

Creating value, Conserving forests

Kilombero Valley Teak Company:
A model for responsible forestry in Sub-Saharan Africa



How we are creating value in Tanzania



1 Building a sustainable, profitable enterprise

The background image for the first point shows large, stacked wooden planks, likely for construction or furniture, in a warehouse or processing area.

2 Creating jobs and investing in people

The background image for the second point shows a woman wearing a yellow hard hat and an orange safety vest, working in a wood processing facility with large stacks of wood in the background.

3 Engaging with—and supporting—communities

The background image for the third point shows a large group of people, including men, women, and children, posing for a group photo in front of a light green building. Some people are sitting on the ground, while others are standing or sitting on a bench.

Established in 1992, Kilombero Valley Teak Company (KVTC) is a teak plantation set on four distinct parcels of woodland between the Udzungwa National Park and Selous Game Reserve. By managing its forestry operations on a landscape basis to grow valuable teak trees while conserving the natural forests within its boundaries, KVTC is both enhancing biodiversity and creating an economically viable enterprise. It brings a wide range of long-term social, economic and environmental benefits to the Kilombero Valley of Tanzania—and serves as a model for responsible forestry in Sub-Saharan Africa.



4 Building long-term value for all stakeholders



5 Protecting wildlife and preserving biodiversity



6 Preserving forests and promoting conservation

Letter from the Chairman

The legend in Ifakara and Kilombero Valley, where I was born and bred, holds me as **“Mkola Mlima,”** literally translating as **“son of the soil!”** Indeed, even as my quest for higher education and later, my diplomatic career uprooted me from the Valley, I still remain the patriotic **“son of the soil”** that I have always been, deeply moulded in the local African culture; strongly anchored on the traditional values that stressed respect, honesty, dignity, integrity and selflessness.

For many years the Valley was largely devoid of any major social and economic infrastructure and commercial investments of significance. The few dusty roads were barely passable during dry seasons and whenever the long rains (Masika) set in, the mighty Kilombero River could only be crossed by dug-in canoes. This challenging environment notwithstanding, life in the Valley was still quite amazing and I hold a deep sense of nostalgia over those fine, old days! I hear the echoes of all night, celebratory drum beats, marking “harvest time” and initiation rituals all over the Valley!

In 1992, Kilombero Valley Teak Company (KVTC) became the second major private sector investment in the Valley, 30 years after Kilombero Sugar Company which had opened in 1962. I have served as a Director of KVTC since 2006, and I am proud to be associated with a company that respects the values, heritage and aspirations that are integral to the communities of the Kilombero Valley.

Over the past 25 years, KVTC has played a transformative role in the economy of the Kilombero Valley by creating employment opportunities, procuring goods and services from local businesses, investing in social and economic infrastructure, and contributing significant tax revenues to the local councils. Furthermore, its community based teak out-grower development scheme is building wealth for many villagers in the Valley! Nationally, KVTC generates substantial forex earnings from timber exports and is a significant tax contributor.



Ambassador Ami R. Mpungwe was born in Ifakara in 1951. He was a career diplomat with the Tanzanian Foreign Service, and served as Tanzania's first High Commissioner to the Republic of South Africa. Since retiring in 1999, he has been involved in the private sector, including serving on numerous private and public sector boards of directors. He joined the KVTC board in 2006 and has served as its Chairman since 2011.

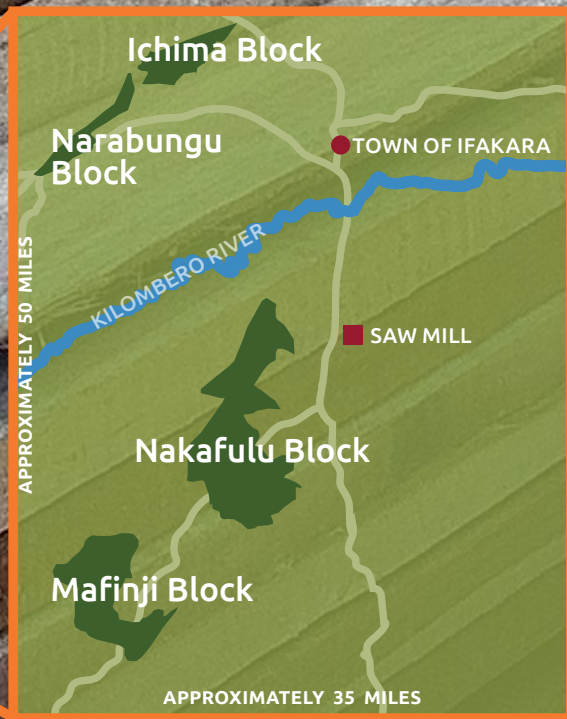
Teak trees take many years to mature, and only in recent years has KVTC started to earn enough revenue to even cover its own costs. We are lucky to have had patient long term investors who have risked millions of dollars of their capital to make the company a success. As KVTC's plantation continues to mature, we can anticipate that the local and national economic benefits will continue to grow for decades to come.

I am also proud to see KVTC playing a very active role in the protection of the Valley's natural forest lands. Since its inception and in total compliance with the Government's own ambition, KVTC's founders and subsequent investors pursued a vision of developing a commercial hardwood plantation along "mosaic" principles and, therefore, designated and continue to manage significant areas of its titled land for conservation of natural woodland and wildlife movement. KVTC has been recognized globally as model of forest conservation in Africa, in an era when our natural forests are increasingly being put under pressure as a result of destructive human activities and uncontrolled livestock movements.

This year, as KVTC marks its 25th anniversary of operations in the Valley, I would like to pay special tributes to all our employees, past and present; community and government leaders at all levels as well as our various stakeholders, partners and service providers, for their great contribution to the growth and transformation of our company from its humble beginnings in 1992 to what it is today, Africa's Largest Teak Company!

As we look forward to the next twenty-five years, KVTC's Board of Directors, Management and all its employees are deeply committed to sustaining and deepening KVTC's role in the Kilombero Valley and creating more value to all its stakeholders.

As the Father of our Nation, Mwalimu Julius Nyerere, once said: IT CAN BE DONE, PLAY YOUR PART! Let us all play our respective parts for the growth and development of the Kilombero Valley through sustainable plantation forest management!



28,000 hectares of land
under management

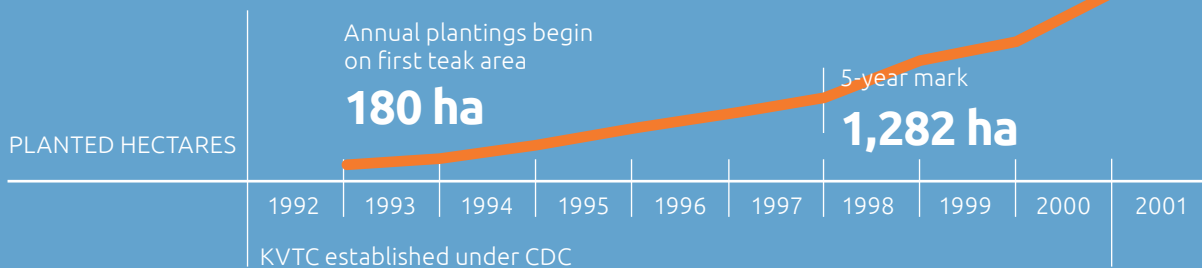
**Total hectares (ha) divided
among 4 blocks (shown here)**

30% dedicated to sustainable forestry
8,000 ha planted with teak

70% under active conservation
16,000 ha natural forests
4,000 ha grasslands and wetlands

Milestones

It takes 25 to 30 years for a teak tree to mature. In 1992, KVTC began the phased planting of 8,162 hectares of teak stands on degraded miombo woodland. Nearly two decades later, the company completed its planting program, harvested its first thinnings and began milling teak for export. By 2030, KVTC expects the plantation to be in full sustainable rotation.

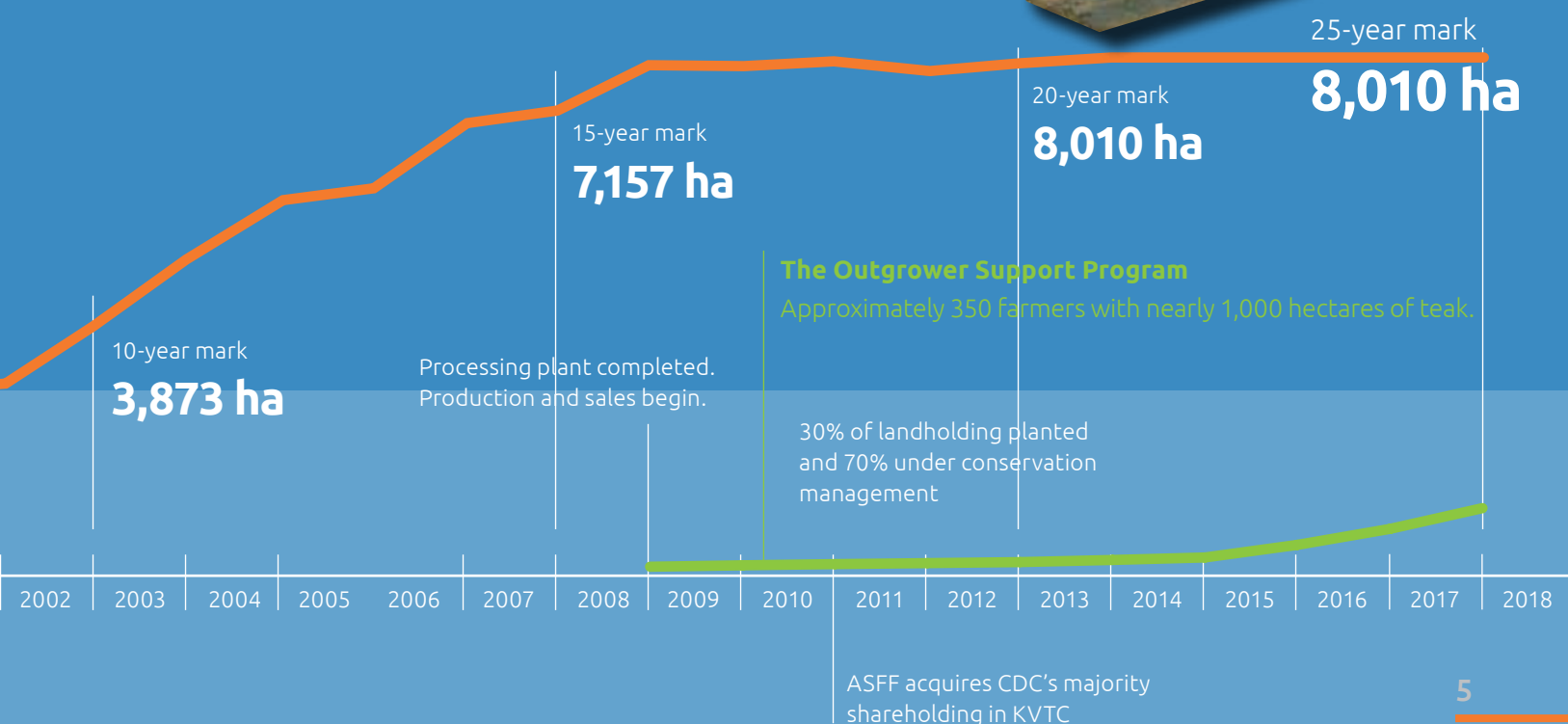


KVTC is Africa's largest private teak company and the largest exporter of wood products in Tanzania.

KVTC was established in 1992 by the British Commonwealth Development Corporation (CDC) as part of the Tanzanian government's effort to spur foreign investment and forestry plantation development. All land in Tanzania is public land, held by the government as trustee for and on behalf of the people of Tanzania. KVTC has full legal title to its land on a right-to-occupancy basis—the highest form of title—with a 99-year term lease extending through 2092.

Owned by Socially and Environmentally Responsible Investors Today, KVTC is jointly owned by the Africa Sustainable Forestry Fund (ASFF) and Finnish Fund for Industrial Cooperation Ltd. (Finnfund). ASFF is managed by Criterion Africa Partners, the largest private investor in Africa's sustainable forestry sector. Finnfund is a Finnish development finance company that provides long-term risk capital for financing socially and environmentally responsible, profitable projects in developing countries.

Managed by a Team of Tanzanians and Expatriates KVTC is managed by a well-established team consisting of a core of Tanzanian foresters and production engineers supported by a small expatriate team with over 70 years of experience in forestry, processing and project management.



Manufacturing Quality Products

The Largest Teak Sawmill in the World In 2009, KVTC established a sawmill, which currently processes 40,000 cubic meters of round logs a year and is capable of processing 75,000. The integrated facility includes a sawmill, drying facility and processing plant that produces teak lumber, flooring and paneling for export. KVTC is one of the main suppliers of processed plantation teak to India, which is the largest teak consumer in the world.

Since its inception, KVTC has invested nearly \$60 million in its physical assets—to complete its planting program and build a state-of-the-art milling and processing facility. That initial investment will yield increased revenue over the next 10 years, as the plantation moves into full rotation—and full production.





Growing Plantation Teak: A 25-Year Life Cycle

1. Seedlings KVTC's nursery produces clonal and seedbed stumps from selected materials from Tanzania, Thailand, Costa Rica, Malaysia, and Australia.

2. Planting Seedlings grown in KVTC's greenhouses are transplanted to compartments in the plantation at a density of 1,100 plants per hectare.

3. Maintenance Young teak stands must be carefully maintained to maximize the future quality of the teak logs. Regular weeding minimizes competition from other plants, while selective thinning of teak trees reduces competition between teak trees and favors the best individual trees for long term growth. By the final harvest, only 25% of the original trees will remain, the rest having been thinned out over the preceding years. Selective pruning of low branches prevents knots and improves the quality of the final teak product.

4. Felling Mature trees are monitored and felled for processing after 20–25 years.

5. Processing The logs are sawn, dried, and processed to produce lumber, flooring, paneling and value-added product.

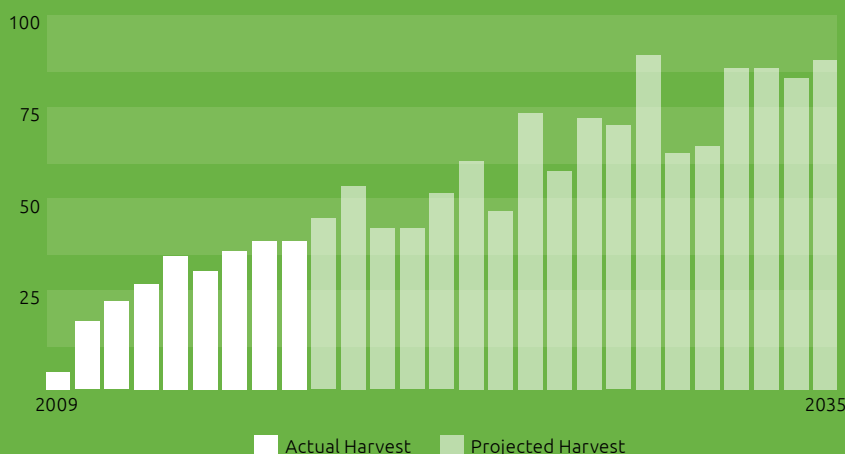
6. Sales The products are packaged and shipped for sale to local and export markets.

7. The cycle begins again. Within 12 months the plot is replanted.

Planting in Stages With the establishment of KVTC's final teak plots in 2010, the entire plantation is in various stages of growth. As of 2017, the plantation is yielding around 40,000 cubic meters per year of logs from thinning and final harvests. Over the next two decades, volumes will increase substantially as the plantation matures, until the plantation is in full rotation and producing around 75,000 cubic meters of round logs per year by 2030.

Teak Harvesting/Felling

Actual and Projected 2009–2032 (in thousands of cubic meters)



Investing in People



Training and Development

KVTC provides technical and specialized skills training in all aspects of sustainable forestry management as well as in disciplines such as internal auditing. We offer business skills seminars and first aid courses to our employees, as well as off-campus leadership training at the managerial level.

KVTC is the largest employer in the Kilombero region—and is operated almost entirely by Tanzanians. KVTC brings year-round employment opportunities and skills training to a region where the main source of income is subsistence-level rice farming and where 30% of the population lives below the poverty level. The company provides full-time employment to 300 people—many of whom come from the surrounding region. In addition, some 200 to 300 are employed by regional subcontractors that are paid by KVTC to assist with growing, cultivation, harvesting and extraction.

Ethical Employment Practices Committed to socially responsible, ethical employment practices, KVTC offers equitable compensation and a full range of employee benefits, including medical support for staff members and their families, a month of paid leave and a housing allowance, as well as covering school fees for the children of its employees.

Health and Safety KVTC places a high priority on the health and safety of its workers and contractors. The company is certified and annually audited by SGS to the OSHAS 18001 standard, an internationally accepted standard of assessing and auditing occupational health and safety management systems. Workers are provided protective clothing and equipment and regularly trained in safe work procedures. An on-site health clinic provides basic medical care to employees as well as malaria and HIV testing.

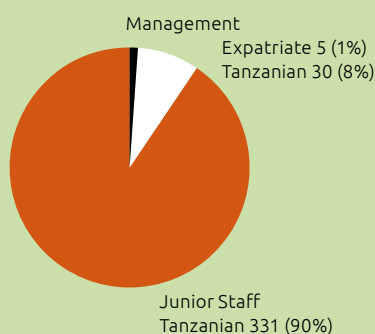
KVTC Training Courses

Workers Trained

	2013	2014	2015	2016	2017
First Aid Courses	15	39	39	28	37
Fire Fighting Courses	61	57	61	35	78
Chainsaw Training Courses	—	42	42	38	—
Management Systems	7	15	5	12	7
Other Training	—	10	1	39	7
	83	163	148	152	129

Makeup of KVTC Workforce

Management and Staff

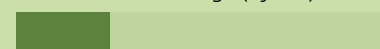


200 to 300 additional workers are directly employed by KVTC's contractors

Average Monthly Wage of KVTC Workforce

August 2017

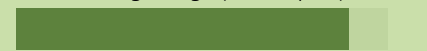
Sector Minimum Wage (by law)



KVTC Minimum Wage



KVTC Average Wage (excl. expats)



0 100,000 200,000 300,000 400,000

Gross TSh/month
(TSh 100,000 = \$45)



Investing in the Community



CEO Hans Lemm visits a farmer who has planted teak trees on his own land with financial and technical support from KVTC.

KVTC and the surrounding communities depend on each other. The communities depend on KVTC for jobs and local investment, while KVTC relies on the communities for the 'social license to operate', including helping the company to minimize risks such as fire, timber theft, and wildlife poaching. Long term success for both parties depends on good relations between the two. KVTC seeks to strengthen this relationship through positive engagement and ongoing dialogue.

Supporting Communities by Engaging Communities Engagement takes many forms. KVTC hires locally, trains locally and shops locally. KVTC hosts regular village seminars and a biweekly radio broadcast to keep villagers informed of KVTC's activities and to educate on issues that affect the environment. Through village contracts, our Outgrower Program and ongoing communication, we strive to promote conservation and sustainable farming practices.

The Outgrower Support Program Through KVTC's innovative Outgrower Support Program ('OSP'), local farmers can convert from one to 50 hectares of their existing farmland to teak forestry. KVTC provides inputs such as seed and fertilizers, financial and technical support as well as a centralized processing facility and a purchase guarantee.

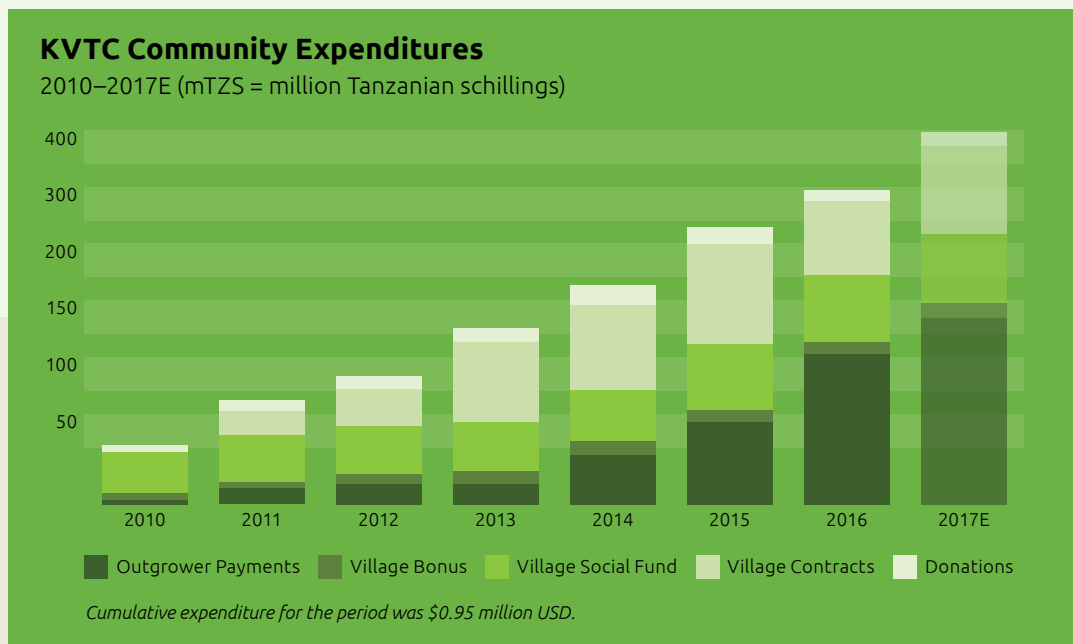
The OSP has supported approximately 350 farmers who have planted a total of nearly 1,000 hectares of teak. KVTC aims to add another 2,000 hectares of outgrower teak areas in the coming years.

The OSP is supported by the Tanzanian Ministry of Natural Resources as well as the Finnish Ministry of Foreign Affairs through the bi-lateral Private Forestry Program. PFP's main objective is to provide sustainable income for a wide population within the forestry sector, while ensuring the social and environmental sustainability of plantation forestry investments.

Since 2010 KVTC and PFP have invested around \$725,000 into the OSP program and the program has attracted strong support from surrounding communities and local stakeholders.



KVTC has regular dialogue with community members and local government officials, shown here touring KVTC.



Social Funding Based on Local Priorities In 2002, KVTC established a Social Fund to support the communities that have granted land to KVTC. We consult with the surrounding villages to determine their needs, and fund projects on that basis. Each year, we contribute social funds for a specific community project in each of the 17 villages associated with KVTC. These funds have helped build schools and roads, improve medical care and serve the needs of these communities. To date, over 140 separate projects have been supported. KVTC is committed to continuing and expanding its social investments in the future as the business grows and succeeds.

This new classroom was built with support from KVTC's Social Fund.

Supporting Tanzania's Growth



Increasing numbers of local developers are choosing KVTC's teak products not just for their appeal but also for their sustainability credentials.

KVTC was established in 1992 by international investors who were, and continue to be, aligned with the Tanzanian government's vision of promoting long term economic development and industrialization in the Kilombero Valley.

Building a teak plantation is a long term endeavor that requires a tremendous amount of hard work, patience, and capital investment. Teak trees take over twenty years to mature before they can be harvested and begin to provide revenues to the company. Only after the company becomes profitable will KVTC's international shareholders begin to earn a financial return on the risk capital which they have invested since the company's founding.

In the first 25 years, KVTC's shareholders spent over \$50 million to establish 8,000 hectares of teak plantations and a modern sawmill. Over two-thirds of these funds have flowed directly into the Tanzanian economy in the form of wages, procurement from Tanzanian businesses and contractors, investments in local communities, and local and national taxes. The balance of funds procured equipment and teak management expertise from overseas suppliers.

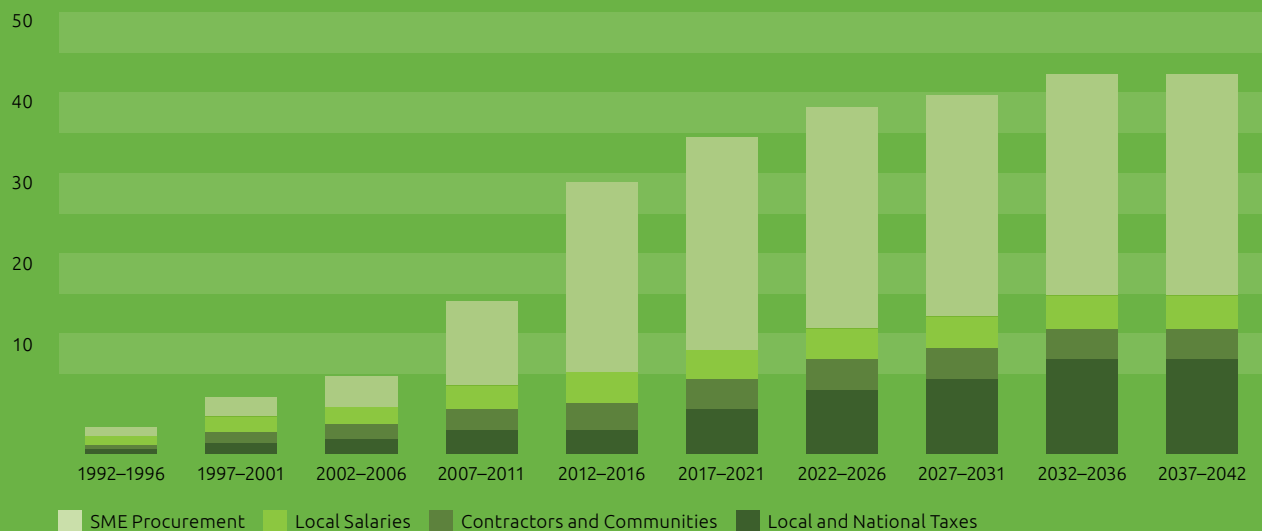
Now that KVTC's plantations are maturing, sales of KVTC's products are projected to bring over \$400 million of foreign currency revenues into Tanzania in the next 25 years, providing even greater benefits to workers, communities, local companies, and Tanzanian citizens. If managed sustainably, KVTC will continue to act as an engine of economic growth for the Kilombero Valley for future generations.



Teak logs are loaded for transport to KVTC's sawmill, where they will be processed into lumber for export. Earnings from KVTC's local and export sales are channeled back into the Tanzanian economy in the form of wages, procurement from Tanzanian SMEs, local and national taxes, and investments in local communities.

KVTC's Increasing Impact on Tanzania's Economy

(US\$ millions)



First 25 Years

\$38m	\$11m	\$9m	\$9m
SME Procurement	Local Salaries	Contractors and Communities	Local and National Taxes

Next 25 Years

\$124m	\$18m	\$17m	\$42m
SME Procurement	Local Salaries	Contractors and Communities	Local and National Taxes

Conserving Miombo Forest

This aerial photo shows the boundary between KVTC and the contiguous countryside, where significant deforestation has occurred.

31%

loss of forest cover
outside KVTC boundaries
Ulanga district
1991–2013*

3%

loss of forest cover
inside KVTC boundaries
during same period

KVTC demonstrates the capacity for a commercial forestry project in a part of the world where forests are being depleted and very little new forestry is taking place.

A Growing Need Africa consumes more wood than any other region in the world—90% of the wood harvested is used as fuel wood to meet basic energy needs. The absolute number of Africans relying on fuel wood and charcoal is projected to increase by 40% from 2015 to 2030. Alternative solutions to deforestation and to address the demand for wood products are needed. Plantations such as KVTC, which combine well-balanced landscape planning with rigorous conservation efforts, can be part of the solution.

Within Our Boundaries Today, 30% of the 28,000 hectares under management are dedicated to teak production, which supports the active conservation of the remaining 70% of the plantation. So, while an area of degraded miombo forest was converted for teak forestry, that enables us to protect and preserve the natural woodlands within our boundaries. We are now exploring new approaches to get the villages more involved in overseeing and managing the natural forests within our concession.

Outside Our Boundaries In the twenty five years since the founding of KVTC, land clearing for small-scale agriculture has resulted in significant losses of miombo forest outside our boundaries. A satellite analysis commissioned by KVTC found that between 1991 and 2013, there was virtually no loss or degradation of forest cover in the non-teak areas of KVTC's plantation, while in some adjacent areas, the forest cover loss exceeded 30% over the same time period. KVTC is now teaming up with international development partners to transfer knowledge about miombo conservation and management to surrounding areas to help curb the deforestation.

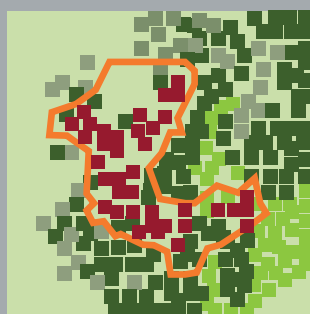
KVTC and FSC™

The Forest Stewardship Council™ is widely recognized as the international best practice set of standards for sustainable forest management that balances economic, environmental, and social considerations. KVTC applies these standards as a benchmark for its own operations. However, under FSC's current rules against conversion of any natural forests to plantations after 1994, and despite the relative success in conserving natural forests within its landholding, KVTC is ineligible for the FSC certification.

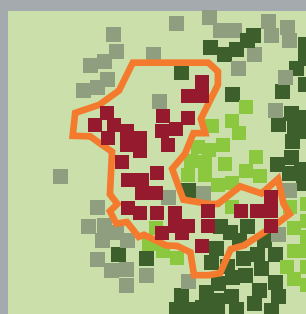
We believe that the African context calls for a more nuanced approach to conserving and restoring natural forests in the face of rampant deforestation for charcoal production and small-scale agriculture. We believe that KVTC provides an alternative model for responsible forestry investment in Africa and expect that this model will soon be recognized by FSC.

Forest cover loss surrounding the Mafinji block 1991–2013

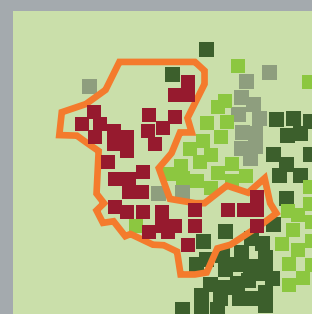
- Block boundaries
- Teak planted
- Evergreen forest
- Dense miombo forest
- Open miombo forest
- Non-forest



1991



2004



2013

Protecting Wildlife

UDZUNGWA RAINFOREST
NATIONAL PARK

Ichima Block

Ifakara

Narabungu Block

KVTC consists of four blocks of land, each composed of teak estate compartments (dark green) surrounded by Miombo woodland (lighter green).

The mosaic layout of teak compartments and conservation land allows wildlife to easily pass through and take refuge on KVTC land, which serves as a key link in the wildlife corridors through the Kilombero Valley.

SELOUS
GAME
RESERVE

Nakafulu Block

Mafinji Block

wildlife passage

KILOMBERO RIVER

Patrolling the Forest Today, 28 trained Village Game Scouts patrol KVTC's plantation and natural forest areas. Equipped with GPS receivers, they track wildlife movements, and monitor and record encroachment, illegal logging, poaching and fires as part of an effort to prevent illegal activity and to conserve the natural woodlands.

Two Village Game Scouts come from each of the area's 17 villages and are paid directly by KVTC. In addition, the villages receive a contract fee and year-end bonuses based on results of this tracking program as an incentive to prevent illegal incidents. Village Game Scouts serve as crucial links to these villages and, as ambassadors of KVTC, play a key role in educating and engaging these communities in active conservation efforts.

A Wildlife Refuge Surrounded by the Selous Game Reserve, the Udzungwa Rainforest National Park, the Kilombero Game Controlled Area and the Kilombero River Wetland (a UNESCO Ramsar Wetland), the KVTC project area is a critical link between these internationally recognized biodiversity hotspots. The Selous Game Reserve is Africa's largest game reserve and home to a wide range of animals, including elephant, buffalo, zebra, lion, hippo and crocodile.

North of KVTC, the Kilombero Floodplain is experiencing land degradation due to an influx of farmers and pastoralists, which puts pressure on the area's wildlife. The last remaining wildlife corridor connecting the Udzungwa Mountains and the game reserve flows through KVTC. By actively conserving the natural habitats within our boundaries and closely monitoring poaching and wildlife activity, KVTC plays an important role in protecting the region's wildlife.



Mapping of wildlife movements plays a key role in KVTC's conservation efforts.





Kilombero Valley Teak Company Ltd.

Ifakara, Tanzania

www.kvtc-tz.com



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