

From the Field

Practices and Challenges of Selling Systems for Teak (*Tectona grandis*) at Mtibwa Tree Plantation in Tanzania

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Background

Mtibwa forest plantation, hereafter referred to simply as Mtibwa plantation was established in 1944, and is currently owned by Tanzania Forest Services (TFS) under Government Notice 269 of 2010. The plantation was gazetted through the Government Notice number 213 of 1944 (URT, 2013). Mtibwa plantation has about 3,115.6 ha of land; out of this 2,068 ha are suitable for teak production. The main species grown was *Tectona grandis*, which constituted 95% while *Cedrella odorata* (3%), *Milicia excelsa* and *Khaya anthotheca* together (2%) were planted as alternative species (URT, 2013).

Timber for logs and building poles are the main forest products from Mtibwa plantation which are traded within and outside the country. The plantation also generates some income through sales of teak stumps, and firewood which are sold or given for free to nearby villages. Tree seeds from the plantation are collected for free by the Tanzania Tree Seed Agency (TTSA) and the community living adjacent to the plantation. The auction system and private agreements are currently used for selling standing teak from. Auctioning is the public sale of goods or properties to the highest bidder (Chamuya, 2007). In implementing the Big Results Now (BRN) in Tanzania, the main focus of the Ministry of Natural Resources and Tourism (MNRT) is to promote sustainable production, utilization and marketing of forest resources to achieve the national social economic objectives as well as the protection of natural forest resources. Tanzania, like other countries in Africa sets forest charges using market mechanisms and calculations that are based on market information (Chamuya, 2007). The main challenge of using market mechanisms is that they work well where there is genuine competition in the market (FAO, 1979). If the number of buyers is small they tend to collude, offering low prices. The Tanzania National Forest policy statement stipulates that 70% of forest

products should be sold using the auction system while the remaining 30% is to be sold through allocation. The policy is supported by the Forest Act Cap 323 [R.E. 2002] of 2002 (URT, 2002).

To date, documentation of innovative marketing system of forest products from Government forest plantations is lacking. This field experience aims to document practices and challenges of selling systems at Mtibwa Forest Plantation, focusing on revenue collection. It is expected that this document will contribute to informing policy makers regarding the best marketing system of selling forests products from government plantations. The system should ensure that the revenue collected from government plantations is maximized and it should also cover all expenses incurred in the management of forest resources. Furthermore, this report will contribute to informing Researchers, Forest officers, NGOs and other development practitioners on the best practices for selling trees.

Location of the Field Experience

This field experience was documented in 2015 at Mtibwa plantation, which is situated in Mvomero District, Morogoro Region. The plantation lies between latitude $6^{\circ} - 6^{\circ} 10' S$ and longitude $37^{\circ} 40' - 37^{\circ} 45' E$ (URT, 2013) and covers about 3,115.6 ha of land. Mtibwa plantation was selected purposively because it is among plantations that are currently implementing the auction system in selling standing teak. Documentation of this field experience was done in 2015.

Approach used in Documenting the Field Experience

Data for the field experience were collected from primary and secondary sources. Primary data were obtained through observation during auction days, and discussion with key informants, which involved stakeholders having sufficient information about the process of selling forest blocks of teak trees. The Key informants included Mtibwa teak Plantation manager, Mtibwa Marketing Officer, a Lawyer from MNRT, a Procurement officer from MNRT, Rondo teak plantation manager, Director of Forest Utilization (DFU) from MNRT, Manager and marketing officer from Kilombero Valley Teak Company (KVTC), timber buyers, and the Dean of the Faculty of Forest and Nature Conservation from Sokoine University of Agriculture (SUA). Revenue data were collected from Mtibwa plantation official finance records, plantation reports and communication with authorities at the ministry and at the farm level. The revenue collected from selling teak trees in various years were adjusted for inflation using the consumer price index for the base year 2010 (Figure 1).

Current and Previous Selling Systems of Forest Products from Mtibwa Plantation

The study found four systems which Mtibwa teak plantation had used for selling teak trees in various periods. The systems include tender, allocation, auction of standing trees and private agreement. Previously, Mtibwa plantation used tender and allocation systems for selling standing trees. Currently however they have switched to using the auction system and private agreement. Forest products sold in the plantation included: standing logs for timber, building poles, firewood, and teak stumps..

The system for selling teak trees should accommodate the level of competition among buyers since teak demand is very high due to the valuable nature of the tree as it is multipurpose, providing timber for making various products including quality furniture, doors, and decorative veneer. Teakwood is also used for various construction works because it has a high rating in most of the timber qualities including strength, durability and workability. The government of Tanzania is currently using the open ascending bid auction system to sell timber in order to increase government revenue. In this kind of auction, competing buyers make increasingly higher bids in trying to win the auction. The buyer who provides the final and highest amount of monetary offer is announced the winner.

Pros and Cons of the Previous Selling Systems of Teak from Mtibwa Plantation

In practicing the allocation system, the Plantation Manager and a selling committee team selects areas or plots to be harvested at a particular time, while buyers submit their application letter for buying teak products. Buyers who have been selected are then allocated a particular plot for harvesting trees. The price of the trees is charged per cubic meter (m^3) and differs according to diameter classes.

The allocation system operated at Mtibwa plantation for only a short period of time because there was bias in selecting the best buyers. Those who missed the allocation became dissatisfied and filed court cases. Sometimes, the plantation was in danger of facing various sabotage actions including forest fire due to dissatisfaction by some applicants with the selection process. Another challenge of the system was that too many applications were submitted for buying timber, which was in most cases attributed to multiple applications from the same applicant using different names. To minimize this tendency, an application fee was introduced amounting to

TZS 50,000. However, the fee did not stop the problem of multiple application. Nonetheless, the allocation system had a positive outcome of providing opportunities for indigenous Tanzanian buyers to participate in this market. In practice, the indigenous buyers did not export the teak products themselves. Instead they resold the awarded products to other buyers, mostly, to larger companies that are locally registered but owned by Tanzanians of Indian origin (Table 1).

Table 1: Teak buyers at Mtibwa Plantation from 2010 to 2014

Finance Year	Locally Registered indigenous Buyers	Locally registered Indian origin Buyers	Foreign Registered Companies
2010/11	Amirnet Co.LTD	Prime Timber, Tanga Teak,Senghani Cielmac (T) LTD	Tanga Teak (Chinese Company)
2011/12	-	Prime Timber, TangaTeak,Senghani Cielmac (T) LTD	MridhuL (Indian based company) ,TangaTeak
2012/13	-	Senghani Cielmac (T) LTD, Mohamed Entreprises Tanzania Limited	Mridhul
2013/14	Amirnet Co.LTD	Jaffery Sain LTD	Mridhul, Export LTD

Local buyers resold their allocation because they had limited capital and they lacked international market links since forest plantations under government ownership have not been internationally certified by the Forest Stewardship Council (FSC). Forest certification is a mechanism for forest monitoring, tracing and labeling timber, wood and pulp products and non-timber forest products, where the quality of forest management is judged against a series of agreed standards. Forest certification also accounts for the social and economic well-being of workers and local communities, transparency and inclusiveness in decision making.

The Forest Stewardship Council (FSC) is an international non-profit, multi-stakeholder organization responsible for the world's *forests* certification. The FSC does this by setting standards on forest plantation, forest products, along with certifying and labeling them as eco-friendly. Tanzania government forest plantations have not yet met this required standard, which include formulation and implementation of management plans, democratic decision making and ensuring the welfare of surrounding communities. Examples of activities for implementing management plans include; control of wildfire, tree diseases control, establishment of exotic tree plantations that do not involve replacement of natural forests, use of tree seed from genuine sources and tracking the forest product from the

plantation to the consumers. These activities demand high costs and a large number of staff, which currently the government forest plantations cannot afford.

The teak market is dominated by locally registered companies but most owners are of Indian origin. These companies buy teak product from Tanzania, then export them to India where they brand the product with an Indian trade mark and sell them in the global market using the new identity. Another challenge which was observed is the fact that the revenue accrued from selling teak using the allocation system, where there was no competition among buyers, was lower compared to income accrued from the auction system. Hence, the allocation system was abandoned in hardwood forest plantations. However, it is still used for selling government's standing softwood trees such as pines. The practice of allocation involves contracts being allocated to large companies to purchase a particular volume of softwood trees for specified period (e.g 10 years). Such contracts are heavily influenced by decision makers who in most cases tend to favor these companies.

Following the abandonment of the allocation system for selling forest products from hardwood plantations, the government adopted the tender system as a better alternative. This study established that the tender system operates in a market which is presumed to be competitive, such that commodity price is determined by market forces of supply and demand. The tendering system has operated at Mtibwa plantation since 2011. After practicing this marketing system for two years, it became unpopular because of its bureaucratic nature and for increased selling cost. The system involved various organizations including those outside the forestry sector like the Tender Board (TB) whose purchasing procedures were unknown to most forest officers. The tender system had weaknesses of having cumbersome, costly and bureaucratic procedures and it attracted few buyers, leading to monopoly by only a few participants. Consequently, the tendering system was discontinued, being replaced by the auction and private agreement systems.

Pros and Cons of the Current Auction System

The current auction system of selling forest products from Mtibwa plantation involve selling standing trees at the field level, which is done by the Auction Committee. During the financial year 2012/2013, the auction was used for selling standing teak trees at Mtibwa plantation, Longuza and Rondo forest plantations in Tanga region. Under public auctioning, buyers

express publicly their willingness to pay for available standing trees. Unlike the allocation system, under the auction system, the producers (Government staff who manage the forest) are price taker while buyers are price maker since the seller takes the price offered at the auction by the highest bidder. The public auction allows competitive market and they are more effective for selling valuable timber species like teak.

This study found that the public auction system allows transparency, since it is done in the field. It is simple and fast as it takes only two weeks to finalize the selling process. Since its introduction in the year 2013/2014, transaction cost for timber marketing has been reduced compared to the tendering system, while government revenue has increased. More companies participate in buying timber under the public auction system, unlike under the tendering system, where only one company purchased the teak presented for sale.

The public auction system has the follows challenges: Only a few large companies with high capital appear every year to compete with and overbid the weaker buyers. For example, in 2013/14, only four companies won the public auction for teak from Mtibwa teak plantation (Table 1). This situation of having few buyers poses a threat of collusion to lower the market price, which could explain the decreasing trend of prices experienced at Mtibwa plantation during the period May 2013-December 2014 (Fig. 1). According to Jean-Daniel, *et al.*, (2006), collusion in timber selling is a coalition of bidders who try to circumvent competition in order to obtain timber at a lower cost.



Figure 1: Trend of real teak price at Mtibwa plantation (2010 prices)

In addition to the auction system for standing trees, Mtibwa plantation is practicing the private agreement system in order to capture more stakeholders including Tanzanians, particularly those with low capital. Under the private agreement system, the individual buyer negotiates with the Government Forest Procurement Committee after submitting an application letter. The private agreement is somehow similar to the allocation system. However, the system begins immediately after the auction. In most cases, the system is used to sell small patches of tree plots, which cannot be sold using the auction. In Romania, the private agreement system is similarly used for selling forest tracts that could not be sold during primary and second auctions (Jean-Daniel, *et al.*, 2006).

The main challenge of the private agreement system is lack of transparency, which can encourage the supplier to cheat the buyer. Some buyers have offered a higher price in trying to convince the other buyers to raise the buying price. Another challenge of the private agreement system is failure of local companies to buy the allocated products. For example, during 2014, three Tanzanian companies were allocated tree products as per contract. However, they failed to make payment on time. Local buyers who could have increased the number of buyers, thereby increasing competition in timber marketing, have often failed to engage in the business due to limited capital.

Prospects of the Auction Selling System for Revenue Collection

In 2011/12, the tender system for selling teak at Mtibwa plantation registered total revenue amounting to 16,636,156,400 TZS (Table 2), which was the highest compared to other systems. However, the revenue per unit volume accrued from the tender system was lower than that obtained from the auction system, making the latter the best system.

Table 2: Revenue accrued from selling Mtibwa plantation products for various selling system (price adjusted for inflation in 2014)

Selling system	Volume(m ³)	Price (TZS)	Revenue (TZS)	Price at present value (TZS)	Revenue at present value revenue (tzs)	Revenue /M ³
Allocation	8,205	279,983	2,297,260,515	336,304	2,759,374,320	336,304
Tender	35,654	466,600	16,636,156,400	527,244	18,798,357,576	527,244
Auction	4,547.7	487,617	2,217,519,579	550,992	2,505,727,954	550,988
Private agreement	2,247	415,250	933,066,750	415,250	933,066,750	415,250

The auction was found to offer the highest price per unit volume followed by tendering and private agreement. The price was lowest when timber was sold by allocation system (Table 2). Although both the tender system and the auction had higher revenue than the other two systems, the tender selling system was considered bureaucratic and it lacked transparency, making the auction system the best for selling teak at Mtibwa plantation. The auction of harvested logs was preferred by most buyers than auctioning of standing trees because the former provided an opportunity for ensuring quality of purchased product. However, the government does not sell logs due to inadequate facilities for tree harvesting and inadequate staff.

Conclusion and Recommendations

The auction system for standing trees provides the highest revenue per unit volume of teak compared to the tender, private agreement and allocation systems. Although, the auction system has some challenges, the system has several advantages surpassing other systems and hence justifying its continued use for marketing forest products from government forest plantations despite indication of potential collusion among buyers.

It is therefore recommended that the government of Tanzania should sell teak and other tree species using the auction selling system in order to realize more revenue. Nevertheless, the price setting process should take

into consideration the cost of production so that the selling price covers both fixed and variable cost of production. In addition, the government of Tanzania should hasten the process of certifying her forest plantations in order to meet the standards required by the international market. Once this step is completed, it will enable Tanzanian local traders to access the international market for forest product. There is also a need to empower and create awareness among local traders to increase the number of participants in the tree marketing process.

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