

Zambia Katanino

Yearly report 2020

Ensuring full local responsibility over the forest

Katanino Forest Reserve,
Copperbelt province

2020 was a challenging year. Katanino was not spared from Covid-19, but being rural and with such a young population, its impact was thankfully limited. For the project, it resulted in delayed or postponed meetings and training sessions that will be resumed as soon as restrictions are lifted.

Long-term success of the forest restoration needs a plan agreed by everyone; our Katanino project's Forest Management Plan will be endorsed by the Director of the Zambian Forestry Department. This milestone planned for 2020 was delayed, but consultation with local communities is now planned during the first half of 2021.

Progress towards improving the governance of the 5600 hectares and approximately 6.3 million trees in the Reserve and buffer zone is already underway. A survey of the Reserve has shown that the number of active charcoal kilns has already been reduced since the project began, thanks to the implementation of the Katanino Forest By-Laws (which were formulated by the local community) and regular patrols by the new Community Forest Guards.

Ensuring the Reserve is protected also means farmers in the buffer zone do not encroach into it. Farmers with around 2 ha of miombo woodland are recruited to the programme and engage in beekeeping to deliver a forest-friendly income that reduces the need to cut trees. Since only smaller groups could be trained at a time, fewer than half of the farmers in the programme received training this year, with a catch-up planned in 2021. Good news in December arrived with the first honey harvest and the start of a new conservation agriculture programme.

This report shares an update of our progress during 2020. Thank you for all your support!



2020 in PICTURES



2020 in NUMBERS

Assisted natural regeneration

The overall goal of the project is to protect and restore **6,345,933** trees in the Reserve and the buffer zone.

80% of this tree target is in the **Katanino Forest Reserve**, which covers **4461 ha**.

In 2020, action plans for **5** zones in the Reserve were developed by local communities.

A baseline vegetation survey was completed, with monitoring plots established.

15 Community Forest Guards were patrolling the Reserve.

20% of the tree target is in the **buffer zone**, which covers **1140 ha**.

59% of the target (covering **670 ha**) is under restoration through the ANR plot programme for farmers.

116 farmers were trained in ANR management.

Indiscriminate cutting of trees for charcoal has led to serious deforestation and forest degradation in Zambia's Copperbelt. Here in Katanino's Joint Forest Management Area, our 10 year programme 2019-2029 is working to protect and restore the 4461 ha of forest in the Katanino Reserve and 1140 ha (minimum) in the 5km buffer zone around it; that represents approximately 6,345,933 trees. The methods used will be Assisted Natural Regeneration (ANR) and enrichment planting.

Planting

Almost **17%** of the degraded agricultural land inside the Forest Reserve needed enrichment planting.

Approx **100,000** seedlings were raised. Over **6500** were planted in the Reserve, and the remainder are allocated for the buffer zone planting starting in late 2021, which will include agroforestry and indigenous miombo species.

1 plant nursery was established inside the Reserve and **2** staff members employed.

Livelihoods

An estimated **941** families are living in the buffer zone.

The average household size is **6** people.

268 farmers with ANR plots (28%) joined the beekeeping programme.

We met almost **50%** of our beehive installation target: **1340** bee hives were installed on the 268 ANR plots. Our long-term goal is **6000** beehives.

9 lead farmers were selected and trained in Conservation Agriculture, and **5** demonstration plots were established.



Forest inventory baseline survey

Inside the Reserve, five zones are mapped and data is collected. Measurements include tree and sapling density and diameter, canopy cover and stand complexity, and species richness, dominance and composition.

The survey shows different levels of degradation. Forest canopy cover is only 37% in some zones, with an average species richness of 74 species per hectare. We are aiming for mature miombo woodland, which means after 20 years of restoration the forest canopy cover would be around 70% and there's an average of 123 species per hectare.

The vegetation survey is the first step in restoration, and enables specific action plans to be developed to manage each zone and set a baseline on which to monitor progress, which will take place every two years until 2028 in the permanent monitoring plots.



Boundary clearance completed

Fires are a real risk here. In order to protect the Reserve, the boundary around it is cleared, and this cleared vegetation is burnt to create a firebreak.

JAN

Vegetation surveys

Ranger patrols (all year)

FEB

Restoration activities

Bird survey

MAR

Restoration activities

Training (farming)

APR

Restoration activities

MAY

Restoration activities

JUN

Restoration

Honey harvesting



Farmer engagement

In the 5km buffer zone around the Reserve we expect to engage several hundreds of farmers over the coming years, who will set aside around at least 0.5ha of their farms as Assisted Natural Regeneration (ANR) plots. Their protection and careful management ensures these trees grow fast.



The farmers each receive up to five beehives to hang in their plots. Bees thrive on the flowering trees and provide a source of income from the honey harvest (see December). This year, 268 farmers are recruited, although only half (116) are trained in ANR management due to Covid-19 restrictions, which led to smaller groups being trained at a time. This means more training sessions than planned.

By December, a total of 1390 bee hives have been installed - 1340 on 268 ANR plots outside the Reserve, and 50 at the Forest Camp inside the Reserve.



Gaining consensus

Engagement with stakeholders takes place throughout the summer. This includes meetings with village Chiefs to brief them on the need for land use plans for the villages, and with government stakeholders in Masaiti. In August, Land Use Planning Committees in the five zones are selected and trained, and in September the land use planning starts.



Forest Guards independent

Since March, regular forest patrols by Community Forest Resource Guards have been accompanied and trained by a Government Officer from the Forestry Department, as well as two Wildlife Police Officers from the Department of National Parks and Wildlife Services. Training is completed in October and they are able to patrol on their own.

Engaging farmers in conservation agriculture

Promoting sustainable farming in Katanino enhances livelihoods and relieving pressure on forests. This year is just the start of the conservation agriculture programme; 9 'lead' farmers are trained, and will support their friends and neighbours in making the transition too. Five have already set up demonstration plots with maize and soybeans. Others planned for 2021 will increase soil fertility (they fix nitrogen in the soil) and include cowpeas, pigeon peas, sunhemp and *Gliricidium sepium*.

JUL

Restoration activities

Honey harvesting

AUG

Restoration activities

SEP

Restoration activities

Training (nursery)

OCT

Restoration activities

Extensionist services

NOV

Restoration

Enrichment planting

Honey harvesting

DEC

Enrichment planting

Honey harvesting



Enrichment planting begins

15th December is National Tree Planting day in Zambia. During the year about 100,000 seedlings are raised at our sister project in Luanshya to be transported to the nursery in Katanino. 13,000 were going to be planted inside the Reserve, but indications of natural regeneration mean that only half are needed by planting time. This is great news; naturally regenerating seedlings have a better chance of survival. By the end of December, 6431 have been planted, over 90% of these in Serejewe zone. Starting in January 2021, the remainder will be planted in surrounding farms.



First honey harvest!

40% of the beehives are harvested, delivering 2142 kg of honey. A December harvest is always the lowest, but despite this, the earnings from the honey represent around 10% of the annual cash income of households in this region. While there are other hives occupied and containing honey, the decision to select only 396 hives is based on advice from the experienced team in our sister project in Luanshya; the best results would come from beehives occupied since April. A second harvest from the remaining ANR plots will take place in July 2021.



What's next?



Restoration

- Plant the remaining miombo tree seedlings in the buffer zone.
- Enrol the remaining 40% of land in the buffer zone into the ANR plot programme for farmers (approx 410 ha).
- Begin production of agroforestry and miombo seedlings in the WeForest nursery.
- Engage and support 3 school outreach programmes in conservation agriculture, woodlot and orchard establishment.



Livelihoods

- Recruit and train 815 farmers in the livelihood programmes (beekeeping, conservation agriculture, livestock, vegetable and mushroom production, nursery establishment).
- Install 2000 beehives (average 5 per farm). By the end of 2021 we expect to have exceeded our beehive target.
- Set up 37.5 ha of farmland as conservation agriculture plots.
- Establish 5 cooperatives (one in each zone) to engage farmers in alternative livelihoods.
- Set up and map 100 pine woodlots in the buffer zone, covering 100 ha.

How do we know our restored forests are growing and making an impact?

Every hectare under restoration is mapped with GPS points to generate polygons (areas on a map) that are assigned to sponsors. Permanent monitoring plots are established in our sites and our forestry and science teams conduct surveys to monitor progress of biomass growth, tree density, survival rate and species diversity, among other indicators. Where social impacts are also critical, we measure socio-economic indicators such as the number of beneficiaries, people trained, and income generated from forest-friendly livelihood activities.

Please visit our **Why and How** webpage for more information.



Stay up-to-date with your interactive **Katanino map**, and check out the **photo album** on Flickr.