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# THE BIRTH OF ASUD PERMACULTURE INNOVATION CENTRE (APIC)

“Unveiling the potential of permaculture in Malawi”

Written by Mike Mkwala



*The beauty in construction that is APIC*

The ASUD Permaculture Innovation Centre (simply called APIC), is an exceptional epicenter being constructed to promote permaculture in Malawi, by offering a practical permaculture education, demonstration and training to communities, institutions, researchers and interested individuals.

The Action for Sustainable Development (ASUD) is constructing this exclusive facility with financial support from EcoSolidar of Switzerzland.

## **The background to APIC**

EcoSolidar is working with ASUD in Mzimba, northern Malawi, to support five primary schools and families of school children to set up permaculture gardens, grow vegetables and fruits with

high nutritional value, support families with pigs as a source of manure for compost, provide fruit trees, maize, soya and bananas, as well as setting up soil erosion measures.

Where it is possible, the project drills deep wells at the schools and in villages so that the gardens are maintained, but the water largely serves for drinking, cooking, cleaning, daily hygiene and hand washing as water access is also a challenge in these areas.



***In the pictures: The ASUD ECOSOLIDAR project in primary schools and Parents of learners at St Michaels Primary School in Mzimba***

The idea is to ensure that families have access to balanced meals for the children so that they attend school regularly, can concentrate in class and improve their performance.

Each of the five schools; Ng'ongo, St. Micheals, Embombeni, Katula and St. Monica in Traditional Authority Mtwalo is used as a learning centre for organic farming and nutrition science for the whole community.

The project experienced many successes in schools and proved beneficial for learners, teachers and parents.

ASUD felt this project needed to have a demonstration centre for more professional and practical permaculture designs. This is what prompted ASUD to establish APIC to work as a reference point for its beneficiaries.



***What parents learnt at the school in practice at home – Backyard Garden***



***A parent shows off maize with manure***

As earlier alluded that the schools are learning centres for organic farming, parents of the school going children go there to learn how to fight hunger and malnutrition with locally available means, without chemicals and with little money, affordable for even the most typical Malawi village family.



***Parents plucking vegetables in a backyard garden***

The parents are organized in a Permaculture club and copy what they have learnt at the school at their homes.

This is enabling most families in the project implementation areas to be food sufficient with the surplus being sold to local markets for parents to be able to buy other needs at their homes.



*Members of the community on a tour at APIC*

### **Construction of APIC**

The ASUD Permaculture Innovation Centre (APIC) is located at Doroba, in the outskirts of Mzuzu city to the north east, approximately a 30 minutes' drive from the city centre.



*APIC signpost and orchard demonstration*



**Thomas Ngwira – Executive Director, ASUD**

ASUD Executive Director, Thomas Ngwira says they have managed to construct a training hall, an office with a library attached to it, ecological sanitation (eco-san) toilets that will help to harvest human waste and use it for making manure, an orchard demonstration, a permaculture garden with vegetables integrated with fruits, stores for keeping items as well as staff houses. So far the construction works at the centre are currently at 80 percent.



**Structures at APIC: a staff house (front), stores (middle), training hall (far end)**

“We are intending to also set up green houses where we will be establishing nurseries for various crops as well as trees. Water has already been installed for irrigation and domestic purposes. We will also build a hostel where students or learners will be coming to stay for a specified time for example a week and be accommodated right here at the centre.



*A staff house at APIC*



*A store room and hall at APIC*



*Water tanks for portable access to safe water at APIC*

“We will also have a guest house for the facilitators who will be travelling from far places to deliver lessons at APIC”, says Ngwira.

Construction of a kitchen and dining is already in progress.



*The kitchen construction (at roofing level)*

### **What is happening at APIC?**

According to Ngwira, “APIC is promoting sustainable farming practices that preserve land and its natural resources, which are becoming increasingly important for a changing climate.

Among others courses at APIC has been designed to help farmers, homemakers and students to learn the basics of organic agriculture, including crop rotation, composting, soil and water management, pest control and more.

“APIC aims at promoting principles of permaculture and sustainable agriculture to students, academics and the general public; it is a living laboratory for permaculture, providing hands-on research and education opportunities in the field of permaculture for the Malawian citizenry and beyond.

“With the help of local and international experts, the centre is and will be transforming land in Malawi, into a thriving oasis of healthy and delicious produce”, said Ngwira.

Even at 80 percent, APIC is already hosting lectures, workshops and field trips to introduce people to principles of permaculture.



*Mzuni students being lectured on water and soil conservation at APIC*





***Mzuzu University students from the Department of Water being drilled on water management right in APIC training hall***



***Mzuzu University students pose for a group photograph after their training session***

"The ASUD Permaculture Innovation Centre has been an incredible experience. It has given me the opportunity to grow and develop my skills in a supportive and encouraging environment. The facilitators at APIC have been instrumental. I'm extremely grateful for all the lessons I have received", said Sekelani Khondowe, a Bachelor of Science in Water Resources Management at Mzuzu University.



***Sekelani Khondowe – A Bachelor of Science in Water Resources Management student at Mzuzu University***

Another student, Patriciah Nyirenda said: "I highly recommend the ASUD Permaculture Innovation Centre to anyone wanting to pursue their dreams and goals. The team of mentors and coaches are incredibly supportive, and the atmosphere of the centre creates an environment for learning, growth, and innovation".



***Patriciah Nyirenda – A Bachelor of Science in Water Resources Management student at Mzuzu University***

Apart from this, the core purpose of the centre is to provide hands-on approach, to inspire and empower local communities to adopt permaculture practices and live more sustainably.

"Visitors take part in workshops and education programs here, but they can also explore the vibrant gardens and observe the permaculture practices in action. APIC is a unique glimpse into the future of agriculture and a powerful reminder of the immense potential of permaculture in our country", said Ngwira of ASUD.

Officials from Mzuzu Prison under the Malawi Prison Service have also visited APIC to tap knowledge on permaculture that can be applied at the prison to ensure that inmates at Mzuzu prison have access for food all year, not just food but nutritious food.



***Prison officials and ASUD staff in the permaculture garden at APIC***

Assistant Commissioner of Prisons, George Chibwe who is also Officer in Charge at Mzuzu Prison said “Our visit to ASUD is so beneficial to the prison service. We are talking of issues of intergrated farming which is an element in agriculture that we would like to implement at Mzuzu prison but we had no expertise.

“In our case it means we will impart the knowledge gained here to our inmates so that they have skills in the course of reformation, much as we will also be benefiting from the nutritious food harvested in our farms and gardens to feed the inmates”, said Chibwe.



***Appreciating maize with manure during the tour***



***A successful tour of training it is, Prison officials and ASUD pose for a group photograph***

Thomas Ngwira of ASUD says the centre is so beneficial to various sectors of society as lessons learnt at the centre are tailor made practically for Malawi's situation.

“We are talking about climate change which is contributing to hunger, floods and drought in some parts of the country. At this place we are demonstrating the means of preventing such kind of catastrophies so that when people follow these they will have enough food”, said Ngwira.



***Community members being drilled on how to make backyard gardens at APIC***



*Community members being drilled on how to make tree nurseries at APIC*



*A beneficiary proudly carries a placard of the project*

**Soil and Water Conservation at APIC**

The ASUD Permaculture Innovation Centre is practicing a number of soil conservation strategies to protect and restore the soil.

One of the main strategies is planting Vertivar. Vertivar is a type of grass that is highly efficient at erosion control and nutrient retention.



***After learning at APIC, time to implement on the farm: beneficiaries planting vertivar grass to avoid soil erosion***

“We have planted the Vertivar in strategic locations around APIC, in order to provide a protective barrier for the soil against wind and water erosion. In addition to planting Vertivar, we have also implemented swales. Swales are shallow depressions that are dug along the contours of a slope. They are designed to collect and hold water, thus reducing the potential for erosion and allowing for more efficient water absorption”, says Ngwira.



***A demonstration of a swale at APIC orchard***

Apart from the two measures, APIC is also implementing mulching, cover cropping and making organic manure. These improve soil fertility and promote healthy soil ecosystems.

Ngwira says: “at APIC, we make use of human waste for organic manure. We have constructed ecological sanitation toilets. So we compost it with organic matter to create a nutrient rich soil

amendment. The amendment is then used to improve soil fertility and aid in the growth of crops around the centre.

Statistics indicate that Mzuzu City Council only manages about 7% of wastes generated in the city. The rest of the wastes are left haphazardly throughout the city's markets and locations. Walking around the suburbs you will find piles and piles of wastes as a result of this.



*Piles of wastes like these will be managed at APIC*

ASUD says through the centre, it is committed to manage waste in an efficient and sustainable manner, and APIC will provide a practical experience on how to manage wastes as it will have a special unit to look at waste management.





***Ecological Sanitation toilets at the ASUD Permaculture Innovation Centre (APIC)***

“We will install a waste management incinerator, which is designed to safely and efficiently dispose of organic and inorganic materials such as plastics, paper, cardboard, and food waste. This centre will demonstrate how best these can be managed”, says Ngwira.

The idea for all this is that people in the communities having looked at how the centre is managing wastes, they should replicate the technology in their communities.



***A demonstration of maize with manure only at APIC***

Ngwira says: “above all we want to recycle and reuse wastes. Anyone coming to the centre, the staff and the visitors have to compost their organic waste, which is why we have put in place bins throughout the centre, so that all plastics, paper, metal and glass should be sorted and



recycled. Items like jars, bottles and containers will be cleaned and reused for various purposes. Compostable materials will be used for organic manure for our gardens and farms”, says Ngwira.



***APIC will create a great platform for youth training on environment***

The ASUD permaculture Innovation Centre (APIC) is a shining example, one of its kind in Malawi.