



Innovation: Africa Making Water Accessible in Local Villages, Uganda
(Credit: Gabrielle Samad)

The Role of Clean Water in the Fight for Food Security: Innovation: Africa's work in Karamoja, Uganda

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The dire reality of water scarcity in Karamoja, Uganda, is being exacerbated by climate change and natural disasters. Below, Gabrielle Samad details an innovation led by Innovation: Africa that undertook to alleviate and improve the conditions of the local communities.

Since the COVID-19 pandemic, food and water insecurity have been on the rise, severely impacting communities across the globe. Today, a record 349 million people across 79 countries are facing acute food insecurity, up from 287 million people in 2021 (World Food Program). With these figures in mind, this article examines a specific community, the unique and rural Karamojong people of northeastern Uganda, to better understand their challenges of food insecurity and ways in which the introduction of a stable water source has sparked a cultural change within their villages.

The region of Karamoja, comprising nine districts, is the driest and most impoverished region in all of Uganda. Characterized globally by chronic underdevelopment and marginalization, the region is facing a severe humanitarian crisis comprising food insecurity, human insecurity and environmental degradation. Over the years, the Karamoja region has been highly affected by climate change and drought, facing months of hot arid climate following short seasons of unpredictable torrential rains and flooding. These uncertain weather patterns have led to extreme soil erosion, land degradation and food insecurity throughout the region.

The people of Karamoja, namely ‘the Karamojong’, are pastoral semi-nomadic herders who migrated from Ethiopia to Uganda in 1600 AD in search of permanent grazing lands and water for their livestock. Traditionally, the most viable form of livelihood is rearing livestock as, unlike crops, livestock can be moved from place to place

in search of water and pastures. As livestock is the most precious and cherished resource, the Karamojong have settled in highly remote areas with ample land for their large herds of animals to graze. Moreover, due to the poor land conditions of the region, there is not much diversity of crop production which leaves sorghum as the most common crop to harvest. In seasons of poor sorghum yield, women are forced to walk to the bush to pick whatever leaves and berries they can find to nourish their hungry families.

Today, the Karamojong people are the most marginalized minority within Uganda, isolated geographically, economically and politically. As of July 2022, 2,465 people in the region have died due to food insecurity while 518,000 are in urgent need of food assistance and 428,000 are facing crisis level food insecurity. Focusing on the districts of Nakapiripirit and Nabilatuk in the Karamojong region, this article now takes a deeper look into the areas of intervention by the organization Innovation: Africa to highlight ways in which introducing water systems to rural communities has supported the fight for food security.

Innovation: Africa (iA), an Israeli non-profit organization established in 2008, utilizes solar

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energy to provide light and electricity to off-grid schools and medical centers and crucially, to pump safe and clean water throughout remote villages across 10 African countries. Today, with over 400 million people in sub-Saharan Africa lacking access to clean water (WHO UNICEF), 1 in 3 African citizens are impacted by water scarcity. This figure, paired with climate change, is projected to become more severe in the coming years. Utilizing Israeli solar, water and agricultural technologies, iA illustrates how solar water pumping systems and solar energy projects can impact the health, education, nutrition and economic independence of countless communities.

Now, what happens when you take these new technologies and introduce them into very rural and remote communities such as the Karamojong? Imagine, for decades, waking up each morning to fetch water from a river 5 kilometers from your home, never believing that one day there would be a stable and continuous water system within your village. How would you react to this water? What would you do with it? How would it change your life? These are the exact questions that are discussed within the communities across Karamoja who

are supplied with Innovation: Africa water systems. With over 20 solar water pumping systems in the districts of Nakapiripirit and Nabilatuk, the pastoral semi-nomadic people are now finding reason to settle and stay around the water system, a resource they have never had before.

Similarly, with water comes new opportunities for life and for the very first time, communities in Nakapiripirit and Nabilatuk

are no longer reliant on sorghum and the unpredictable rain patterns to irrigate their gardens. Today, cereals, leafy greens and vegetables have been introduced into the community's diet through the installation of iA's water systems and the establishment of agricultural initiatives such as the Cereal and Kitchen Garden Projects. Both projects introduce new crop varieties available in the local markets to the village along with locally available tools and training on how to plant, weed, harvest, store seeds and regenerate cereals and vegetables for future seasons. The goal is to start on a small scale, teach the foundations and over time continue to encourage a steady practice of agriculture within the community.

Specifically, the Kitchen Garden initiative trains farmers to establish small-scale backyard “micro-farms” at the individual homestead level (manyatas) aimed to ameliorate food insecurity for the individual family. Focusing on crops that regenerate, each family's backyard garden supplies a nutritional balance to their nuclear families. Where in the past mothers would spend time searching for berries or leaves to eat from the bush, today in

villages such as Looi, mothers are trained to plant, grow and weed vegetables right outside of their home and can even sell excess produce to the local markets.

One particularly inspiring example of iA's impact is Sabine, a 44-year-old mother who born and raised in Looi Village. Before the intervention in her village, she had never planted one seed in her life. Struck with severe famine, Sabine and other women in Looi Village struggled on a daily basis to find food to feed their children. Without any other options, most women were eating leaves and the small berries they could find. Their children were emaciated with many too weak to leave their homes, let alone attend school. When iA's solar water pumping system was installed and clean water was brought to outside of Sabine's home, she was astounded. An agronomist arrived in her village with tools, seeds and watering cans and taught Sabine how to utilize the water from the taps to grow food for her family. One year later, Sabine stands proudly in her yard surrounded by a garden full of tomatoes, the first vegetables that their village has ever grown. With the extra produce from her garden, she buys soap, oil and more seeds to continue nourishing

her garden and family.

Although we have seen firsthand the immense impact that clean water and the introduction of agricultural initiatives have had on villages in Looi, Nakapiripirit and Nabilatuk, these communities still face a number of challenges when it comes to adapting and continuing these new practices. In regions like Karamoja where communities commonly receive food aid from humanitarian organizations, it is difficult to change the group mindset to focus and invest in agriculture instead of waiting to receive a donation. Community sensitization, regular visits and training are a constant and a continuous focus for the first few years of intervention to ensure the community sees value in the adaptations the system has had on their lives. For the Karamojong, embracing a culture where agriculture is a regular and consistent activity is something new; however, once embraced, the power of a consistent water source can permeate the entire village, instilling new opportunities for health, nutrition and food security. As they say, water is life, and we have seen and experienced the buds of new life sprouting each day.

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