

Climate smart agriculture is a set of agricultural practices and technologies which simultaneously boost productivity, enhance resilience and reduce Greenhouse Gasses.

Climate smart agriculture: Solar irrigation transforms Karamoja

BY FRANKLIN DRAKU

At a small backyard garden, in Lopodot Village Abilayep, Paris, Abilayep sub county, Amudat district, Hellen Chepkrelo fondly tends to her garden of vegetables, watering it while singing a local tune, which she says motivates her to work harder.

She uses solar irrigation for water her plants to ensure that even the harsh weather conditions in Amudat do not stop her from growing the vegetables both during the rainy season and dry season as well.

The district that has unpredictable weather, occasioned by long droughts and sporadic flush floods has had to battle food insecurity for ages.

However, for Rebecca, the story is gradually changing. She says the story of famine and poverty is slowly fading, being replaced by hope, food security and being able to send her children to school, alongside providing the basic household needs, all thanks to her garden, which she tends to affectionately.

"We would sit here and wait for days for relief aid from NGOs because we didn't have food. When our husbands go to raid, we would be left helpless. However, one time some one from TPO (Transcultural Psychosocial Organisation) came and started teaching us how to plant crops and use water to grown them. That is where my story started and has now helped me to produce enough food and also sell surplus to earn money," she says.

"TPO came to our parish and taught us how to grow vegetables. They brought for me seeds, that's how you can see me, I've planted. These vegetables are now helping me to buy so many things. I can buy sugar, can buy salt for my household," she adds.

Chepkrelo says her small garden has helped her improve the family income which she can use to purchase other commodities like manufactured goods.

"I see this garden has boosted my family income and also the nutrition of my children," she said.

She says she makes between Shs40,000 and Shs100,000 daily from sale of her vegetables and also feeds the family from the same garden.

Michael Lotumel, the husband of Chepkrelo said the smart agriculture model has helped them to move away from the biting poverty they experienced in the past. He also said learning how to farm on a small piece of land and get good yields has united the family because he works together with his wife and when it's time for harvest, they do the same together, but the money from the sale of the produce is handled by his wife.

He advises families to unite and work together so that they can reap the fruits of unity while working as a team.

"If you don't farm as a household together, the family will not stand together," he said, holding his wife's hands while speaking.

Anzoyo Hellen from Achorichor sub county Abdai village said before she got trained in smart agriculture, they used to wait for food hand-outs from the aid agencies, but after the training, she realised that she could actually produce her own food and also engage in commercial farming.

"The training that I attended, they taught us on how to produce crops. We started from small with vegetables to before expanding our farm," she said.

"Now we have expanded and we are selling the vegetables to communities and earning money. The saving that we make help our children to go to school," she said.

From a small garden of Sukuma Wiki, beans and other vegetables, Anzoyo is able to make between Shs140,000 and Shs200,000 every day during the harvest season and says this is the money her family uses to pay school fees for the children and provide scholastic materials for them, some of who study as

far as in Mbale and parts parts of the country.

"It is always a Sukuma wiki that comes faster. In two weeks, three weeks, it's ready. That's where it earns me a lot of money. Sukuma wiki gives me Shs100,000 in this garden. When the tomatoes are ready now, we measure in basins. We give a basin at Shs40,000," she said.

In Nadingating village in Moroto district, the situation is similar. However, while in Amudat the farmers work individually, in Moroto, they are clustered into farmer field groups, with a central solar irrigation system. Rebecca Awok, a member of Nadingating Field Farmer Group in Moroto says from cattle rustling to farming, the situation has completely changed for her and her family.

She says previously, they used to offer casual labour to other people, but now, others are looking for jobs from them.

"In the past, we used to move for work. But today, we have realized that instead of moving elsewhere to go and look for money in other people's garden, you can be able to produce your own. So for now, there's no more way to go and look for what to buy, because you already have what to sell here," she says.

Nomadism no more

From nomadic life due to big shocks as a result of climate change, to settled community lives, the residents of Nadingating now have a different story to tell.

"In the previous years, in the dry season it was a culture that people would migrate to go and work for people in other areas. But today you have come and got us here just because we know we have a production unit that is helping us daily. So we have also decided to say no, instead of moving elsewhere, remember all the other people who are going to work in their areas also started like this, they started small. And because of this kind of work, they managed to grow to the levels where they are. So in order to build Karamo-

ja, we have also decided to say no, let us handle this," Awok says with a beaming smile.

She said most times they would migrate because of scarcity of water, but when Foods and Agricultural Organisation (FAO) constructed the irrigation system in the area, the situation changed. Even the pastoralists who used to move to Teso and other parts are now settled because water points for animals have also been provided through the solar irrigation.

"What normally triggers migration is the lack of water, that is what makes our people move. But as long as the water is there, automatically people are going to fully settle and continue producing, that's why we are here at this time," she says.

Paul Kotol, the chairperson of Karimol Farmer Field School in Karimol village says the joy of being in a settled community life with peace has won it all for them. He says before the solar irrigation system was put in place, they had nothing and had to be for food from other people, but now, they produce their own food and sell it out.

How it all started

In 1998, the Transcultural Psychosocial Organisation, a non-governmental organisation working to offer support to traumatised communities embarked on a mental help for communities affected by years of insecurity in Karamoja region. In Amudat, apart from cattle rustling, the Pokot community also practiced female genital mutilation, a practice that left permanent scars on women and girls.

James Lomonyang, a crop specialist and project officer at TPO says after the psychosocial support and after realising that they communities were now settled, they then thought of livelihood support so that the rehabilitated people could live decently.

"The reason why the Agro Development Initiative project came in was to support these farmers to come from nomadic



Members of Nadingating Field Farmer Group harvest Onions grown using solar irrigation under climate smart agriculture programme. PHOTOS/FRANKLIN DRAKU

HE SAYS

Michael Okiror, the head of FAO field office in Karamoja region based in Moroto District, says climate smart agriculture has helped stave off famine in Karamoja region. A few years ago, hundreds of people died in the region due to famine, while thousands were affected.

"In Karamoja our rain uh the season is between March and around July. But in January, which is a typical dry season, the farmers out there are able to produce. So this is the kind of climate smart technologies we are talking about that allow farmers to produce even outside the normal rainfall window," he said.

He also said as a FAO, they target technologies that reduce on carbon footprint in the atmosphere. He said they achieve this by introducing energy efficient systems that reduce carbon emission.

"We target energy efficient, but also clean sources of energy, like the solar. Unlike the generators that will generate for you a lot of carbon that will pollute the atmosphere," he said.

pastoralism to farming. Because initially in Amudat district people rely mostly in cattle rearing, but now we looked at if people can supplement farming when animals are grazing very far, the women who are remaining behind with children are able to sustain their families through cultivation," he said.

He said with initial training of very few farmers, the numbers have now grown and more are still being trained how to transition from nomadism to settled farming life.

"And that's how we decided to start training these mothers, how to cultivate vegetables in

their various households. Up to now we have managed to reach 2,100 farmers in the entire district. We are working in five sub-counties, that is in Loroa, Achorchor, Abilayep, Amudat sub county and then in Kongoro. We have youth, we have women and we have the elderly. We did not say we are only focusing to young ones or young mothers but we also say every person who has the ability to grow can be in our category," he said.

"We take them in various trainings where we start first with enterprise selection, where farmers can first decide which enterprise suits their area and which enterprise can give more income and at the shortest time. After we finish with the enterprise selection, these farmers are taken through making organic pesticides and manure making because with agroecology, we don't encourage farmers to use inorganic pesticides, but we rather encourage them to make their own organic pesticides using locally available materials," he added.

Lomonyang says Karamoja being a dry region, farmers had to be trained to adapt to climate smart agriculture and use the locally available resources to produce their own food.

"Before the agriecological development initiative project came in, we had a project that is accelerated climate smart agriculture. We train farmers on how they can maintain their crops, how they can maintain trees, how they can plant crops that are resistant to pest and diseases, and also to the harsh climatic conditions," he said.

"We are encouraging farmers to plant more trees because when trees are not there, the evaporation rate will be very high and if we move to various farmers, we realize that most farmers have trees. And in every garden, we integrate many of the crops, because we want to make sure that the other crop can feed the other one and also these crops can feed the soil and if the soil is fed, the soil can feed the crops," he added.