

# ZAMBIA

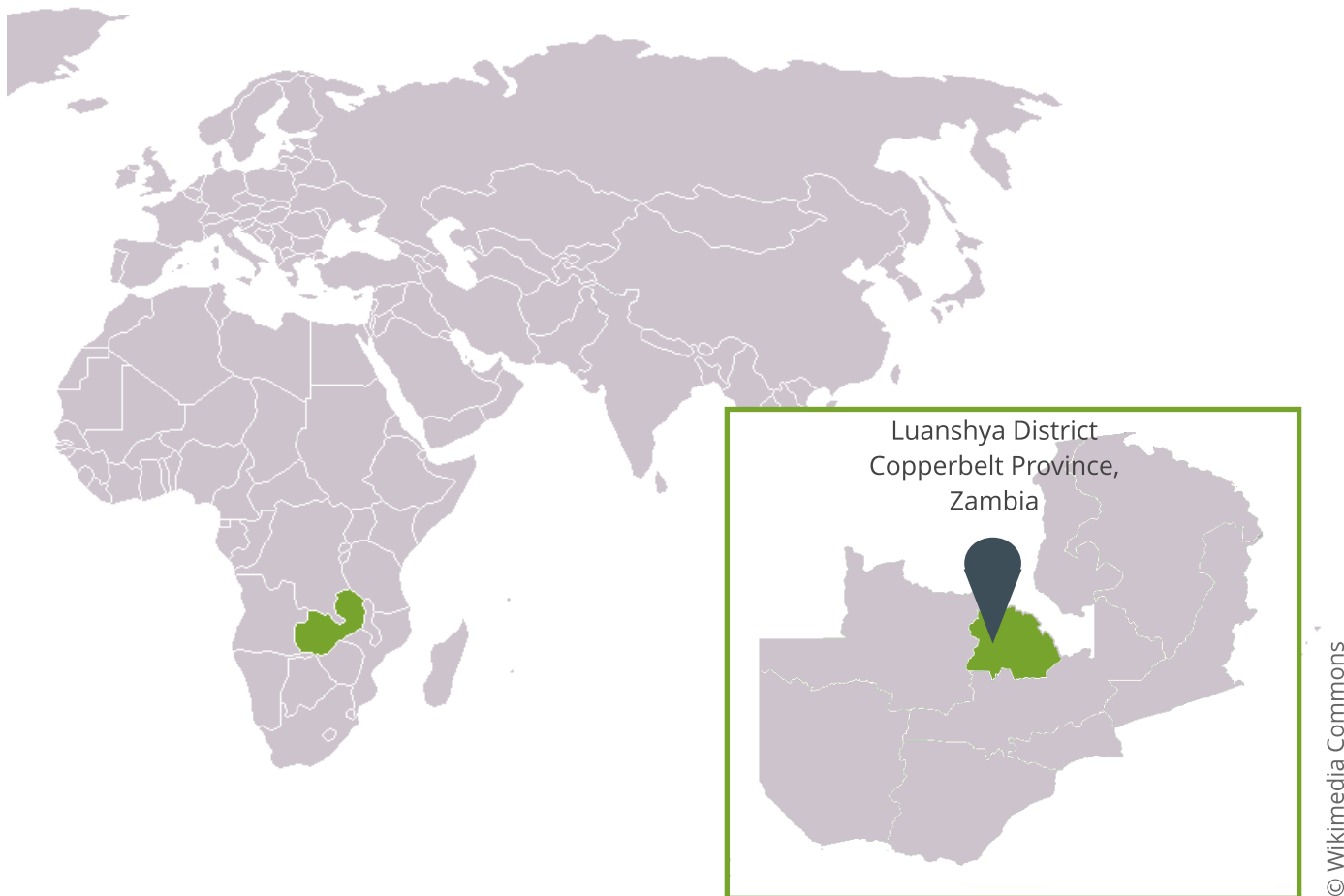
## LUANSHYA DISTRICT

### NOVEMBER 2017



## THE PROJECT

Planting trees and restoring forests only make sense if you can ensure the trees will thrive in the long term: for that you need the local communities to see more value in standing trees than in felled forests. In the Copperbelt WeForest focuses on empowering hundreds of farmers to restore their small parcels (normally 1 or 2 ha) which will bring tangible value after a few years when the trees have grown. In order to motivate the farmers and their families in the short term, they benefit from our forestry training, get free beehives and subsidized wood stoves. See how.



## IMPACT FOR PEOPLE, PLANET AND CLIMATE

The data collected is based on various audits we perform during the year:

- Forestry audits: conducted by WeForest annually
- Socio Economic audit: first audit planned end of 2018, baseline in place, to be performed by Civil Society Environment Fund 2 (CSEF 2)
- Carbon audit: planned at the end of 2018, WeForest just finished the baseline1 x per year monitoring of 10 plots according to Shannon Index and annual control of all home-based nurseries



## LANDSCAPE TRANSFORMATION

**Trees financed**<sup>1</sup>: 1 135 430

**Hectares directly restored**: 946 ha

**Total area positively impacted**: 1 900 ha

**Miombo woodland**: Tropical and subtropical forest comprising a large number of tree species that characteristically shed their leaves for a short period in the dry season to reduce water loss, and produce a flush of new leaves just before the onset of the rainy season.

**Methodology used**: Assisted natural regeneration is a restoration method to enhance the establishment of forests by protecting and nurturing wild seedlings present in the area. It may also include enrichment planting (enhancing the density of desired tree species) and transplanting of saplings.



## BIODIVERSITY CONSERVATION

**69 native tree species** grow in our intervention area.

**7 new species** were identified since our last measurement in May 2017: *Albizia amara*, *Commiphora mollis*, *Faurea saligna*, *Hymenocardia acida*, *Monotes glaber*, *Uapaca sansibarica* (provides an edible fruit for local people, called musokolowe in bemba), *Zanthoxylum chalybeum*.

The intervention area's **Shannon biodiversity index of 2.2 in richness and 0.81 in evenness** suggest a high level of biodiversity and even spread of species.



## CARBON SINK

Under the Copperbelt climate, the above-ground biomass in Miombo woodlands stores an average of 145.4 tons of CO<sub>2</sub> per hectare after 20 years of undisturbed tree growth (source Kalaba et al. 2013). As the average density is 1200 trees per ha, we can extrapolate the number to be around 121Kg of CO<sub>2</sub> after 20 years per tree.

The tree planted to date will eventually after 20 years have stored **137 198 tons of CO<sub>2</sub>** or an equivalent of **annual carbon footprint of 14 000 Europeans**.<sup>2</sup>



## COMMUNITY ENGAGEMENT

**756 people engaged** in project activities

**665 farmers** (226 women, 439 men) participated in training in forest restoration and land management

**101 women trained** in home-based tree nursery scheme

**244 fuel-efficient stoves distributed** to farmers at a subsidized price to reduce wood consumption

**990 free beehives installed** on the farms for additional short term income

## ACTIVITIES AND RESULTS

### FARMERS ENGAGEMENT

- **Already close to 700 farmers engaged**

665 farmers (226 women, 439 men) participated in training in forest restoration and land management to date. These farmers all own 1 or 2 ha of land and get trained in restoration and sustainable land management, reversing the current trend that has seen large swathes of forest cleared for charcoal, construction and agriculture. The project also promotes sustainable harvesting of biomass so the trees can still deliver some fuel for their cooking stoves without having to cut the trees

- **Train the trainer technique**

A group of farmers acting as lead farmers were trained in farm forestry and are tasked with the responsibility of training others in the community. Demo plots are established on local farmland to demonstrate the value of farm forests and small nurseries are established to provide the community with valuable trees. To reach out to more farmers and private nurseries in the districts, we organize a number of radio programs on farm forestry to run on local stations. As part of the project, farmers will be taught the benefits of the native woodland on their farmland and how to manage and restore the forest through assisted natural regeneration. The project will also support them in securing ownership of these woodlots so that they can receive the economic benefits. It is our aim to promote farm forestry as a sustainable and profitable business.

- **Free beehives to generate short term income**

121 farmers received five beehives each since May 2017: the total number of beehives across the intervention site is now 990. The first honey harvest is expected to be in December 2018. To manage the marketing and commercialization of the agro-forestry products produced by the farmers, WeForest supported the development and foundation of the Luanshya Farm Forest Association. The association is made up of 10 board members, four of whom are women, representing farmers from every area in the district. The first board meetings were held in July and August.

- **Learning beekeeping mentorship**

The project farmers have selected one person from each district to be their beekeeping mentor. The mentor is tasked with supporting the community in beekeeping and honey production as well as maintaining the conditions of the beehives. In July, the mentors received training in beehive assembly and mounting, honey harvest, proper use of protective clothing and general bookkeeping. They will be responsible for monitoring and assisting approximately 100 farmers in each block in beehive management and honey production. Each mentor has the potential to manage 1 000 beehives in their area.



WeForest's extensionist Donnell measures the tree height with a clinometer.



Young Miombo woodland restoration plot.

- **Facilitating the commercialization of farm produces**

Honey and fruit produced must also be sold in order to grow the farmer's revenue: WeForest facilitates introductions between local farmers and the private sector.

## W O M E N ' S N U R S E R I E S

- **Training women can change the world**

In Africa, girls often drop out of school early and start taking care of their family. WeForest has therefore a specific focus on training women to become entrepreneurs in Zambia. By learning new skills and organizing themselves, women can diversify their income and become more financially independent.

In Sept 2017, 55 women took part in a two-day training course in tree nursery development and fruit tree budding and grafting. They also received a course on bookkeeping and a "do-it-at-home" kit with materials and plants stock necessary for establishing their own nurseries.

They will for example learn to graft different varieties of citrus trees and sell them to commercial agricultural producers. WeForest supported them by preparing their first order and negotiated competitive market prices for their first 500 healthy grafted fruit trees.

An advanced course is planned for women who successfully establish their own tree nurseries in 2018.



*Pastor Musukwa shows Violet how to bud lemon root stock.*



*Newly trained women receive their certificate in fruit tree budding.*



*Beehive mentor Samson assembles the final pieces of a beehive .*



*Samson installs a beehive in a plot of Miombo woodland.*

## PROJECT CHRONOLOGY

- 2010 WeForest starts working with Rainlands in the Copperbelt on experimental projects
- 2014 The project is designed as it is today (engaging smallholder farmers in reversing deforestation with ANR)
- 2015 Contract signed with RAINLANDS for them to engage some of the most vulnerable people in the Copperbelt Province in farm-based reforestation
- Forest restoration activities started
- 2016 Partnership with BEESWEET to support farmers in producing and selling honey
- Partnership with HOME ENERGY to subsidise wood-efficient cooking stoves
- Received a co-funding grant from the Finnish Ministry of Foreign Affairs, as part of the Civil Society Environmental Fund 2 (CSEF 2), to continue to consolidate and expand our forest restoration activities in Luanshya
- 2017 Foundation of the Luanshya Farm Forest Association to manage the marketing and commercialization of the agro-forest products produced by the farmers.
- In February, started a sister project in two new districts in the Copperbelt province - Mpongwe and Chingola, with the support of Finnish Agri-Agency for Food & Forest Development and AGRICORD.
- In August, meeting with Minister of Water, Sanitation and Environmental Protection, Lloyd Kaziya, in Lusaka. WeForest was asked for advice on how to tackle deforestation.

### BENEFICIARY STORY: JANE, TREASURER OF A WOMEN'S COOPERATIVE

Jane N. is 42 years old and treasurer of a women's cooperative in Mpatamatu, in Luanshya district, Zambia.

In August 2016, she followed WeForest's fruit tree grafting training. Now, one year later, she leads a training for women to learn grafting.



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*Farmer on her plot of land, where she is reintroducing trees using assisted natural restoration.*



*Young trees in the Miombo woodland.*

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## FOOTNOTES

- 1 Includes 240 000 trees financed in 2015, 445 432 trees financed in 2016 and 450 000 trees financed in 2017 (still ongoing).
- 2 Assuming the average annual carbon footprint of one European is an equivalent of 10 tons of CO<sub>2</sub>.

WeForest is an international non-profit that specializes in mobilizing companies to restore the World's forests and embark their stakeholders into a long-term journey towards environmental sustainability.

In order to achieve the objectives of the Paris Climate Agreement, we must peak our global emissions by 2020 and achieve carbon neutrality by the second half of this century. While reducing carbon emissions is critical, research suggests that even if carbon dioxide emissions came to a sudden halt, the carbon dioxide already in the Earth's atmosphere could continue to warm our planet for hundreds of years. The challenge is to reduce future carbon emissions and actively remove the excess carbon from our atmosphere.

Forests are known as the best technology for that: they are an amazing carbon sink.

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THANK YOU