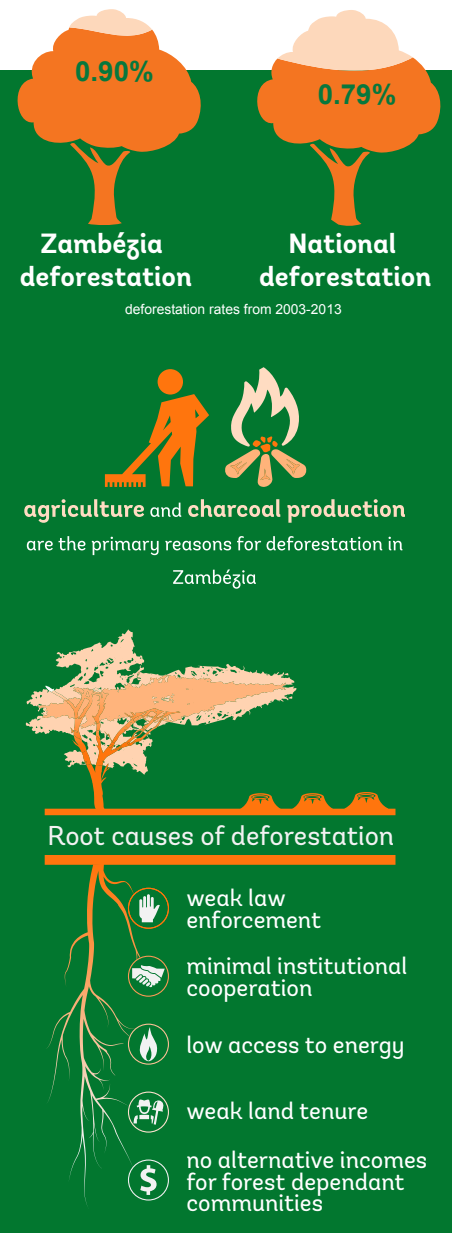


ZAMBÉZIA LANDSCAPE PROGRAM

Building Livelihoods and Conserving Forests in Rural Mozambique



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Overview

Mozambique is one of the few Sub-Saharan countries with significant natural forest cover. Native forests and woodlands cover 43% of land-mass (344,000 km²), harboring extensive biodiversity and unique landscapes. Rapid deforestation, however, is threatening ecosystems and rural livelihoods; with slash and burn agriculture responsible for more than 65% of forest cover loss across the country.

In the central-coastal region, Zambézia Province is home to lush forests, fertile soils, river systems and an extensive coastline. Covering over 100,000 km², Zambézia offers untapped opportunity for sustainable and equitable economic growth through agriculture and industry. Yet as one of the poorest but most populous provinces in the country, challenges such as rapid population expansion and poor management of natural resources threaten fragile rural livelihoods.

Above average rates of population growth and rural poverty are driving extensive loss of natural forest. Between 2001 and 2016, the province lost 5% of forest cover (approximately 5440 km²) to small-scale slash and burn agriculture and charcoal production. With limited access to alternative sources of income, Zambézia's largely rural population is caught in a cycle of unsustainable forest use and land practices.

To improve the management of natural resources and promote rural development, the World Bank is supporting the Government of Mozambique in implementing the Zambézia Integrated Landscape Management Program (ZILMP).

Through technical assistance and on-the-ground projects, such as improving natural resource management and promoting conservation agriculture, commercial reforestation and community-based tourism, ZILMP is leveraging existing resources and using new financing to sustain and scale-up investments that directly address deforestation.

Working in nine continuous districts, over 50% of which is forested, ZILMP covers the first area in the country eligible for payments for reduced emissions from deforestation. In other words, Zambézia is poised to receive international funds when forest loss is reduced.



Mt Namuli

On the slopes of Mt Namuli, the remains of a threatened Afromontane forest harbors previously unknown species; some of which, such as the Namuli apalis bird and Vincent's bush squirrel, are endemic to the mountain's steep rock faces.

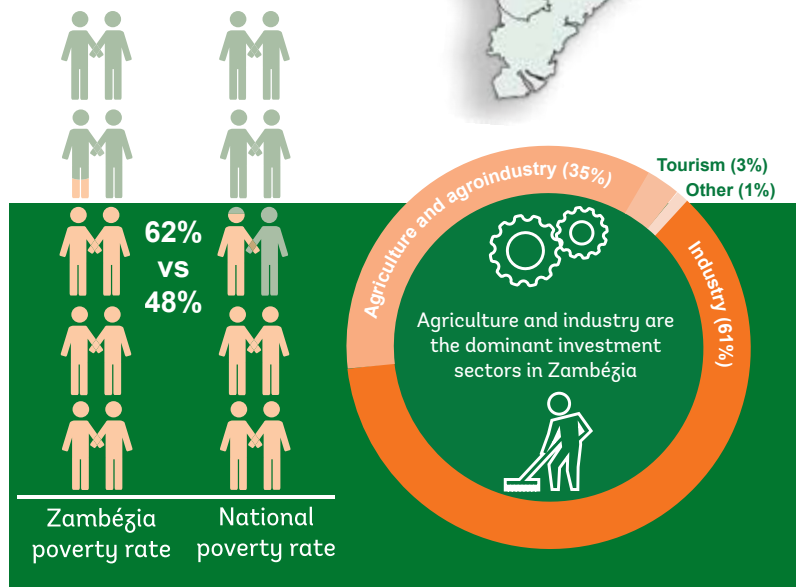
ZILMP works across nine districts in Zambézia (highlighted in dark green), an area with a population of approx. 2.3 million people.

Gilé National Reserve

Once brimming with biodiversity, including Mozambique's last black rhino population, the Gilé National Reserve has suffered extensively from poaching and, more recently, illegal logging for valuable species. With increased investment, however, the Reserve is seeing a resurgence in biodiversity and renewed recognition of its significant local and global environmental services, particularly carbon storage provided by the extensive forests of miombo woodland.

Marine waters

Zambézia's coastal shores are a rich source of marine life and mangrove forests, offering substantial benefits to local livelihoods. Spanning over 10,400 km² and crossing into Nampula province to the north, the Primeiras and Segundas Archipelago Marine Reserve harbors abundant coral and turtle species and is an important environmental asset along Zambézia's coastline.



The World Bank in Zambézia

“We cannot tackle deforestation and overexploitation of resources without addressing issues such as rural poverty, community rights, and land management - and we cannot equitably address these issues without engaging with all stakeholders.”

Andre Aquino, Senior Natural Resources Management Specialist at the World Bank in Mozambique

Enhancing the living conditions of Zambézia’s rural communities while ensuring the sustainable management of the Province’s natural resources requires the input from multiple sectors. In partnership with the Government of Mozambique (GoM), the World Bank implements an integrated landscape approach, bringing stakeholders together to manage natural resources and support the communities that depend on them.

In leveraging shared knowledge and resources, the multi-project approach seeks to harness synergies— whether working with beneficiaries on the ground or providing technical assistance to policy makers in Maputo and Quelimane (the provincial capital). The result is shared vision to support rural livelihoods, while strengthening the health and resilience of the surrounding landscapes.

Zambézia Multi-Stakeholder Platform

Engaging with all stakeholders in decision making has proven to be critical in ensuring sustainable practices and policies are enacted and upheld.

ZILMP is facilitating this engagement through the Zambézia Multi-Stakeholder Platform, a forum for civil society, the private sector, academia and government to discuss natural resource management issues. Providing opportunities for collective discussions on natural resource related issues, the Platform generates in a strong, common plan for forest and landscape management.

Through the platform, ZILMP works closely with civil society organizations such as the Zambézia Environment and Community Development Network (RADEZA) – to tap local insight and form key partnerships in implementing on-the-ground activities.

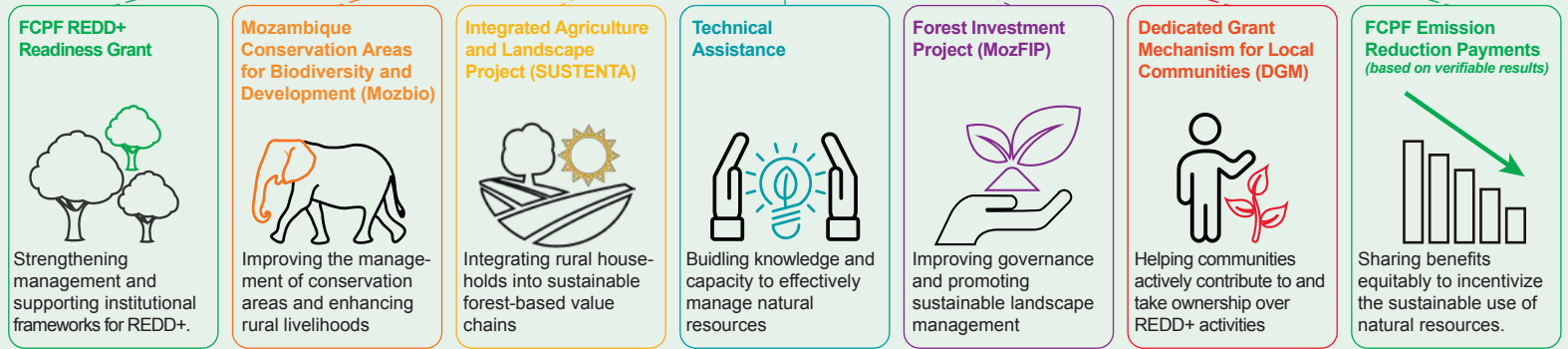
“The Zambézia Platform assists in managing differing views and potential conflicts between actors”

Daniel Maula

President of RADEZA and co-founder of the Zambézia Multi-Stakeholder Platform.

Zambézia Integrated Landscape Management Program

Building a strong foundation to sustainably manage resources and promote rural development



ZILMP in Practice: Sharing Knowledge and Promoting Collaboration

With support from ZILMP, the Multi-Stakeholder Platform coordinated collaboration between the GoM and Zambézia's provincial university, UNIZAMBEZI, for a series of academic trainings designed for forest operators and civil society.

This led to the first Mozambican Scientific Conference on Agroforestry Systems, bringing together over 200 researchers, students, politicians, civil society and private sector representatives to discuss scientific topics related to crop production and productivity, land, environment, forest conservation and climate change.

Opportunities such as these lead to higher engagement by local organizations and communities in land management practices, resulting a more effective and equitable system of forest governance.



Beneficiaries working in agroforestry near Gilé National Reserve (World Bank, 2018)

Strengthening Forest Governance

Creating an Enabling Environment



Law
Enforcement



Institutional
Co-operation



FCPF Grant



MozFIP

Mozambique's National REDD+ Strategy aims to reduce deforestation by 40% by 2030.

Between 2013 and 2016, Mozambique received over US\$8 million in grants from the Bank's Forest Carbon Partnership Facility (FCPF) to prepare a National REDD+ Strategy and to build the capacity needed to engage in payments for emissions reductions from deforestation and degradation

With these funds, Mozambique prepared REDD+ pilot projects in several Provinces including Zambézia, and established a series of new management and monitoring entities, such as the provincial Program Implementation Unit (PIU) and Multi-Stakeholder Platform.

The PIU is responsible for supporting Zambézia's rural development investments and ensuring all activities are implemented efficiently and transparently, in close coordination with a range of stakeholders and as part of the province's overall social and economic development plan. The PIU is designed to promote innovative and decentralized governance arrangements at provincial and district levels.

ZILMP in Practice: Technical Assistance

Following concerns about the management capacity of the Nipiode Community forest concession, the PIU, supported by ZILMP, coordinated technical assistance collaboration between the private sector, academia and civil society to design more effective activities aimed at improving the livelihoods of people living within and around the concession area.

The National Sustainable Development Fund

In 2016, the World Bank supported the Ministry of Land, Environment and Rural Development (MITADER) in the creation of the National Sustainable Development Fund (FNDS).

Responsible for promoting rural development, strategic land planning, sustainable value chains and long-term financing for the environment sector, FNDS streamlines the implementation of rural development projects and builds institutional capacity.

ZILMP, in collaboration with other Bank sponsored projects, works closely with FNDS on a daily basis, providing technical support and policy advice to strengthen strategic planning, guide reform analysis and encourage long-term financing opportunities.

Strengthening Policy Regulation



Law
Enforcement



Institutional
Co-operation



MozFIP

Illegal logging is widespread throughout Mozambique, causing losses of billions of dollars every year.

Despite the government's zero tolerance for illegal logging, protected forests continue to be logged and a large proportion of the country's timber exports are illegal. Additionally, few forest concession operators are fully compliant with legislations, operational requirements and management plans.

Since effective law enforcement and high-level coordination are at the crux of illegal logging, ZILMP is working to address fragmentation and lack of dialogue in the government by coordinating decision makers from across different departments to present a united front that can stamp out illegal activity.

Under the MozFIP project, the World Bank is supporting the development of a national timber tracking system to help the government maintain control over the logging industry and prevent illegal activity. To support this tracking system in Zambézia and enforce laws regarding the use of natural resources, ZILMP is helping to establish a provincial branch of AQUA, the environmental law enforcement agency.



The Bank is supporting law enforcement strengthening to curb illegal forest activities in several provinces in Mozambique, including Zambézia (World Bank, 2018)

ZILMP in Practice: Operação Tronco

In 2017, representatives from across the government came together to crack-down on illegal logging activities. Cross-ministerial teams visited border controls, ports, log yards and forest concessions throughout Zambézia and the country, to ascertain the legality of timber and assess operator compliance. This peaceful operation seized over 150,000 cubic meters of wood and led to hefty fines, sounding a clear alert as to the GoM's commitment to sustainable forest use.

Through ZILMP and other projects, the World Bank is providing technical assistance and policy advice to the GoM to implement actions that are essential in halting illegal resource exploitation, strengthening forest management and accelerating conservation of forests.

Data and Analysis



Land Tenure



Institutional
Co-operation



SUSTENTA



MozFIP

The GoM now has a National Forest Monitoring System (NFMS), to track and measure forest cover, and a Geoportal of Sustainable Development Initiatives, an open-source resource to show land-use and geographically track active projects.

The Geoportal, NFMS and other geospatial data systems are critical tools in making informed and equitable management decisions.

They assist government agencies and partners in securing land rights, encourage communities and farmers to invest in long-term agricultural and forestry practices, and help track deforestation and landscape change.

In Zambézia, ZILMP provides technical assistance and GIS support for the continued collection of land-use data and the production and updating of maps and landscape analysis to support and inform these tools.

This includes working closely with communities to define boundaries and designate land-use priorities, such as villages, agriculture, plantations and rehabilitation.

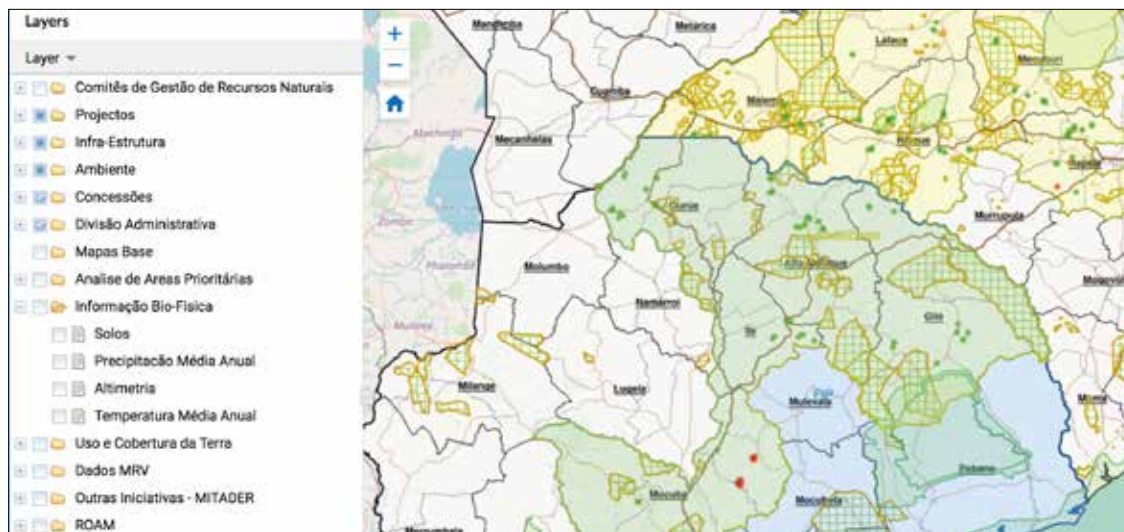
Community land delimitation is the first step to clarifying land rights and mitigating conflict. For communities to sustainably use and protect the services provided by healthy forests, they must feel a sense of ownership over the land and be able to gain the skills necessary to manage and govern the resources.

ZILMP in Practice: ROAM

Restoration Opportunities Assessment Methodology (ROAM) is an internationally recognized framework (developed by IUCN and WRI) for rapidly identifying, analyzing and prioritizing areas for reforestation and restoration. To assist with land management planning in Zambézia, the World Bank supported a ROAM assessment in five of the ZILMP districts.

The study found over 50% of the analyzed landscape to be severely degraded and identified five restoration interventions: agroforestry, water and watershed conservation, soil conservation, new forest plantations and management of existing woodlots, and natural forest rehabilitation.

The analysis also indicates that integrating trees into agricultural systems will provide potential alternative sources of income, while regulating the local microclimate and providing nutrient cycling in the soil.



The Bank supported the GoM in launching the Geoportal: a public website dedicated to sharing geospatial information such as project sites, land-uses, forest cover, delimitation borders and priority areas.

The Portal can be accessed at: landscape.nextgis.com

ZILMP in Practice: Land Use Planning for Enhanced Resilience of Landscapes (LAUREL)

Funded by the World Bank, LAUREL works in partnership with government, civil society and academia to develop a GIS modeling platform that tracks actual and projected rates of population, land-use, land cover and degradation.

The project works extensively in Zambézia, where it helps to inform land-use decision making by evaluating potential interventions for improved management and highlighting potential threats, such as endangering to food security or biodiversity conservation.

ZILMP in Practice: National Spatial Development Plan (PNDT)

Funded by MozFIP, the National Spatial Development Plan (PNDT) recommends land-use investments for certain areas by presenting territorial models based on current and future scenarios and evaluating the positive and negative trade-offs for each option.

The data and information presented in the PNDT is critical to informing sustainable land-management decisions that will ensure food security and balance economic development with environmental benefits.

Working on the Ground

Conservation Agriculture



Access to Energy



Livelihoods



SUSTENTA

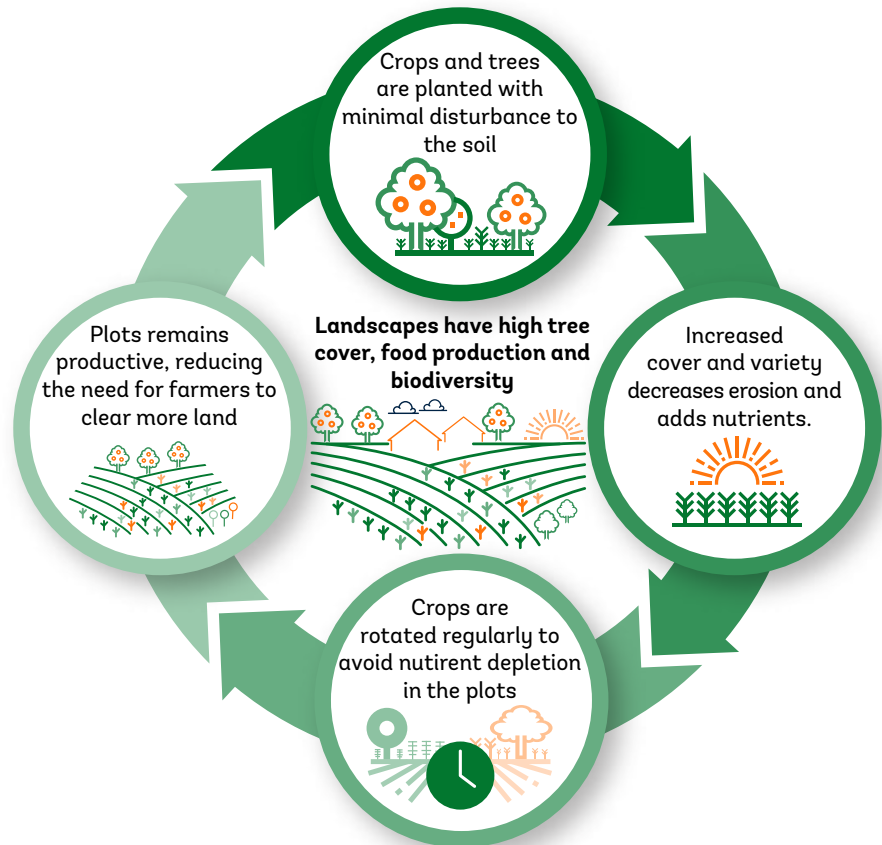


MoçFIP

Small-scale agriculture implemented by subsistence farmers is the key driver of deforestation in Zambézia.

ZILMP is promoting conservation agriculture to reduce “slash and burn” methods and support subsistence farmers in increasing crop yields, without cutting forests and degrading the landscape.

By reforesting farming plots with a combination of crops and trees, farmers enhance the organic matter in the soil and create the healthy ecosystems needed for sustainable production. This means that communities are able to grow enough food to eat, address local and commercial demand to biomass energy and produce valuable crops and other non-timber products that can be sold at the market.





*Right: Women are engaged in conservation agriculture across the country
Above: Agroforestry plots in Zambia (World Bank, 2018)*

ZILMP in Practice: Conservation Agriculture in Forestry

In Mulevala, Mocubela and Gurue districts, ZILMP is introducing conservation agriculture across 1,500 hectares of degraded land.

Working with farmers and producer groups – including associations and cooperatives – the project will benefit at least 1,500 households while restoring unproductive land and ecological services.

By reducing deforestation in their area, these communities will also be eligible to receive payments for emissions reductions, further disincentivizing slash and burn practices.

The project will work closely with beneficiaries to provide trainings, technical assistance in planning what to grow, and support (through a voucher system) for farmers to receive the products needed (fertilizers, irrigation etc.). The project also supports the organization of formalized community-based organizations to pool resources and share knowledge.



Community Based Natural Resource Management



Land Tenure



Livelihoods



SUSTENTA



MoçFIP



MoçDGM

Community Based Natural Resource Management (CBNRM) supports transparent and inclusive decision-making processes.

ZILMP is encouraging the GoM to adopt a more inclusive approach to designating land-use, upholding regulations and strengthening law enforcement, by working in partnership with communities and local operators.

By coordinating with Natural Resources Management Committees and other Community Based Organizations, the Program is improving awareness of local forest laws and garnering support for the review and enhancement of forest regulation where needed.

With more knowledge of laws and landscape management activities, local organizations are better positioned to participate and benefit economically. As such, the GoM has embraced CBNRM and is trying to actively engage with local people on environmental management and conservation.

In 2018 the Bank assisted the GoM in holding a CBNRM Conference in Maputo (World Bank, 2018)



ZILMP in Practice: Community forestry

António Macaula is the president of ANAWAPE, a community agricultural association committed to providing tangible benefits to communities while safeguarding the natural environment.

According to Macaula, the group saw a great economic opportunity in a local forestry concession for sustainable logging but faced technical and financial limitations in developing a business.

ANAWAPE is receiving institutional support from ZILMP to create a community forest concession and negotiate a partnership with a private company for the processing and commercialization of the harvested timber.

“The association has greatly benefited from this support, which has increased our capacity and stimulated motivation within the group” says Macaula. “Our dream is to evolve into an enterprise that is involved in various economic areas to increase and diversify incomes, yet always with the spirit of nature conservation.”

Supply Chains for Cash Crop Production



Livelihoods



SUSTENTA



MogFIP



MogBio



Emissions
Payments

Combined with agriculture for food, sustainable cash crops can boost livelihoods of subsistence farmers and regenerate degraded land.

In one of the poorest provinces in the country, Zambia's rural families subsist on what they grow and the small amount they are able to send to market. Low productivity and isolated conditions, however, restrict their opportunities to enhance their livelihoods.

By promoting sustainable cash-crops, such as cashew, ZILMP encourages agricultural practices that don't degrade the land and offers rural communities the chance to move beyond daily subsistence.

Farmers learn more productive agricultural techniques, gain a deeper understanding of markets and business and are connected with commercial suppliers. With greater productivity and more stable livelihoods, they are then better positioned to invest in their land for the future.



ZILMP in Practice: Connecting Farmers with Markets

(World Bank, 2018)

Near Gilé National Reserve, the Bank is working closely with the international NGO Etc Terra, to improve agricultural practices, energy production and community law enforcement in over 1200 households. Collectively, these activities work to reduce deforestation and prevent landscape degradation.

Antonio Curasse, in Malema, Pebane, is one of the 1200 households enrolled in the Koiwa project (meaning "I am aware of" in Lomwe). The cashew market information service provides prices and market evaluations, helping farmers make informed business decisions.

The project is critical in helping farmers, such as Mr Curasse, who credits the program for "receiving essential market information by SMS and technical advice on how to combine crops such as cashew and sesame".

Commercial Reforestation



Access to
Energy



Livelihoods



MozFIP



A local man waters seedlings at a plantation in Zambia where they are adopting Conservation Agriculture practices (World Bank, 2018)

By 2030, the GoM aims to restore one million hectares of degraded and deforested land, much of which will be situated in Zambia, creating up to 25,000 jobs in the plantation sector.

To reduce deforestation of native woodlands and encourage the replanting of trees, ZILMP is working closely with communities and private sector to create sustainable plantations that support the local area both economically and environmentally.

By providing a combination of financing schemes and technical assistance and training, ZILMP can greatly increase community incomes and sustainably transform subsistence, often destructive, forestry practices into profitable, market orientated activities.

ZILMP in Practice: Innovative Financing

To grow a viable and sustainable plantation, trees must be cultivated for six years before harvesting. For subsistence communities, that can be an insurmountable amount of time to invest in a project before gaining profit.

To bridge this gap, the World Bank is supporting a new innovative financing scheme that supports farmers throughout this growth period by providing performance-based payments for establishing and maintaining commercial plantations while also restoring priority areas.

The Planted Forest Grant Scheme contributes 50-65% of establishment costs and provides access to knowledge, products and technology to support the producer. In the coming years, it is predicted that the Scheme will establish at least 3000 ha of sustainable, multi-purpose plantations and restore over 500 ha of degraded land across the ZILMP area.

Charcoal Production and the Timber Industry



Access to
Energy



Livelihoods



MogFIP



Emissions
Payments

A growing population and weak energy sector mean there is huge demand for wood and bio-energy, particularly charcoal.

Unsustainable extraction practices, such as logging beyond the regenerative capacity of the forests, coupled with the low-efficiency of the charcoal produced, is causing severe forest degradation.

ZILMP is curbing deforestation by supporting sustainable multi-purpose plantations that provide local jobs, supply wood for energy, construction and industry, and reforest landscapes. These plantations aim to meet local demands for timber and non-timber products while restoring ecological services to degraded land and supporting local food supply.

The Program is also promoting new kilns that produce high efficiency charcoal from timber waste products (thus reducing pressure on forests). This includes bringing together timber producers and suppliers on the ground to encourage collaboration in the industry, strengthen management of sustainable practices and offer trainings on reducing waste and using the new kilns.



(World Bank, 2018)

ZILMP in Practice: Working with the Timber Industry

In Mocuba district, Geraldo Sotomane's industry, construction and timber company registers high waste in timber production and processing.

After participating in a ZILMP supported training program, however, he has seen a decrease in waste and a jump in the productivity of his timber mill.

“As a result of the training, I am now using waste from the saw mill to produce products such as charcoal, which I can then either use or sell at the market” explains Sotomane.

After the training he also started to use a more efficient kiln and now produces up to 40 bags of charcoal in a week. “In view of the good results achieved, we now have three kilns. Another advantage is that factory is always clean, and we are using all the waste from the timber processing so there is no rubbish.”

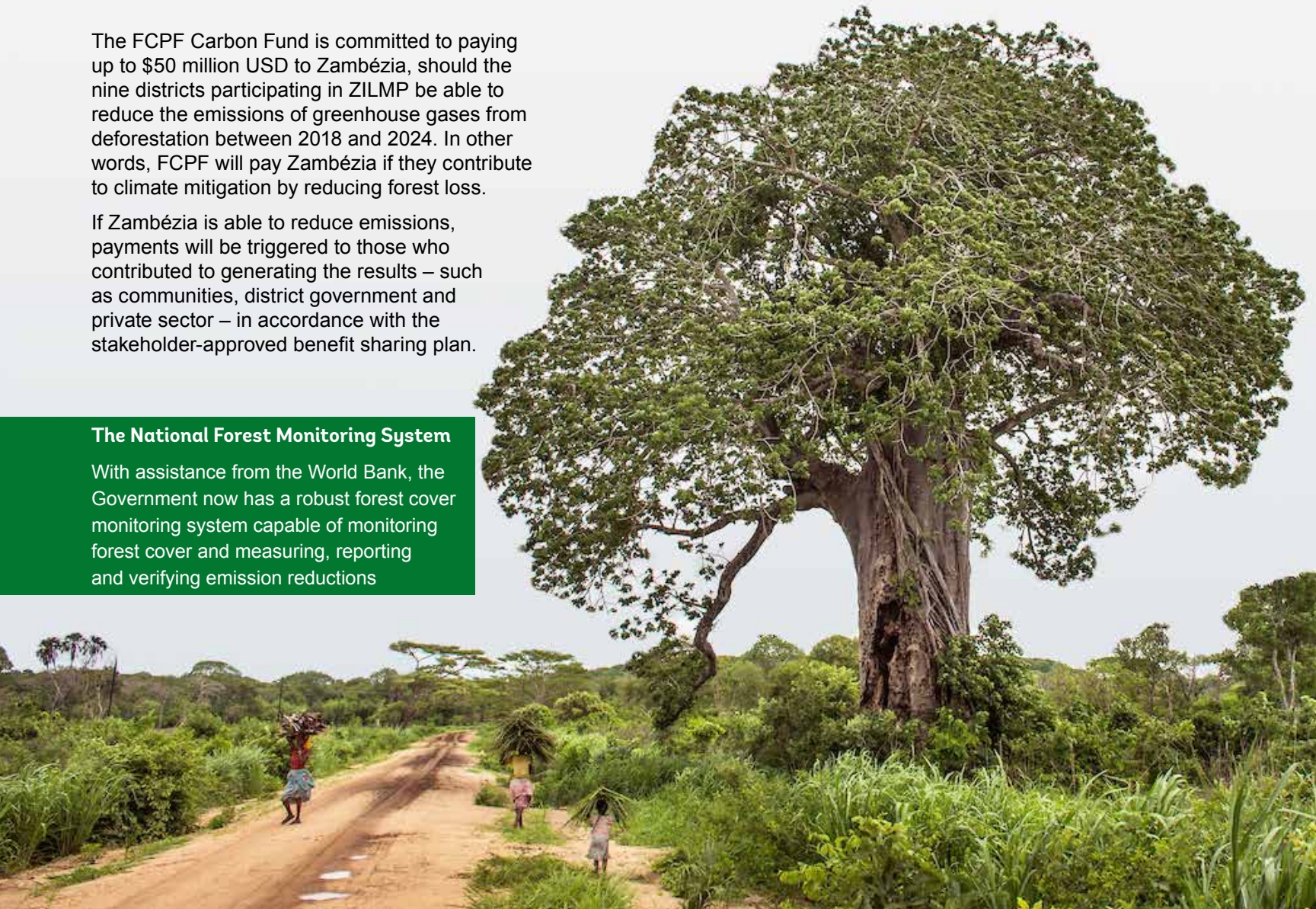
Payments for Emissions Reductions

The FCPF Carbon Fund is committed to paying up to \$50 million USD to Zambézia, should the nine districts participating in ZILMP be able to reduce the emissions of greenhouse gases from deforestation between 2018 and 2024. In other words, FCPF will pay Zambézia if they contribute to climate mitigation by reducing forest loss.

If Zambézia is able to reduce emissions, payments will be triggered to those who contributed to generating the results – such as communities, district government and private sector – in accordance with the stakeholder-approved benefit sharing plan.

The National Forest Monitoring System

With assistance from the World Bank, the Government now has a robust forest cover monitoring system capable of monitoring forest cover and measuring, reporting and verifying emission reductions





Mozambique is a potential recipient of results based payments from the Forest Carbon Partnership Facility (FCPF) Carbon Fund.

FCPF (coordinated by the World Bank) is a global partnership of governments, businesses, civil society and indigenous peoples that helps countries reduce emissions from deforestation and forest degradation, and sustainably manage forests to conserve and enhance carbon stocks (activities commonly referred to as REDD+).

The **FCPF Readiness Fund** assists countries in developing REDD+ strategies and preparing for large-scale performance-based payments for REDD+ activities.

The **FCPF Carbon Fund** then provides incentive payments for REDD+ policies and measures.

Mozambique loses approx. 267,000 ha of forests every year



Trees and soil capture and store climate change causing CO₂

Deforestation accounts for 43% of Mozambique's greenhouse gas emissions



Deforestation is releasing 46 million tons of CO₂ annually



Reaching the Beneficiaries

Communities are at the heart of ZILMP, with local people receiving the most significant share of emissions reductions payments and on-the-ground activities.

By contributing directly and voluntarily to the implementation of emission reduction activities, such as adopting conservation agriculture, monitoring community forests or restoring degraded land, beneficiaries will receive a previously agreed-upon portion of the payments in relation to their contribution to reducing deforestation.

Developed in collaboration with the stakeholders whose actions most directly impact forests, particularly communities, the Benefit-Sharing Plan is guided by the principles of equity, efficiency and transparency.

ZILMP Safeguards

The Bank's environmental and social safeguard policies are the cornerstone of all environmental and rural development projects in Mozambique.

To ensure these are upheld throughout all activities, ZILMP relies on a team of safeguards specialists – four at the national level, one based in Zambézia – as well as a community officer based at Gilé National Reserve and 15 extensionists.

Institutional capacity is a Bank priority and ZILMP is providing a series of social and environmental safeguards training workshops to improve awareness of safeguards policies and understanding of how to implement mitigation and inclusion measures.

The Dialogue and Grievance Mechanism

The DGM enhances public awareness about ZILMP, deters corruption, mitigates social and environmental risks, and allows stakeholders to provide practical suggestions and feedback to ensure ZILMP remains accountable and transparent towards beneficiaries.

The complaint process that can be used by individuals, communities and/or civil society organisations who feel they are being negatively affected by ZILMP activities and operations.

Programs to reduce carbon emissions and promote sustainable rural development



Reduction in deforestation and landscape degradation



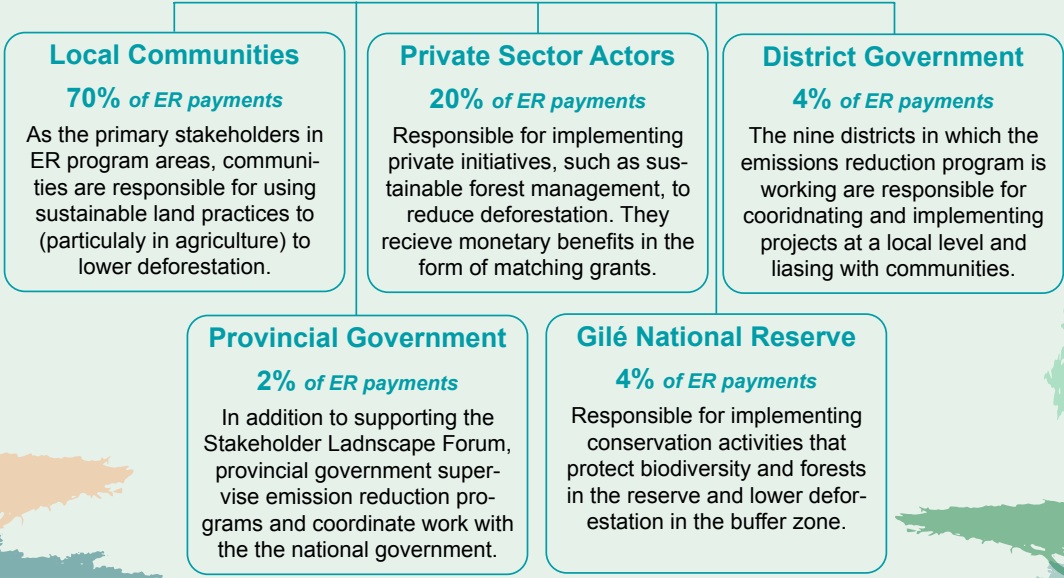
Payments for emissions reductions are issued from the FCPF to FNSD



Performance buffer and operational costs are deducted



Monetary benefits are divided between beneficiaries



Local Communities

70% of ER payments

As the primary stakeholders in ER program areas, communities are responsible for using sustainable land practices to (particularly in agriculture) to lower deforestation.

Private Sector Actors

20% of ER payments

Responsible for implementing private initiatives, such as sustainable forest management, to reduce deforestation. They receive monetary benefits in the form of matching grants.

District Government

4% of ER payments

The nine districts in which the emissions reduction program is working are responsible for coordinating and implementing projects at a local level and liaising with communities.

Provincial Government

2% of ER payments

In addition to supporting the Stakeholder Landscape Forum, provincial government supervise emission reduction programs and coordinate work with the the national government.

Gilé National Reserve

4% of ER payments

Responsible for implementing conservation activities that protect biodiversity and forests in the reserve and lower deforestation in the buffer zone.



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Government of
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