WeForest

2024 Project Update

The Mukungule Project

Improving the health and resilience of ecological and human communities in and around Zambia's Luangwa Valley

Mukungule, Zambia
Miombo Belt

Timeline:
2022 - 2026

Targeted ecosystem:
Miombo woodlands

KBA KEY BIODIVERSITY AREAS
South Luangwa #7195
North Luangwa #7196

Project management and M&E team

Main implementing partner:
Frankfurt Zoological Society (FZS)

Dr. Fainess Lumbwe
Country Director, Zambia

Gift Mazimba
MEL Manager

Dr. Dries Van de Loock
Regional manager Muchinga

Rachel Ndabala
Project manager, Mukungule

Catherine Zulu
Monitoring and Evaluation Officer

See the full team at:
www.weforest.org/about-us/#our-team

Project story

The Luangwa ‘Protecting Nature Improving Lives’ Project aims to improve the health and resilience of ecological and human communities in and around Zambia's Luangwa Valley (LV) that depend on natural resources. It will do this by building strong partnerships between the government, the private sector, and the community to keep and improve natural resources, such as the number of key species or the amount of land that is managed well. Local community members will, in target areas, benefit from improved nutrition and access to safe water, educational services, and diversified and sustainable conservation-compatible livelihoods.

The project, funded by USAID (HEARTH) is led by the Frankfurt Zoological Society. WeForest is a co-implementing partner, alongside Zayohub, Immunization for life and Community Markets for Conservation. WeForest is responsible for the Mukungule chiefdom, where we focus on upscaling beekeeping as a conservation-compatible livelihood and supporting associated sustainable forest management.

Key challenges in the landscape

Illegal forest resource extraction, including timber and poaching

Unsustainable charcoal production

Land conversion to agriculture by slash-and-burn activities

Economic hardship and food insecurity in local villages, which drive unsustainable behaviours

Low nutrition and education levels

Our integrated approach

Improve forest governance and stewardship through:

- Co-developing a functional, accountable and self-sustaining beekeeping model and ensuring compliance to sustainable forest management by Beekeeping Enterprise Groups (BKEG) members.

Conserve and restore the forest through:

- Ensuring that sustainable forest management is adopted and implemented within Mukungule chiefdom, involving specific activities including effective fire management.

Strengthening forest-friendly livelihoods through:

- Developing a profitable and sustainable beekeeping scheme.

A long-term vision

Climate

The restoration of the landscape will contribute to both climate mitigation and adaptation: increasing tree cover to sequester carbon while improving water retention and soil stability to help communities adapt to droughts and erratic weather.

Nature

Ensuring that sustainable forest management is adopted in the Mukungule Chiefdom will protect biodiversity and secure critical ecosystem services like water and soil health. Improved land management will enhance habitat resilience, ensuring the forest continues to sustain both people and wildlife.

People

Strengthened governance and forest-friendly livelihoods will ensure communities see the forest as an asset: one that provides resources while being sustainably managed. By introducing forest-friendly practices such as beekeeping, the project reduces deforestation-driven income reliance while securing long-term economic stability.

Outcomes

By integrating these interventions, the project will:

- Enhance **sustainable forest** management on farmlands in the Mukungule chiefdom
- Improve **stewardship** of Community Forest Managment Groups - in this case the BKEGs
- Improve **economic benefits** through forest-friendly livelihood schemes.
- The **long-term** impact of our work will benefit people, nature and climate.

Theory of Change

Existing problems in the landscape

- Land degradation
- Biodiversity loss
- Forest fires
- Food insecurity
- Poverty
- Forest resource extraction
- Slash and burn agriculture
- Unsustainable charcoal production

Risks

- Agricultural expansion

WeForest Interventions

Project outcomes

Improved forest governance and stewardship

- Improving local forest management structures → Enhancing stewardship of Beekeeping Enterprise Groups (BKEGs) in sustainable forest management

Restoring and conserving at-risk forests

- Conservation
- Assisted Natural Regeneration
- Fire management

→ Enhanced sustainable forest management on farmlands

Introducing forest-friendly livelihoods and behaviours

- Beekeeping → Improved economic benefits through forest-friendly livelihood schemes

Long term impact

Climate

Stored and sequested carbon

Nature

Thriving biodiversity and intact ecosystems

People

Sustainable and resilient communities

2024 Major Achievements

WeForest has now collaborated with the community across all ten Village Action Groups (VAGs) within Mukungule Chiefdom and co-developed a sustainable beekeeping intervention model. This enables these groups to turn into beekeeping service providers, and will ensure that the project's legacy continues long into the future.

Besnart Banda, a beekeeping extensionist from the LCC project, is learning how to install a beehive in Mukungule Chiefdom.

2024 activity update

Improved forest governance and stewardship

- **Organizational capacity assessments (OCA)** were conducted for two Village Action Groups.
- **Ten Beekeeping Enterprise Group representatives** attended the 8th National CBNRM Annual Conference, which fostered governance, collaboration and partnerships among conservation stakeholders.

Restoring and conserving at-risk forests

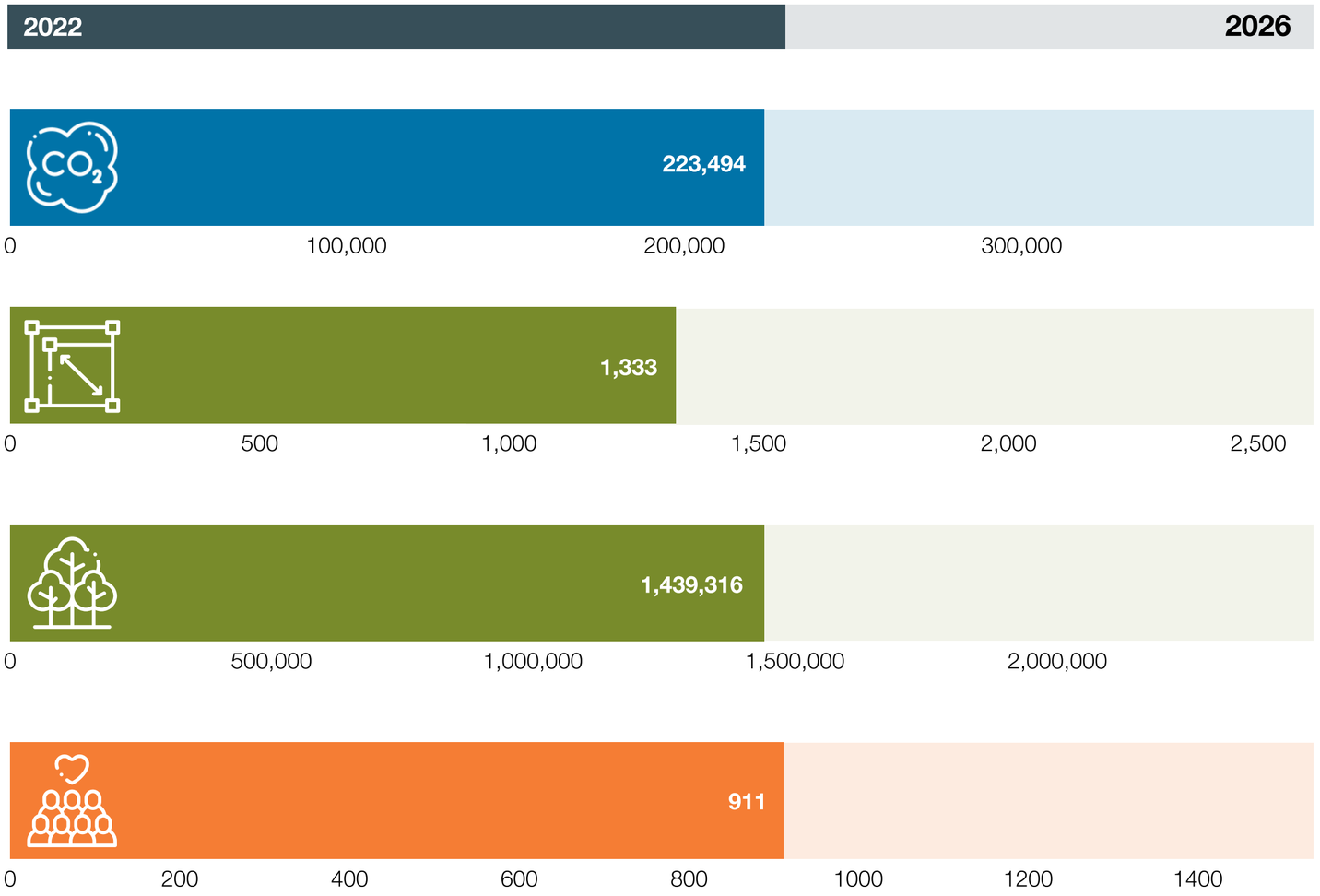
- **22 Honorary Forest Officers (HFOs)** were trained in regeneration management.
- **200 forest beekeeping plots** were verified and mapped.

Introducing forest-friendly livelihoods

- **Eight new bee mentors** were trained.
- **200 farmers** were recruited and trained in beekeeping and sustainable forest management.
- **1000 beehives** were installed on 200 plots.
- The May–June honey harvest yielded 465.9 kg of comb honey, with an average yield of **7.93 kg per farmer**.
- The November–December honey harvest yielded 3476 kg of comb honey, with an average yield of **9.03 kg per farmer**.
- A baseline socio-economic survey was conducted to inform actions and monitor impact in the project's future, and revealed **high crop dependency** and food insecurity.
- **Gender equality** and social inclusion (GESI) assessments were carried out, revealing resource-use bias and related gender-based violence in three VAGs out of ten assessed.

Progress tracker

See end of report for our progress tracking methodology



Trees planted to date

Uniquely for a WeForest project, our activities in Mukungu do not involve tree planting. Instead, we focus on forest conservation and assisted natural regeneration, with beekeeping as a conservation-compatible livelihood.

Woody species in project to date **39**

During the honey sampling exercise in Chishala VAG, showing a nearly empty honeycomb as the bees had consumed most of the honey. We hypothesized several factors that could have contributed to this, including slow colony build-up over the year and temporarily limited food availability and/or swarming which caused the bees to consume earlier produced honey.

The beekeeping extension officer (left) and the two bee mentors (right) are weighing honey in readiness for bulking in Nkomba VAG.

2024 Challenges

Lower yields than expected were observed from the beekeeping plots in 2024. This could have been due to several factors, including slow colony build-up, limited food availability or swarming, leading to increased honey consumption. An assessment by an expert beekeeper has taken place and a report will be published in 2025.

Overall, 79% of farmers are complying with tree-cutting restrictions, charcoal kiln bans and fire management. However, economic dependence on agriculture continues to contribute to forest degradation, reduce bee flora, and pose long-term threats to beekeeping viability. To address these challenges, the project will implement awareness campaigns, strengthen enforcement, and expand beekeeping livelihood programs.

Unplanned fires had a negative impact on the project, as at least half of the farmers did not create firebreaks and ring weeding in their forest beekeeping plots. To mitigate this, improved fire management practices will be promoted in 2025.

Looking ahead to 2025

A further 600 farmers will be recruited and trained in beekeeping and sustainable forest management, with 3000 new beehived hung on 600 forest beekeeping plots.

Carried over from 2024, in 2025 organizational capacity assessments (OCA) will be conducted for the remaining eight Village Action Groups

Supporters & Partners

2024 project partners

Frankfurt Zoological Society coordinators of the Luangwa Protecting Nature Improving Lives HEARTH Project.

Wildhives & Co prospective buyer of comb honey.

Beekeeping Enterprise Groups (BKEGs) will be handed over responsibility for beekeeping activities in 2026.

With thanks to our supporters in 2024, including:

NIKE

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Contact us

Visti **www.weforest.org** or for more information or email: **contact@weforest.org**

How we measure and forecast our impact

Baseline

For the sake of simplicity, the progress bars in this report show a baseline of zero. This represents the concept that the area covered by WeForest forest and landscape restoration (FLR) activities was zero; thus the associated trees conserved and restored, carbon stored and households impacted through WeForest intervention was also zero.

In reality, when a WeForest project begins, our Monitoring, Evaluation and Learning team undertakes a detailed survey on forest structure and regeneration through establishing Permanent Monitoring Plots, and conducts an extensive questionnaire on livelihoods, to establish meaningful baseline values. You can read more about our full MEL activities here.

Hectares planted, conserved and restored

Progress up to 2024

Verifiable cumulative total since the project began of all mapped intervention sites, also known as polygons, of:

1) Conservation forest areas, such as forest reserves

2) Restoration forest areas, such as Assisted Natural Regeneration and planting areas

3) Agroforestry areas on community/farm land

End of Project Target

Target number based on the potential area of land able to be conserved, restored and planted in the project area under the known and expected conditions at project start. However, it is subject to change based on unforeseen opportunities or challenges that may arise.

Anticipated tons of CO2 to be sequestered through project activities

Progress up to 2024

Extrapolated tons of CO2 calculated from the measured areas of different types of land use (for example forest or agroforestry) under “Hectares of forest planted, conserved and restored” to date, and the average amount of projected long-term CO2 per hectare provided from literature review for each land use type in their locations. Although totalled, please note the methodology for calculating these CO2 projections are specific to land-use type, and span a period corresponding to the expected time taken for the trees to reach maturity, which varies between locations.

End of Project Target

As above, but using the target (and not current) number of hectares planted, restored and conserved and their respective area totals as a parameter for calculations. As this parameter is subject to change, the associated CO2 target may also change over time.

Number of trees conserved and restored*

Progress up to 2024
Extrapolated number of trees calculated from the measured areas of different land use types (for example conservation areas, restoration areas or agroforestry) under “Hectares planted, conserved and restored” to date, and the average tree densities observed for each land-use type when mature, known through our MEL activities or scientific literature.

End of Project Target
As above, but using the target (and not current) number of “Hectares of forest planted, restored and conserved” and their respective area totals as a parameter for calculations. As this parameter is subject to change, the associated trees conserved and restored target may also change over time.

*Estimations based on average numbers per hectare

Trees planted to date (2024)

Total
Actual counted number of planted seedlings and saplings of woody (tree and shrub) species in the project to date.

Trees planted for forest-friendly livelihoods and behaviors
Only woody species directly planted for livelihood improvement. This also includes woody fruit, fodder & timber trees, and woody cash crops, exclusively planted on community or farm land.

Trees planted for forest conservation and restoration
Only woody species that were directly planted for ecological reasons, aiding restoration of the natural forest ecosystem.

Woody species in project to date (2024)

Total
Actual observed number of woody (tree and shrub) species:

- Regenerating in the conservation/restoration zones (i.e. in the Permanent Monitoring Plots) and
- Planted, either for restoration or livelihood improvement
- Growing as mature trees in the conservation/restoration zones (i.e. in the permanent monitoring plots).
- Please note, these numbers are not exhaustive and the true species richness is likely to be higher.

Tree species for forest-friendly livelihoods and behaviors
Only woody species directly planted for livelihood improvement. This also includes woody fruit, fodder and timber trees, and woody cash crops, exclusively planted on community or farm land.

Tree species for forest conservation and restoration
The woody species observed in the project area that are not used for livelihood improvement purposes. Where species are used for both livelihood improvement and restoration (which is sometimes the case, as we use native species as much as possible), they have been counted under ‘forest-friendly livelihoods and behaviors’.

Mammal and bird species sighted to date

Numbers are included where we have a good level of biological monitoring, for example using camera traps or audio devices - please note that numbers are unlikely to capture the full species richness of the project area and that the absence of reporting does not imply the absence of species.

Other notes

WeForest works in close cooperation with local partner organisations, institutions, community-based organizations and local people. Therefore, our impact can never be fully separated from the work of our partners. WeForest acknowledges that the presented impact numbers cannot be solely attributed to our work, but is also supported through the hard work contributed by all our local partners.

Terminology

Conservation
Where native forest canopy cover is still intact, we focus on protecting the forest from any threats and disturbances, such as overgrazing, unsustainable wood extraction and fire.

Restoration
Assisted Natural Regeneration (ANR): Where there is reduced forest cover but high potential for natural regeneration, we aim to accelerate natural recovery, typically through preventing soil degradation, reducing competition with weeds, and protecting young trees.

Tree planting
Where there is reduced forest cover and little regeneration potential, we actively plant native trees at a density that corresponds with the regeneration potential.

Agroforestry and tree crops
Where agricultural landscapes exist, WeForest promotes the planting of trees for livelihood improvement. These trees can be used either for direct consumption or sale (fruits, timber, fuelwood) or to support other crops or livestock (agroforestry). Native tree species are prioritized but, where necessary, non-native species may be used.