

# Zambia Copperbelt: Forests on farms



Report for IllustrationX  
2020



# Engaging smallholder farmers in reversing deforestation

## Luanshya district, Copperbelt province



**2020 was a challenging year for everybody, and our project in Luanshya was no exception. Due to the COVID-19 pandemic, strict rules were put in place in March 2020, which impacted some activities in the field.**

Training on assisted natural regeneration for farmers had to be postponed until June, when restrictions on larger group meetings were lifted. Fortunately, the team was able to continue to work from the office during the whole year, as there is enough space to sit at least 1.5m apart.

Despite 2020's challenges, our partnership with the Luanshya Forest Commodities Association (LFCA) grew stronger. In return for agreeing to restore and protect woodland and harvest sustainably, LFCA farmers are provided with the training and tools they need to diversify into forest-friendly activities such as sustainable bioenergy, fruit and honey production. After a new board was elected in 2020, a governance and sustainability training expert has been working with the LFCA, training them in organisational governance and financial management and monitoring their progress. They will now take over management of the beekeeping programme, and are also looking after the kuroiler chickens pilot programme, with WeForest monitoring progress. This is important for the project's continuity and local ownership, making it less dependent on WeForest support, so that it can continue long into the future.

The kuroiler chickens pilot programme was one of two alternative livelihood strategies developed during 2020, bringing further options for farmers to earn incomes other than by depleting the forest for charcoal. The other was the vegetable garden pilot project using treadle pumps for irrigation, in which 42 producer groups will grow cabbages, tomatoes and green beans for sale.

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

### 2020 in PICTURES



# 2020 in NUMBERS

In Luanshya, in Zambia's Copperbelt province, the miombo forest has suffered from mining and charcoal production. WeForest is working with local farmers to restore native woodlands and empower local communities.

## ILLUSTRATIONX's contribution in 2020

- regenerating 804.08 ha; growing 964 894 trees
- 69 tree species
- a potential 116 500t CO<sub>2</sub> sequestered over the lifetime of the trees

In addition, IllustrationX is supporting wider project impacts:

825  
farmers  
engaged

>1000  
people  
trained

of which  
40% are  
women

47  
household  
nurseries  
established

3784  
beehives  
hung

## Restoration in 2020

By the end of 2020 we planned to have 2750 ha and 3.3 million trees protected and growing. In fact, we reached **3189.9 ha** – over **3.8 m** trees!

---

**328 ha** (representing about **393,600** trees) were brought under restoration this year.

---

**120** new farmers joined the project.

---

Vegetation surveys showed a **10%** increase in biomass over all measured plots between 2019 and 2020, with the strongest growth in shrub forest plots. This is well above the expected level and translates into good carbon storage!

---

**99** farmers (**53%** of them women) were trained in miombo forest management and silvicultural practices (**90%** of our target for the end of 2020).

---

6 Community Forest Rangers accumulated a total of **147** patrol days.

## Livelihoods in 2020

**639** beehives were distributed.

---

**71%** of farmers (**685**) in the programme have now received beehives. **53%** surveyed in 2019 have seen an increase in their household income.

---

The first honey harvest of 2020 broke records: over **17 tons** of raw honey was produced, resulting in the WeForest farmers earning more than **250,000 ZMW** altogether!

---

In 2020, **32** nursery women from the project were able to earn, on average, the equivalent of an extra month's income each by raising around **8000** miombo tree seedlings for enrichment planting at our sister project in Katanino.





## New farmers commit to growing their forests

120 new farmers joined the project in 2020 and will receive training in the assisted natural regeneration of the forest on their land.

## Biomass growth rate

Based on the surveys in the permanent monitoring plots from the beginning of 2020, the average growth in biomass across all plots is 10% in shrub, young and mature forests. This is good news, because on average a 5% increase in net miombo biomass should be achieved yearly to achieve a mature forest from the regenerating plots within 20 years.



JAN

Biomass monitoring & silviculture training

Egg production (all yr)

Ranger patrols

FEB

Biomass monitoring & silviculture training

Farm visits

Ranger patrols

MAR

Ranger patrols

APR

Irrigated vegetable garden project (till end of year)

Ranger patrols

MAY

JUN

Honey harvest

Training

## Meet the locals

Jack-of-all-trades Kamwendo S. lives in Mikomfwa. Besides being a farmer and bee mentor in the Copperbelt project, he will soon take on extra responsibilities as a forest ranger now that he has passed his training.



## Protecting the forest

Six community forest rangers were trained and started carrying out monthly patrols in the Luanshya district, accumulating a total of 147 days on patrol.



Their key focus is monitoring the forest regeneration status of the farms of participating farmers and checking whether the Rules of Engagement are being followed.





### Happy cabbage growers

A vegetable gardening pilot project has started in collaboration with the Luanshya Forestry Commodities Association (LFCA). These farmers just received their first cabbage seedlings from the Vegetable Coordinator of the LFCA. The seedlings will take about four months to become mature cabbages that will then be sold to local hospitals. Participating farmers will also receive tomato and green bean seedlings. The scheme provides an additional option for farmers to gain a forest-friendly income, other than by depleting the forest for charcoal.



### Water for gardening

Water is essential for gardening, and gardening is an income-generating activity that could help Blessed K. reduce the pressure on his young forest, where beekeeping is not yet an option. In this picture, Blessed K., the LFCA Vegetable Coordinator and the WeForest team are assessing the suitability of a water source to establish a small treadle pump irrigation system to deal with the six-month-long dry season in Zambia.

## JUL

- Distribution of fruit trees
- Honey harvest
- Mapping farms

## AUG

- Mapping farms
- Hive installation
- Ranger patrols
- Establishing woodlots

## SEP

- Mapping farms
- Hive installation
- Nursery training
- Establishing woodlots

## OCT

- Establishing woodlots

## NOV

- Nursery training & home nursery setup
- Honey harvest
- Farm visits

## DEC

- Honey harvest

### Nursery incomes for women

22 women took part in a one-day training session on nursery establishment, and 17 of them also took the plant propagation training. Grafting equipment and tree stock is distributed to women upon successful completion of the nursery training. 44 lemon trees, 22 orange trees and 22 rough lemon trees were given to the trainees, 19 of whom have now established a nursery.



### Leaving the bees in peace

Honey sampling has predicted a low harvest this period. As a result, the bee mentors have decided that some areas won't harvest this season, in order not to disrupt the bees. This will help them to produce more honey in time for the next harvest in 2021.





# What's next?



## Restoration

- 2021 will see the programme expand into two new districts.
- Bring 460 ha (representing 552,000 trees) of miombo plots under sustainable management (average 8 ha per farm in Mpongwe and 3 ha per farm in Ndola), engaging and training 70 new farmers.
- Strengthen new farmers associations in Mpongwe and Ndola, and continue support to the LFCA.
- Recruit 3 new community forest rangers in new farmer associations, one in Ndola and two in Mpongwe.



## Livelihoods

- Evaluate and extend the pilot livelihood schemes (vegetable gardening with treadle pumps, and chicken rearing).
- Identify forest friendly livelihood opportunities in Mpongwe and Ndola.
- Install 700 beehives (10 beehives per farm) with 85% of the new farmers in Mpongwe and Ndola districts.

## 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 **Copperbelt map**, and check out the **photo album** on Flickr.

