Workers place a log on to a horizontal band saw (Wood Mizer) to convert into timber. (Photo: Miti Uganda)

On the road to recovery

The sawmilling industry could become one of the leading pillars of Kenya's economy

BY GEORGE MUTHIKE

The timber processing sector contributes substantially to the growth of national economies of different countries in the world. With natural forests being increasingly protected for the "global good", plantation-grown trees are the key suppliers of timber for construction in many countries, including Kenya.

Due to the continued competition between forest plantations and food crops for limited space in state or communal land, trees growing for timber on farms continue to be important.

Farm forestry therefore has a huge potential to meet the demand for more wood, if the vast drylands can also be turned into productive agro forests. This can be achieved through matching the land with the right species and empowering farmers with appropriate skills and technologies.

However, outside traditional forest zones, for example in drylands and on farms, wood from unprocessed trees provides relatively little income when sold standing as fuel, posts or unprocessed logs. In some areas, studies on the sawn wood value chain indicated that tree owners get as little as 10 per cent of the sawn timber value when they sell standing trees.

Before the 1999 government restriction on tree harvesting from state forests, sawmilling provided employment to many people. The ban reduced round wood supplies to most wood-based industries, culminating in the closure of many sawmills in the country. This led to reduced employment opportunities and an acute shortage of timber products, prompting an increase in sawn timber imports from neighbouring countries. Consequently, cross-border timber trade, both legal and illegal, increased.

In an effort to sustain their operations, a few sawmillers turned to farms to supplement the supply of saw logs. This, however, became uneconomical due to distances to the tree sources. Local sawyers using small-scale sawing systems took up the operations on farms to provide highly needed sawn timber.

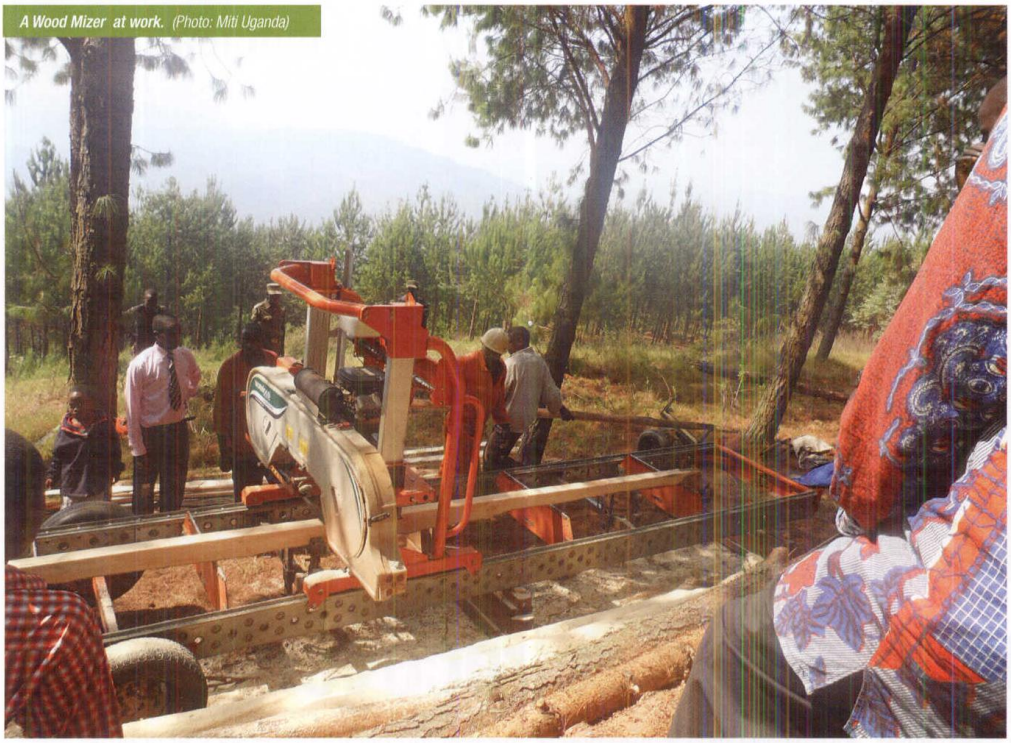
A number of researchers estimate that 70 per cent of sawn and other timber products (timber-based panels and poles) come from timber harvested in state plantations, while the remaining 30 per cent comes from private plantations and from the widespread "timber farming" business. The volumes of logs processed by sawmills was estimated at about 1.8 to 2.0 million cubic metres. Kenya Forest Service (KFS) data shows about 0.9 million cubic metres was sold annually from 2010 to 2014.

Opportunities in wood processing in Kenya

Kenyan Vision 2030 places sawmills, together with other small and medium enterprises (SMEs), at the heart of the country's development plan. Of late, after the logging ban was lifted, many small and medium size sawmills have been revived and a few new ones have come up.

According to the KFS Registry, there are about 700 registered sawmillers and 32 producers of treated transmission poles, in addition to about 400 producers of firewood. The reopening of the timber processing industry has restored hope for rural dwellers because employment opportunities are growing with every sawmill that opens.

This has also led to the establishment of chains of other businesses. Some previously quiet towns are now active with different businesses, all supported by the timber industry.



A Wood Mizer at work. (Photo: Miti Uganda)

The availability of felling plans by KFS enables site officers to advise the head office on allocation of materials with accuracy, information that is passed on to sawmillers. This is beginning to reduce cases of sawmillers sourcing wood far from their sawmills, and thus being forced to saw the timber with movable bench saws to avoid transport costs.

Challenges in the timber industry

Even with the elaborate supply efforts by KFS, the timber industry is still experiencing a shortfall of wood to sustain its operations. This is because the forestry sector is still trying to balance between the number of wood users, their consumption capacity and the available quantities.

Many sawmillers are wary of another logging ban, and so do not invest in good production infrastructure. In addition, many credit providers are reluctant to lend to sawmillers owing to the frustration the lenders underwent earlier when the logging ban was imposed.

Due to these limitations, quite a number of sawmillers are still operating with obsolete and inefficient processing equipment. Some of that, especially the bench saws, have a timber recovery rate ranging from as low as 18 per cent to 30 per cent.

Most of the machinery used in the sawmilling industry is imported, making it expensive. This not only lowers profits from the business but also jeopardises efforts to increase tree cover in the country. Many sawmills operate in small spaces. Log and sawn timber yards, storage areas for offcuts and cull wood and even the area dedicated to sawmilling are often insufficient.

These deficiencies make it difficult to streamline the sawmilling processes, particularly handling of incoming and outgoing materials and its classification and storage by quality. However, some sawmillers have confronted these challenges and invested in efficient sawing systems.

Another challenge in setting up production facilities is the lack of skilled personnel. The country lacks competent personnel to install and service most of the imported machinery. Some saw millers, particularly those who have imported horizontal band saws (Wood Mizer) have to import personnel to install and train local operators. Even after the initial training, many are still experiencing challenges in operating such machinery, which at times has caused losses.

With a number of saw millers trying to invest in efficient processing technology, many others operate with simple tractor-mounted bench saws. This has increased the supply of timber in the market, lowering prices equally for all sawmillers.

The future of sawmilling

Despite these challenges and weaknesses, timber processing has developed steadily, far exceeding the production levels reached during the 1990s. In fact, in consideration of the average yield/performance of the sawn wood at 33 per cent of 2.0 million cubic metres, the annual production of sawn wood may currently be estimated at 600,000 cubic metres, which is more than three times the 200,000 cubic metres produced during the 1990s.

It is also worth noting that a high number of sawmills are located close to plantations and urban centres and often near roads that lead to major urban centres where most of the demand for sawn timber originates.

There are a few industrial timber processing units in Kenya specialising in

different wood products. Timsales, for example, is a productive facility with timber treatment, drying, sawing and production of panels, finished door and window frames. The facility uses raw materials and offcuts in an integrated way, thus maximising recovery rates and optimising production. Infrastructure and equipment are considerable, efficient and modern, compared to many of the small sawmill installations.

Full-time operators and private individuals also saw timber on location in forest sites using chainsaws or portable sawing equipment, according to need. This is a relatively widespread harvesting method in agroforestry fields and it has increased following the 1999 logging ban.

These operators are able to process trees standing in places inaccessible by large sawmilling equipment, while fulfilling specific timber consumer requirements for small quantities, especially for rural consumption which otherwise would not be fulfilled by industrial sawmilling.

Chainsaw timber sawing has lower recovery rates. However, if used together with a blade-guiding frame, the technique can yield acceptable results, with a recovery rate of up to 50 per cent. The adoption of framed chain sawing for farm-grown timber increases timber recovery and surface quality and also offers local employment opportunities.

The medium-to-small size sawmills offer more opportunities for improvement. A growing number of the SME sawmills are now investing in narrow bandsaws (Wood Mizers). This equipment has the advantage of being relatively cheap compared to typical bandsaws, has small thickness blades and thus allows greater recovery rates. These sawmills are highly flexible and can cut large and small diameter logs.

These upcoming improvements are expected to boost productivity, efficiency and level of sustainable employment creation in the sector. It is expected that with continued backup by research and development initiatives, the sawmilling industry has a great future and can be expected to become one of the leading supporters for the economy.

Some saw millers, particularly those who have imported horizontal band saws (like the Wood Mizer in the photo) have to import personnel to install and train local operators. (Photo: Miti Uganda)

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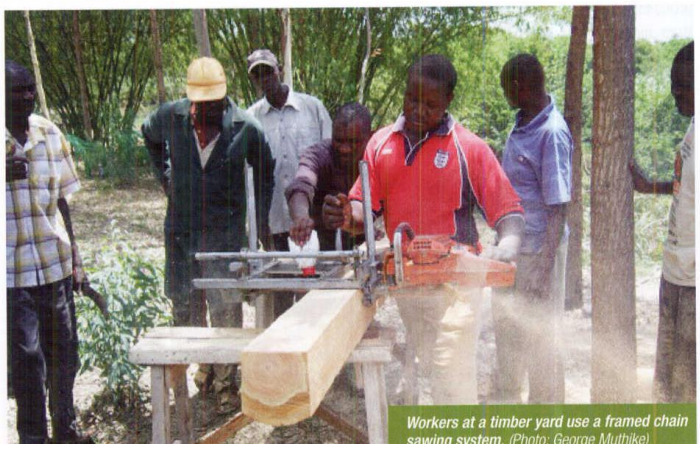

Workers at a timber yard use a framed chain sawing system. (Photo: George Muthike)

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