Breaking the ground for regenerative farming practices; conserving biodiversity around a tropical rain forest in Uganda

By: The KAFRED Team

Water retention ditches at garden of one of the participating farmers

Bigodi village lies right next to Kibale National Park and has a number of rich ecosystems including Magombe Wetland, which is managed by the Kibale Association for Rural and Environmental Development (KAFRED). The community in this area has for the past few decades largely depended on ecotourism and agriculture

KAFRED started in 1992 with the main aim of preventing the then rapidly increasing population from encroaching on the biodiversity rich Magombe Wetland for agriculture. A team of six local community members sold the idea of using the 4 Km Square wetland for ecotourism, to enable the largely illiterate community understand the benefits of conserving this resource as opposed to converting into a farmland. Over the past 29 years, KAFRED has been using funds from ecotourism to extend social services to the local community. The locals have appreciated KAFRED's efforts and these have been supplemented by other conservation focused institutions in the area such as, UWA, UNITE which have used conservation education to enable locals appreciate the other benefits of conservation.

With the breakout of Covid 19 in 2020, the tourists could not come and visit the wetland and this meant our income as KAFRED, which we largely used to extend social services to the community, was no more. Besides, this negatively affected many other people who depended directly or indirectly on tourism for livelihood. With reduced income from tourism in this community, the alternative was agriculture while some people got involved in illegal activities such as charcoal burning, cutting trees for timber etc. The community started to look at the wetland as a wasteland as it wasn't bringing in more tourist income. Many people started conventional forms of agriculture so as to get quick returns!

As we were pondering on the next move, we were pleased to partner with Regenerosity and the Buckminster Fuller Institute for implementing a regenerative agriculture project in Bigodi. There was no better time to receive this news than this time! In addition to the funding news, we got introduced, through Re-alliance to a network of regenerative farming practitioners and permaculturalists who have since been helpful.

After several meetings and sharing experiences especially through the Re-alliance network, we had to get the ground set! The first activities were.

- Recruiting a Regenerative Agriculture Officer and 3 other staff to help with the project
- Identify and acquire land for a demonstration garden which would act as a model farm from which community members in the area can learn regenerative farming practices
- Conducting a baseline survey and developing site plans
- Selecting at least six farmers, who later in the project would help other community members to learn and appreciate regenerative farming practices; and increase the multiplier effect

Surprisingly none of the above tasks was as easy! Getting three acre piece of land was very difficult because most people have fragmented their land into small plots of an acre or less distributed amongst different family members. A few that had three or more acres were not willing to sell their land, and when we tried to encourage them to sell, they charged exorbitant prices. I remember one day when we had agreed to pay one of the locals the next day and when we went to pay him, he said he had changed his mind and he was not willing to sell. The search went on for close to a month until when we got someone with 3 acres of land. The other trick we used was to go through an individual because if the community realizes that an organization is buying then there is a special price dedicated to organizations or "foreigners". Therefore some trusted individual negotiated and later changed ownership of the land or we would have had to spend the entire project budget on buying land.

Then there came selection of farmers. In our approaches, we have always tried to work with local leaders because they are key stakeholders. Therefore we informed local leaders about the project and asked two local council leaders (the project is in two sub counties) to nominate 12 farmers from which we could assess and select six farmers. Upon learning about the project, the local leaders were excited and they ended up nominating 20 farmers. When we visited these farmers for assessment, all of the 20 farmers were willing to work with us because they picked interest in the regenerative farming idea, although some were practicing conventional agriculture. One of the farmers Aziz pleaded to be included in the program "I have never attended any training on the right way to do farming… We are tired of using chemicals on our land, some people who were marketing their chemicals persuaded us to start using them to increase profits from farming, unfortunately they helped us for a few seasons and now our land is degraded and we were wondering what to do". Irrespective of the interest from all the nominated farmers, we had to select Seven (7) (Five gentlemen headed families and two lady headed families) thereby exceeding the earlier plan of working with Six (6).

The team and one of the farmers during the selection process

A typical day of our work includes:
Reporting to the office at 8.30am; Check email and send/respond to any communications; take different directions to the field to visit participating farmers or to the demonstration to check on the workers; Lunch break; we spend most of the afternoon in the office discussing the findings from the field; typing up notes and developing plans for the following day. Afternoons are also suitable for any meetings

To be able to make guided decisions and know where we started from, we conducted a baseline survey, which aimed at assessing the current soil health using Visual Soil Analyses and testing kits; biodiversity health by doing the BioBlitz; household incomes using the interview method and the nutritional levels of food consumed at household levels using the Brix Refractometer.

Soil testing during baseline survey

Reading the Brix!

Three months down the road, the demonstration site which was bushy with stunted coffee trees covered with weeds at the time of buying is now different! The staff cleared the land by slashing and carried out spot weeding on the coffee trees, and the coffee looks healthier now following the rainy season and the interventions applied so far. That said, it was a given to have coffee on the land as it was our plan to plant it anyway. We shall have to improve the existing garden and with time, plant more.

Coffee on the land

Fencing the land

We have conducted one general meeting with all the participants but we have also visited each farmer three times and as a result of our interactions with participating farmers, they have started adopting regenerative farming practices. One of the farmers, Everest said, " I am glad this project is here, I have already got some ideas on how I can make my land more productive from the interactions with the team. I have already made water retention ditches/contours on the slopping parts of my land, and with your support and guidance, I want to do as many regenerative agriculture practices as possible, encourage and train other community members to follow suit"

The staff and participating farmers after the general meeting

As part of the education program and building capacity of the participating farmers in regenerative agriculture, we organized a trip for the farmers to Biglad Organic Farm in the neighboring district. Staff had earlier visited last month - for a reconnaissance visit. This farmer practices organic farming on 9 acres of land which fetches him millions of money and is a known organic Agro-supplier country wide. He started with less than two acre piece of land in 2008 but used that land in a regenerative manner, which has earned him income to support 20 farming enterprises on the current 9 acres.

Farmers were very pleased to interact with a fellow farmer who is a millionaire earning from 9 acres of land yet most of them have huge chunks of land but still earn less due to the use of synthetic chemicals. As a result of the visit, coupled with the interaction of the team with the participating farmers, they are now challenged to apply the knowledge as many pledged.

Farmers during the study visit

Key Findings so far

- The baseline results reveal that the 7 participants and the demo plot are a total of 61.5 acres of land; the farmers are currently practicing both food (maize, beans, G-nuts among others) and cash (coffee) crop growing.

- The current soils are suitable for coffee and other food crop growing and the soil quality is moderate. However most of the soils have a low water holding capacity because of their sandy structure.
- Most farmers (5/7) consume three meals per day whereas others (2/7) farmers consume two meals per day. On average only 15% of the meal is comprised of vegetables and our wish is to push this to 30%
- The participants have an Average income of 3.4 million UGX per annum. This implies the community income is still very low despite the availability of land as a valuable asset. There is no balance between the land a farmer owns and the income levels. Our target is to increase the average to 5million.
- The current Biodiversity index stands at 0.03 for plants and 0.034 for animals. The target is to increase the BI to 0.2 for both plants and animals.

We have had a number of other small but meaningful activities; we hosted Margarida from Portugal, she for one month trained a group of 12 women in producing a number of regenerative crafts items while using natural dyes and agricultural residues; Bemerick visited from Rwamwanja Refugee Settlement and shared his permaculture experiences with us; Faith visited from another neigbouring district and shared her regenerative farming experience with our staff; the KAFRED board held a meeting about the project and visited the demonstration site; opened on a garden lab but planting small garden plots with different crops.

A few issues still boggling our minds include: organic pest and disease control, achieving and sustaining good yields; need for solar irrigation; buying more land from the neighbors to extend our demonstration; better prices for organic foods, resources for more activities on the demonstration including beekeeping and fish farming……

Otherwise, the three-month journey has been an interesting one, the team has learned and shared with other regenerative agriculture practitioners, the farmers are excited and we look forward to have more local community members adopting regenerative agriculture practices.