were shared among neighbours. All one had to do was ask and choose as many as they wanted. We were advised not to waste fruit and 'pick what you can eat and come back tomorrow for more.' During mango season, we looked at our neighbours who had two giant mango trees in their backyard. Other times we walked to the home of a grand aunt who lived about ten minutes away, picked, and ate as many as we wanted.

The physalis season was the most challenging. The only place they thrived was on a plot of land occupied by the town scarecrow known as Matovu. We had to climb over the back wall of our house, sneak onto the unkempt land, and 'steal' it. After that season, came the *jambula* (java plum or Indian blackberry) season. The biggest tree was down on Hill Road.



Elizabeth Kameo during a cooking demonstration of Local Food Plants in Pekele community, Adjumani

When the fruit trees in the compounds were bare, there were botanical gardens. This was one of the most exotic places in Entebbe and a fruit heaven in my eyes. Never mind we sometimes had to fend off mean small monkeys who thought the fruit belonged to them. Or the mean guard who believed fruits were only for garden beautification, not eating.

And then there were my mother's huge, purple sugarcanes by the house. Mother had 'green hands' and her sugar canes proved this. She also kept a vegetable and banana plantation garden. The fact that we lived smack right in the middle of Entebbe town never hindered her from keeping a garden. We were neither rich nor poor. But we never lacked healthy meals. That is why I am baffled by those that say Africans cannot have food and nutrition security because of poverty!

I grew up on three healthy meals a day, and a snack, in 1980s Africa. On any given day, my plate was colourful and filled with nutritious food. There was always a portion of carbohydrates, proteins and greens. They ranged from *matooke*, cassava, potatoes, yams or *posho*, with sauces such as fish, beef, chicken, beans or groundnut paste. Chicken was mainly a Sunday or Christmas thing back then.

We always had vegetables during our meals or green leafy vegetables. My love for *nakati*, the bitter tomato or Ethiopian eggplant, and *katunkuma*, bitter berries, is still strong. The easiest vegetable to get was *dodo* (amarantha) which grew everywhere and in every household's backyard. Once a week, our immune system was boosted by boiled *mukene* (silverfish) stew. I preferred this to the cod liver oil my mother always brought back from England.

So, when I hear someone say we cannot have food and nutrition security, I look back at all this and realise there is a mindset problem. It is a shame that with all the trimmings of modernisation and development today, we still believe Africa cannot be food and nutrition secure. And that Africans cannot have healthy meals because they are poor.

My fish head story is one I have told my 13-year-old son countless times. It is now 32 years since my mother died, but I continue to convey the importance of healthy eating to him. He never saw his grandmother, but her legacy lives on through the fish head story. Perhaps if all Africans treasured their memories of their 'fish head' stories, we would realise that eating healthy and food security is possible in Africa. 🌱

The 'rich feed the poor' mentality needs to CHANGE

by Tina Byaruhanga



As the clock ticks, the big question remains: Will Africa achieve Sustainable Development Goal 2 - Zero Hunger? Leading African experts are setting the pace to ensure Africa feeds itself. Rowlands Kaotcha, The Hunger Project Global Vice President and Director for Africa and Mexico, discusses Africa's progress towards its achievement. He emphasises the need to raise a generation that rejects hunger and is willing to transform food systems for a hunger-free world.

Where does Africa stand regarding the achievement of zero hunger by 2030? 'Hunger is unfortunately rising again. According to the "State of Food Security and Nutrition" in the World Report, about 783 million people faced hunger in 2022. While we can blame the COVID pandemic for this, we were already off track to achieving the zero hunger goal.

'This situation started after 2015, with increased malnutrition and obesity, primarily in communities facing hunger. Another observation is the growing gender gap within vulnerable communities. We won't achieve it unless we radically shift our approach. Vulnerability is increasing in Africa, despite rising income levels. The cost of food is also rising rapidly, leaving millions without adequate resources.'

Why do you think we will not be able to meet this goal?

'We can create a world without hunger. It's possible. However, it's a complex issue. The main drivers are global economic forces—including the ongoing Russia-Ukraine war—impacting those in vulnerable situations.

'Climate change also plays a role. It is now evident that farmers can not grow crops the same way they used to a few years ago. Shifting weather patterns destroy crops, increasing reliance on expensive international food systems. Conflict is another factor, leading to food insecurity, and serving as a catalyst for more conflict. The recent coup in Niger is a prime example. These realities expose us to even greater vulnerability.'

Do you think the current approaches are working and if not, why?

'We need to review the systems we've created to feed our planet. They may have worked in the past, but they are not achieving our goal of ending hunger. It's time to shift our mindset and invest in building resilient communities and local food systems. After World War II, famine was widespread and hunger relief was the default response. Many of our current hunger responses were born during that time, with the main goal being relief.

'In 2000, the United Nations introduced a goal to reduce hunger by half. Though not fully achieved, progress has been made, giving us the impetus to aim higher. The new goal: end hunger by 2030. As you can see, there has been a shift in the agenda from relief, to reduce hunger by half, to end hunger by 2030. However, our approach remains unchanged.

'Instead of empowering local communities and investing in local food systems, we still rely on building massive global food systems. The mindset of "the rich feed the poor" needs to shift. We must support local leadership and create sustainable local economies even when there is conflict at a global level. Our relationship with nature also requires balance and support for the future, not just short-term exploitation.

'We must create a food system that not only feeds the present generation but also regenerates itself to nourish future generations. Instead of perpetuating a mindset of dependency, we should empower individuals to unlock their potential and work towards a sustainable world, thus ending hunger.

'What we are currently doing is perpetuating a mindset of dependency where the masters feed the victim. We need to realise there are no victims, just people who need to be empowered to unlock their potential and work towards a sustainable world, thus ending hunger.'

In your point of view, what changes should be made?

'Moving forward, we need a new approach: not just reducing hunger but creating a world without it. Instead of perpetuating hunger, let's build inclusive systems where everyone takes responsibility to end it. We must educate future generations to reject hunger and transform our food systems to create a new world without hunger, not one where it is regenerated.

'Let's ask ourselves critical questions like; How would a community with a transformed food system look like? What does an ecosystem that is leveraging its youth and women to take charge of the food system look like? What should the new relationship be between the private sector and a functional local food system in a hunger-free future? Are our policies aiming to eradicate hunger or perpetuating a broken system?

'We must reassess these issues and develop effective approaches instead of repeating the same ones. At The Hunger Project, we support communities in building sustainable and resilient food systems by empowering small businesses, youth, and women-led initiatives. In non-emergency situations, international food aid from charities and organisations is not the solution as it fosters dependency and enables governments to evade their responsibilities to their citizens.'

How does The Hunger Project's vision and mission, which was unveiled this year, link with overall efforts to ensure Africa achieves SDG 2?

'Over the past two years, our global team assessed world hunger and identified gaps in ending it. A key observation was that although the number of undernourished people decreased significantly from 2005 to 2008, hunger is sadly resurging. Humanity's global system allows hunger to persist, a by-product of injustice.'

'Despite being intolerable and unacceptable, hunger persisted and worsened during the COVID pandemic. Our new vision and mission aim to prevent hunger and create a future where it is not tolerated. In short, it is an expanded platform, an evolution, not a radical change. This expanded platform offers new programmes, thought leadership, and opportunities for collaboration with community partners, governments, investors, and NGOs.

'By the end of this phase, we aim to foster effective leadership, particularly among women and youth, who play crucial roles in building self-reliant communities. Our goals also include improving access to resources, promoting proactive government involvement, and securing funder commitment. Hunger emerged as a global issue after World War II, commonly referred to as famine.

'Previous beliefs considered hunger inevitable and those affected as helpless victims. The Hunger Project, launched in 1977, distinguished between famine, starvation, and chronic hunger, which predominantly impacted women and children. We asserted that hunger could be eradicated by providing opportunities for people to cultivate their food. Our methodologies empower individuals, regardless of their location, to overcome hunger.'

Why are the youth and women important in driving a new agenda for food systems in Africa?

'Africa has a predominantly youthful population. If we set the context right, we can harness their energy effectively instead of letting it go to waste. If we do not, the youth will revolt one day, because they are dissatisfied with the status quo.

'We need to review and understand what needs to be done to engage them productively. Women on the other hand are feeding the continent because most smallholder farmers are women. Instead of producing policies that foster land grabbing from them, rendering them peasants, we should promote their land ownership in the agricultural sector.

'We need to put in place policies for them to thrive because they will invest in their well-being, as well as that of their communities and Africa as a whole. Unfortunately, we overlook the significant contribution of the youth and women as key players in the agricultural sector and their impact on food systems. When you drive out smallholder farmers, you are driving out women farmers. There is clear evidence that points to the fact that they are the ones feeding our nations and our continent.'

Rowlands Kaotcha giving a lecture at a workshop



The power lies in the hands

of the **small
scale
farmer**

*Grace Barina, a member of
Golimori Farmer Field School
grinding okra seeds to make
coffee*





Communities in Uganda's West Nile sub-region are changing their approach to ensure they are food and nutrition-secure. From farmer field schools (FFS) to community seed banks, kitchen gardens and cooking demonstration classes, they have found the winning card. They are proving that Africa can and will be able to feed its own. It starts with knowledge, practice and planning. There is a journey of rediscovering Local Food Plants (LFPs), also referred to as Neglected and Underutilised Species (NUS), and bringing them back on their menus.

*Text by Nicera Wanjiru and Elizabeth Kameo
Images by McWilliams Wasswa*

Approaching Maxwell Kejaga and Grace Barina's compound in Sube Village, Ofuwa sub-county, Adjumani district, we're greeted by a tantalising nutty aroma. The scent hints at freshly roasted coffee beans, sparking our excitement for a comforting cup of brewed coffee. Intrigued by the source of this fragrance, we discover that the women are roasting okra (Lady Fingers) seeds to make okra coffee.

'This is an example,' Albert Obuoja explains, 'of the different ways members of the farmer field schools are creatively utilising local food crops to provide nourishment for their families. We save money by transforming okra seeds into natural, organic, and healthy coffee.' Obuoja is a facilitator of the Golimori Farmer Field School.

'The men harvest the seeds, while the wives roast and grind them to make coffee. Everyone is happy. However, okra, despite its many benefits, is often disregarded due to bitterness, unpleasant textures, or wild growth,' he says. 'It is for such reasons that we were inspired to explore creative cultivating methods and recipes for these food crops to ensure sustainable food and nutritional security.'

Teopista Mazira, 38, is a wife and mother of seven. She tends to her 2-acre farm with her 3-month-old baby snugly strapped to her back. She shares her journey of embracing the nutritious benefits of okra and scaling up its cultivation. Her face lights up as she talks about it. It not only provides nutritional value to her family's meals but also contributes to her economic stability. She also grows tomatoes, sorghum, millet, maize, and rice.

'I never cooked okra for my family before as it was expensive. I thought it only grew wildly and disliked its slippery nature. In 2022, I learned about its health benefits and nutritional values through farmer field school training. Afterwards, I obtained seeds from my grandmother and planted a whole plot,' she explains.

Now, she confidently discusses its benefits and engages in seed multiplication, considering it a valuable treasure. 'We can cook it in various ways, as I discovered during cooking demonstration classes. It can be dried and used in powder form, mixed with different foods or drinks. Pregnant women find it helpful in easing labour pains. We even make coffee from its seeds.'

The formal seed system often overlooks their needs, with indigenous people, and smallholder farmers—especially women—having little input in the plant breeding process

In addition to being a farmer who can feed her family, Mazira has also become a businessperson. Her family's food and nutrition security have significantly improved. 'Regardless of the season, I can provide my family with a balanced diet,' she says. Like all members of the school, she recognises the invaluable role they play in enhancing food and nutrition security within her community and surrounding areas.

In 2020, the Eastern and Southern Africa Small Scale Forum (ESAFF-Uganda) implemented the farmer field schools approach in the West Nile sub-region. This initiative aims to improve small-scale farmers' access to Plant Genetic Resources (PGR) and promote the use of local food plants, enhancing food and nutrition security. The FFS in Adjumani district is among the 54 established by ESAFF-Uganda in Amuria, Apac, and Adjumani districts.

These community-driven schools build farmers' capacity in agro-economy, crop research, production, value addition to food, seed banking, and group saving and loaning through the Village Saving and Loans Association (VSLA). They specialise in research on various plants, including leafy vegetables, beans, rice, millet, sorghum, maize, and potatoes, aiming to develop drought-resistant, high-yielding, early-maturing, pest and disease-resistant seeds adaptable to different soil types. These studies involve participatory variety selection and enhancement in plant breeding.

'They were established as a response to the challenges faced by farmers in accessing seeds. Having learned about an FFS project in another community through their membership in ESAFF-Uganda, some members expressed the need for a similar initiative in their community,' explains Margaret Masudio, chairperson of ESAFF-Uganda Adjumani district.

Sustainable change through Farmer Field Schools

Tandru Passi is one such remarkable school. Established in 2017 as a savings group, it evolved into a fully-fledged school in 2020. Presently, its focus lies in the study of millet seeds. After two seasons, they found what they believe is their best variety of millet; the NARO Mill 5. It takes 85 days to mature and is drought-resistant.

'We no longer worry about going to bed hungry. Even during droughts, we have local food plants to feed our families. Relationships are better and cases of GBV, resulting from husbands not giving money for food, have reduced,' says Evaline Ababiko, another

member. 'We know the neglected food crops and have drought-resistant, quick-maturing varieties. With these, we can provide our families with food and nutrition.'

At Amanzuluku, Richard Kinyara, the chairperson, is now a happy rice farmer. 'After three seasons of research, we finally found the variety that meets our objectives of drought tolerance, pest and disease tolerance, early maturing, and high yield. We studied nine varieties and chose the best one for promotion among members.' This research has not only provided farmers with testing opportunities but also helped them learn best practices in rice production. Today, Kinyara and other rice farmers are preparing their fields to start large-scale rice cultivation.

The FFS has bridged the gap between the local and refugee communities by providing land for them to grow their food. As food rations from aid organisations decreased in the past three years, refugees struggled to have enough to eat. Seeing their plight, the members welcomed them into the group.

Ariyo Jessica, a 20-year-old beneficiary, rents a piece of land from a member to grow food for her family. 'With reduced food rations, we had to find ways to feed ourselves. Joining the FFS allowed me to grow food for my parents and siblings on a piece of land provided by a member. We are a family of eight, and the food rations we used to receive only lasted for about two and a half weeks.' Ensuring food security for the refugee community goes beyond its primary goal. The FFS has also fostered peace, harmony, and lasting relationships between communities.

Small-scale farmers in developing nations play a crucial role in global food production, yet they are disproportionately vulnerable to food scarcity. Power dynamics within the production and distribution of food, exacerbated by unequal land ownership and the impact of climate change, further aggravates these disparities. Limited access to high-quality, locally adapted, and climate-resilient seeds is a significant challenge for smallholder farmers.

Hellen Adiyio and Juliet Abiyio, members of Golimori Farmer Field School, at the group's weekly meeting



A proud and smiling Teopista Mazira in her flourishing garden



The partner organisations work directly with the farmers to ensure that the skills acquired in the training cascade down to the grassroots

The formal seed system often overlooks their needs, with indigenous people, and smallholder farmers—especially women—having little input in the plant breeding process. Additionally, regulatory hurdles hinder the use of farmers and improved varieties for seed production and marketing by communities. Recognising the complexity of these issues, the programme forms partnerships with national NGOs, government institutions, academic bodies, and breeding and research institutes.

The Dikiri ne Etego FFS provides evidence of knowledge sharing and application. With 30 members, it focuses on promoting LFPS for food and nutrition security. Their quarter-acre demo garden showcases diverse crop varieties, aiming for seed multiplication. Despite limited space, they maximise land use. 'The FFS's work is based on participatory variety selection, enhancement, and food security and nutrition. The third pillar aims to revive neglected underutilised species (LFPS) that were once grown and eaten by previous generations,' Oweka explains.

Consolate Rachiu and her husband Michael Ozele, both members, established a home kitchen garden after receiving training from the FFS at the end of 2022. On days when they have no harvest from their bigger farm, which is closer to the border of the Democratic Republic of Congo, she always finds food in her kitchen garden. The cherry on top has been learning how to prepare all the LFPS in different ways. 'The first time I prepared pasted *jiri* in a pot, after taking part in a cooking demonstration class, my family loved it, yet they used to find it bitter.'

Since 2010, they have been engaged in small-scale farming but had never considered having a kitchen garden. Instead, they relied on the crops grown on their farm. However, the introduction of a kitchen garden has revolutionised their approach to food. 'Now, I provide my family with a balanced diet,' says the mother of three.

Seed banks - promises of wealth, hope and food security

In Pakele, Adjumani District, a small orange building by the roadside stands out among the traditional grass-thatched huts that make up the homesteads. A plaque on the front reads, 'Constructed and equipped by Eastern and Southern Africa Small Scale Farmers' Forum - Uganda (ESAFF).' Next to it is additional writing that says 'with support from African Women's Collaborative and OXFAM.'

This building houses the Pakele Community Seed Bank. Inside, there is a variety of seeds. 'This is wealth,' says Margaret Masudio, chairperson of ESAFF Adjumani, as she points to the jars filled with different types of food crop seeds. Located a day's drive away, the Mic Parwoth community-managed seed bank in Nebbi overflows with neatly arranged seeds of various food crops.

'The land where the seed bank was constructed was a gift from one of the members. It used to be housed in a different place,' says Alfred Onegi, the group secretary. The seed banks, initiated by the FFS and funded by Oxfam via PELUM Uganda, not only provide seeds to small-scale farmers but also impart knowledge.

'Farmers also learn about optimal quantities per acre, expected yields, market sourcing, and saving through the Village Saving and Loan Association (VSLA),' Richard Ofungi, the chairperson says. 'Additionally, the seed banks aim to support members' children's education by offering loans guaranteed or repaid based on the stored seed quantity.'

The seed banks work with registered farmer's groups or individuals. Depending on the community, they pay a membership fee of between USD 1.30 to 10. The money is used to maintain the seed bank and cover other daily costs. At harvest, members bring their seeds which are exchanged or sold to other farmers. In cases where farmers cannot afford to pay the membership fee, they are loaned the seeds.

However, they are mandated to pay back twice the quantity they borrowed after harvest. This is done to increase the quantities of seeds in the seed bank and to reach out to more farmers. Through the seed banks, communities in the West Nile sub-region have found innovative ways through which they are rendering households, especially those of small-scale farmers, resilient and more food secure.

Saving infant lives with Local Food Plants (LFPS)

'That is 'cocosunga' (climbing bean) and the other is 'mugu' (climbing yam),' Beatrice Dropia says, pointing at two local food plants. She is the chairperson of 'Uribadrika' (do not confuse us) Farmer Field School in Kololo village, Adjumani district. 'They had disappeared, but we found them and are regrowing them. Our forefathers used to eat them and they never went hungry. We had forgotten about them, yet they are very nutritious.'

Halfway through her explication, she calls out to a group member: 'Agnes is living proof of how important and nutritious these plants are.' She then asks Agnes Achan to tell her story—how a local and formerly neglected food crop, 'kerekede' (Hibiscus), saved her infant son's life. 'After giving birth to my first child,' she begins, 'I had no breast milk and could not afford to buy milk for him. I did not know what to do. Then one day a neighbour came to my house and asked if I knew a plant called 'kerekede'. I had never heard of it. She told me to find it and use it to feed my son.'

'I went, picked it, and soaked it in water as I had been advised. I sieved it to ensure there were no residues left and started feeding my son as you would with a bottle of milk.' Her son regained his health as a result. 'You should see him now, he is a 6-year-old healthy big boy in school.' Once again, she is nourishing her second

6-month-old son with hibiscus juice due to insufficient breast milk.

After joining the Uribadrika FFS and participating in various trainings, she started growing hibiscus to generate income. She invested in solar power for her home, paid her son's school fees, and even set up a savings account.

Sowing Diversity equals Harvesting Security - empowering small-scale farmers

Oxfam, its partners, and communities identified a gap in accessing quality seeds in Uganda. This led them to change the narrative and ensure food and nutrition security among the communities.

'At the time, we were implementing a strategic partnership programme funded by the Dutch Ministry of Foreign Affairs. It aimed to promote food sovereignty through community-managed seed security,' Charles Opiyo, Resilience and Livelihoods Manager at Oxfam Uganda, explains. 'The farmers desired indigenous seeds. However, we discovered that most of what they had access to were not suitable for replanting. Thus, when the opportunity arose, Oxfam and its partners sought to empower them by managing, developing, and accessing genetic materials for food security more sustainably, despite the challenges of climate change.'

This led to the establishment of the SD=HS programme in Uganda. 'Although the programme had been successfully implemented in other countries, it had not yet been introduced in Uganda. Our goal was to establish it to enhance crop diversity within the community, thereby ensuring food security. By promoting diversity, we aimed to mitigate the impact of climate change and drought, preventing individuals from facing complete devastation in such situations,' he says.

Margaret Masudio during a training session with members of Golimori FFS



Oxfam Novib and Oxfam Uganda's role, Opiyo explains, has been to provide technical support in the schools. 'This support is tailored to bringing farmers together, so they share experiences by facilitating the learning process. We train our partners so they can work with the farmers to build capacities and ensure these skills cascade down to the grassroots.' This is made possible through partnerships that have been forged with ESAFF, PELUM, and CEFORD.

The partner organisations work directly with the farmers to ensure that the skills acquired in the training cascade down to the grassroots. 'Our job is to ensure they have the training and capacity to make their choices. It starts with crop improvement using participatory methods. They choose those varieties of seeds that suit their agroecological conditions through participatory variety selection,' he says.

'Farmers are not restricted in their choice of plant varieties. They follow specific criteria like maturity time, pod production, and cooked variety shelf life, to carefully select the most suitable ones.' They also receive training in variety enhancement to improve local varieties affected by time and climate changes.

'After variety selection and enhancement, they focus on multiplication and making a business out of all this. This leads them to engage in local seed production and marketing, then into ensuring that local food plants which are not staple, contribute to improving household food and nutrition security,' Opiyo says.

To ensure success, an enabling environment is created by all institutions involved. 'If a farmer improves their variety but faces institutional bottlenecks, we ensure that the policy environment favours them. These four components make up the SD=HS programme.'

To achieve this, he affirms that they have engaged various stakeholders from different ministries and government entities to reinvigorate discussions on plant genetic resources policy for agriculture. Stakeholders included the Ministry of Agriculture, Water and Environment, and Uganda Wildlife Authority, among others. 'This has helped revive discussions on the need to pass the genetic resources policy to some extent,' he states.

Through activities like participatory plant breeding, policy changes, and initiatives such as okra-seed coffee and community seed banks, the SD=HS programme, along with its partners and farmers, strives to create a fairer and more resilient food system.

Still carrying on - Nebbi's success story

Four kilometres from the border with the Democratic Republic of Congo, lies the Nebbi District. 'The focus of those who were part of the project is food and nutrition security. The farmers continue to benefit from FFS and demonstration farms supported by seed banks. Even after the project's completion, farmers pass on acquired knowledge and train others,' Jude Deogratius Oweka explains.

He is the Project Officer for the Sowing Diversity = Harvesting Security (SD=HS) project and oversees its implementation in the Nebbi District through PELUM and its partner CEFORD (Community Empowerment for Rural Development). SD=HS is a collaboration between Oxfam Novib and national organisations that support all smallholder farmers in accessing, developing, and utilising plant genetic resources to enhance food and nutrition security in the face of climate change.



Left: Innocent Achan showing off, the rich, dark, fertile soils of Adjumani
Below: A display of the different meals prepared from LFPs



Betty Luguwa during a LFPs cooking demonstration activity in Pekele

SD=HS

The Sowing Diversity = Harvesting Security (SD=HS) is a programme in a race to protect food now and in the future. The program works with Indigenous people and smallholder farmers in 8 countries in Africa, Asia and Latin America. These include Uganda, Zambia, Zimbabwe, Peru, China, Nepal, Lao PDR and Guatemala.

SD=HS is the joint effort of Oxfam Novib one of the 20 affiliates of the Oxfam Confederations. Oxfam Novib is also recognised globally as a leading civil organisation with a firm track record in the field of plant genetic resources. The programme aims to ensure there is increase in the level of crop diversity in the communities, so communities are food secure.

To achieve the goals, the SD=HS programme works in partnerships and invests in alliances with likeminded NGOs, government institutions, academic bodies and national breeding and research institutes.

Through these partnerships it brings forth expertise in quality seed development, policies and regulation, local enterprise development and public-private partnerships.

In Uganda the SD=HS programme is implemented in nine districts in northern Uganda and the West Nile region through the non-accessible Farmer Field Schools (FFS).

OXFAM Uganda works with partner organisations including the Eastern and Southern Africa Small Scale Farmers Forum (ESAFF) and Participatory Ecological Land Use Management (PELUM-Uganda) which has subcontracted Community Empowerment for Rural Development – Uganda (CEFORD – Uganda).

To date the program has led to great innovations such as Okra Coffee by women of Adjumani district, Uganda. Through methodology, community seed banks and alliances with relevant governmental and private institutions, the SD=HS programme empowers farmers to conserve, develop, exchange and sustainably use diverse plant genetic resources to improve their livelihoods and improve food and nutrition security.

SD=HS focuses on 4 pillars which include farmer's crop improvement and adaptation to working with resilient indigenous and farming communities and improved production and improved market access to high quality seeds diverse crops and varieties.

The third and fourth pillars aim at improving nutrition and local food-plants to strengthen coping strategies of communities and works on attaining an enabling policy and institution environment.



Nurturing

‘Educating children about the importance of a balanced diet at school helps them develop healthy eating habits that last a lifetime’

ENSURING FOOD AND NUTRITION SECURITY FOR CHILDREN

Text by Eunice Mwaura and Cynthia Omondi
Images by Cynthia Omondi

It is estimated that 23 million primary school-age children in Africa attend classes hungry. Malnutrition is also responsible for 45 percent of deaths among children under five. Victoria Friendly Montessori on Rusinga Island is trying to change these statistics. In addition to feeding children at school, they also provide food and nutrition education to parents.



Victoria Friendly Montessori students are served two meals a day—breakfast and lunch. In the morning they drink porridge, composed of millet, sorghum, cassava, and ground nuts. They are also served a meal at lunchtime which varies depending on the day of the week, and fruit every day.

‘These meals prevent them from being susceptible to diseases; a well-nourished body is better equipped to fight off infections and diseases,’ says Jackline Atieno Opala. She is the school’s nurse.

‘Ensuring proper nutrition is a fundamental pillar of child healthy development. Children’s food during their early years lays the foundation for their growth and overall well-being,’ she adds. Her primary goal is every student’s well-being and optimal health. She started working at the school six years ago. In contrast to when she began, she says there has been a gradual improvement in the quality of nutritious food on the island.

‘Educating children about the importance of a balanced diet at school helps them develop healthy eating habits that last a lifetime. They will carry this over into adulthood and reduce the risk associated with poor dietary choices,’ she says. Following a study conducted by the Green Food Foundation, the school implemented a nutrition project. This was after the realisation that children who attended the school were at nutrition risk due to only having fish and *ugali* (cornbread) as a staple for all meals.

‘We got a visit from The Green Food Foundation which conducted a comprehensive study that involved blood tests among some of the children. The results were worrying. Most of them were anaemic,’ she explains. These findings, Opala says, raised significant concerns about the nutritional quality of the food they consumed. In response, the Foundation offered recommendations to address them.

They stressed the importance of quantity and quality of food. To tackle this problem effectively, the Foundation is now working on developing a curriculum that can be implemented at the household level. It aims to educate parents and caregivers about the importance of nutritious and balanced meals for their children.

Residents of Rusinga Island on Lake Victoria depend primarily on fish for food. ‘Vegetables and fruits are rarely included in local meals. This poses a nutritional risk to children. We have seen the role schools play in shaping children’s eating behaviours. By teaching them the importance of a balanced diet at an early age, we instil healthy eating habits that can benefit their long-term health,’ she says.

Opala says a balanced diet provides the necessary nutrients, vitamins, and minerals required for optimal physical growth and development in children. Nutrient-rich foods such as fruits, vegetables, and proteins ensure children grow healthily and have the energy to participate actively in school activities.

‘We also teach them about portion sizes. In our quest to address nutrition among children, serving plates designed for young ones play a crucial role. These plates are intentionally smaller than the standard plates for pupils in upper classes, ensuring accurate portion control for the little ones,’ she says.

By using smaller plates, children are encouraged to consume appropriate meal portions, which promotes a balanced diet and prevents overeating. These specially designed plates cater for young children's physical needs and also make mealtime more engaging and enjoyable. Their designs are visually appealing with vibrant colours that capture children's attention, making their dining experience more exciting. By incorporating these small plates into the lives of young pupils, the school takes a significant step toward fostering healthy eating habits and nurturing their overall well-being.

To ensure children are well-nourished both at school and at home, a proactive initiative has been taken by Victoria Friendly Montessori School to educate parents about the importance of kitchen gardening. This innovative approach aims to empower parents with the knowledge and skills needed to grow fresh and nutritious foods in their homes. A walk around the island shows the increasing number of households that have embraced kitchen gardening.



Left: A balanced diet meal served for lunch at Victoria Friendly Montessori school
Below: Nurse Jackline Atieno Opala in the school garden

Through educational programmes and workshops, parents are enlightened about the numerous benefits of growing a garden. They learn about the nutritional value of fresh vegetables and fruits, as well as the positive impact they can have on their children's health and development. Kitchen gardens serve as an effective means to supplement meals with organic and pesticide-free produce, thereby improving their diet quality.

As parents become more knowledgeable about kitchen gardening, they also develop a sense of community. They share tips, experiences, and surplus produce with their neighbours, fostering a supportive network of like-minded individuals. This exchange of ideas further creates a vibrant atmosphere where everyone can learn from each other's successes and challenges. This further strengthens the community bond.

'The initiative to educate parents about kitchen gardening has yielded promising results. By promoting self-sufficiency, improving nutrition, and fostering community engagement, this approach ensures children are well-fed in school and at home,' she asserts.

'As you observe the increasing number of kitchen gardens in the community, it becomes evident that this simple, yet impactful practice has the potential to transform not only the way we eat but also the way we connect with our food and each other,' she concludes. ▽



LET'S FIGHT HUNGER

by Pinkleen Oinokwesiga

It is not like my simple ABCs
That run flawlessly off the tongue
Not like learning how to ride a bike
It's like tripping and falling without training wheels
It kills, and it bruises, from the inside out causing malnutrition
Illnesses or death.

In a place I call home, food insecurity remains high,
With many people struggling day by day to get by
Zero Hunger is just the "goal" we seek,
A world where we all have enough to eat and no debts to pay
Take a look at the Uganda National Household Survey
Where food insecurity is moderate and severe
With indexes at very high levels of 48 and 11 percent respectively
Yet still we seek to have food grown sustainably
More so, distributed equitably!
Do you really think we can save the day?

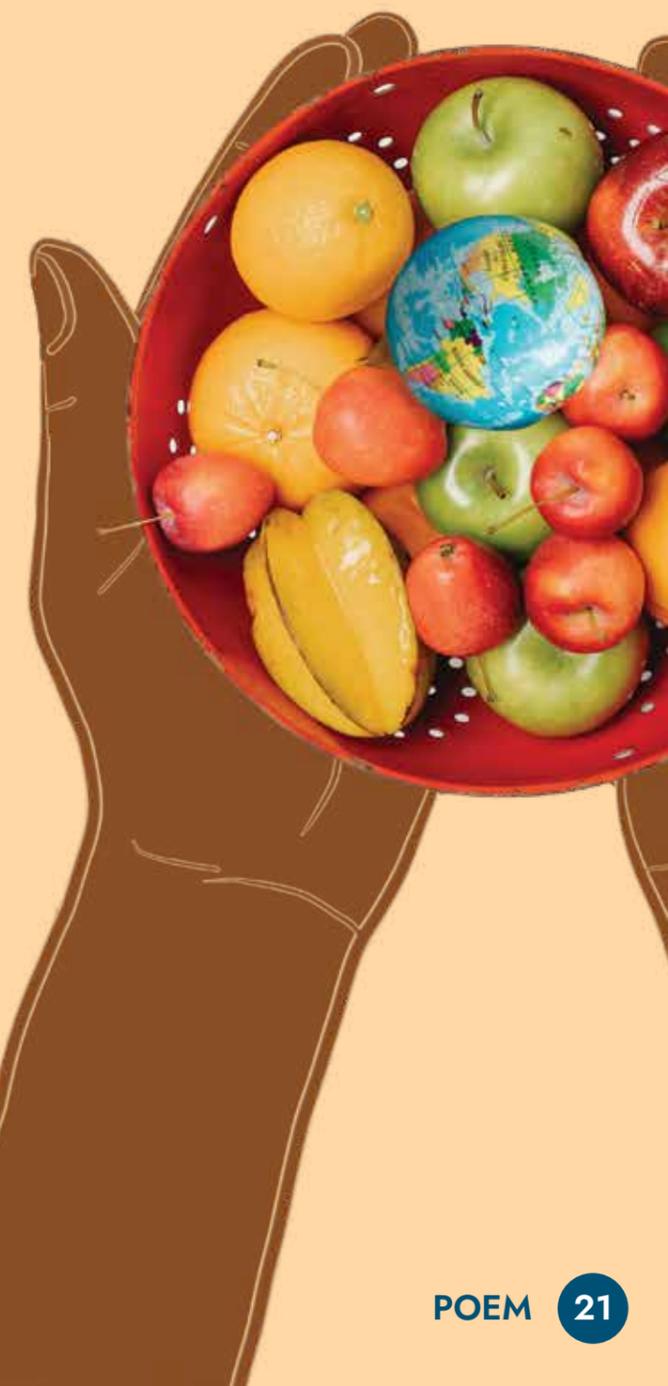
Alas! Hunger is a scourge that plagues my world,
They say it will get better, but when?
It has left many of us unfurled.
Though herein are many bitter truths, I must unfold.
It's ignited by poverty and inequality,
Subsequently, a lack of access to food and stability.

Climate change, natural disasters, and conflict also play a magnificent role,
Constantly, they can disrupt food systems and take their toll.
Like a wildfire, cause food insecurity,
Leaving people without enough to eat, and in a state of uncertainty.
But only immediate action can pull us back from this abyss.

Let's put an end to waste and overconsumption,
Ease access to nutritious food and promote healthy production.
Digitize the agricultural sector,
That is if we want to create a world and generation that is stronger.
Where everyone has access to proper food, diet, and nutrition.
So why not support small farmers too?
Or maybe then we can address the root causes of hunger.

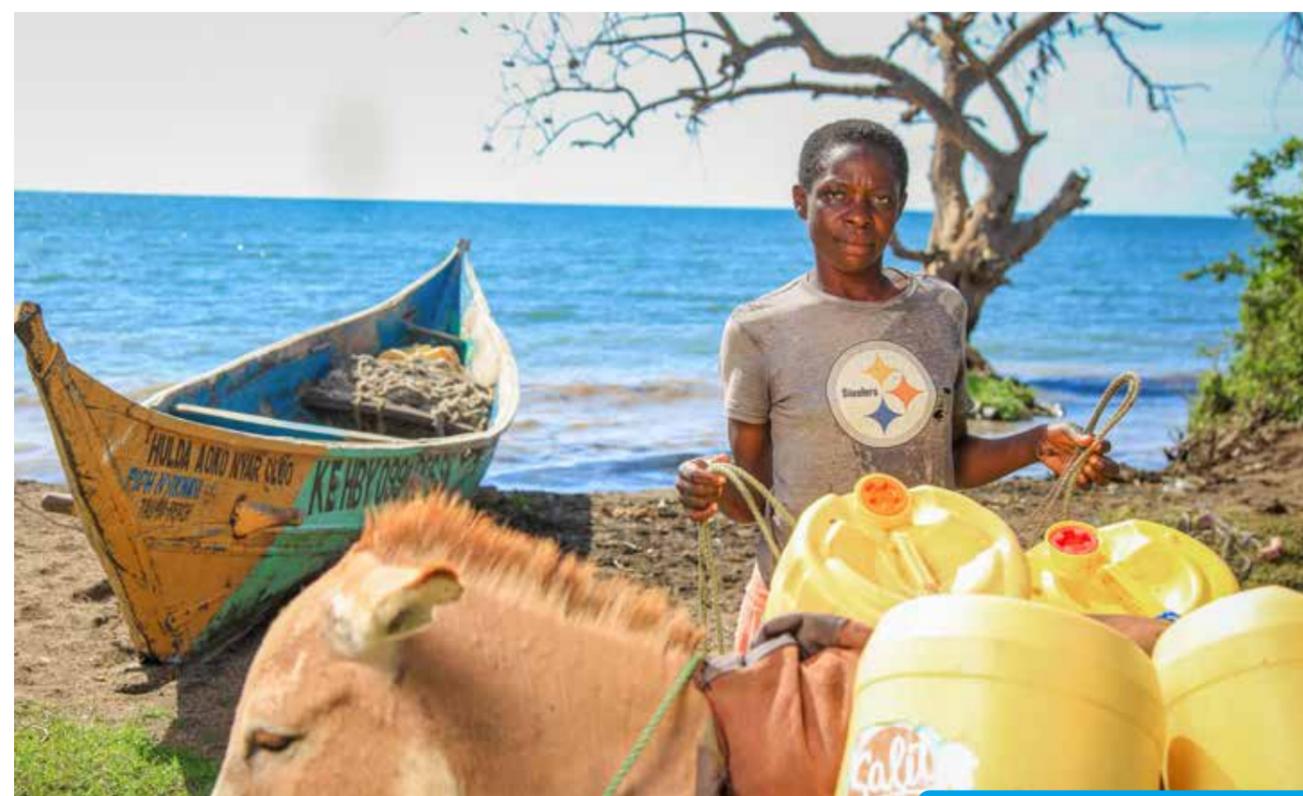
Like, the 89 percent of the population in Uganda
Whose food security is intact
With normal food access from their own production
And acceptable food consumption score and access to at least three meals per day
Here is what I have to say;

Let's put an end to hunger
It kills, and it bruises, from the inside out causing malnutrition
Illnesses or death.





Left: Lensa Atieno carrying a plastic jerrycan on her head
Below: Atieno supporting one of her donkeys loaded with multiple jerrycans



Rusinga Island

WHERE DONKEYS ARE MAKING A DIFFERENCE

There is a captivating story of empowerment and change unfolding on Rusinga Island. Donkeys are emerging as the unlikely heroes in the lives of the local farmer women. Once lauded as agents of development in ancient civilisations, the robust animals are today invaluable to Rusinga's women as they help them pursue sustainable farming livelihoods.

Text by Eunice Mwaura
Images by McWilliams Wasswa

Lush green landscapes sprawl as far as one can see, water-filled trenches feeding into the gardens of several homesteads. A common sight here, these kitchen gardens are changing livelihoods on the island.

Located in western Kenya, Rusinga is one of the many islands on Lake Victoria. Its strategic location makes it, by default, a fishing community and the island's economic backbone. Food sources here have always been dependent on the lake's activities. However, this scenario is changing – and fast. Today, communities on the island turn to agriculture for sustenance. Flourishing kitchen gardens are proof of this change as are the resilient donkeys that are making agriculture less of a burden for women.

32-year-old Lensa Atieno is a perfect illustration of how women on the island embrace this change. The *Vice Versa Global* team meets her as she steers one of her two donkeys to the lake to fetch water. She is one of the women who depend on the animals to ferry water for household and farm use. Donkeys are now part and parcel of their lives. 'I came to fetch water for my plants,' she says, lifting the jerrycans off the donkeys' backs and carrying them to the lake shore to be filled. Once this is done, she carefully loads them on the donkeys' backs to be ferried back to her garden.

Atieno has had the donkeys for three months now. It is an unfamiliar concept to her but one she appreciates. A widow and mother of six, she is her family's sole breadwinner and having the donkeys eases the burden. She used to work as a fish collector, a job she says was neither profitable nor sustainable. 'For a day's work, I earned US\$1.2 (about KShs. 210) which I used to feed my family and pay for their schooling. At one time I could not afford to send them to school.'

After receiving the donkeys, Atieno was trained in how to care for them and ensure they are fit and healthy to perform the laborious work. 'Donkeys are low maintenance. All they consume is grass and water. With them, I am assured of sufficient water,' she says with a smile. Having lost two children to sickle cell anaemia, which doctors said was aggravated by malnutrition, she took to farming to save her remaining children. 'Before I started farming, all we ate was fish. It was all I could afford. I never knew that lack of a nutritious diet could result in my children's death,' she says sadly. However, this has changed.

'I used to wake up at 5:00 a.m. and walk for two hours to and from the lake every day to fetch water. With the donkeys, this has changed' – Adhiambo

'I can now feed my children with food grown in my garden. I sell the surplus food, together with fish and water collected with the help of the donkeys, to supplement my income,' she says. 'The donkeys have made it easier to manage the farm even during long drought periods.' She also grows potatoes, kale, cassava, and rears poultry. Like Atieno, 61-year-old Carina Adhiambo also acknowledges the importance of small-scale farming for food security and the advantage of donkeys. She began by growing vegetables for family consumption in a 10 by 10-unit kitchen garden at the back of her semi-mud and concrete house.

She grows a variety of vegetables, including spinach, kale, onions, and cassava. She sells any surplus to neighbours, generating additional income. By engaging in small-scale agriculture, she ensures household food security and economic stability. The mother of seven moved to Rusinga Island more than 40 years ago after marriage. They sold charcoal with her husband to sustain their family.

'I have been a charcoal burner for the better part of my working life. We used to cut trees, burn wood, and sell charcoal,' she says. She is not proud of it, but it was their only livelihood source. A look around her compound reveals a small herd of goats and a flock of chickens roaming freely. There are also two donkeys, the strongest link in the setting. To others, they are simply animals, but to her, they are treasures.

'I used to wake up at 5:00 a.m. and walk for two hours to and from the lake every day to fetch water. With donkeys, this has changed,' she says. She now makes fewer trips and brings back more water. 'With the donkeys, I fetch more water for domestic use and irrigation purposes. I also sell water to my neighbours for five shillings (less than a dollar) for a 20-litre jerrycan. This provides me with an extra source of income,' she adds happily.

Adhiambo who started farming two years ago on her 10 by 10 kitchen garden unit, now has a 2-acre farm. She grows a variety of crops including potatoes, and fruit trees such as pawpaw and horseradish trees—commonly known as the Moringa tree. Weather changes remain a challenge with island weather patterns barely supporting rain-fed agriculture. This exposes them to long drought spells. The Donkey Project bridges this gap.

'The success of the donkey water project and the overall food security efforts demonstrate that Africa has the potential to feed itself' – Onger

'Sometimes, the drought period lasts for six months which affects our crops. This means more trips to the lake to get water for basic household needs and crops. It is now much easier with donkeys,' she says. Donkeys became a part of the lives of farming women after Victoria Friendly Montessori School realised there was a need to bridge the gap as far as water challenges were concerned.

'When we realised there was a water problem, we decided to start a water project. We took water from the lake uphill to a reserve tank and sent it to houses downhill using solar power,' Philip Onger, programme manager at Victoria Friendly Montessori School, explains. However, he adds, this system did not provide water to residents in hilly areas of the island as they were above the reservoir. To address this, they came up with the idea of giving donkeys to female small-scale farmers.

'Currently, a donkey costs US\$100, about KShs. 14,000. We encouraged the women who qualified to get a donkey to raise a quarter of this amount, and we financed the rest,' he says. The donkey project started a year ago. To date, sixteen donkeys have been handed out. 'We ensure sustainability by providing training to women on how to care for the donkeys. Each family receives a male and female donkey for breeding purposes so that more families can benefit from the programme,' he states.

He confirms that the objective is to establish continuous food cycles throughout the year on the island. 'This not only involves providing access to a variety of food crops but also promoting long-term crops and crop diversity. The introduction of nutritious African vegetables like spiderweed and pumpkins, as well as the horseradish tree, has been a notable achievement.'

'Changing the mindset about farming has been challenging, particularly among the younger generation. They often view agriculture as a menial and undesirable occupation. It is imperative to instil the right mindset in children and youth as they are the future custodians of food security,' he asserts. 'We are working towards achieving this by involving the young generation through the promotion of a positive view of farming. This will ensure a sustainable future for food production on the island. The success of the donkey water project and the overall food security efforts demonstrate that Africa has the potential to feed itself.'

He continues: 'By identifying and addressing local challenges, such as the lack of access to water and the need for sustainable agricultural practices, communities can find solutions that empower them to improve their food security. Local perspective and understanding of small-scale farmers' challenges have been instrumental in this initiative's success.'

Carina Adhiambo using a plastic bucket to irrigate vegetable crops in her back garden



Carina Adhiambo posing with one of her donkeys in front of her house



Set up to address the issue of out of school children on Rusinga Island in 2014, Victoria Friendly Montessori realised they could not solve the above without considering challenges of food and nutrition security.

'We set up Victoria Montessori Friendly upon realisation that parents were not keen on sending children to school. Soon after we realised most children came to school hungry and were unable to concentrate in class,' explains Philip Onger, programme manager of Victoria Friendly Montessori.

He adds, 'We then introduced a feeding program at the school where children get two nutritious meals in a day – breakfast and lunch. But this did not solve the challenge at home as they were not getting a third meal.'

To counter this, Onger says the school engaged parents and found out what was needed to ensure children had a third meal at home. Together with the parents, they came up with food security activities that involved food production at home through kitchen gardens.

'The programme started by engaging families whose children attended the school but later on involved the community after realising food security problems affected not only families with children at the school but the community as a whole,' explains Onger.

'Women especially were bearing the burden, as the responsibility of taking care of the household and the children falls entirely on them when their fishermen husbands leave on fishing trips.

When children return home after school, they look up to their mothers to be fed,' he says.

Because fishermen are nomadic, they migrate to different islands depending on where the greatest catch of fish will be leaving the women behind as sole providers for the families.

'Most of the beneficiaries of our programs are women, and we believe that empowering the women will translate into empowering the community,' emphasises Onger.

Achieving a secure food system through professionalisation



On a rainy evening at Lycée Agricole Mèdji de Sekou (LAMS), one can see students wearing rain boots and carrying gardening tools as they jump over rain puddles. They are heading to the college gardens, where they receive practical hands-on training. These students represent change, as new training methods are being implemented in Benin's professional agricultural colleges. Thanks to the Orange Knowledge Programme (OKP) Benin project, the impact is evident. This is not only among satisfied students but also the college professors. They recognise the importance of updating teaching methods to ensure food security in Benin.

Text by Elizabeth Kameo
Images by Bio Séké

The entrance to Lycée Agricole Mèdji de Sekou (LAMS) is both imposing and impressive, reflecting the ongoing changes taking place here. According to Judicael Goussanou, a professor there and coordinator for the Orange Knowledge Programme - Benin (OKP-Benin), this transformation originated from universities. It then trickled down to agricultural colleges through research and training.

'We wanted to create a link between universities and the ten agricultural colleges in Benin, so they could all be a part of the consortium. That was the start,' he explains. LAMS, an agricultural technical and vocational school, was established in 1970 by the government of Benin. It trains local and foreign students to become future entrepreneurs in the agricultural sector and provides professional workers for companies in the field.

It is one of the ten professional agricultural colleges in Benin, revolutionising higher education with a curriculum upgrade that emphasises practical methods. This prepares future agricultural professionals who will ensure the country's agricultural sector is sustainable. To ensure sustainability, these colleges have been part of OKP-Benin since 2019. This programme aims to enhance education and train lecturers, equipping them with the necessary tools to improve lesson preparation and teaching methods.

OKP-Benin brings change to agricultural colleges through a value chain. It focuses on curriculum improvement, gender inclusion, entrepreneurial skills, and professionalism. It also strengthens the link between universities, agricultural colleges, and enterprises through integration, infusion, internships, and investments.

Managed by NUFFIC and funded by the Dutch Ministry of Foreign Affairs, OKP-Benin enhances training for employment in agri-food chains in Benin. This is achieved through a consortium of Dutch researchers from ICRA, KIT, AERES, and WCDI, along with lecturers from ten agricultural colleges and three universities in Benin.

According to Annisath Mamadou, a food technology lecturer at LAMS, a significant outcome has been the development of an updated teaching curriculum. 'We are now able to come up with ways to adapt changes to the curriculum that are in tune with the current realities,' she explains. 'What excites me the most is that we have the necessary tools to provide our students with a significantly improved learning experience, one that is more dynamic and successful.'

Lecturers are now empowered through training to identify and address challenges that students may face in the field, better preparing them for life outside of school. While they cannot confirm changes in students already employed, they observe positive changes in students taught using the value chain method.

According to Goussanou, while not yet the case at LAMS, students in other colleges have already started creating enterprises due to the success of new teaching methods. Mamadou further explains, 'We prepare them for the work environment, empowering them with skills to not only survive but succeed, ensuring agricultural success and food security in Benin.'

Rachelle Da-Gbadji, a lecturer in Nutrition and Food Technology, affirms; 'Since adopting this teaching method, we've noticed significant changes in our classes. Students are more engaged and actively participate in both theory and practical sessions.' OKP-Benin has not only brought about changes in teaching methods, but it has also strengthened the gender approach in agricultural colleges. Severine Hangnanme—a lecturer in animal production—explains that through it, they have sensitised both students and teachers to the implications of gender in agriculture.

The gender approach is used to address issues of gender-based violence, inequalities in colleges, and the protection and advancement of female students' rights. According to Hangnanme; 'The project has strengthened our training methods, particularly for female lecturers, to handle GBV issues. It has also helped integrate the gender component into our activities, promoting equality for all students and benefiting both students and lecturers.'

Hangnanme further explains that today's teaching methods ensure equal opportunities for all students to succeed. Each of the ten colleges has 'les cellules d'écoute' (listening rooms) where lecturers and students address gender-based violence, harassment, student rights, and equality. Baba Loukiatou, a food technology lecturer at LAMS, emphasises; 'Our aim is not only to promote the rights of female students but to ensure that female and male students know they have the same rights to the same education.'

Loukiatou adds: 'Today, many students have made a positive impact through interactions in the listening rooms, and female students feel safer. They have now become leading advocates for gender issues.' Another significant point considered by the project was training entrepreneurs to ensure a sustainable future for

Left: A young female student of LAMS.

Right: A student weeding the school garden during a practical lesson.





Judicael Goussanou, project coordinator OKP-Benin

Benin's agricultural sector. The focus today is on producing college graduates who are job creators rather than job seekers. They should be professional and can easily integrate into the workforce. According to lecturers, this is already making an impact.

'The theme has changed. Previously, we focused more on classroom teaching theories and provided limited field practice to students. As a result, when they entered internships or found jobs, they struggled with a lack of practical skills,' explains Loukiatou. The shift in training methods has empowered students. They now build networks to support their entrepreneurial endeavours. They also create websites to promote their enterprises and secure financial aid.

They are trained to understand the importance of becoming job creators and receive personal development training as well. 'I have students who are already thinking of starting their businesses. Some are growing vegetables or setting up animal farms at home,' says Loukiatou. 'While still in college, they are creating jobs for themselves. This means that once they complete college, they will already have jobs instead of seeking them. These new training methods are real game changers.'

The lecturers believe that the above-mentioned links are significant for the development and sustainability of the country's agricultural sector. 'The infusion process in improving the college curriculum and teaching quality is crucial for the new vision our government has for professional training,' says Mamadou. 'These elements were missing. This practical part is a great link to teaching students in agricultural college. This year, I have enjoyed teaching because of the new methods that have allowed me to add value to my classes.'

While the initial teaching programme was not erased, changes were made to prioritise practical teaching methods over theoretical ones. Improvements in internships and follow-up training are complete. Students are now required to have internships as part of the teaching programme, with well-defined roles for everyone involved, benefiting all parties.

Ibrahim Moumouni, principal of LAMS, says the OKP-Benin project provides an enabling environment for training students to take over the agricultural sector in the future. This improves food security through sustainable production methods. The availability of teaching materials, previously lacking in colleges, has further strengthened this practical approach.

'Not having teaching equipment made practical lessons difficult. Sometimes we had to find people to lend us or hire the equipment

'Our main goal today is to train future professionals who can create value chains, be competitive in the field, and apply what they have learned for their future success, survival, and the sustainability of the agricultural sector in Benin'

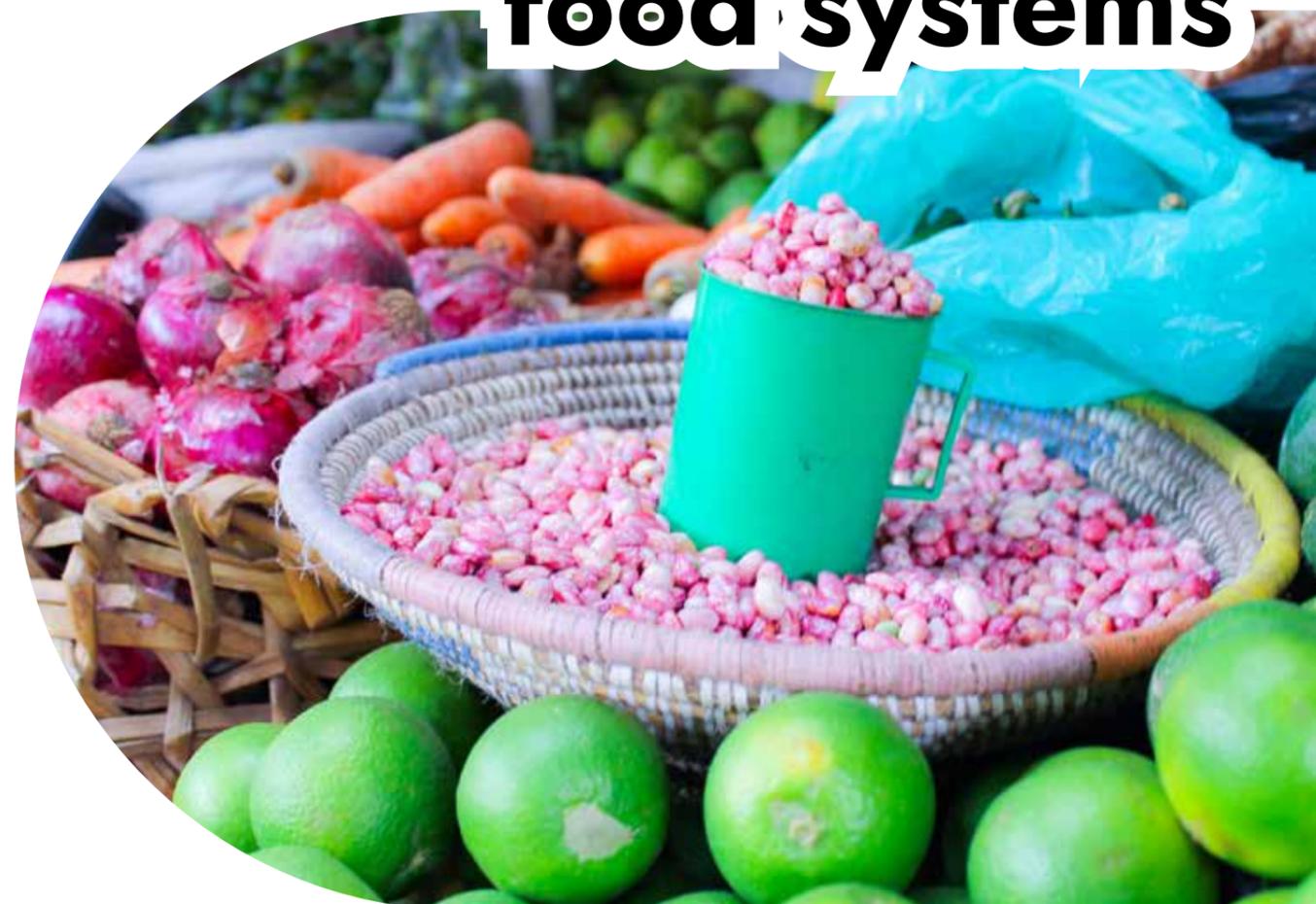
from, which wasted time. Now we have them, saving time and ensuring students learn comfortably at the college,' he says. This professionalism is also being followed up at the internship level. The roles of all involved parties have been defined to ensure the right follow-ups are done.

'We want to make sure that through internships, students are fully equipped once they are ready to join the workforce. We also want to ensure that parents are involved,' he asserts. 'We are changing the old way of internships by implementing detailed internship guidelines for parents, professors, and the companies where students intern. We will ensure that lecturers follow these guidelines for sustainability. Although the project has ended at LAMS, we will continue strengthening and passing down these practices to all lecturers, even those who were not part of the training.'

'This is just the beginning' says Loukiatou. 'In three or four years, we will see the real impacts of OKP-Benin. Many lecturers, including myself, have been influenced by this project. It is not limited to LAMS. We are now incorporating its significant elements to bring about change in our teaching methods. Our training aligns with the country's national strategy.'

According to Mamadou: 'Our main goal today is to train future professionals who can create value chains, be competitive in the field, and apply what they have learned for their future success, survival, and the sustainability of the agricultural sector in Benin.'

Nurturing resilient food systems



FOR IMPROVED FOOD AND NUTRITION

by Emmanuel Mandebo

In the heart of Africa, lies South Sudan, a country burdened by conflict and extreme climatic conditions. This presents a formidable challenge to food security. However, amidst these adversities, a groundbreaking project has emerged, bringing hope and catalysing transformative change. Known as the Food and Nutrition Security Resilience Programme (FNS-REPRO), this initiative aims to tackle the pressing issue of food and nutrition security in South Sudan. By adopting a livelihood and resilience-based approach, the project not only fosters peace but also takes significant strides towards achieving the ambitious goal of Zero Hunger by 2030.

The situation in South Sudan is deeply concerning. Over six million people are facing a food insecurity crisis, while approximately two million are internally displaced or caught in armed conflicts. Furthermore, the recurring inter- and intra-tribal disputes not only claim lives but also disrupt agricultural and grazing activities, leading to widespread displacement.

Undoubtedly, the humanitarian needs in South Sudan are extraordinary. However, even in such exceptional circumstances, there is room for hope. 'By empowering communities to strengthen their value chains and develop resilient livelihoods, we can make a difference,' says Dr. Tony Ngalamu, an Associate Professor at the University of Juba. One initiative working towards this goal is the Food and Nutrition Security Resilience Programme (FNS-REPRO).

'The journey towards achieving food security is one filled with hope and resilience,' adds Dr. Ngalamu. He also serves as the Learning Journey Focal Point for South Sudan under the programme. It is funded by the Dutch Government and managed by the Food and Agriculture Organisation (FAO), in collaboration with Wageningen University and Research (WUR), through the Wageningen Centre for Development Innovation.

The programme's primary objective is to translate knowledge of food systems into actionable solutions by enhancing capacities for sustainable development in emerging markets. This is accomplished through partnerships with local universities and training centres. It has set its sights on building the resilience of food systems in conflict-affected areas in Africa, with South Sudan standing out as a focal point of transformation.

Dr Ngalamu's team collaborates with local communities to develop seed systems, establish community seed banks that preserve indigenous seed varieties, and improve access to diverse crops. 'These efforts not only enhance food security but also safeguard traditional knowledge, ensuring that future generations can access local seed landraces developed over centuries. This is especially crucial as these varieties are at risk of being lost due to ongoing crises,' he says.

One of the remarkable outcomes of this initiative is empowering women and youth in agriculture. By supporting women's role in food production and promoting nutrition-sensitive crops, the project contributes to healthier diets within communities. The establishment of demonstration farms and research activities has also resulted in the release of improved crop varieties, bolstering production and productivity.

Gerrit Jan van Uffelen, the project lead for the WUR component of the programme—the knowledge and capacity building agenda—explains; 'The goal of the programme is to reduce the number of people facing food crises, emergencies, and potential famine. This will be achieved by leveraging existing resilience capacities and developing new ones to address vulnerabilities.'

What makes this project unique is its flexibility and evidence-based adaptive programming. 'We are taking advantage of the opportunity of flexible programming based on evidence. Flexibility enhances learning and effective programming, especially in dynamic and volatile contexts,' he says.

By connecting humanitarian, development, and peace actors and efforts, the project tackles both the consequences and root causes of food crises. Various interventions have been implemented to strengthen local food systems, focusing on enhancing access to and management of natural resources like land and seeds. Seed systems, a critical component of food systems, are a key area of intervention.

'The lack of timely access to quality seeds at affordable prices has hindered progress in food and nutrition security, particularly in promoting healthier diets. Our work on seed systems aims to bridge this gap,' explains Van Uffelen. Moreover, the project is creating opportunities for livelihood and income generation, with a particular emphasis on empowering women who play a vital role in the informal seed sector.

Dr Tony Ngalamu



'The inability of farmers to access quality seeds promptly for affordable prices has been a bottleneck in improving food and nutrition security (through healthier diets). Our work on seed systems aims to bridge this gap'



Gerrit Jan van Uffelen attending a FNS-REPRO workshop

For instance, this can be accomplished by gaining a deeper comprehension of and offering support to the informal social seed networks. These networks, especially facilitated by women, play a crucial role in providing access to high-quality seeds. They are prevalent among internally displaced individuals and returnees.

These social seed networks foster social cohesion and inclusivity contributing to the resilience of local seed systems across different community groups. The success of this project is founded upon partnerships between local and international organisations. Furthermore, through collaborating with FAO, local universities, and training centres, the project sustains partnerships with local institutions and food system governance engaging humanitarian, development and peace actors.

'We work with local partners to programme local contexts by facilitating dialogues that envision food systems resilience, co-create the pathways required, and develop and align the interventions required,' explains Van Uffelen. The project's efforts in decentralised food systems dialogues have provided insights for informed policy formulation and alignment with local realities.

In addition, the project's learning and knowledge agenda plays a significant role in driving policy dialogue and the implementation of improved food system resilience. The involvement of the Zero Hunger Lab has brought about a unique data perspective to the project. 'Data analytics have allowed us to make projections and foresight on how food systems perform and evolve, enhancing our ability to respond effectively to challenges,' he says.

Implementing this project has not been without its challenges. One is the transformation from solely addressing the consequences of food crises to building resilience in food systems by addressing both the consequences and causes. This requires embracing the localisation agenda and integrating humanitarian-development-peace nexus programming as essential components.

Van Uffelen emphasises the need for fundamental changes, stating; 'We must take local realities on the ground seriously and acknowledge the capacities and strengths of local actors

Wageningen Centre for Development Innovation supports value creation by strengthening capacities for sustainable development.

As the international expertise and capacity-building institute of Wageningen University and Research, the centre brings knowledge into action, to explore the potential of nature to improve the quality of life.

With approximately 30 locations, 7,200 members (6,400 FTE) of staff and 13,200 students, WUR is a world leader in its domain. An integrated way of working, and cooperation between the exact sciences and the technological and social disciplines, are key to its approach.

and communities.' Despite these challenges, the project remains steadfast in its commitment to making a lasting impact. Looking ahead, they aim to develop investment portfolios and align existing programmes. This will bolster food systems' resilience and pave the way for significant progress in achieving Zero Hunger by 2030.

Amidst the challenges and adversities, the resilience of the South Sudanese people shines through. The community dialogues and pathway development exercises have contributed to building up social cohesion and conflict resolution. Communities that once faced animosity and distrust now work together for a common goal—to achieve food security and combat hunger.

The spirit of collaboration extends to partnerships and collaborations. FAO, Wageningen Centre for Development Innovation, and national and international non-governmental organisations are working together. This is to ensure interventions align with national development plans and receive support at the highest level.

They have formed a tapestry of strength, weaving hope and prosperity into the fabric of South Sudan's food systems. As the sun sets on the horizon, a vision for the future emerges. The country stands at the cusp of change, with the seeds of resilience shown by the FNS-REPRO and its local partners taking root. The challenges may persist, but so will the determination to overcome them.

The project's long-term vision is to continue focusing on enabling communities to assert power, nurturing local knowledge, and striving for sustainable food systems in South Sudan. It strives to create a hunger-free South Sudan by advocating for policies that support interventions and establish state-level hubs to foster collaboration and promote investment in the agricultural sector.

By promoting inclusivity, enabling local communities to claim power, and bridging the gap between humanitarian, development, and peace efforts, the project is paving a new path towards Zero Hunger. ▾

My Food, My Security, My Identity.

Text by Nicera Wanjiru
Images by Jarvis Kasandi

Food and nutrition security are crucial for various reasons. They guarantee human health, economic development, poverty reduction, social stability, environmental sustainability, resilience, and achieving the Sustainable Development Goals. Ultimately, they are crucial for development and align with global goals like ending poverty and hunger, promoting good health, and ensuring responsible consumption and production.

As I walk to my home in Kibra after a busy day, thoughts of what I will prepare for dinner occupy my mind. I place a great deal of importance on meal preparation. Kibra formerly known as Kibera is an urban informal setting in Nairobi. Here, residents' daily food purchases are dictated by household incomes. The poor rarely afford meat and fish, so their diet includes affordable cereals and vegetables.

Is this to say that I cannot afford to eat a balanced diet because I live in Kibra? How does living here affect the nutritional value of my meals? We cannot ignore the significance of a healthy diet. It is little wonder that food and nutrition security are paramount to human existence. Today, these subjects feature significantly among the UN Sustainable Development Goals 2030 (SDGs). SDG 2 seeks to 'end hunger, achieve food security and improve nutrition and promote sustainable agriculture.'

Africa's hunger statistics are shocking. The UN Food and Agricultural Organisation (FAO) states; '226.7 million people starve in Africa.' Countries most affected by extreme poverty and hunger in Africa are located south of the Sahara. One in four people suffer from hunger, meaning the world's hungriest are highest in sub-Saharan Africa.

With this in mind, I contemplated my own food experience and how it relates to SDG 2. I wondered where my food comes from, the journey it makes, and the farmers who grow it. Do I meet the recommended dietary requirements? The more I pondered these, the more I thought about the woman who brings fresh produce to my doorstep.

As a single woman with a crazy work schedule, I get my food supplies from local vendors despite a market nearby. It is not only

convenient but also of substantial value. When I buy collard greens from *Mama Mboga* (greengrocery business owner), she chops them up and once home all I have to do is wash and cook them. I also buy pre-cooked foods such as beans, meaning I only warm or fry them to my liking and my meal is ready. This saves me time and I am assured of always having a meal regardless of my return time. My typical meal is made up of *ugali* – a stiff dough made from maize flour - a protein (beef, beans or fish), vegetables and/or fruits. Sometimes I spend KSHs. 281 (about US\$2) to buy fresh produce. Today, like so many other Kenyans, I am grappling with food price increases.

This leads me to ask Brenda Wairimu, my local *Mama Mboga* for three years, where she gets her produce. She tells me about *Othaya*, the local market she frequents in Kibra.

Other times, she reveals, she travels straight to farmers on the outskirts of Nairobi, where she is assured of the highest quality products. 'Vegetables and fruits are freshly picked, and the prices are fair compared to the local market,' she explains.

“There is a need to ensure our meals are balanced so we can benefit from all the food classes. Food is not just an enabler; it is a necessity.”

I ask if I can accompany her on one such visit, and she agrees. 'Utaweza kuamka?' (Will you wake up?) Wairimu teases as she gives me an appointment for 5:00 am the next morning at the M-Pesa kiosk.

It is cold and drizzling when we meet. I notice most of those heading the same way are women. To initiate conversation, I ask her how long she has been in the business.

'I started selling vegetables when my husband died 6 years ago. Every day I wake up at 4:45 am, get ready, wake my daughter up and prepare her for school before heading to the market. On Sunday I usually rest. If you are lazy, you cannot do this kind of work. If you oversleep and get to the market late, you will find leftovers,' she says. At the market, we move from one seller to another buying kale, spinach, onions, and tomatoes.

We are done by 8:00 am. With a sack full of vegetables, I look around and recall her words about finding very little if you get to the market late. She tells me that by 9:30 am the market will look like an abandoned field. As we head back to Kibra, I acknowledge that this job is not for the faint-hearted.

Wairimu is just one part of my food chain. Once back in Kibra, I meet Syombua Nyakio, the fishmonger from whom I get *omena* (silver cyprinid). She gets her fish from the market, not from the lake. 'Brokers and business cartels control the business on the shores and sometimes one has to pay extra for fish,' she explains. Additionally, she cannot afford to transport fresh fish from there.

There is more to what I eat so I seek out Jacklyne Opal, a nutritionist, to find out whether my diet is correct. Amidst laughter, she describes my eating habits as 'fascinating' when she hears that I skip breakfast, nibble on biscuits at midday and have a feast for supper. She finds my fruit intake twice or thrice a week lacking.

'You are supposed to eat breakfast like a king, lunch as a queen and dinner as a pauper,' she explains. She informs me that I am not the only one who does this.

'After supper, you head straight to bed but in the morning you have a full schedule of activities. Why do you starve when you need food and feast when it is imperative to have a low intake of nutrients?' she asks.

She reiterates that food provides nutrients and energy. 'While you are forced to compromise on diet needs because of the high rising living costs; you must maintain a balanced diet as it is important.'

As I leave, I reflect on this and relate it to what happens in the real world. In dealing with high living costs, we eat what is affordable and ignore dietary needs and safety.

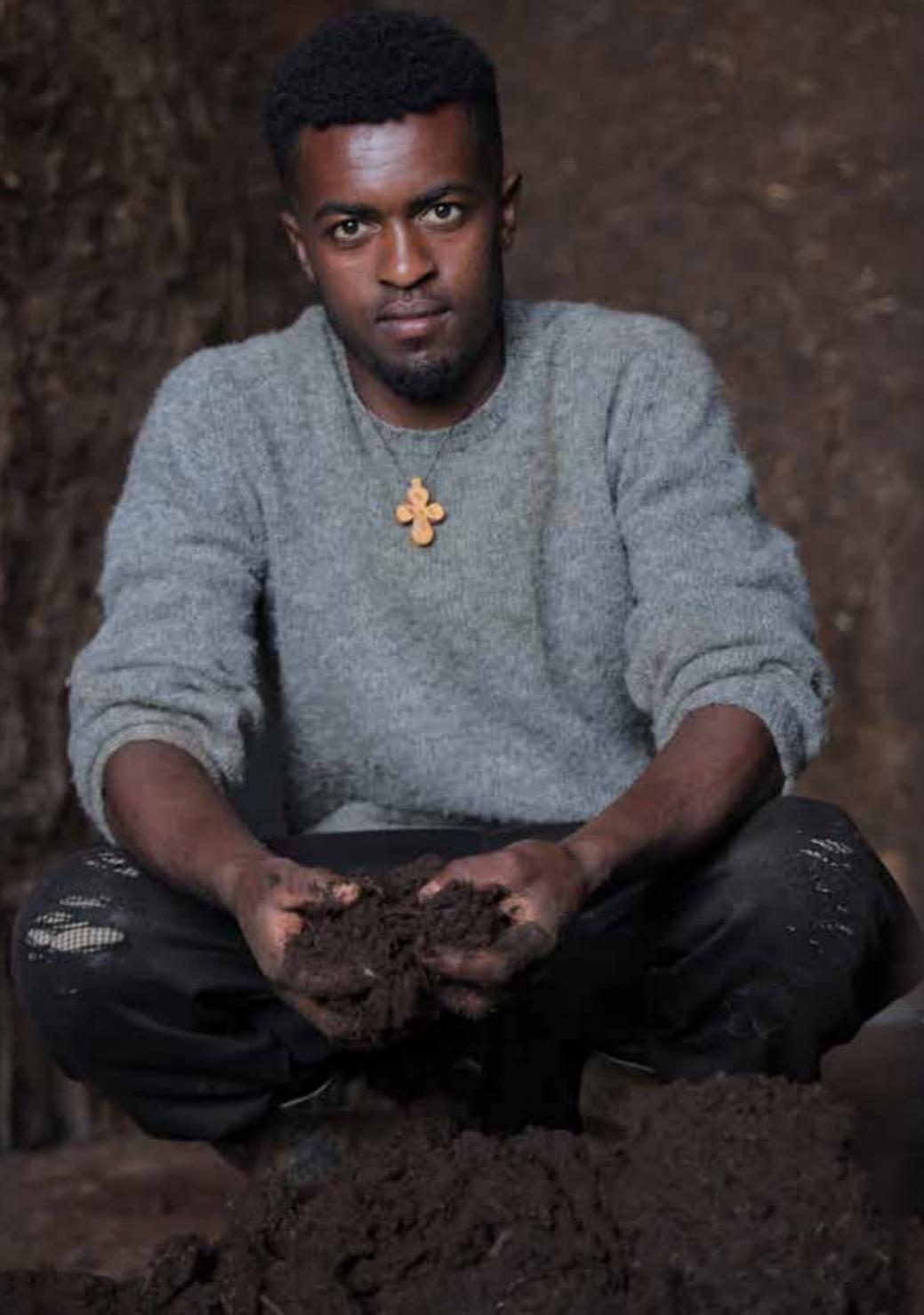
How do we ensure food and nutrition security in Africa? Will the day come when no African sleeps hungry, and no African child dies of malnutrition?

As Opal said, 'There is a need to ensure our meals are balanced so we can benefit from all food classes. Food is not just an enabler; it is a necessity.'

Wanjiru(right) and Wairimu picking out vegetables at the farmers' market



Unlocking the **POTENTIAL** of Vegetables for Food Security



Located 40 kilometres from Addis Ababa, is Wolmera District in Oromia Regional State, Ethiopia. It is embracing organic farming and harnessing biodigester technology to achieve food security. Their journey towards sustainability and self-sufficiency involves nurturing the earth and utilising biogas technology. This results in nutrient-rich vegetables, which transform both their agricultural landscape and way of life. Today, vegetables play a vital role in this thriving community.

Text by Eunice Mwaura
Images by Dabala Getacho

24-year-old Wondwosen Alemu proudly stands amidst his family's flourishing farm in Wolmera. His weathered attire reflects practicality and a deep connection to his agricultural lifestyle. As the son of a farmer, he inherited a love for agriculture from his father, who passed down knowledge of tiling the land.

His farm showcases his creativity and adaptability, with neatly arranged rows of cabbages showcasing the fruits of his labour. His extensive knowledge of the land and crops led him to train other farmers, earning him the title of 'Most exemplary farmer in his community.' 'I always wanted to be a medical doctor, though in a way I still am, as I supply and feed people with healthy agricultural products,' he says.

Wondwosen has embraced biodiversity and practices intercropping. Alongside his cabbage plants, he cultivates a diverse array of vegetables and herbs, fostering a symbiotic ecosystem where each plant nurtures the growth of others. He also grows a variety of traditional African vegetables and indigenous food crops which he says adapt well to the environment and climate changes. They are also very nutritious.

'Farmers no longer depend on rain-fed farming as the rain patterns have changed. That is why we have integrated practices such as planting climate-resilient crops. 70% percent of Africa's population depends on agriculture for food security and livelihood,' he explains. 'However, most farmers have very little or no knowledge of how to practise sustainable farming. Yet, this can help improve food security and promote better livelihoods, of which, I am the perfect example.'

He believes it is important to know that being food secure does not only imply having access to plenty of food. It entails having access to high-quality, nutritious food that promotes good health. To bridge this gap, the community today boasts of the Veggies 4 Planet & People (V4P&P) project.

The project is implemented by SNV in partnership with the World Vegetable Centre, with the support of the IKEA Foundation.

It aims to generate income and employment opportunities for women and youth. At the same time, it promotes environmental and human health through the same production of vegetables.

The project also strives to enhance soil health, and foster biodiversity and circularity in farming practices. By embracing innovative approaches, it seeks to enhance resilience to climate change. 'Vegetables play a crucial role,' says Gemechis Jaleta, 'in addressing malnutrition in Africa. We realised that Ethiopia has a very low consumption of vegetables and fruits. That is why we came up with the project.' He is the Project Coordinator with SNV.

Wondwosen is a project participant of the V4P&P, where he has gained valuable knowledge about the nutritional value of vegetables. As a result, today he grows and sells produce, as well as educates other farmers on how to employ better and regenerative farming practices.

To enrich his soil, he utilises vermicompost, a nutrient-rich mixture produced through the decomposition process involving various species of worms. This process combines decomposing vegetable or food waste, bedding materials, and vermicast. The practice of rearing worms for this purpose is known as vermiculture.

His granary is filled with rows of vermicompost beddings, crafted from wooden shelves covered with protective plastic sheets, delicately suspended in the air and firmly attached to sturdy beams for utmost security. These beds are meticulously filled with a blend of organic waste and aged manure, creating the ideal environment for composting worms to flourish.

Outside the granary, sacks of ready-to-sell composts are stacked upon one another. Today Wondwosen sells a sack of vermicompost for between 1200-1500 birr (US\$ 21 to 27) as compared to only 500 birr (US\$9) before. 'The compost is currently in high demand. Farmers recognise the benefit of avoiding chemical-intensive farming, and how it affects their yields, soil health, and the potential risk to consumer's health,' he says.

In addition to being a farmer and trainer, he also organises business-to-business opportunities for other farmers. Through these initiatives, they have been able to pool resources and negotiate better prices with local markets and distributors. As his farm thrives, so does his family's well-being and that of his community. The income generated from his farm not only ensures food security, it also brings economic stability to his family.

They ensure their work is evidence-based by conducting thorough analyses of the current situation and gaining a comprehensive understanding of the existing landscape and ongoing efforts

Tanzanian Youth Revolutionise Agriculture in Morogoro's Fields

Text and images by Cynthia Omondi

The agricultural prowess of Tanzania is deeply intertwined with its diverse geography and abundant natural resources. From traditional crops to innovative ventures, the country's agricultural landscape is evolving, making it a key player in food production in the region. This transformation is being driven by a new generation of determined and enterprising young individuals who are rewriting the narrative of farming as a livelihood choice.

Tanzania owes its agricultural success to its remarkable geographical diversity. From the fertile plains of Kilimanjaro to the lush valleys of Morogoro and the enchanting tropical coastline, the country boasts a wealth of natural resources that contribute to its prowess in agriculture.

The agricultural sector of the country has long been dominated by the older generation of farmers. However, there is now a gradual yet consistent increase in the participation of young individuals. Young Tanzanians, armed with innovation and a deep connection to their land, are stepping up to embrace the untapped potential of agriculture as a viable and rewarding career choice.

In the picturesque town of Morogoro, nestled against a breathtaking backdrop of undulating hills and verdant landscapes, a thriving community of dedicated farmers is emerging. Young and aspiring, these agriculturists are defying conventional norms. They are showcasing that farming is not just a means of livelihood, but also a pathway to success that can be pursued by the younger generation.

It is here that the remarkable 33-year-old farmer Victor Tobias Kadudu of Msufini village is making his mark. On his farm, one section boasts vibrant, green cabbages, while rows of robust cucumber plants thrive in another. This testament to his unwavering dedication and hard work exemplifies the fruits of his labour.



Mulu Abebe lighting a gas stove in her house

Back at the SNV office in Addis Ababa, we meet Julie Graham, the country director. She provides us with a comprehensive overview of their work, with a particular focus on Ethiopia, where they have dedicated themselves for nearly five decades. She highlights their recently unveiled global plan, aimed at propelling their impact and making significant contributions to the transformative vision outlined in the 2030 Agenda for Sustainable Development.

'We are doing so by harmonising our efforts across the sectors and themes in which we work. This involves adopting a more holistic approach to the agri-food system, encompassing everything starting from production, through the value chain, all the way to consumption and disposal. Additionally, we're intent on cultivating synergies with various stakeholders in the Ethiopian context to ensure success and sustainability.'

According to her, a major aspect of SNV's goal is the emphasis on bolstering the resilience of Ethiopia's food system. This includes fostering opportunities for youth and empowering women, who play a significant role in the country's agricultural workforce. Today they work in three sectors: the agri-food sector, the water sector, and the energy sector.

'Historically, we have adopted a value chain methodology in our agricultural endeavours. However, our current emphasis is pivoting towards a more profound agri-food system transformation, which also takes into account sustainable water and energy sources,' she says.

To achieve its goals, SNV employs a comprehensive and sustainable systems-based approach that tackles challenges holistically. They ensure their work is evidence-based by conducting thorough analyses of the current situation and gaining a comprehensive understanding of the existing landscape and ongoing efforts. In their pursuit of impactful change, SNV emphasises building strong partnerships. By collaborating with government entities, private enterprises, civil society groups, and grassroots communities, they foster a unified approach that optimises the utilisation of resources and expertise.

'We monitor the process to see if it is working and whether we are getting the desired degree of involvement. Food and nutrition security in a country like Ethiopia can be quite multifaceted,' she says. 'Our projects are meticulously designed to respect and address the myriad factors at play—from political and economic nuances to socio-cultural and religious dynamics. Moreover, we're exploring innovative technological solutions to enhance our efforts.'

However, she says it is also essential that the government provides an enabling environment that is inductive to private sector development. One of their biggest achievements, she says, has been witnessing young Ethiopians flourish in agriculture as a result of the training they have received. 'Making agriculture more attractive to young people is key—when they realise they can earn a profitable income, they are more than willing to get involved. Collaboration is key. SNV provides skills training, while the government provides an enabling environment and land. This equips them to succeed.'

Graham emphasises the importance of community buy-in. She believes that true success is achieved when projects resonate with the hearts of the community, ensuring long-lasting and impactful change.

'Every morning, as the sun greets the day, I return the favour and greet my beloved farm, thanking it for the bountiful gifts it has bestowed upon me and my community,' he says.

Traditional methods of cooking and heating in many developing regions often rely on the burning of wood and other biomass fuels. However, this is no longer the case for the locals in Wolmera. For 24-year-old Mulu Abebe, biogas has provided an eco-friendly alternative to traditional biomass fuels and a potent organic fertiliser for her vegetables. She keeps a treasure in the form of a cylindrical stone structure at the back of her house. 'To feed the digester, I use animal manure from the livestock,' she explains.

Today, she generates biogas thanks to the training provided by SNV through the V4P&P and the National Biogas Programme. Through the efficient anaerobic digestion process, organic matter is broken down, resulting in the production of biogas and nutrient-rich slurry. She utilises this slurry as a natural fertilizer in her fields, thereby enhancing soil fertility, improving crop yields, and reducing the reliance on synthetic chemical fertilizers.

She decided to take part in the training after realising that her family's food security could be enhanced through the adoption of biogas technology. 'Now, my family enjoys a variety of fresh and nutritious vegetables with every meal,' she says. As her vegetable production grows, so does her family's food security. Her unwavering determination and commitment to utilising biogas have not only transformed her life but also ignited inspiration within the community.

An increasing number of households are embracing her lead by establishing their biogas digesters. As a result, they are reaping the rewards of clean energy and experiencing enhanced agricultural productivity. She takes great pride in her role as a steward of sustainable farming practices. With unwavering determination, she reminds us all that a future of sustainable and secure food production is well within our grasp through continuous innovation and perseverance.

Tanzanian youth farmer Victor Tobias Kadudu in his garden with soon to be harvested cucumbers





Abundant local produce sold by women in Tanzania

‘These are my valued employees,’ he says, proudly introducing us to four women diligently weeding the field. He explains that they play a crucial role in maintaining the farm’s success and productivity.

Sharing his inspiring journey, Kadudu attributes much of his progress to the Opportunity for Youth Employment (OYE) training programme. It is by the SNV Netherlands Development Organisation. He says this training was the turning point in his life. It equipped him with valuable skills and knowledge in modern farming techniques, efficient resource management, and marketing strategies.

‘I was unable to complete my education. At one point, I felt like a failure. I was left with no choice but to join my parents in farming, though on a small scale. Lacking modern techniques on how best to do it, we did it traditionally,’ he explains.

After three months of training—which included exposure to prominent Tanzanian farmers and the *Nane-Nane* Day agricultural show that was held in Morogoro in 2019—he was inspired. *Nane-Nane* (eight-eight) Day is celebrated annually on August 8th. It recognises and honours the significant contribution of farmers to the economy.

‘I started farming seriously in 2021 with different crops such as cabbage, cucumber, tomatoes and watermelons,’ he reveals. His ability to spot and capitalise on market opportunities enabled him to establish sustainable connections with buyers in urban centres.

With unwavering commitment and tireless efforts, he has discovered profitable markets outside his village. This has made him establish a formidable presence in both the cities of Dodoma and Dar es Salaam.

As a result, he has emerged as a pivotal figure in the agriculture industry. Today, he not only supports his family financially but also funds the education of his younger siblings. This is the opportunity he yearned for but never got.

Hadija Omari Nassoro is a 30-year-old mother of three from Konga village. Brushing aside the challenges that caused her to leave school at a young age, her unwavering determination and resilience paved the way for success in an unexpected field: farming.

After exploring the realm of agriculture, she discovered her true purpose and wholeheartedly embraced farming. With passion and dedication, she has attained financial independence, shattering the barriers that once hindered her progress. ‘I was orphaned at a young age, so life became difficult for my siblings and me,’ she narrates. ‘I even went to Dar es Salaam in search of greener pastures. Little did I know that I had left the pastures right here in the village.’

‘When life became unbearable, I returned and was lucky to be among the youth in my village who benefited from the SNV’s OYE training programme.’ She admits that she enrolled in the programme without any particular expectations. She merely wanted to occupy her time and satisfy her curiosity.

‘That was the beginning of a new journey in my life. The skills gained enabled me to become a farmer who embraces new techniques. Many young people run to the city for menial jobs, but I can attest that there are more opportunities here than in the city,’ she says.

In a region where opportunities for women are limited, Nassoro’s journey serves as an inspiring example of empowerment through agriculture. She can not only provide for her family but has also grown her agricultural enterprise to a point where she can securely invest in her future. She recently achieved a remarkable milestone by acquiring a piece of land. This accomplishment not only symbolises her success but also stands as a testament to the triumph of young farmers.

Hamisi Ramadhan, just like Kadudu and Nassoro, is another flourishing young farmer in his home village of Doma.

The 28-year-old football enthusiast is a devoted follower of the Young Africans Sports Club, *Yanga FC*, a Tanzanian professional

football club. He once aspired to become a renowned footballer but is now content with being a farmer. We meet him on his farm as he tends to tomato seedlings, nurturing them with precision and devotion. His grit and unmistakable passion are palpable.

‘In about a week, I will be transferring these seedlings to a 3-acre farm. I began serious tomato farming in 2019 by applying the techniques I acquired from my training. I made a profit of Tsh.2.7 million (about \$1,000) from that year’s harvest. It was unbelievable.’ He adds: ‘This motivated me further so in 2021, I invested more by farming on a 1-acre piece of land. This season I am looking forward to harvesting from a 3-acre piece. I have a ready market, especially from women who sell by the main Morogoro – Iringa Road. It is always busy with trucks from different Eastern African countries.’

His journey is an inspiring example of how dreams can evolve and lead to unexpected paths of fulfilment. Although he is not gracing the football field as he once envisioned, he has discovered a new passion; nurturing crops and contributing to the agricultural landscape of Morogoro. Working side by side with his mother, it is evident that farming has become a family affair, fostering unity and generational knowledge transfer.

Despite their enthusiasm and dedication, young farmers in Morogoro face various challenges. The growth potential of farmers is hindered by limited access to modern farming techniques, inadequate financing options, and fragmented land ownership. These barriers impede their ability to thrive and succeed in their agricultural endeavours.

But these challenges have also ignited innovation. They are embracing technology, employing sustainable practices such as the use of solar panels, and forming cooperatives to pool resources and expertise. Amidst Africa’s pursuit of the formidable goal of eradicating hunger, it becomes evident that young farmers are pivotal in shaping a sustainable agricultural future for the continent. With a burgeoning young population, Africa faces both a challenge and an opportunity of unprecedented magnitude.

Jean Mwenda is the global youth employment and entrepreneurship lead at SNV. She emphasises the transformative power of this demographic in the agriculture sector. ‘Young people have enormous untapped potential. All they require is exposure, skills, access to finance and markets, and an enabling environment with favourable policies that are conducive to triggering their capabilities.’

She argues that to truly harness young farmers’ potential, policymakers across Africa must prioritise policies that promote entrepreneurial skills development from a young age, incentivise public and public sector collaboration and put the voice of the youth at the core of policy formulation, coordination and implementation. This includes providing access to agricultural education, training, and mentorship programmes. Initiatives such as workshops, agricultural fairs, and on-field training sessions with seasoned farmers to equip young farmers with modern farming techniques, climate-smart practices, and business acumen.▼



Jean Mwenda

SNV

SNV is a mission-driven global development partner working in more than 20 countries across Africa and Asia. With over 60 years of experience and a team of over 1,600 people, SNV strengthens capacities and catalyses partnerships to transform agri-food, energy, and water systems for sustainable and more equitable lives for all.

Grounded in the 2030 Agenda for Sustainable Development, SNV works on the core themes of gender equality, social inclusion, climate adaptation and mitigation, strong institutions and effective governance.

Their work is grounded in the 2030 Agenda for Sustainable Development.

In line with SDG 2 - SNV supports the equitable transition to a sustainable and resilient agri-food system, aligning with SDG 2. Through its Youth Employment and Entrepreneurship portfolio in more than 10 countries in Africa, SNV provides out-of-school underprivileged, underemployed and unemployed, SNV empowers young women and men with tools, skills, and networks to identify enterprise development

and employment opportunities. It facilitates linkages between the labour market (demand side) and skilled youth (supply side) to stimulate stimulating employment and entrepreneurship opportunities in agri-food, energy, water and emerging green sectors.

The OYE project in Tanzania is implemented by SNV in partnership with the Swiss Agency for Development Cooperation, and The Royal Danish Embassy in Tanzania.



HYBRID POTATOES:

A POSSIBLE SOLUTION FOR SUSTAINABLE FARMING AND FOOD SECURITY IN AFRICA

This year saw the publication of a book, *'Open access to make the results of the agronomic as well as the socio-economic research accessible for all'* about the hybrid potato. Its authors believe this breeding technique will help increase Africa's food security. But the question remains; will and can the hybrid potato help increase food security in Africa? *Vice Versa Global* talks to Wachira Kaguongo, Chief Executive Officer of the National Potato Council of Kenya (NPCK), and Peter Gildemacher, a potato expert at KIT Royal Tropical Institute.

by Alice Nduta

A groundbreaking potato hybrid is currently under development, the first results of which when put to test in Africa could herald immense possibilities. The hybrid true potato seed technology offers great advantages compared to conventional vegetatively propagated potato varieties. Resilient varieties, with enhanced resistance against drought, pests, and diseases can be developed much faster, and quality seed potatoes can become available for smallholder potato producers. The promotion of the technology in Sub-Sahara Africa aims to enhance food security, serving as a beacon of hope for Africa's future.

According to Wachira Kaguongo, the implementation of hybrid breeding techniques will enable the creation of improved potato varieties. These varieties will exhibit enhanced nitrogen and water use efficiency, bolstered resistance against severe potato diseases, and superior quality traits.

'Using less phytochemicals will enable farmers to cultivate more sustainably and adapt to the effects of climate change,' he says. 'As climate change intensifies, the resulting pressures, especially abiotic stresses, have heightened the need for developing new cultivars to ensure stable yields. This requirement has become increasingly critical to safeguarding agricultural productivity.'

Although this vision is filled with hope, Gildemacher acknowledges that challenges still lie ahead for both high-tech farmers in Europe and low-tech small farmers in Africa

Kaguongo explains that well-adapted, climate-resistant, and pest-resistant potato varieties are needed to obtain high yields in varied environmental circumstances. 'The hybrid variety of this well-known crop has enormous potential of helping fight hunger and attain food security, particularly in the context of Africa's agricultural regions. It might also significantly impact the shift to sustainable agriculture,' Peter Gildemacher explains.

He continues by saying that, as opposed to the tubers (seed potatoes) which farmers currently use, hybrid potatoes can be propagated by using the True Potato Seed (TPS) produced by the plant's berries.

Depending on the variety, each plant can produce 5 to 50 berries, with each berry containing 50 to 150 seeds. According to Gildemacher, TPS seeds are smaller than tomato seeds, allowing for the planting of a one-hectare field with just 25 grams of TPS (equivalent to 62,500 seeds) instead of 2,500 kilograms of potato seed tubers.

Kaguongo adds, 'The tubers of common potatoes, which serve as their seeds, are large and pose challenges in terms of transportation, processing, and energy consumption. Using smaller quantities of TPS reduces the carbon footprint of the production system and enables easier transportation. Additionally, it can be stored for longer periods without requiring specialised facilities. Its clean and disease-free nature as propagation material also offers significant benefits to farmers.'

Although this vision is filled with hope, Gildemacher acknowledges that challenges still lie ahead for both high-tech farmers in Europe and low-tech small farmers in Africa. However, he firmly believes that achieving this transition is not only possible but also potentially transformative.

'It will take a lot of work to reach the millions of potato growers in Africa. Government agencies, non-governmental organisations, and the industry will need to work closely together to provide enough resources for easy adoption of the hybrid potato in different countries,' he says. Regardless of this challenge, Gildemacher is optimistic that the hybrid potato could trigger an unparalleled boost in potato yield in Africa.

Kaguongo believes that while potato hybrids and the TPS will be a tremendous advantage for all potato growers worldwide, they will have an even greater positive impact in low to middle-income nations—particularly in sub-Saharan Africa. 'They offer advantages such as higher yields in remote rural areas and resistance to Phytophthora disease. They also have the potential to create hybrid varieties that are more resilient to climate change,' he says.

Although there are yet to be any hybrid potato types on the market, researchers are looking to introduce the first ones very soon. This development will aid farmers in cultivating more sustainably and coping with the effects of climate change. 'Every place that produces potatoes in the world has a lot of promise. Nevertheless, the first outcomes are anticipated in Africa, where hybrid seed provides the most added value to small farmers with few resources,' Gildemacher says.

©Image courtesy of KIT



KIT

KIT Royal Tropical Institute is an independent center of expertise, education and hospitality dedicated to sustainable development. Guided by the sustainable Development Goals (SDGs) of the United Nations, its knowledge work focuses on global health, gender, economic development, and intercultural communication.

It offers graduate programmes in global health, advanced courses for health professionals, a gender training programme, and training and coaching services in intercultural communication.

Resilience in the Face of



Grace Nambile at her workshop

Climate Disasters

Text and images by Nicera Wanjiru

In Chikwawa District, Malawi, climate change impacts, particularly cyclones, have damaged roads and disrupted livelihoods, hitting women the hardest. Despite the challenges, they show resilience by finding alternative ways to secure food. Their persistent efforts contribute to both community resilience and food security.

As one drives through Chikwawa District, pot-holes, cracks, and washed-away sections of the road reflect the cyclone's devastation. Innocent Dula, Project Officer with The Hunger Project (THP) Malawi, draws our attention to a section of the road that has been completely washed away.

He recounts how three family members died there on a fateful morning in March. This district is located in southern Malawi. It is known for its vulnerability to climate change impacts, particularly in terms of drought, floods, and extreme weather patterns; especially cyclones.

These challenges disrupt livelihoods, affecting women the most. They are now finding ways of living through the turmoil they have endured. In Misomari Village, the women's beautiful welcoming songs are quickly followed by tales of survival and resilience.

"We sleep outside guarding our crops," they say. Their farms were destroyed by cyclones and their food security was compromised. So, they had to find alternatives to get food. One alternative involves renting farmland during the summer season. Since summer is dry, they can spend nights outside until the crop harvesting season.

During this period, women guard their farms. "If we do not take care of our land, we will not harvest anything," they say, highlighting their adaptability. It is not only through farming that they demonstrate resilience. Grace Nambile, 45, is the most ideal example of this. The experienced carpenter lives in Chepananga village and works out of the workshop of a good samaritan as she awaits to save enough money to open her own.

Carpentry was not a traditional job for women in the past. It is apparent from Nambile that the women are determined to break gender stereotypes and to actively participate in income-generating activities to support their families. In addition to her carpentry work, she has a farm on which she harvests and sells vegetables and food produce for extra income. She runs a vegetable shop that doubles as her workshop, allowing her to carry out carpentry work alongside her business.

"Carpentry training was free and when the opportunity came through the women's empowerment programme to train as a carpenter, I took it because I wanted to do something unique," she says. Hers is not the only tale of inspiration. Modesta Donesiano from Muunda village narrates how she lived in abject poverty. To fend for her family, she looked for casual jobs until she met other women. Together, they started a women's group to support each other.

In this group, they save together. This enables members to borrow from their savings, use the money to set up a business and pay it back later. "I've built rentals, my house, and bought cattle among other things," she proclaims loudly. Still using these savings, Donesiano can send her children to school and provide for basic needs.

The savings group that started with seven women today has 28 members. The challenge she says is getting younger women to realise how worthwhile saving is. "They do not take savings seriously and most have nothing to share at the end of the calendar year." According to Donesiano, young women need to change their attitudes and save.

A bird in hand is worth two in the bush, so the proverb states. This applies to Chikwawa women's efforts to reverse climate disaster effects. These may seem meagre but as they say, "It is not the thunder of the roaring storm but the persistence of the raindrops that water the plants." Today, their efforts not only contribute to their resilience but also to food security. ▼

"If we do not take care of our land, we will not harvest anything"



Chikwawa women in Muunda village narrating their stories

GRASSHOPPERS



1



4

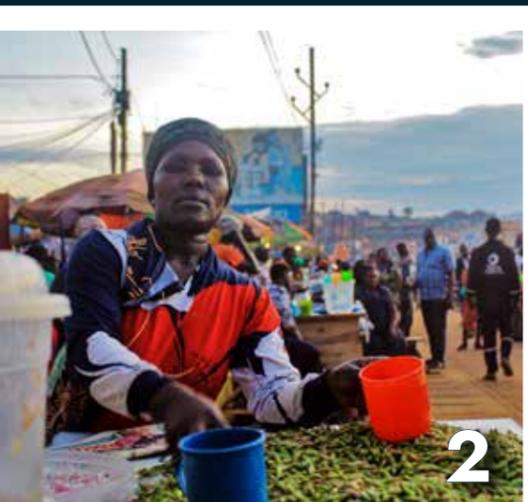


5

1. Fried grasshoppers in a cup. A cup is most commonly used as the unit measurement for grasshoppers and one like this goes for about 2 USD
2. A vendor uses a cup to measure the quantity of raw grasshoppers
3. A large amount of freshly caught and plucked grasshoppers laid out for sale
4. A unidentified man is seen buying fried grasshoppers from a street vendor
5. A grasshopper vendor sits at her table of fresh grasshoppers laid out for sale

AKA

'NSENENE'



2



3

AN ANSWER TO FOOD AND NUTRITION SECURITY

by Martha Nalukenge

To Ugandans they are simply overpriced, and a much sought after delicacy that comes around twice every year, in May and November.

However, there is more to grasshoppers. They are high in omega-3 and omega-6 fatty acids and their exoskeletons contain the most common form of fibre, known as chitin. They defend against parasitic infections and allergic conditions.

According to a 2013 UN Food and Agriculture (FAO) book titled *Edible Insects: Prospects for Food and Feed Security*, grasshoppers are not only nutritious but could also be significant for food security. Farming of these insects could potentially impact the environment and address the rapidly increasing demand for food worldwide.

It goes on to state that grasshoppers outrank beef in protein content. They also contain higher concentrations of micronutrients, trace minerals, and vitamins, including iron and zinc. 'Low in cholesterol and saturated fat influenced by the plants they eat, grasshoppers are also gentle on the gut and easy to digest. They also help in the healthy development of children and infants. Given these benefits, grasshoppers have proven to be a nutritional source of food for people of all ages.'

Grasshoppers can be fried, sun-dried, boiled, or even frozen for future consumption. *Vice Versa Global's* Martha Nalukenge tells the grasshopper story through images captured in Masaka, Uganda.

CHANGING THE NARRATIVE
TO ERADICATE HUNGER

From
street
beggar
to
**example
setter**



Alfred Andima abandoned street begging, overcame stereotyping that comes with being disabled and today he is changing the narrative as far as food and nutrition security goes in his village as a successful farmer. *Vice Versa Global* caught up with him and below is his story. One of resilience, hope and inspiration.



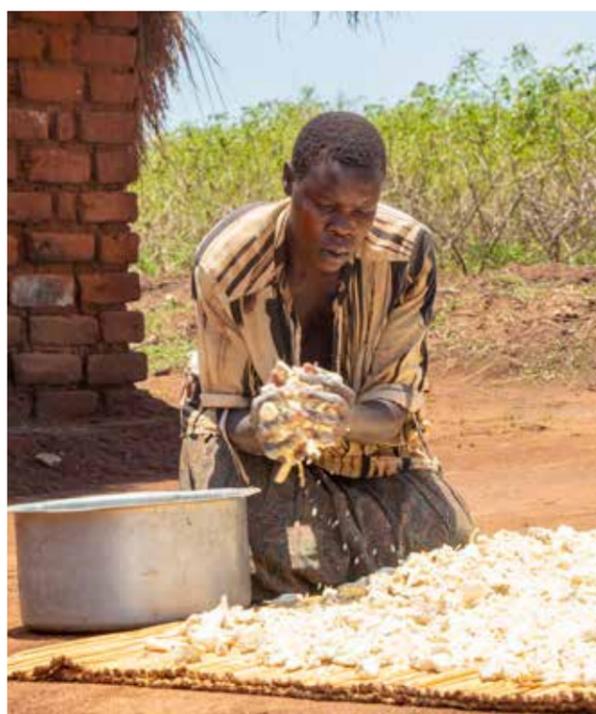
Text by Eva Nakato
Images by McWilliams Wasswa

With a hoe slung over his shoulder, a dark-skinned young man approaches us. The man is barefoot and wearing worn-out old clothes, indicating he is just from the garden. Upon approaching us, a wooden bench is brought and placed under a huge tamarind tree for us. Andima, 38 years old and a resident of Erenzea Village, Uriauma Sub County in Terego district is a farmer. Disabled with visual impairment, he is an exemplary example of the adage *disability is not inability*.

After the pleasantries, I acknowledge his handsome looks and ask if he knows this. He responds mischievously while giggling; 'Yes, but I am more handsome when I am clean and smartly dressed.' He then introduces us to his wife. Seated in the shade of their grass-thatched house, she peels cassava recently harvested from their garden. As soon as he settles and puts his hoe down, he tells the story of his life.

He recalls that his father, who died before he was born, served in the UPDF army. At a very young age, his mother left him in his grandmother's care. He does not have fond memories of his school days when he was nicknamed *mulema* (the lame one) because of his physical disability; mockery he countered with humour.

Upon completing secondary school, he began experiencing eye problems which led to vision loss. Unable to continue with school, he found a partner with whom he lived for two years and had a child. He was later diagnosed with Glaucoma, an incurable eye disease that left him blind. Devasted by the loss of his eyesight, he lost hope and resorted to begging in the village centre to provide for his family. This brought him no money and soon after his partner left him taking their son with her. A few years later he met and married Gloria.



Andima's wife Gloria preparing cassava for grinding in their compound

The turning point in his life came about when he was approached by Godwin Azale, Hub Manager for the West Nile region, We are Able (WaA) project and Vivian Chandiru from ZOA with a training proposition.

WaA is a ZOA-supported project that aims to empower people with disabilities and other marginalised groups to increase access to food, basic services and land rights for food production.

'They (Azale and Chandiru) told me about the Integrated Farm Plan (IFP) a community awareness approach under the WaA project. With it, farmer households become actors of change. They are empowered to believe in their capacities and make decisions related to food and income security,' Andima explains.

Before the approach, he farmed on a very small scale and his harvests could not support his family. He engaged in part-time street begging, an activity he gave up once he started practising the approach.

'The only thing that will motivate them is when they reap what they sowed during harvest'



Alfred Andima inspecting his farm using his hoe

'We met Andima during a community awareness campaign where he participated. Community members selected him as a role model for farmers. We trained him in the IFP approach and supported him through mentorship sessions until his family generated a household plan. He developed a positive mindset and quickly progressed from begging to working,' Azale reveals.

After this meeting, an impressed Andima returned home realising he was wasting time as a beggar. He talked to his wife about training, and she encouraged him to try it. Luckily Andima owned land, an inheritance from his father. He immediately prepared it and planted cassava, sesame seeds, beans, sorghum and eggplants.

'We no longer buy food from the market; we eat from our garden. We also sell some and store the rest for the future. We have some animals now,' he says proudly. WaA training imparts farming knowledge and also empowers PWDs so they stop depicting themselves as disabled but rather as abled. They are further encouraged to set up savings schemes.

After training, participants must create a group of ten people to train and track their progress. The groups meet every other day and help each other cultivate their farms. 'This makes the work easier and faster especially since the majority of members are widows,' Andima says. To date, he has trained approximately sixty people, whom he has divided into groups of ten. Each will create their group.

'I train them in agriculture, so they can change their lifestyle. I have also trained them in irrigation. The only thing that motivates them is when they reap what they sowed during harvest,' he says.

But challenges still exist. He has dealt with issues of land theft and encroachment, limited capital, theft of his produce, droughts and heavy rains as a result of climate change.

'One of my neighbours encroached on my land thinking I would not find out because I am blind. When I confronted her, she attacked me so I gave up on it,' he states. He was advised to plant peas to demarcate his land.

Today Andima is no longer a street beggar but a role model highly respected in his village. He has planted more than three acres of cassava and plans to cultivate more land and build a granary. For now, he is focusing on crops which he hopes to sell and make enough profits to use as capital to buy animals.

He uses the Inclusive Saving Scheme (ISAVE), which is an integrated approach designed to address barriers leading to PWDs exclusion from accessing development services (formal and informal financial services), business development and livelihood programs. When his crops are ready for harvest, he divides them into two: one half for selling and the other half for home consumption. Andima and his wife save about UgShs 20,000 (approximately \$5) per week.

WaA

We Are Able (WaA) aims at empowering people with disabilities in Central Africa so they can fully participate in society. Set up by ZOA in close collaboration with local organisations, in particular interest representatives of people with disabilities, WaA seeks to contribute toward the inclusion of PWDs and other marginalised groups to increase access to food, basic services and land rights for food production.

Disability is currently recognized as a development concern that requires inclusion as noted in the Sustainable Development Goals (SDGs); the Uganda National Development Plan (NDP II) 2015/16 – 2019/20 and the Social Development Sector Plan (SDSP1) 2015/16 – 2019/20. The WeAreAble! project is generously supported by the Dutch Ministry of Foreign Affairs under the Power of Voices strategy.

Refugee food security

Text by Pinkleen Oinokwesiga
Images by McWilliams Wasswa

For refugees and their host community in Akino village, Terego district West Nile region Uganda, finding affordable and nutritious food has always been a challenge. The Covid pandemic made the situation worse. 65-year-old Jacob Anjo learnt of the food challenges faced by the refugees in his community, and he rose to the challenge.

Jane Hayati measuring land given to her by Jacob Anjo

THE TALE OF ONE HOST RESIDENT'S DETERMINATION

Tears roll down Jane Hayati's face as she talks about the harsh reality of death caused by hunger amongst refugees. 'When you are a refugee living in a refugee settlement you have to work hard or die from hunger,' says the 39-year-old South Sudanese refugee and mother of six. She experienced this firsthand when upon returning home after visiting her ailing father, she found three of her children had died of hunger.

She escaped the war in South Sudan and sought refuge in Uganda with her now-deceased husband and their children in 2016. Today, she is confident she will never lose another child to hunger. She has Anjo to thank for this security; his land offer has enabled her to feed her surviving children.

'When I met Anjo's wife, my food rations were low. I could barely feed my children,' she explains. Before, rations from UN humanitarian organisations in the settlement amounted to four kilos of maize grains, one litre of cooking oil, one and a half kilos of beans and thirty grams of salt per person, per month.

'She (Anjo's wife) asked her husband to give me a portion of land to cultivate. By then most refugees had chosen to go back to Sudan, but I stayed and now I am cultivating the land given to me. The food I grow feeds my children. I sell the surplus to pay for their education and invest in my business,' she says.

Her story left me wondering why one man decided to take on the responsibility of ensuring food security for refugees and the host community. Today, this act of generosity precedes him.

When the *Vice Versa Global* team arrived at Anjo's home, we were met by a tall imposing man clad in a lemon-green t-shirt that blended in with his surroundings. As he welcomes us, his smile and heartfelt personality shine through. He looks younger than 65 years old. As we settled and shared pleasantries a voice called out; good afternoon, landlord. In Akino, he is called a landlord because of

'When you are a refugee living in a refugee settlement you must work hard or die of hunger'

the vast acres of land he owns. We sat under an imposing tamarind tree in the centre of his compound which provided us with much-needed shade from the scorching sun. From here we could see the Rhino Refugee Settlement. In between lay a cassava garden and further beyond the valley stretched Anjo's land dotted with beehives.

It is under this sacred African tree that he narrates his story; how he found a way to ensure both refugees and the host community in Akino village are food secure. 'Despite the challenges, our two communities get along well. Since 2016, refugees have received support and food aid from the UN Food Programme (UNFP) and the United Nations High Commission for Refugees (UNHCR). All this changed in 2020,' he explains.

When he found out that the refugees were experiencing difficulties because the food-to-energy ratio was decreasing and was made more difficult by the increase in their population, he decided to intervene. 'Demand for food was high, but there was a shortage. This not only affected the refugees but the host population as well because our social lives are interlinked.'



Above: Jacob Anjo measuring land with Jane Hayati. Inset: Jacob Anjo



‘If I dig alone, the little I am going to produce will not be enough. So, let them also produce, then the whole village will have enough food’

Prompted by a request from the Office of the Prime Minister (OPM), Anjo started giving out land to refugees so they could grow food. ‘If I dig alone, the amount I produce will not be enough. In this case, we should also allow them to produce so that the entire village has enough food,’ he explains. He owns more than 500 hectares of land inherited from his grandparents.

‘When we agreed to host the refugees, this place had been neglected by the local government. There were no development initiatives; no access to clean water; no roads, schools or health service facilities. These services were later provided for the refugees following their settlement here and the host community benefitted,’ he says.

According to the Uganda Bureau of Statistics (UBOS) population projections, Terego District has an estimated population of 168,000 South Sudan refugees. Characterised as rural, subsistence crop farming is the main economic activity for both host and refugee communities, according to International Labour Organisation statistics (ILO, 2020).

Anjo consented to give land to the refugees because he hoped this would ‘develop the place.’ ‘There were no proper roads here before, now we do. This tank (pointing to a water tank) was also not there. Today we have more services and benefits as a host community.’ He adds that more importantly, refugees have understood the importance of growing their food and the number of land seekers has increased.

As of now, over 50 households have benefited from land allocated starting at one acre. For those with financial means, he asks for a payment of between UgShs.20,000 and 50,000 (between 5 and 13 dollars). Allocation is free for those who cannot afford this amount. Crops grown include simsim (sesame seeds), beans, sorghum, groundnuts, maize, and cassava.

To avoid conflicts, Anjo’s NZO’s land was demarcated and he was issued a Certificate of Customary Ownership with help from ZOA. This is an international relief and recovery organisation that helps people affected by violent conflicts and natural disasters in fragile contexts.

Land rights and tenant agreements have been introduced for refugees to ensure peaceful interaction and relationships between them and their hosts. Land agreements are signed by both parties’ authorities. The host community is represented by the Local Council while the refugees are represented by the Refugee Welfare Council (RWC).

Agreements ensure boundaries are respected and promises are kept. ‘If we agree that a refugee will work in an allocated field for two years, it will be written down. If I try to get them to leave, that agreement protects them,’ he explains. Challenges remain, including a lack of rain which he says can last up to three months leading to poor yields and famine. Sometimes, crops are destroyed by wandering animals. He cites the example of his newly planted cassava garden destroyed by untethered goats.

There are also food and domestic animal thefts, wildfires and tree-cutting. ‘The population has grown, and so has the number of thieves. If I plant a tree like this, when I am not around, someone will cut it. It is not refugees. They rarely cut trees, save for construction or firewood, but they never steal our livestock.’ He says dialogue is used in conflicts. Anjo’s contribution was born of empathy. As a result, the refugee community and host community have become stronger and healthier.

‘While I have taken on the responsibility of providing land for cultivation, people must be willing to farm the land. That way everyone has something to eat. In the end, theft and poverty will be eliminated,’ he says. ‘People must use the land given to them by God to fight hunger. If we cannot use the land, someone else will profitably cultivate it, which will benefit the landowner.’

ZOA

Dutch based International Non-Governmental Organisation (INGO) ZOA works in 15 countries to guide people in emergency towards relief and then recovery. It also guides local organisations to take over once ZOA leaves to handle another emergency.

ZOA has a Christian foundation and offers help to people affected by natural disasters or armed conflict regardless of religious or political backgrounds. It works with communities to recover so

people can restore their livelihoods, through income and agricultural projects.

In Uganda, ZOA focuses on 3 main sectors: land rights, food security and livelihoods, as well as education, which are implemented in tandem with various local projects.

In Terego District, West Nile Uganda, ZOA works with GIZ on land registration and certification with community members adjacent to the Rhino Camp refugee settlement. This is to support land access

and tenancy agreements for refugees. According to Patrick Otampican, who coordinates the land rights project in Terego, the pilot project was set up in the Uriama sub-county in 2020.

‘The aim was to give out customary land ownership certificates to the host community to provide security for their land and avoid land disputes among the refugees and host communities.’

The land rights project is generously supported by GIZ.

Students of Medji Sekou agricultural college in Benin where learning communities have set up collaborations in line with attaining zero hunger through knowledge sharing

by Tina Byaruhanga

Attaining ZERO HUNGER:

The Coalitions Link

Dr. Beatrice Owiti, a senior lecturer at Meru University believes in spearheading collaborations within learning communities in the Global South and the Global North; Nigerian researcher at the Rubber Research Institute, Rosemary Ogeri seeks to bridge the knowledge gap. Food and Policy analyst and researcher Shadrack Agaki is all for spearheading conversations through social media platforms to draw attention and advance debate on food security and policy issues that seek to change how people think about the food systems.

The three, all beneficiaries of the Netherlands Food Partnership free E-Course offered to agri-food stakeholders interested in food system transformations in low- and middle-income countries, are proving that there is power in having knowledge and in sharing that knowledge.

In separate stories below, Owiti, Ogeri and Agaki, borrowing from their childhood experiences, share views on bridging the knowledge gap and its significance in alighting the value chain towards attaining SDG 2 on the continent.

Through optimising production to avoid food waste, building networks, linking farmers to cooperatives, training graduates that can solve real problems, and equipping farmers with the proper knowledge so they become part of the value chain, they believe Africa can win the fight against hunger.



On stage during World Food Day 2022

Spearheading conversations to change food systems.

by Tina Byaruhanga

Africa is a continent rich in history and potential. Despite abundant natural resources and agricultural opportunities, hunger and malnutrition persist, shadowing prosperity. Shadrack Agaki, a food policy analyst and researcher talks to *Vice Versa Global* about the significance of food system thinking in attaining food security in Africa.



Raised in Nyanza, western Kenya, Shadrack Agaki knows food scarcity. 'Having grown up with nine other siblings and preacher parents who did not work, I experienced food scarcity on a personal level. We planted maize, beans, bananas, and potatoes on our small piece of land. This was never enough and we often went to bed hungry,' he says.

From a young age, he knew about food scarcity because, unlike their neighbours, his family could not afford fertilisers. That meant land productivity declined and production was less. When he was thirteen, his father passed on and times became increasingly difficult. This forced him to skip school to sell cups of water at the market. The money earned enabled him to purchase food for his family so they would not sleep hungry.

Today, the Kenyan international food policy analyst and researcher borrows from his childhood experiences. He uses his social media platforms to draw attention and advance debate on food security, and food policy issues. He has also recently taken on climate diplomacy which he says is a key component of the food system thinking.

'In Kenya, food issues are left to the Agriculture Ministry whereas food is a joint responsibility of all government departments'



Garri made from cassava in Ibadan, Nigeria

'We cannot address food security without addressing climate change because it is a key determinant of productivity levels. Food systems thinking takes a holistic approach to food security,' he points out. 'Policymakers should connect and collaborate with various sectors to address food security issues.'

'Agriculture, education, water, transport, information, and trade ministries should all work together to facilitate joint conversations and achieve a common goal. For example, if you produce food and the transport system is broken, there will be delays and higher transport costs. Eventually, there will be wastage and loss if the products do not get to the market.'

In 2017, Agaki decided to pursue a master's degree in international studies with a focus on food policy regarding multinationals and Africa. These are known as the Global North and the Global South. The former refers to economies with up-to-date technology and resources whereas the latter have fewer resources and are more likely to suffer from food scarcity and poverty.

'I now use everything within my arsenal to address food system thinking because it is where we will derive solutions to food insecurity. I spearhead conversations to build awareness when I am with policymakers or partners,' he says.

'I also use my social media platforms to share thought-provoking insights to create awareness. I have been in the policy-making environment for ten years and have made connections to channel through these discussions.' While there exist food policies for each country in Africa, there is still a major dissonance between policy developers and implementors. Food systems thinking is based on working together rather than working in silos.

Agaki says different key stakeholders play different roles in food security. He realised this after participating in the Food Systems E-course organised and offered by the Netherlands Food Partnership. The Food Systems e-course is organised since 2021 and offers

free participation to a maximum of 800 selected agri-food practitioners and policymakers annually. It exposed him to the latest concepts in food systems and gave him an in-depth understanding. 'The course helped me understand how different components of food systems are closely related and work together to shape a sustainable outcome.'

For food security to be a reality, food production and supply must be stable. Consumers should be able to choose different food options, yet this is not the case. Without availability, accessibility, agency, and sustainability, people are not food secure,' he explains.

He believes a mindset change is needed. The lack of a common understanding and approach to food system thinking delays progress towards SDG 2 by 2030. 'In Kenya, food issues are left to the Agriculture Ministry whereas food is a joint responsibility of all government departments. I always say food is life. Without it, we will all die, so we should pay attention to discussions affecting sustainable food production for our people,' he says.

'Food security awareness levels are low because people do not understand the concepts. When you talk about it, people automatically think you are talking about starvation and maize grain supply. It seeks to address the continuous availability and accessibility of the right amounts of the right foods for the population,' he adds.

According to him, there is not a single person, government unit, or partner responsible for food security alone. It is a joint effort that must be tackled holistically to deliver the intended results by 2030.

'Going forward, we must all work together to realise the impact on Africa. I will continue to be deliberate in seeking out opportunities to influence the right people, shape conversations and build coalitions to address food systems thinking. With the right amount of influence and effort, this knowledge will reach the grassroots and inspire change,' he concludes.

Bridging the knowledge gap.

by Tina Byaruhanga



Africa is ramping up efforts towards zero hunger and ensuring no African goes to bed hungry or child dies of malnutrition. Ogeri Rosemary Idika, a researcher at the Rubber Research Institute of Nigeria sums up the biggest challenge as: 'The knowledge gap. Although we're not where we used to be or where we need to be, we're on the right track.'

Ogeri Rosemary Idika was introduced to farming by her grandmother. They tended to her garden whenever they visited her family home in Amaizu, Ebonyi (formerly Abia) State in southeast Nigeria. She would observe her grandmother and other village members carrying out traditional food farming.

Little did Ogeri know that those visits laid the foundation for her pursuit of food and nutrition as a career later in life. She studied Human Nutrition at the University of Ibadan. 'I would just follow her to the garden and help her transplant seedlings from the nursery to the garden. I loved it,' she reminisces. For a long time, she only knew traditional farming practices until she took part in the Food Systems e-course hosted by the Netherlands Food Partnership (NFP).

Ogeri believes that while nutrition and food are directly interlinked in her field of practice, the course gave her a broader understanding of food ecosystems. It also demonstrated the impact of better food management on livelihoods in low to middle-income communities.

'I now understand that there needs to be more interaction between the different elements of the food ecosystem. They are more effective when approached holistically,' she says. The 6-week online course is offered for free to agri-food stakeholders interested in food system transformation in low to middle-income countries. It is hosted by the NFP with support from the Netherlands Ministry of Foreign Affairs. The course is facilitated by the Wageningen Center for Development and Innovation.

It is one of several initiatives by the NFP to support a systemic approach toward ending hunger and malnutrition in line with the SDGs by 2030 and raising small-scale food systems' productivity. As part of its policies on foreign trade and development, cooperation and agriculture, the Netherlands government has placed priority on delivering its contribution toward a future without hunger through a food systems' approach.

To increase global food security, a focus has been placed on reviewing the entire food supply system and the role of stakeholders in the ecosystem. This is to deliver holistic food system development. With extensive knowledge of agriculture, water, and food value chains—coupled with the relevant partnerships—Dutch expertise supports achieving sustainable food security and healthy diets worldwide.

The goal is to end hunger and malnutrition, promote inclusive and long-term growth in the agricultural sector and achieve ecologically sustainable food production systems. They all contribute to SDG 2. Achieving food security means a growing global population has a healthy diet based on sustainable food systems.

Ogeri has developed a renewed understanding and appreciation of the food system. Today she analyses agricultural practices through those lenses and knows the gaps in the food management chain. Ogeri hopes for a time when food systems initiatives are widely known, and shared several examples to highlight this.

'When we harvest maize, it is everywhere,' she explains. 'After the season ends, it becomes unavailable. This scarcity leads to a price increase. Why isn't there a way to process and preserve it so it's available throughout the year?'

She adds that there is a need to change the way agricultural products are processed to solve that problem. 'There are several initiatives to develop the value chain of agricultural products. It will get better now that there are interventions like this.'

One focus area in her research is how to optimise gum Arabic production timing. Extracted from the bark of the African acacia tree, it is processed, packaged and sold on the local market and exported. It is utilised in the food industry to set flavours as an emulsifying agent. It is also used to prevent sugar crystallisation in confectionary and as a stabilising agent in frozen dairy products.

Ogeri laments that whereas there is a huge opportunity for farmers who grow and harvest gum, to process, package and export it, they only grow and sell it cheaply. 'They harvest the gum, remove the unwanted residue, and sell it raw to the only company that processes and exports it for a fortune,' she says.

According to Idika, if farmers were equipped and empowered with the right knowledge, they would be part of the value-addition chain and earn more as a result

She believes that if farmers were equipped and empowered with the right knowledge, they would be part of the value-addition chain and earn more as a result. That is why today they are sensitising farmers about other income-generating opportunities by optimising land usage during the seven years as they wait to harvest the gum.

'We encourage farmers to grow ginger and herbal plants. These co-exist with acacia trees and yield decent returns because of their medicinal relevance,' Ogeri states. Farmer livelihoods can be improved through intercropping, she says. In other instances, farmers optimise agricultural land by planting several crops in one small plot.

In eastern Nigeria, she says, farmers now plant over five different types of crops on one small plot. 'We have introduced biodiversity to some communities. This has improved their harvest returns and livelihoods over time.' In response to how best to address food loss in the ecosystem, she says the main problem is the knowledge gap.

'When I go to the market, I see wastage. It is only because there is not sufficient knowledge to change mindsets.' She cites an example of vendors who throw away unsold produce that rots because they have no cold rooms for perishable food storage.

'They lack knowledge of how to process fruits to create products with a longer shelf life. There is one community market with a cold room where farmers store their products overnight. Nonetheless, we need to do more than that,' she asserts. 'In our homes, we do not all have refrigerators. You will be surprised to know that food lost is more than food consumed.'

While she agrees that food loss is still a major issue, progress is being made in other areas. That is where knowledge gaps are filled. 'The stakeholders in Nigeria know the need to jointly work towards meeting the SDG 2 and are more responsive to initiatives to achieve this,' Ogeri concludes.

At a farm visit with Nandi cooperative in Nandi county, Kenya, where avocado growing is replacing tea growing



Empowering Farmers and Fostering Global Cooperation.

by Tina Byaruhanga

Collaborating with learning communities between the Global South and North is essential for Africa to feed its population and eradicate hunger. This is according to Dr Beatrice Owiti from Meru University. She talks to *Vice Versa Global* about why this collaboration is significant and beneficial to Africa.

A person who has not travelled widely thinks their mother is the best cook.' Dr Owiti uses this African proverb to highlight the advantages of partnerships between the North and South on a global scale. This can be achieved by working with learning communities and partners, both domestically and abroad.

She was part of the Food Waste Reduction and Food Quality Lab (FORQLAB) team from Kenya. They visited different stakeholders and took part in knowledge exchange sessions in the Netherlands.

FORQLAB is a consortium under the auspices of the Netherlands Food Partnership comprised of four Dutch universities—Van Hall Larenstein University of Applied Sciences, HAS Green Academy, In-holland, and Aeres University of Applied Sciences. The consortium is further made up of Egerton University and Meru University from Kenya. It includes stakeholders from different cooperatives, companies, business support organisations, and knowledge partners in the dairy and avocado sectors.



Dr Owiti explains: 'FORQLAB follows a living lab approach. Masters students and teachers undertake applied research with business partners to explore and test solutions to technical issues. They also improve coordination in the avocado and dairy value chains.'

Today, the project which started at Meru University, has expanded to six colleges and four co-operatives over five years. 'We have scaled up the project to Mt. Kenya Avocado Growers' Cooperative, Mt. Kenya Abogeta East Avocado Growers' Cooperative, and Nandi Cooperative Society. We have also created linkages between them and different networks to facilitate avocado sector growth,' she says.

Dr Owiti says through the project, they have built networks between cooperatives, the government, and exporters. This has yielded tangible results for the sector. 'We have also linked farmers in cooperatives to each Horticulture Crop Directorate which gives farmers seedling certification. This automatically makes cooperatives stand out above the rest when the business community looks for export products.'

To show farmers the quality expected of them by exporters, FORQLAB organises sessions with farmers and exporters. By participating in these sessions, production standards have been raised. They are taking it a step further by introducing new exporters to cooperative societies and designing export contracts with them. As a result of recurring business opportunities, their livelihood has improved.

'Through these networks, farmers have demystified the role and relevance of government departments to their trade. Cooperatives now have better governance structures,' she says.

Dr Owiti says that together with her team at Meru University, they have created modules that have been infused into the main curriculum. These modules will continue to be used long after the project ends.

Kenya's education system was recently changed to a competency-based curriculum. As a result, Meru University's college has infused modules on horticulture and water into the curriculum. The students received this well. 'We streamlined the way students complete their attachment modules so this knowledge is covered. We also introduced gender policies. Hopefully, we will no longer be accused of simply researching to gather knowledge to fill up shelf space,' she says jokingly.

Dr Owiti is hopeful about future expansion. She reveals that with each additional project, she finds the required resources. This is because of the interest FORQLAB has piqued at the university. She works with several students. Two are exploring financing options for farmers, while two others are focused on preventing food loss. The rest of the team is working on developing a powdered form of avocado fruit. It is also researching the use of black soldier flies to create organic fertilizers from waste.

'At an institutional level, I want to produce graduates that can solve real problems like food loss, benefitting the industry and themselves. As an economy, we tend to lean towards entrepreneurship. I want to see farmers develop their farms into profitable business ventures by utilising our knowledge,' she says.

'The government should work closely with cooperatives. To achieve their agendas and uplift livelihoods, the entire ecosystem can learn a lot from each other. I have seen the benefits of a partnership between the Global North and the Global South. I have met a diverse array of people, not only in horticulture but in other specialities like food science technology, water, gender, export, government, the private sector and several others. These people have all contributed to my knowledge and networks.'

Local communities and stakeholders in Africa are working together to achieve zero hunger on the continent, with support from international organisations. These organisations bring the knowledge and expertise needed to achieve this goal.

'We are supporting partnerships with different stakeholders to extend the Dutch knowledge and expertise to communities with a common ambition and agenda,' Babette Bodlaender, a Coalition Builder with the Netherlands Food Partnership (NFP), says. 'We have undertaken initiatives with learning communities or governments in various low- and middle-income countries to support cross-cultural partnerships focused on soils, seeds, and water.'

Kenneth Owino, the Communications Officer at NFP, divulges that they follow the diamond approach to achieve this, building on the complementary strengths of partners from different sectors. It ensures all players in the ecosystem are given equal opportunity to take part in conversations and exchange insights on food nutrition and security.

'This approach involves working with stakeholders to develop relevant, applicable, and sustainable food system transformation strategies. We do not want to leave anyone out so every player in the food ecosystem has a contribution to make,' he says. The NFP engages with stakeholders including governments, NGOs, the private sector, and learning institutions.

This approach promotes information sharing and collaboration, resulting in local networks established in ten African countries and two in Asia. 'We work in areas where there is an urgent need for food system transformation to help make food systems more economically, socially and environmentally viable,' he explains. 'Our work is mainly needed in middle to low-income countries, where stakeholders are increasingly collaborating to address the challenges of the current food system.'

According to Bodlaender, NFP aims to bring all stakeholders and partners together, fostering equal conversations and collaborative action, to create an enabling environment for ecosystem or value chain growth. This approach discourages isolated efforts and promotes collective progress.

'Our goal through these initiatives is to create a world without hunger, where everyone has access to sustainable food. We do this by supporting collective impact coalitions to reach their full potential, and offer a convening space where initiatives can grow and be sustained,' Owino clarifies.

To achieve this, NFP follows a three-pronged strategy: Community Engagement, which involves capacity strengthening, knowledge brokering, network support, and policy engagement; Partnership Initiation; and Collective Impact Coalitions, enabling partnerships to explore and implement solutions for food systems transformation.

Bodlaender elaborates: 'NFP provides backbone support to Collective Impact Coalitions in enhancing communication, innovation, or scaling solutions within the ecosystem. This includes defining a common agenda, aligning partner activities, communicating coalition results, and identifying relevant financing opportunities.'

According to Bodlaender and Owino, these coalitions are already having positive impacts. 'Some of the coalitions that are advancing food systems transformation with the desired impact are the Food Waste Reduction and Food Quality Living Lab (FORQLAB). They explore technical and policy interventions required to develop safe products and reduce food losses for the avocado and dairy sectors in Kenya,' Bodlaender says.

Others she mentions include SeedNL, which provides access to quality seeds and boosts productivity for all farmers; Saline Water and Food Systems, established by

NFP and the Netherlands Water Partnership to tackle salinity challenges and empower smallholder farmers through enhanced digital ecosystems; and the Global Partnership for the True Price of Food coalition, which enables governments and food system actors to adopt true pricing at scale.

However, challenges exist. There is the difficulty of defining a specific timeframe by which the envisioned food systems change is realised, and how long the partnership will continue to be supported. 'What we want to see is continued collaboration amongst partners—and beyond NFP's support—to sustain the partnership's impact,' she says.

As for the future, Bodlaender and Owino say they will continue to support food systems transformation. 'NFP seeks to bring best practices to regional levels and the agendas of international policy and investments, through events like the UN Food System Summit and Conferences of Parties (COP) for Climate and Biodiversity. Food nutrition and security is still a challenge. There is also a lot of work to be done to sensitise, mobilise and help build coalitions in low- and middle-income countries.

'Additionally, there are always new innovations and developments in food and nutrition security. So, there will still be a need to collaborate and continue to facilitate knowledge exchange to foster deeper understanding of promising solutions and collective action, to put them into practice,' she asserts.

Owino concludes; 'Success to us, is seeing the collaborations work. Being able to bring relevant actors to the table, to have meaningful conversations for shared understanding, and to stimulate real-life action to realise the much-needed changes in our food systems.'

Harnessing local foods for infant nutrition

Malnutrition remains a significant concern for the health and development of children in developing countries. In Bugiri district, Eastern Uganda, World Vision programs - led by a group of caregivers - are actively tackling this challenge through innovative approaches such as Positive Deviance Hearth sessions and Nurturing Care Groups. Despite limited financial resources, caregivers are making remarkable progress in combating malnutrition by enhancing children's nutrition with locally sourced food options.

Text by Pinkleen Oinokwesiga
Images by Henry Williams

As we walk to our meeting place, we're greeted by a lovely sight: parents feeding around 14 children, aged one to five. We are in the middle of a banana plantation, with a single traditional Ugandan hut that makes up a homestead. It is here, under the shade of the banana plantation leaves, that members of the Bulidha Parish Group hold their weekly Positive Deviance (PD) Hearth sessions.

The sessions, facilitated by World Vision Uganda, involve training caregivers in child care and appropriate feeding practices. This particular group is found in Bulidha Parish located in Nakyereike village, Bugiri district, in Eastern Uganda. Fred Kigenyi, a member of the Village Health Team (VHT), and Sajidu Obugu, the health assistant, provide support to the group.

Amidst the plantation, an interesting revelation emerges: each group member had a child who suffered from malnutrition. Through sensitisation from the PD Hearth sessions, solutions were found. 20-year-old Hafuswa Naitebe explains; 'We use locally avail-

able foods to make this porridge, which we feed children under 5 years, three times a day, for 12 consecutive days. This period allows us to monitor changes in their health.'

Naitebe joined the group after her child stopped breastfeeding suddenly. After a hospital visit, the doctor diagnosed the child with malnourishment. 'I took my child to different clinics, but they only prescribed malaria medicine without any diagnosis. After learning about the malnourishment, I started feeding him this porridge,' she explicates. 'After twelve days of rehabilitation, the VHT assured me of my child's recovery. His weight significantly increased from seven to fifteen kilogrammes.'

The energy-dense and nutrient-enriched porridge is made with various local foods like millet flour, sorghum, roasted soya, silverfish, fish, meat, eggs, vegetable oil, and ground nuts; all suitable for babies. Madina Namuluba, 23, noticed her one-year-old child losing hair, swelling, turning yellow, experiencing diarrhoea, and having a reduced appetite.



A mother serving energy-dense porridge to children in Bulidha

'When my child's hair started turning yellow, I visited the doctor twice, but the prescribed medication did not work. The doctor then suggested I join a group where they would teach us how to prepare 'ekitobelo' (a balanced meal). I agreed and joined the group.'

According to Namuluba, the training involved cooking demonstrations for infant meals. 'When I started preparing these meals for my child, his health improved. Today he weighs thirteen kilogrammes, compared to six before. It has been a year since. I noticed the changes after twelve days of feeding him the porridge, and continued with balanced meals.'

Through the PD Hearth sessions, parents learn how to care for and prepare balanced meals for infants and their families. Members are organised into groups and collect various foods like millet flour, sorghum flour, maize flour, sweet potatoes, cassava, eggs, cooking oil, Irish potatoes, 'matooke', silverfish, and vegetables.

Through the PD Hearth sessions, parents learn how to care for and prepare balanced meals for infants and their families

After collection, they prepare an assortment of foods, which are then mixed and fed to the children. They gain knowledge about cooking different foods, portion measurements, and the importance of food groups for children's growth. This knowledge is shared with the community, regardless of group membership.

Furthermore, members are taught about the three essential food groups: body-building (proteins), energy-giving (carbohydrates and fats), and protective foods (vitamins and minerals) that should be included in children's daily diet for proper growth and development.

They also learn to use affordable local protein-rich foods like soybeans, beans, chicken eggs, and silverfish as substitutes for expensive meats and fish. Combating malnutrition goes beyond a balanced diet and three meals a day. The community members now have the knowledge to address the root causes, starting with hygiene.

Today, they have improved sanitation by setting up plate stands, rubbish pits, and latrines. They proudly showcase clean compounds and the drainage of stagnant water. Naitebe and Namuluba, like other members, learned about the PD Hearth sessions from the VHT. During routine checkups on pregnant women, the VHT informs them about training focusing on the well-being of pregnant women and lactating mothers.

Challenges persist, with prioritisation being the most significant. Financial constraints force families to choose between basic needs, education, and purchasing high-end nutrients for a balanced diet. However, communities recognise and acknowledge the importance of good nutrition for the health of their families and children.

An integrated approach to combat malnutrition

Household food shortages, poor nutrition, and limited access to healthcare may seem like urgent problems that families should address by growing their food. Unfortunately, in Bugiri district, poverty drives the majority to lease family farming land for sugarcane planting instead of domestic farming for food and nutrition security.

This contributes to the persistent issue of malnutrition in the district. According to 2020 global statistics, approximately 149 million children under the age of five are stunted, 45.4 million are wasting (too thin for their height), and 38.9 million are overweight. The prevalence of malnourished children is highest in East Africa, at 39 percent.

Uganda has one of the highest rates of malnutrition, with three out of ten children under the age of five being stunted and 3.5

percent wasting. In Busoga Sub Regions, a study among households with children under five found prevalence rates of stunting (33.3%), underweight (27.4%), and wasting (18%). The percentage of malnourished children increased with the number of children in the households. There is also a high prevalence of malnutrition and household food insecurity in the sugarcane-growing communities of east-central Uganda (Lwanga, Wanyenze, Matovu, and Orach, 2015).

It is against this background that World Vision focuses on health programmes through Nurturing Care Groups and Positive Deviance Hearth Sessions in Bugiri district. According to Daniel Martin Kizza, a Project Officer of Health and Nutrition in the Nabukalu area programme; 'Due to high poverty levels in Busoga sub-region, most people have decided to hire out their land for as low as USD 290 annually per hectare for sugarcane planting instead of growing food to feed their families. This is why there is a high prevalence of malnutrition.'

In the effort to reduce malnutrition in the district, World Vision is implementing Health and nutrition in the Nabukalu sub-county. This is alongside a two-year Pfizer district-wide grant funded by the Pfizer Foundation, which is implementing ICCM and PD Hearth led by Isaac Charles Baigereza.

In 2019, the Nabukalu Area Programme, funded by the Australia World Vision Support Office, started implementing the Nurturing Care Group model. This model addresses issues around poor infant and young child feeding (IYCF), home management, and care-seeking for sick children—and promotes disease-preventive actions. It also addresses poor early child development, stimulation practices, water collection, storage, treatment, hygiene, and sanitation practices.

The PD Hearth programme was implemented in 2022 as part of the Pfizer Foundation project. The programme integration involves the collaboration of various technical programmes (Health, Nutrition and WASH, Child Protection, Literacy Improvement, and Community Engagement and Sponsorship). The goal is to transform the lives and well-being of vulnerable children and their families holistically. For example, health and nutrition efforts aim to ensure well-nourished children are protected from infections and diseases through meaningful community engagement.

Baigereza says the goal is to end malnutrition and stunting in infants by focusing on mothers' lifestyles before conception. 'If a mother is malnourished, it can lead to undernourishment in the newborn and long-term malnutrition and stunting. In other words, they do not attain the required height for their age. That is why these programmes were implemented to sensitise, educate and promote good feeding habits for both mothers and babies through local solutions.'

Today, the numbers tell a story of positive change. In 2022 during an initial assessment carried out in the sub-counties of Busowa, Bulidha, and Bulesa, 253 children were screened using a Mid Upper Arm Circumference (MUAC) tape. Nine percent were found to have severe acute malnutrition, eleven had moderate acute malnutrition, and nineteen suffered from mild acute malnutrition.

Of the 163 children that were rehabilitated in PD Hearth sessions, 67 suffered from acute malnutrition and the rest were at risk. 'After twelve days, the number of acute malnutrition reduced to forty-eight. After three months, a follow-up assessment revealed only 34 still suffered from acute malnutrition,' says Baigereza. 'In June and July 2023, more children were rehabilitated in the same sub-counties: 166 in Bulesa, 173 in Bulidha, and 181 in Busowa.'

Nurturing Care Groups - a tale of lead mothers

We cross into Nabukalu from Bulidha to meet with members of the 'Amagezi Bwe Bugagga' (knowledge is wealth) Care Group. Here, the success tale of lead mothers resonates—women trained by World Vision Uganda to educate mothers in preparing mixed foods, 'ekitobelo', to combat infant malnutrition. The care group teaches members how to cook the three essential food groups for children under 5: energy-giving, bodybuilding, and protective foods.

The care group aims to promote good health in children. This includes ensuring hygiene practices to minimise infections, providing affectionate care, and promoting adequate nutrition through exclusive breastfeeding (from birth to six months), diverse complementary feeding, and essential micronutrients. It also focuses on stimulating early learning and meeting the physical and emotional needs of children.

The initiative also aims to ensure expectant mothers attend antenatal clinics and have proper nutrition. It promotes family planning, good sanitation, immunisation, backyard vegetable gardening for food security, group expertise and the starting up of saving groups with low-interest loan rates. Founded in October 2019, the group has grown from fifteen, seven pregnant mothers and eight lactating mothers, to twenty members.

Financial constraints force families to choose between basic needs, education, and purchasing high-end nutrients for a balanced diet

Community members appreciate its positive impact, such as building energy-saving stoves, promoting household hygiene and sanitation, ownership of backyard gardens for better nutrition and healthy eating habits of their children, and saving for transformation. 'Lead mothers spread awareness about joining the group from one village to another. Then we all meet up and get trained,' says Mariam Nakitende, a mother of 13. They share knowledge about breastfeeding, keyhole kitchen gardens, and balanced diet meals.

'My late mother taught me that good hygiene is the first step to proper nutrition,' says Scovia Kwemogera. She emphasises the importance of exclusive breastfeeding and the care for babies from birth to the sixth month. 'From six months to two years, supplementary foods can be given alongside breast milk. However, moderation is key as the baby's throat is not yet fully developed. Meals should include energy-giving, bodybuilding, and disease-fighting foods.'

To ensure sustainability, families are encouraged to set up backyard and keyhole kitchen gardens (biofortification) using stones, sand, ash, compost manure, and dry cow dung. These are then mixed and a structure is built in which soil is added. As the soil level decreases, it is replenished with compost manure, serving



A demonstration of the use of an energy saving stove in Nabukalu sub-county

as a fertiliser. Keyhole kitchen gardens are used to grow nutritious, non-invasive vegetables like carrots, onions, and leafy greens.

Similar to the PD Hearth groups, women in the group are taught how to prepare balanced meals for their families, which complement measures to reduce child malnutrition. Nakitende joined the care group after her fifth child suffered from malnutrition. 'My mother-in-law used to care for my children. When she died I did not know what to do. I did not know about proper nutrition and how to feed my children well, which is why my child got malnourished,' she says. However, her knowledge and situation changed after joining the group.

Challenges persist, such as a lack of seedlings and affordable watering equipment for their gardens. Nevertheless, increased men's involvement, immunisation awareness, proper feeding, antenatal checkups, improved sanitation, hygiene practices, and handwashing have significantly reduced malnutrition levels.

World Vision initiated the Lead Mothers Programme by identifying two women per village and providing them with training before forming care groups. Currently, there are 104 registered lead mothers from 52 villages who are trained to share information through peer-to-peer learning.

Globally, Nurturing Care Group activities align with fulfilling multiple Sustainable Development Goals (SDGs). These include SDG 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture), SDG 3 (ensure healthy lives and promote well-being for all), SDG 5 (achieve gender equality and empower all women and girls), and SDG 6 (clean water and sanitation).

A Nurturing Care Group consists of ten to fifteen women, mothers, and child caregivers. Led by community-based volunteer behaviour change agents (lead mothers), they meet every two weeks with VHT promoters for training. Through peer-to-peer learning,



Hafuswa Naitabe demonstrating how energy-dense porridge is made during a PD Hearth session in Nakyeike village, Bulidha parish, Bugiri district, Eastern Uganda

they disseminate key health, nutrition, and WASH messages at the household level.

‘After training, they go out and create care groups where they conduct sessions on infant child feeding practices, nutrition, sanitation, and growth monitoring,’ Kizza explains. To ensure they are well equipped to disseminate this information and monitor progress, they are provided with weighing scales, MUAC tapes and height boards centralised at health centres. They are supervised monthly by VHTs and receive coaching and mentoring from health workers every quarter.

‘This enables them to carry out monthly growth monitoring, nutritional screening and rehabilitation of malnourished children. Severe cases are referred to health centres for treatment and further management. The lead mothers also educate caregivers and mothers on causes and signs of child malnutrition through peer-to-peer neighbourhood sessions,’ he explains.

‘Communities have been imparted with knowledge on assessing, counselling, and rehabilitating. Lessons continue in their care groups, equipping them with skills to handle cases using the locally made balanced diet of nutritious foods—‘*ekitobelo*.’ Lead mothers, with the help of VHTs, manage moderately malnourished cases among infants. Severely malnourished children are referred to health centres for professional health interventions by the OTCS, ensuring appropriate intervention.

Scaling up nutritional security through micro-nutrient supplementation

Dan Irvine, Global Director of Health and Nutrition at World Vision International states; ‘It starts with dietary diversity. Fighting hunger alone is not sufficient. We are just beginning to address and reduce micronutrient deficiency in large populations. People must support and advocate for this cause. More political and social will is needed to achieve it.’

Over two billion people worldwide may be suffering from micronutrient deficiency—lacking essential vitamins and minerals for proper growth and development. ‘A lot of micronutrient deficiencies can be addressed through optimisation of a diet. This is by having a nutrient-dense diet with adequate diversity to cover human nutrition needs optimally,’ he says.

World Vision operates in 100 countries, implementing a Children’s Nutrition Strategy that promotes nutrition, prevents malnutrition, and detects and treats acute forms of it. Today, their global

‘If a mother is malnourished, it can lead to undernourishment in the newborn and long-term malnutrition and stunting’



Above: Demonstrating how to wash hands using soap and water on a tippy tap after using the latrine
Left: An arrangement of simple nutritious food groups prepared during PD Hearth sessions



Scovia Kwemwogera plucking leafy greens from her backyard garden in Nabukalu sub-county



campaign on hunger and malnutrition focuses on micronutrient supplementation, combating ‘hidden hunger’ and ensuring diets are nutrient-rich.

Food fortification—adding essential vitamins and minerals to commonly consumed foods—is a scalable and cost-effective tool to reduce deficiencies and improve nutrition worldwide. ‘Food fortification involves adding an additive to food to increase its nutritional value,’ he explains. ‘Examples include adding iodine to salt to address iodine deficiency. Or adding vitamin A to maize for fortified maize mill, or adding zinc to rice to get fortified rice. This can be done at small and large-scale levels.’

According to Irvine, another approach they have taken involves partnering with farmers to promote biofortified foods and educate them on cultivation and regeneration techniques. This helps ensure the sustainability of these foods in local farm systems and increases micronutrient uptake in the local food supply. For instance, in Tanzania, World Vision works on fortifying orange-fleshed sweet potatoes with higher Vitamin A content.

Marjella Bronkhorst, Lobby and Advocacy Officer at World Vision Netherlands highlights the collaboration between World Vision and DSM, a global food company, in addressing micronutrient provision. ‘The partnership between World Vision Netherlands and DSM has been ongoing for years, with a focus on tackling micronutrient deficiency from various perspectives. In Rwanda, DSM improved the maize supply chain from harvest to milling to enhance maize quality. World Vision Netherlands focused on mobilising farmers.’

Other food fortification projects between them include increasing egg production to provide a critical protein source, especially for pregnant and lactating women. ‘Scaling up multiple micronutrient supplements for pregnant and lactating women is being piloted in the Philippines to strengthen both the supply and demand chain,’ she says.

One challenge in addressing micronutrient deficiency is the difficulty of diagnosis. Irvine explains; ‘It requires blood sample testing of the population, which is not easily or regularly done at national levels. Usually, public health services rely on the available data to drive their interventions. However, in East Africa, we have made breakthrough innovations.

‘Over the years, we have partnered with technology companies to develop a non-invasive procedure for detecting iron-deficient anaemia through haemoglobin testing. This real-time testing in communities eliminates the need for a clinical procedure and represents a significant technological achievement.’

He expounds that World Vision aims to create positive change by scaling successful interventions like Positive Deviance Hearth. ‘It begins with a contextualised process called positive deviant inquiry, which assesses food security dimensions in the community and the availability of foods throughout the year.’

This assessment considers the nutritional value of foods and how local communities can use them to create balanced meals. Well-nourished families in the community serve as examples, showcasing their successful practices, food choices, and positive outcomes for their children. ‘The process involves assessing, scaling up growth monitoring, identifying positive practices, and teaching families to adopt these practices over time.’

Additionally, upscaling involves various strategies, including social behaviour change approaches, that target household feeding practices and social norms related to dietary habits. This includes engaging influential grandmothers to drive behaviour change within households. However, one challenge highlighted by Irvine is the lack of global and national funding for nutrition as a development focus. ‘Without a dedicated ministry of nutrition, it often receives insufficient attention in national plans, investment, capacity building, and system strengthening efforts.’

‘Essential nutrition action delivery at the frontline of health systems poses challenges at the policy and systems level. Insufficient investments and capacities hinder the resolution of the nutrition problem. The health workforce’s nutrition competence is typically below the recommended level of thirty percent. Moving forward without a competent workforce is difficult.’

While nutrition is a complex issue with various factors to consider, such as clean water and sanitation, education, food security, livelihood, and economic stability, Irvine states that they continue to monitor nutrition evidence and innovation. ‘World Vision primarily focuses on children’s nutrition, prioritising underweight, stunting, wasting, obesity, and micronutrient deficiency due to their dynamic nature.’

Violet Nanduwa on her farm where she practices crop diversification



ENSURING FOOD SECURITY

ECOLOGICALLY

Text and images by Alice Nduta

The Kenyan government recently lifted a 10-year ban on Genetically Modified Crops (GMOs). However, local farmers from Vihiga County in Kenya's Western Region remain cautious about their use. Their goal is to find solutions that ensure food and nutrition security in an ecologically sound manner.

Acheerful Violet Nanduwa serves us *githeri* for lunch. It is a staple food of Kenya's Gikuyu and Embu people—a mixture of beans and maize boiled together. She tells us that everything used to make the meal was harvested from her garden. 'I can now cater for my family's basic needs thanks to the harvests from my garden. They are fed, their school fees paid, and they have clothes to wear,' she says.

She is one of the small-scale farmers championing ecological methods and steering clear of GMOs to change the narrative around food and nutrition security and sustainability. She used to rely on GMOs and practised monocropping—planting a single crop on the same patch of land annually. However, that changed soon after training from Bio Gardening Innovations, BioGI.

'My life has never been the same again. I cannot compare monocropping with crop diversification. There is a huge difference, particularly now that I use bio fertilisers which I make instead of the chemicals I used to purchase from the stores. Despite the recent food crisis, I continued feeding my family with harvests from my garden,' she says.

Julius Astiva and Esther Digi, small-scale farmers at the Ebubai and Eshikholobe eco sites respectively, are two other success stories. Their journey to food and nutrition security in their communities is bearing fruit. Like Nanduwa, they too practice ecological farming methods aimed at securing sustainability.

'I didn't come this far just for the sake of it,' Astiva, who practices agroforestry, explains. 'During the rainy season, I create curves on my land to prevent rains from carrying away my plants and causing soil erosion. I have learned to channel rainwater and currently have three fishponds.'

He believes that millions of people are still at risk of severe hunger if nothing is done immediately. 'By tackling hunger's underlying causes, we can respond to this worldwide disaster. We are all responsible for creating a future that benefits our planet and its inhabitants.'

'With collective action, achieving zero hunger is probable. We have seen this through our work. We employ ecological principles with domesticated crops through ecological agriculture intervention. We also use tools that reflect and work with the environment, which is a means to achieve our goal as a whole,' Isaac Okalo who heads the Emarunda Eco site project explains.

He is one of the leading farmers who train others in sustainable farming. He emphasises the significance of overall results rather than just one product (monocropping), before gradually developing ways to help them become self-sufficient.

'Lifting the ban will not ensure there is enough food in Africa but is rather an act of "torture" to the local farmers'



BIOGI's seed hub. Seeds are distributed to local farmers from here

‘There is a huge difference, particularly now that I use bio fertilisers that I make instead of the chemicals I used to purchase from the stores’

Through training sessions, he passes on different methods to farmers, such as seed saving. He helps them transition from independent small-scale farmers to sustainable producers. The site also has a hub where they store seeds for the next planting season. This way, they have enough every season to distribute to local farmers. To make the hub sustainable, farmers donate three times as many seeds after the harvest season to maintain the cycle.

‘The government’s anti-seed exchange and anti-farmers’ seed policy creates a challenge for food and nutritional security since most small-scale farmers have few seeds. Conserving seeds is imperative,’ Okalo says.

According to BIOGI’s coordination officer Ferdinand Wafula, ‘While seeds are the basis of agriculture, the indigenous ones are in danger. Government policies favour researching GMOs, hybrids, and other artificial products. Small-scale farmers, therefore, are at risk since this is out of their reach and favours those with money. That is why we have established a seed-preserving project to guarantee the community has a variety.’

He says their main objective is to give small-scale farmers the resources needed to improve production, lower poor harvest losses and develop business skills through training. ‘The training they receive assists them in understanding diverse food systems so they can build resilient livelihoods against the risks of variable yields and seasonal changes.’

The initiative has now been fully adopted by farmers in the county. Those who can, offer part of their property for demonstration of ecological interventions, passing on valuable information to other farmers. This is called ‘farmer-to-farmer ecological learning.’ ‘One of the cruellest ironies is the fact that small-scale farmers—the very individuals who grow food for a living—are unjustifiably affected by hunger. They live in poverty,’ he says.

He blames it on the lack of access to farming equipment, biofertilisers, suitable storage facilities, and adverse weather conditions which cause economic losses. ‘For this reason, we aim to provide small-scale farmers with the tools they need to improve production, reduce post-harvest losses, connect to markets, and feed their communities.’

Through several projects, farmers connect with industries which support investments that increase crop varieties and economic opportunities. In that way, farmers like Digidi and Nanduwa are empowered to fight hunger, feed and educate their children and grandchildren, and make investments.

Despite challenges, including food theft by locals and climate change, more small-scale farmers are seeking training in ecological interventions to address the food and nutrition challenge. ‘People think that because conventional agriculture is dominant achieving the zero-hunger goal is not possible. Yet, we know we can do it by using most of our strategies. Achieving it is possible even in the face of the climate crisis and droughts despite conventional agriculture supremacy,’ Wafula says.

He believes that everyone is essential to achieving zero hunger. We can contribute to a world with zero hunger in many ways. ‘We are doing this by opposing the GMO ban lifting. The biggest problem of our time—achieving zero hunger—is at a crossroads after the government lifted the ban. As far as GMOs are concerned, there is no food sovereignty or safety. People have no control over what they consume, and because they cannot exchange products locally, they tend to lose their culture,’ he says. ‘Lifting the ban will not ensure there is enough food in Africa but is rather an act of “torture” to the local farmers.’

BioGI

Bio Gardening Innovations (BIOGI) is a not-for-profit organisation that advances ecological and natural farming principles for food system change. It pays special attention to small-holder transformation and livelihood improvement.

BIOGI supports a paradigm shift from industrial agriculture to a diverse agroecological system through the transformation of a monoculture mindset into a diverse food system. They work on four elements which include productivity outcomes that focus on total outputs rather than single crops: environmental outcomes through the reduction of greenhouse gas emissions, water efficiency, conservation of wild biodiversity and enhancement of ecosystem services.

It also partners with local and international organisations and networks, among these are Both ENDS and Participatory Ecological Land Use Management, PELUM Kenya. Their goal is to achieve a more responsive connection to culturally appropriate food. This conserves local ecology and creates wealth for the community while supporting poor communities’ resilience and rights to manage their land sustainably.

Both ENDS’ partners share equitable, sustainable, and inclusive development goals and consist of NGOs, research institutions, and organisations from civil society and the community.

Ferdinand Wafula demonstrating how manure is collected and stored from BIOGI livestock





UTILISING the triple nexus to achieve food security

by Alice Nduta

With the current drought and food crisis in Africa, development organisations are rethinking the link between their projects, and food and nutrition security. To remedy this, ActionAid International Kenya is using development, humanitarian, and peace strategies to build sustainable livelihoods to enhance food and nutrition security in Kenya.

Our meeting with Kitasi Wanga, the Programmes Manager for Resilient Livelihoods, and Emergencies at ActionAid International Kenya, takes place on a warm Monday afternoon. He takes us to a *kibanda* (makeshift restaurant) located in Westlands, Nairobi County. Here a lady serves us *ugali* with *mrenda* (jute mallow) and beef for lunch.

'This is how we fight food insecurity in our communities. We promote fresh food consumption from the farm,' he says. 'We champion the fight to eliminate hunger. This is accomplished through projects that support the inclusion of women and people with disabilities in climate policy discussions. We also focus on food security by using agroecology.'

Unfortunately, there has been an unexpected development. Kenya lifted a 10-year ban on Genetically Modified Food (GMOs). 'They are not the solution. The government should allow people to use indigenous farming knowledge and farmer-managed seeds. These are sustainable and yield quality, healthy foods. GMOs are exploitative and do not solve food shortages. They are an injustice to farmers who work diligently to produce organic food,' he stresses.

GMOs or not, Kitasi says, they are linking development, humanitarianism, and peace in the implementation of the project. This will help people remain food secure even during a crisis. 'Last year, the drought in the Horn of Africa was one of the most devastating humanitarian disasters Kenya has experienced in forty years. We had to scale down country development programmes to support humanitarian action,' he explains.

'We made sure communities understood the context in which they live. Climate change is real and they must change their perspective, actions, and practices.' Kitasi says this is accomplished through training, exchanges, and demonstrations of alternative modes of interaction. This ensures easy access to information, learning from peers and other resources.

To this end, they have set up projects in eight arid and semi-arid counties. They use production systems support, ensuring communities have access to climate-resilient sustainable inputs and can diversify their sources of income; like having sustainable seeds that can withstand climate catastrophes.

'We also help them influence government decisions and gain social protection in the agricultural industry. For instance, how and where agriculture officials can provide extension services to produce food.' Existing challenges include conflict, wildlife destruction and food crop theft. This is a major blow to smallholder farmers producing food using conservation approaches.

'Food insecurity and vulnerability coexist with conflicts where people are not at peace. Our communities will successfully combat hunger if we concentrate on eliminating these conflicts,' he says.

'The other issue is climate change. This has severely impacted the ASAL counties and our projects in those areas. The project's main objective is to improve water resource management in those counties. This will guarantee sustainable access to water for domestic use and irrigation.'

To do this, they have built farm ponds and rehabilitated water sources, like boreholes, to provide communities with water for farming activities. It also ensures that children, especially girls, stay in school during drought periods. This is when many drop out to help their families fetch water. They also teach communities how to preserve harvested crops for future use, and pasture for livestock, by promoting food storage.

Kitasi acknowledges food loss as conceptual. The fact that most African families waste a lot of food at the table is a problem that must be considered. 'Providing sufficient information to enable communities to access markets is crucial to understanding market information and assessments. They also know when to sell their

produce. This will enable them to get the most competitive prices,' he says.

While he recognizes the challenges, he also acknowledges the successes-which he refers to as transformations-that help communities to cope with uncertainty. 'So far we have worked with communities in eight counties that have come together to learn about agroecological farming practices,' he states.

In the County of Isiolo, over three thousand women were brought together under the Village Savings and Loan Association (VSLA). They saved over ten million shillings (USD 70,000), which is available for household livelihood interventions. It is one way to help rural women who have difficulty getting loans from large financial institutions that require collateral.

'Women in the VSLA access loans easily for agroecological farming. They pay it back according to local agreements with their groups,' he explains. While food and nutrition security is achievable, several underlying contextual problems need to be addressed.

'Much thought must be put into the production system if we intend to end hunger and attain food security. Africa's ability to feed itself is a political issue because so much must be done regarding policy and practice,' he states. As Africa looks to eliminate hunger, we need clean energy to protect the environment. 'We cannot encourage fossil fuel use and hope to eradicate hunger. Considering the global energy supply, Africa must stop using fossil fuels to support agriculture.'

Additionally, Kitasi says every household needs to generate food. Governments also need to support ecological agriculture and prohibit GMO inputs for healthy lives. 'The concept where an investor buys a sizable piece of land to cultivate hybrid foods to feed people should be discouraged. It is profit-driven and serves no societal purpose,' he argues.

ActionAid

ActionAid was founded as a charity in 1972 and adopted a human rights-based approach to development in the 1990s. In 2003, the ActionAid International Federation was established with a head office in Johannesburg, South Africa. It has hubs in Asia, the Americas and Europe.

ActionAid's work covers women, politics and economics, land and climate and emergency. It mobilises the marginalised and minority communities to embrace and practice agroecology and other sustainable alternatives led by women and young people. In Kenya, it also works with civil society organisations, social movements, and their supporters. Together, they conduct grassroots initiatives and offer crisis aid and advocacy.

In partnership with ActionAid Netherlands, it is implementing the Fair Green and Global (FGG) project. FGG's 2021-2025 Phase seeks to strengthen the capacity of women and young people, civil society organisations, government institutions, and investment actors to prioritise and promote trade and investment value chains on land, agriculture, natural resources, and extractives that are inclusive, sustainable, responsive, and work for women and young people and nature.



NIGERIA'S AGROECOLOGY REVOLUTION

In the vast landscapes of Nigeria, smallholder farmers toil to sustain their families and communities. Azubike Nwokoye, the Food and Agriculture programme manager at ActionAid Nigeria, brings hope through the transformative project of 'The Strategic Partnership for Agroecology and Climate Justice in West Africa.' In a conversation with *Vice Versa Global*, he shares the project's vision of a transformed agricultural landscape that promotes agroecology and sustainable farming practices.

by Emmanuel Mandebo

As Africans seek local solutions to end hunger, Nwokoye and his team in Nigeria are working on shaping national policies and securing public investment in agriculture. Their goal is to establish a foundation for long-term food and nutrition security in the country. 'Empowering smallholder farmers is crucial for sustainable development and eradicating hunger. With this project, we aim to create lasting change that benefits present and future generations,' he explains.

The project emphasises the significance of agroecological practices in fostering sustainable agriculture in Nigeria. According to Nwokoye, agroecology reduces reliance on hazardous pesticides and chemical fertilisers, enhances climate resilience, and lowers input costs for farmers by promoting a nature-based approach to farming.

'Embracing agroecology leads us towards a sustainable and resilient agricultural system that tackles climate change and supports smallholder farmers' livelihoods,' he says. He emphasises the importance of crossbreeding to naturally enhance crop varieties. This enables smallholder farmers to produce food sustainably while protecting the environment. The project aims to empower smallholder women farmers and young people by providing them with the necessary tools to adopt agroecological practices.

Additionally, it focuses on facilitating access to early maturing seeds, seedlings, livestock and poultry, offering farmers improved varieties tailored to their needs. 'Providing smallholder farmers with access to high-quality seeds and livestock is crucial in boosting their productivity and enhancing food security. This is at the heart of our mission.'

This focus is further strengthened by the availability of extension agents. They offer technical assistance and expertise, so farmers effectively implement agroecological practices. 'These agents act as mentors and guides, providing farmers with the knowledge and support needed to succeed,' he says. The team also focuses on agroecology budget tracking to advocate for dedicated budget lines in Nigeria's agricultural budget.

By securing financial support for sustainable farming practices, the project aims to benefit thousands of smallholder farmers. 'We believe sustainable agriculture should be a government priority. We're committed to working closely with stakeholders to ensure it receives the attention and funding it deserves,' he states. Through community scorecards and stakeholder engagement, they ensure budget allocations support farmers and promote equitable resource distribution.

'Accountability is crucial to ensure effective utilisation of funds and make a real impact in farmers' lives. Involving the community in monitoring progress fosters a sense of ownership and responsibility towards the project,' he explicates. To promote the widespread adoption of agroecological practices, the team establishes model farms as practical learning centres. These farms serve as demonstrations, showcasing the stark contrast between agroecological and conventional farming methods.

'These model farms demonstrate the achievements of sustainable agriculture, inspiring smallholder farmers to embrace agroecology and contribute to a more sustainable future.' They also act as catalysts for change, creating a ripple effect across Nigeria's farming communities.



Small-scale African farmers are taking on agroecological practices to ensure sustainability

©Archive photo

'To reach and engage 120,000 smallholder women farmers and young people in Nigeria, we adopt a multi-tiered training model,' he says. The project equips farmers with knowledge and skills to train others in their communities, while extension agents support the farmers in implementing agroecological practices successfully.

'We believe in the power of peer-to-peer learning.' By training many farmers annually and empowering them to pass on knowledge, we create a sustainable network of agroecological practitioners,' he adds. 'The success of our project relies heavily on the dedication and expertise of our extension agents, who bridge the gap between theory and practice.'

The project relies on accurately measuring its impact on food and nutrition security, agroecological practices, and livelihood improvement. 'Robust indicators track trained farmers, adaptation of agroecological practices, and yield outcomes. Data-driven decision-making is core to the project's effectiveness. Continuous evaluation allows us to fine-tune strategies and make a meaningful difference. As positive changes occur, it fuels our determination to press forward and achieve more,' he states.

Challenges are anticipated and strategies are developed to overcome them. 'We understand challenges will arise, but we're prepared to face them head-on. By staying agile and adaptable, we can overcome any hurdles that come our way.' The project aims to strengthen resilience by addressing fatigue among smallholder farmers and providing technical expertise support.

'We recognise the importance of supporting farmers' emotional well-being. By providing necessary support, we empower them to remain steadfast in their pursuit of sustainable agriculture,' he says. Through regular reviews and reflections, the team ensures the initiative remains agile, adaptable, and responsive to emerging

challenges. This helps them learn from past experiences and adapt their approach, which is vital to success.

The project's impact has been made possible through strong partnerships and collaborations with stakeholders, government agencies, and NGOs. 'We firmly believe in the power of collective action. By uniting our efforts, we can achieve a greater impact and create a more sustainable future.'

Nwokoye believes that building economic literacy and promoting budget accountability is crucial for the project's long-term sustainability. They advocate for dedicated budget lines for agroecology and closely monitor allocations to ensure continuous support for sustainable agriculture.

'Our advocacy efforts are aimed at ensuring that sustainable agriculture remains a priority for funding. By promoting budget accountability, we can secure the resources needed to create lasting change. Empowering partners as advocates for sustainable agriculture is a core belief, achieved through equipping them with economic literacy to strengthen the collective voice for change.'

In a nation facing hunger and agricultural challenges, the project brings hope and empowerment. By championing agroecology, indigenous seed preservation, and strategic partnerships, it empowers smallholder farmers and advances sustainable food security.

Nwokoye emphasises the importance of promoting agroecology for food sustainability to everybody. 'Non-farmers can contribute by advocating, participating in social media campaigns, and engaging with representatives to encourage sustainable agricultural practices and hold the government accountable. Investing in sustainable agriculture is an investment in our future. Nigeria has the potential to achieve SDG 2 - Zero Hunger. Together, we can build a more resilient and food-secure future for all Nigerians,' he concludes. ▽

Restoring Ethiopia's Communal Lands:

A JOURNEY TOWARDS SUSTAINABILITY AND FOOD SECURITY

by Eunice Mwaura



A girl in attendance at the 'woreda' meeting in Finote Selam

A remarkable transformation is taking place in the Finote Selam community in western Ethiopia. Its people have embraced sustainable land management practices. The restoration of their community forest and land has emerged as a beacon of hope, bringing about a positive change that transcends boundaries.

As the heavy downpour subsides early Sunday afternoon in Finote Selam, a thick and ethereal fog descends upon the landscape. The tarmacked road leading to this Ethiopian district glistens with rainwater.

The vegetation, rejuvenated by the downpour, exudes a vibrant energy giving the landscape an eerie appearance. Along the roadside, women carry bundles of firewood on their heads, while heavy-duty trucks carry towering loads of timber. The abundant presence of *tuk-tuks*, painted in various shades of blue, adds a delightful touch to the town's aesthetics.

In Ethiopia, it's customary to kick off the day with a coffee ceremony, a time-honoured tradition of profound cultural significance. We sit in one of the canteens where our conversation with Adamu Mekonnen begins. He is a natural resource expert and the project manager for the restoration of the Gewocha forest and communal lands in fourteen rural *kebeles* (villages bordering the forest).

Communal lands—areas collectively owned and managed by communities rather than privately—are common in Ethiopia. They are often used for grazing livestock, gathering firewood, cultivating crops, and other communal activities. Historically, they have played a significant role in Ethiopia's agricultural system. This is especially true for rural areas like Finote Selam where subsistence farming is prevalent.

'Over time,' Mekonnen says, 'the concept of common land has faced various challenges due to changing land use patterns. They have become susceptible to overgrazing, logging, and even charcoal burning.'

'As a result, the lack of proper management and monitoring has led to land degradation, reduced vegetation cover, soil erosion, and loss of biodiversity. Without effective regulations and enforcement, the land becomes vulnerable to unsustainable exploitation.'

Mana Kabele village is one of 14 villages where rehabilitation of communal land—initiated by The Hunger Project and WeForest—is taking place. There is a huge difference between land that has been restored, evidenced by green foliage, and land devastated by poor use.

The terrain still needs a lot of work. Deep gullies run through most of it, exposing tree roots that extend out like gnarled, withered fingers trying desperately to hold on to the eroding land. 'When the land looks like this, the community cannot use it,' he explains. 'They cannot get fodder for their animals, which lowers the produce they get from them. This affects the food security and nutritional aspects of their lives as well as the economic aspect.'

But people are not giving up. They conserve land by segregating portions and planting varieties of indigenous vegetation and trees, to prevent soil erosion. On what looks like an old water runway with sparse vegetation, Mekonnen explains that any weight will cause a soil shift.

'It proves how delicate the soil is. However, planting trees in deforested or degraded areas has helped to restore vegetation cover, stabilise the soil, and prevent erosion in most areas of the region. The community knows and understands the importance of proper land management now. They are taking charge of the restoration of communally degraded land,' he states.

Every restoration site has five restoration committee members chosen by the community. For one and a half years, eleven men representing different *woredas* (districts) have shifted their beliefs from what they used to do and how they used the communal lands to what they now know and the benefit to the community.

They take into account the needs and concerns of the communities in the different wards within Finome Selam. They are farmers and have experienced first-hand the effects of land degradation coupled with climate change. This has not only threatened their ability to get pasture for their animals but also their food security.

Through trainings, workshops and capacity building, they know and are inspired to lead in communal lands conservation for community sustainability. Land restoration is important in the community, as demonstrated by 48-year-old Emebet Mollo. He is the chairman of the restoration committee for Gewocha Forest in Hondanshi *kebele*.

The forest falls under the category of a community forest, meaning it is open to communal use. 'I have lived in this area all my life. I knew this place before the intervention. I gave several suggestions to help the community attain their goals, which is why I am the chairman,' he clarifies.

For decades, he witnessed severe forest destruction. 'I saw farmers near the forest encroach on land for farming activities. People have extracted construction materials to build their houses, openly grazed, and logged for timber production.' This, he says, came with negative consequences for his community. As a farmer and livestock keeper, he had to bear the consequences for years.

'Rain has never been an issue in this region. This has changed as the intensity and patterns of rain have not been favourable or consistent,' he says. 'Before, the rain was consistent in the month of April. Today it is difficult to get consistent rain in any month. This has affected crop and animal production.'

Mollo hopes that once the forest is rehabilitated to its former state, climatic change will be regulated. Wild animals that had migrated elsewhere are starting to return—which to him is an encouraging sign—as a result of the ongoing restoration efforts.

Upon entering the forest, the damage is evident. There is bare land at the start of the forest line. Mekonnen says nearly 43 hectares of land have been demarcated for restoration. For proper governance and management, each restoration site has its own governing bylaws for communities to observe. Community members are responsible for restoration activities.

Restoration efforts in the Gewocha forest began one and a half years ago. During this period they have restored one thousand hectares of the forest. With 537 beneficiaries from the community, members are also adopting climate-resilient farming methods.

One such is 52-year-old Aleshegne Mognet. Her compound is filled with crates of freshly harvested tomatoes. She moves gracefully through the rows of lush, green tomato plants. The branches are heavy with plump, ruby-red fruit as she works on her farm. 'I have been a farmer since 2004,' she starts. However, two years ago she gave up and leased out her land due to challenges. Her return was prompted by the climate-resilient farming training she received through the Hunger Project.

'My farming practices changed after I received capacity building on how to produce fruit and vegetable seedlings,' she says. She believes that depending on rain-fed agriculture is no longer an option for farmers. To overcome this challenge, she secured a water pump to irrigate her farm. With her 3-month tomato harvest, she has made 12,000 birr (about US\$ 217). She is now food secure and can afford farm inputs. On her land, crops sprout from potatoes to cabbages.

Her dream is to use her entire 0.35 hectares of land for crop production. She hopes to buy oxen to help her farm the land instead of paying labourers, which she says costs her 1500 birr (about US\$ 27).

'I am an inspiration to others. Sometimes I allow them to come to my farm and see what I am doing for those interested in doing the same,' she says. The restoration activities are not only seeing forests come back to life and the return of wild animals, but also contributing to food security. According to Mekonnen, the project's coming years' plan involves empowering the community's livelihoods as an approach to assist the community become food secure.

Mekonnen asserts the significance of community development at all scales. 'If we strive to improve the community's standard of living, we can ensure food access,' he says. 'Land degradation is one cause of food insecurity. This is why we are restoring Gewocha Forest through the project's community land development and forest land restoration efforts.'

To this effect, he says, the community will play an integral part in the design of a sustainable intervention. 'For generational purposes, we need seeds in the degraded areas of the soil since they are the only thing that can regenerate the soil.'

'By supporting beekeeping and other economically connected activities for sustainable support, as well as offering seedlings and other forms of livelihood support, we are working on a sustainable way of life. All community members ought to take part,' he concludes. ▾



Aleshegne Mognet standing in her garden, holding two baskets of tomatoes

Building RESILIENCE to Climate Change Devastations

FOR BETTER FOOD PRODUCTION

A pressing global challenge, climate change today affects various aspects of human life, one of them being food and nutritional security. Due to its heavy reliance on rain-fed agriculture and limited adaptive capacity, Malawi, a landlocked country in south-eastern Africa, is particularly vulnerable to its adverse effects. To address climate change mitigation and adaptation, as well as food security, Malawi's best option is improved agricultural productivity.



Veronica Chakanza feeding her grandson outside her home

Text and images by Cynthia Omondi

Those least responsible for climate change often suffer the most, which is the case with Malawi, one of the world's lowest carbon-emitting countries. However, it is ranked fifth on the Global Climate Index 2021 list of nations worst affected by climate-related extreme weather. Its most recent catastrophe was cyclone Freddy which struck in March 2023. It caused floods across the Southern Region, disrupting nearly 2.2 million people's livelihoods.

To witness the devastating effect of climate change on the local ecosystem, we embarked on a journey to Chikwawa District, Malawi. It is a two-hour drive from Blantyre, the country's largest city and commercial town. Nestled in the heart of Malawi's southern region, it is a captivating district that beckons travellers with its enchanting landscapes and vibrant cultural heritage.

It is blessed with breathtaking natural wonders like the Majete Wildlife Reserve and a rich tapestry of traditions. As you traverse the vast plains and rolling hills, you will be greeted by the majestic Shire River, meandering through the district. This adds serenity and life-giving vitality to the surroundings. However, the roads leading to the villages in Chikwawa District have fallen victim to the relentless impact of climate change, painting a distressing picture

of their current state. Once well-maintained arteries connecting communities, these roads now bear the scars of a changing climate. Extreme weather events, such as recently experienced cyclones, have devastated infrastructure.

The Chapananga Bridge (Malawi's longest bridge) was completely swept away, leaving behind eroded surfaces, deep potholes, and hazardous debris. Along the way, we see several spots where roads are repaired. 'The road we are on turns into a river during the rainy season,' Chrispin Manyera, our driver, tells us as we head to Misomali Village. It is part of a self-reliant hub of villages that—supported by The Hunger Project—has organised themselves around a shared goal: to end hunger and poverty in a sustainable manner.

When we get there, we meet April Sipiliyano at his home. In the wake of a devastating cyclone, the forty-two-year-old father of three is busy at work repairing his house. It has been approximately four months since the incident happened. With him is his eldest son, who helps with the arrangement of the bricks. His wife prepares *nsima*, Malawi's staple food made from corn flour. Their other two children are in school.

'This is not the first time I am rebuilding my house,' he says. 'I have fallen victim to cyclones several times, with the most devastating one being in 2015. I lost everything and was forced to move back to my mother's house with my family.'

Sipiliyano, who has cultivated for years, recalls how his farm fields were damaged in different seasons due to floods. 'Our region experiences adverse weather conditions. It is prone to drought and when it rains it floods. As a general rule, we waited for the rainy season to plant crops and invested in farm inputs, only for them to be carried away. That meant we had no food in rainy and dry seasons. We were often forced to buy food from other districts, which was expensive,' he explains.

Encouraged by their training, the farmers looked for alternative methods of farming to counter the unpredictable weather patterns. This led to the adoption of 'winter farming,' a term coined to define farming during the dry season. This means the farmers must give their crops full attention, water them manually, and control pests. This assures them of a bumper harvest. This method has tremendously improved their livelihoods while ensuring household food security and economic empowerment.

Beyond farming, communities are also working on measures to mitigate climate change and improve food production. 'Some years back, the majority of people relied on natural resources. Many trees were cut down for firewood, timber and charcoal. This is a contributing factor to the climate crisis we face today. We have received trainings that have empowered people to seek alternative means of generating income and stop destroying natural resources for livelihood survival,' he adds.

Currently, he is a community volunteer for The Hunger Project (THP). 'I engaged with the project in 2016 and was trained on environmental issues. Consequently, we took it as our initiative and have been preparing tree seedlings as we practice reforestation,' he states. With combined efforts, Sipiliyano and his team have created three tree forests. One is lying on a 70m by 80m piece of land, another on a 60m by 90m and the last one on a one-hectare piece of land. All these are efforts to restore adequate rainfall and enhance carbon sync.



A farmer carrying his water pump home after irrigating his farm

Farmers here have embraced alternative winter farming practices and adopted innovative approaches to effectively control pests using locally produced products

Their efforts are paying off. Around 1.5 km from the banks of the River Mwanza, plants flourish. There is a distinct contrast between the farms of those that have been trained and those that have not; on the one hand lush green farms and on another dry land, dusty thickets. Farmers here have benefitted from the Kadumba irrigation scheme. It was a partnership between THP and African Parks, which manages the Majete Wildlife Reserve. This was to prevent communities from encroaching on the park. 193 households, including Isaac Chapepa, in his late 60s, benefit from the irrigation scheme. 'In my old age, farming would have been difficult without this irrigation scheme. I would likely focus on a very small piece of land to farm, enough for my consumption. But I can still do commercial agriculture on a much larger piece of land,' he says.

Farmers here have embraced alternative 'winter farming' practices and adopted innovative approaches to effectively control pests using locally produced products. One such method gaining popularity is the utilisation of river sand as a natural pest control measure. This ingenious technique has revolutionised farmers' pest combat while minimising harmful chemicals.

'The coarse texture of the sand creates an unfavourable environment for pests especially when it is hot, discouraging them from infesting the fields. Moreover, the abrasive nature of the sand acts as a physical barrier, making it difficult for pests to move freely and causing discomfort to their sensitive bodies,' Fransico Mbuto, a farm trainer for the community, explains.

Aside from river sand as a means of controlling pests, he demonstrates how even fish sauce can be used. It attracts ants which feed on pests when applied to plant tunnels.

Additionally, they also use the Nim trees bitter leaves. 'When they are pounded to form the juice, it is poured into the plant tunnels. This provides an unfavourable environment for pests, which die of hunger,' he explains.

The adoption of alternative winter farming practices and embracing eco-friendly pest management techniques has sparked a positive transformation in agriculture.

Farmers are diversifying their crops and extending growing seasons. This innovative approach not only enhances food security in the region but also sets a remarkable example for sustainable farming practices worldwide.

Originally, the community members were mobilised and trained by The Hunger Project. Today, farmers are trained in these new methods by their neighbours, on land owned and managed by the community. Mbuto also volunteers as one of the managers of the now self-reliant community food bank.

'After training them on pest control techniques, we expect high yields during harvest time. Under community leadership, we buy most of their farm products and keep them in the bank. This is especially maize and sorghum which is highly consumed here. During the rainy season when food is scarce, we sell it to them at an affordable price,' he adds.

As malnutrition poses a significant challenge in most parts of Africa, particularly children, a remarkable solution lies within reach in Southern Malawi. The abundant Moringa tree, with its nutrient-rich leaves and versatile applications, holds substantial potential to combat malnutrition and improve children's health in this region.

Veronica Chakanza, (54), is a nutritionist champion in her village. She demonstrates this when we meet her feeding her two-year-old grandchild with home-made sweet potato juice, which she has prepared, accompanied by sweet potato doughnuts.

'Over the years, we have learned to use what we have locally to add nutritional value to our meals,' she says. 'Back then many children suffered from malnourishment. At the dispensaries all they received was peanut butter. I was fortunate to be recruited by the government for the weighing of children under five years to determine malnutrition levels. This was back in 2008.'

Years later, another project came up which addressed the malnutrition issue by utilising locally available resources, with Chakanza playing a part in it. 'Trained community volunteers helped us discover the value of nutritious meals and a balanced diet. Our area has a lot of sweet potatoes and they have nutritional value, which is why we chose to maximise their use. Beyond cooking potatoes for starch, we use its leaves to process natural juice and vegetables. We also use moringa leaves to prepare porridge, especially for children below five,' she says.

The Moringa tree, known as the 'miracle tree' or 'tree of life,' thrives in Malawi's southern region and offers a multitude of benefits for improving nutrition. Its leaves are a rich source of vital nutrients, including protein, vitamins A and C, iron, calcium, and antioxidants. These nutrients are crucial for healthy growth and development in young children.

With the assistance of local farmers and communities, promoting the cultivation and consumption of Moringa leaves can become a transformative strategy to combat malnutrition. The leaves can be incorporated into various local dishes, such as stews, soups, and porridge. They provide a sustainable solution to address nutritional deficiencies by enhancing the nutritional value of their meals.

And just like that, from the devastation of climate change, communities in Southern Malawi continue to emerge as beacons of resilience and hope. 🌱



April Sipiliyano repairing his house in the aftermath of a devastating cyclone

THP

The Hunger Project was founded in 1977 with the goal of sustainably ending world hunger. It has ongoing programs in Africa, Asia, and Latin America, where it implements programs aimed at mobilizing rural grassroots communities to achieve sustainable progress in health, education, nutrition, and family income. In 2011 The Hunger Project Malawi started working in the communities around Majete Wild Reserve, with funding from Dioraphte foundation. The reserve had been successfully revitalized by African Parks, but the people who used to tap into the reserve's natural resources for food and income still struggled to meet their basic needs. The ambitious horizon is to mobilise and train all communities (an estimated 60,000 people) around the Majete Wild Reserve and support them to reach self-reliance.

Isaac Chapepa inspecting his farm along Kadumba irrigation scheme



Cultivating an Entrepreneur Culture

FOR FOOD SECURITY

Text by Elizabeth Kameo
Images by Bio Séké

Fainou Mathias Pélagie, Mama Bankpin Karim, Orou Sannou Kouro, Yerima Sabibou, and Zakari Aïssatou are five strangers living in different parts of Sinenedé, a community in central Benin with a population of 91,672. Alongside many others, they share a common goal—cultivating an entrepreneurial mindset to ensure food and nutrition security in their communities.



Above: Orou Sannou at the the Gnangbannou site. Left: Fainou Mathias Pélagie's well tended to rabbits

Watching 36-year-old Fainou Mathias Pélagie handle one of her rabbit kits is like seeing a mother caring for her little one. She converted a two-room house with an iron sheet roof, situated close to the main town of Sinenedé, into a spacious rabbit hutch. It provides ample room for her growing number of rabbits. With a cheerful smile, she mentions that she recently sold 30 rabbits and still has 47 left.

'Most of my clients are restaurant owners while the rest are from the community who, after witnessing my success, are inspired to start rabbit farms. They buy rabbits from me to start their business,' she reveals. The wife and mother of eight had an unsuccessful chicken business from which she never earned much as she lacked knowledge and skills in chicken rearing.

She was introduced to the venture by her brother who gave her a pair of rabbits, a male and a female. However, she encountered numerous challenges. With no knowledge or skills in rabbit farming or feeding, she lost all of them. 'After receiving two rabbits from my brother, they had kits. Unfortunately, they all passed away. My brother, who had rabbit farming skills and knowledge from a training session with Familles Fortes, then took me along for training.'

The rest, as they say, is history. Knowledge and skills gained from this training paved the way for her transformation journey into a successful enterprising rabbit farmer. 'With support from Familles Fortes and more training sessions, I gained knowledge in rearing, caring for, and feeding the rabbits. This enabled me to start all over again with success.'

Today she is a flourishing rabbit farmer and earns about XOF 2,500 (USD 4) for the sale of a rabbit. 'The profits go towards the children's education, feeding the family, and medical care,' she says. Familles Fortes, a project in DEDRAS Benin, is a Christian humanitarian and development NGO. It is dedicated to promoting social justice and empowering disadvantaged communities to achieve overall well-being.

DEDRAS Benin focuses on various development themes such as education, child protection, community and reproductive health, nutrition, food security, peace/security, and humanitarian action. 25-year-old Mama Bankpin Karim is a father, husband, teacher, and now a goat farmer. He utilised skills acquired from the goat-rearing entrepreneur programme to establish his goat-rearing business.

I once visited a friend and was impressed by their care for goats. After that, I went and bought six kids, which is how I started,' he explains. Shortly after that, Familles Fortes came in to train him and other youth on animal care and rearing. 'The advantage of goat rearing is the low feeding costs. I only buy affordable soya flour to include in their feed. The rest of the time, I feed them with vegetation collected from the fields.' Karim purchases a young goat for around XOF 18,000 to 25,000 (USD 41) and sells a fully grown goat for approximately XOF 150,000 to 160,000 (nearly USD 250).

'I received training in September 2022. By mid-March 2023, I had set up my business,' Karim says. He rears the goats at the back of his house, providing ample space for the well-fed and tended animals. By mid-May, he was preparing to sell his largest goat for the Eid-ul-Fitr celebrations. 'That is when they fetch a good price,' he explains, showing his entrepreneurial acumen.

Karim's goat business supplements his income from teaching French and Arabic at a private school in Sinenedé. He strongly believes in the value of his training and its significance. 'You need to have the means to do something. Training is a valuable means, surpassing money, because knowledge lasts a lifetime. I aspire to expand my goat-selling business throughout Benin, which has been a rewarding experience since its inception and will surely thrive.'

Pélagie and Karim exemplify success in Sinenedé through the Familles Fortes projects. These initiatives aim to include women and youth in agriculture, known as 'Développement Agricole pour Tous' (Agricultural Development for All). This specific activity started in 2021. It is part of the bigger project, Familles Fortes that aims to create strong families through entrepreneurship support for youth, farming as a business for farmers and to strengthen education through the support of school teachers and the Mothers' Association (AME). The project as a whole was started in 2015. They have received training in entrepreneurial skills and, like Karim, are starting businesses in various farming sectors. In total, 1300 youth received an introduction to entrepreneurship. 550 youth with the most viable and successful business plans received follow-up training and coaching. Familles Fortes reaches out to the communities of Sinenedé through informative radio broadcasts on enrollment and training opportunities.

They provide training on establishing various farming enterprises and developing production skills to enhance the value of raw agricultural products. This includes processes like converting soybeans into milk and engaging in rabbit and poultry farming. The selection of participants for training is determined by their demonstrated motivation during entrepreneurial mindset awareness sessions conducted by the field team.

Successful trainees are provided with support to launch their entrepreneurial projects. This includes incentives like feeding and drinking utensils for chickens and rabbits, market gardening tools, raw materials for animal feed, rabbit hutches, and veterinary products. Destin Philippi Ayedegue, the leader of the DEDRAS Familles Fortes Project, attributes the success in Sinendé to local partnerships with the town council, the municipal agricultural development unit, the AJB Project, Agribusiness Development SARL (ABD), and the Social Promotion Centre (CPS), among others.

He says: 'This success was possible because we realised, through the project, the importance of entrepreneurs having the necessary equipment to increase yields and ease their work. It also involved organising producers and processors into groups.' At the Gnangbannou site, 53 women exemplify the essence of his words. They have benefited from this grouping of producers and are now reaping the benefits.

'Initially, we had a site in the town centre where women shared a piece of land. It was divided into four aisles per person, separated by wooden pieces. We lacked a watering system and had to use our hands or improvised methods to water the plants,' says Kouro Orou Sannou. 'Then, a housing estate was built there. So, the village authorities provided us with this one (Gnangbannou). Initially, we each cultivated food for our families before Familles Fortes intervened.'

Kader Koto Kpera, the on-site agricultural advisor, chimes in; 'Now there is a water system in place, parcels are well-demarcated, there are technicians and security on site, and the women now work together. They have undergone training that has resulted in higher yields, and have established production chains to enhance the value of their produce.'

The women farmers at the Gnangbannou site were initially 20. Today, there are 53 members between the ages of 25 and 55. They have been allocated one hectare of land on which they cultivate vegetables, rear animals, and grow crops such as okra, amaranth,

chillies, and tomatoes— for family consumption and sale. Today, the well-demarcated and well-organised site also boasts a fishpond, a production unit, and a watering system.

'The women now possess gardening tools which they never had before. This has helped increase yields and ultimately render them economically empowered,' says Kpera. With a sly smile, he continues; 'They don't need to wait for money from their husbands to do or buy anything. Now, it's a matter of men bringing home the meat and wives bringing home the vegetables, resulting in better-fed families.' As he says this, the women speak out in unison, 'We have more energy to farm, we eat better, and have better diets.'

To supplement their nutrition, they buy fruits they can't grow at home or pick wild fruits from the forests. Yerima Sabibou, an entrepreneurship officer and field team member of Familles Fortes, notes that participants in the project continue to develop strong entrepreneurial skills. 'Instead of waiting for mainstream jobs, they are becoming entrepreneurs in different agricultural sectors. They have been sensitised and trained, and are putting into practice what they have learnt,' she says.

**While it takes time,
success stories like Mama's
serve as role models to inspire
other youth**

Mama Bankpin Karim tending to his goats



Members of the Antisua Women's group

'With youth employment at an all-time low, our focus is shifting towards changing young minds, by encouraging entrepreneurship rather than mainstream employment. While it takes time, success stories like Mama's serve as role models to inspire other youth.' To empower women in Sinendé economically, ten women were initially trained in various production methods to add value to grains—like soya and rice—by creating flour-enriched mixtures. These ten women have since trained an additional 104 women to date. This model is used by Familles Fortes to train men and women growing different produce. Annually more than 1000 are trained to improve their production.

Aissatou Zakari, from Sikki Village in Sinendé, was one of the ten women initially trained. She is the President of Antisua Women's Group and a member of the 'Association des mères d'élevés' (mother pupil association). She says; 'Training solved our problems. We can combat child malnutrition and improve adult nutrition with specially formulated flour made from maize, soya, rice, and millet, which is highly nutritious.'

The association was established in 2022 with 7 members, a number which has now doubled. 'We didn't know we could create nutritious flour for the health benefit of both children and adults. This association emerged after we participated in the training,' Zakari says. 'We didn't have any activities that brought us together, but now we're fighting malnutrition in our village—not just among infants and children—but also among adults,' she says, gesturing towards a young man in his thirties drinking porridge made from the flour mixture.

They make two types of flour: soya, maize and rice which is for infants and children, and soya, millet, rice and sorghum for adults. They currently supply the flour mixture to pharmacies which has enabled the association to make profits. According to Mamatou Mohammed, the association's treasurer; 'Initially, six members each contributed 25 kilos of soya grains, equivalent to XOF Benin CFA 45,000 (USD 73). This was our startup capital, and today we have a profit in our account.'

Their future goal, Zakari says, is to set up their mill. 'Currently, we take our grains to the local mill, but we are dissatisfied with the end product. We aim to achieve better quality and packaging. This will only be possible if set up our production mill.' Despite challenges overlooked by youth and women, these collective efforts are yielding results. The success story and community enthusiasm for achieving food and nutrition security through agricultural entrepreneurship are creating a positive ripple effect in Sinendé.

More children attend school due to improved health, reduced malnutrition rates, and increased youth innovation. Women are spearheading projects to promote education and ensure teenage girls stay in school, and are leading food security and nutrition campaigns. Meanwhile, more men, women, and youth are succeeding as agricultural entrepreneurs.

DEDRAS

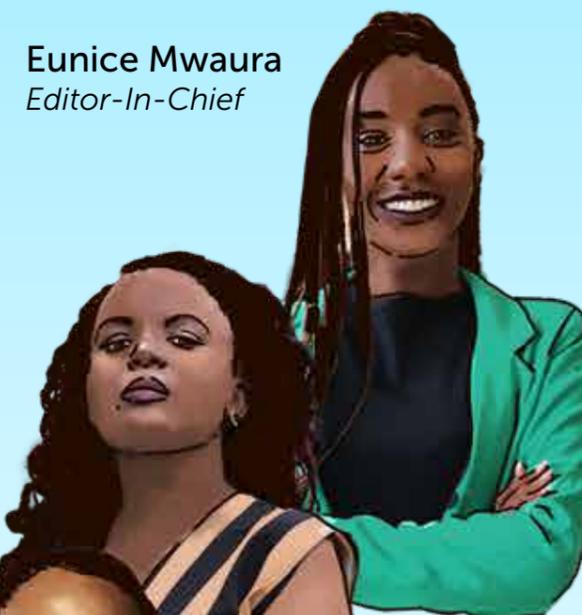
DEDRAS is a partner organisation of Woord en Daad, a Dutch NGO which connects people, communities, schools and educational centres, entrepreneurs, farmers and local NGOs worldwide. Motivated by a Christian perspective on justice and compassion, Woord en Daad aims at changing systems that sustain poverty and realising a dignified existence for every individual.

'We don't just want to change one life, family or village. For real transformation, we are changing systems that perpetuate poverty. For example, the system of unfair distribution of water for humans in Ethiopia. Or the violent system of street gangs in Guatemala, that prevents young people from building a secure future,' Woord en Daad.

MEET



Eva Nakato
Journalist



Eunice Mwaura
Editor-In-Chief



Alice Nduta
Journalist

Tina Byaruhanga
Journalist

McWilliams Wasswa
Photojournalist



Cynthia Omondi
Journalist

Jarvis Kasandi
Photojournalist



Pinkleen Oinokwesiga
Journalist

Najuma
Art Director



Pius Okore
Editor

Martha Nalukenge
Photojournalist

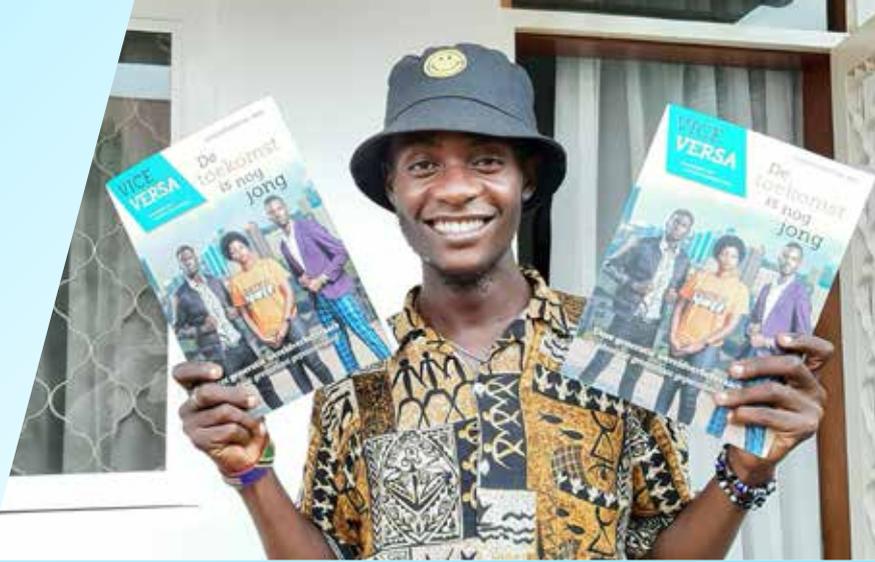


Emmanuel Mandebo
Journalist

Nicera Wanjiru
Coordinator/Journalist

Elizabeth Kameo
Coordinator/ Editor

By **subscribing** to *Vice Versa Global*, you support young African storytellers to shift the African narrative.



Inspiring stories of young leaders, thinkers, and doers from the **heart** of **communities**.

Hybrid **events** and festivals featuring informed and expert opinions from the **youth** on pressing issues of the day and **emerging topics** of global concern.



Check out our **website** www.viceversaglobal.com

and **subscribe** to our newsletter.

