



Unexploited possibilities

The status of forest resources and trade opportunities in wood products in East and Central Africa

Treatment plants for poles: A yard with both transmission and fencing poles (Kakuzi Ltd).

By Joshua K. Cheboiwo

Principal Research Officer, Kenya Forestry Research Institute, Londiani RRC

Summary

In most developing countries, forest resource investment and management are mostly geared to meet domestic consumption needs. External market development has not, until recently, been viewed as a priority area and product entry into regional markets was more by default than design. To take stock of forest resources and wood product trade opportunities in East and Central Africa (ECA) the Kenya Forestry Research Institute (KEFRI) and Tree on Farm Network (TOFNET) commissioned a baseline study in 2006 that covered five countries (Kenya, Tanzania, Uganda, Rwanda, Ethiopia and Southern Sudan).

The study revealed that forest resource endowments in ECA differed significantly in term of size of public forests, farm forestry and woodlands. The most traded tree products were charcoal, sawn wood, construction poles, industrial firewood, saw logs and firewood. Products from public forests dominate the lucrative industrial wood markets in countries with good forest resources. This contrasts with countries with less forests where demand for most forest products exceed accessible stock in both public and farm forests. The outputs from smallholder farms are small and thus unlikely to attract a pool of buyers necessary to create a competitive market environment.

However, in countries with few forests, farmers were more likely to enter into commercial farm forestry to satisfy the fast changing supply and demand conditions for various tree products. Kenya was leading in wood-based industries, mostly sawmills (442), Tanzania was second with 138, then came Uganda (103), Ethiopia (45) and Rwanda. Despite Kenya being the most industrialised, the saw mills that formed the bulk of the processing plants were closed in 1999 after a moratorium on harvesting in public forests was imposed.

The most likely tree products to be traded across the study countries were construction poles, industrial firewood, transmission poles and softwood sawn timber, but the level of cross border trade was very low. Kenya and Tanzania reported to have some standards for export and import of tree products, mostly sanitary inspections. The trade between Kenya and Tanzania was highest.

Introduction

As part of the World Bank sponsored structural adjustment programmes (SAPs), East and Central Africa (ECA) countries have liberalised their markets in an effort to develop market driven land uses. The decreasing amount of land available to land owners to meet their subsistence and financial objectives has compelled them to increase on-farm productivity and marketed outputs. However, in the ECA countries, farm forestry policies and support has traditionally focused on the improvement of production activities, mostly to meet farm household needs. Such strategies did not prepare farmers to address market specification and market demand in case of surplus production because market development was not viewed as a priority area and tree product entry into markets was more by default than design.

Cross-country studies indicate that farmers in ECA countries grow more than 20 different tree species, producing various tree products. However, declining tree product outputs from public forests and increased emphasis on forest reservations for water and biodiversity conservation have led to planting of trees as an alternative supplier of roundwood to wood commodity markets.

To realise investments in tree planting, there is need for increased generation of market related information, including the prevailing prices and range of tree products in demand in different markets where tree growers can sell their tree products. Thus, access to remunerative markets by smallholder tree growers is expected to motivate tree growers to expand their land under trees and,

by extension, to increase the flow of environmental goods and services. The information gap on the potential opportunities for tree products in ECA persuaded KEFRI, in collaboration with TOFNET, to initiate a baseline study in Kenya, Uganda, Rwanda, Tanzania, Ethiopia and Southern Sudan to improve the information base and knowledge on the potential markets and trade in tree products within the ECA countries. This is attested by the fact that in 2007, Kenya imported tree products worth Ksh 3.6 billion mostly from Tanzania, the country's main trading partner in tree product trade in the region.

Status of forest resources in ECA: Forests and roundwood production

Comparatively, Tanzania has the largest forest cover among the study countries, followed by Ethiopia, Kenya, Southern Sudan, Uganda, and Rwanda in that order (Table 1). The bulk of the forest cover consists of woodland and bushland that accounts for over 70 per cent of the total forest cover in the study countries.

In Kenya, woodland and bushland, mostly in arid and semi-arid lands (ASAL), account for 77 per cent of the total forest cover but produces 30 per cent of the total output of wood products. Farms and settlements lead in accounting for 60 per cent of the annual output by volume whereas high forests and plantations account for less than 10 per cent.

In Rwanda, data available show that woodlands and parks produce over 60 per cent of the total roundwood output, with the rest from natural forests. In Uganda the bulk of forest products are harvested from woodlands and farms account for 68 per cent of the annual output.

In Tanzania, farms and settlements lead production of forest products with an estimated 7.9 million tonnes per year and forest plantations follow at 700,000 cubic metres per year.

In terms of plantation forests, Ethiopia leads with 262,162 hectares, mostly eucalypt plantations for fuel wood and pole production. Kenya, with most of its plantation depleted, was second with 164,000 hectares, Tanzania third while Southern Sudan had the least at 15,796 hectares.

Comparative processing capacity indicate that Kenya had 442 wood based industries, mostly sawmills, Tanzania was ranked second with 138, Uganda (103) Ethiopia (45), and Rwanda did not provide information on the existing industries. Despite Kenya being the most industrialised, most of its sawmills were closed in 1999 and currently lie idle or have been moved to neighbouring countries. The level of forestry sector industrialisation in the selected counties is still very low and there is a need for expansion and modernisation with more emphasis on efficiency and capacity to process short-rotation tree crops grown by smallholders. The industries cited above include biomass energy sectors, mostly textile 1 and tea-processing industries, transmission pole treatment plants, sawmills and wood panel and constituted wood processing industries. Power saw operators and hand sawyers are not included.

Table1: Forest cover, roundwood production and industries in selected ECA countries

Country	Forest cover (Ha)	Plantations (Ha)	Farm forests (Ha)	Annual output (Tonnes or m3)	Industries
Kenya	48,604,000	164,000	9,540,000	37,523,000 m3	442
Rwanda	542,900	-	-	4,343,200 m3	-
Uganda	20,465,000	35,000	8,401,000	53,676,500 m3	103
Ethiopia	44,762,164	262,162	16,000,000	7,500,000 T	45
Tanzania	88,702,000	150,000	51,000,000	8,758,000 m3	138
Southern Sudan	33,000,000	15,796*	-	-	-

- information not available * half verified so far

Potential for trade in wood products

Kenya imports timber from both hardwood and softwood trees due to the prevailing timber shortage in the country after the moratorium on harvesting in public forests was imposed in 1999. As a result, Tanzania and Uganda have taken advantage of the vast Kenyan market opportunities in the specified products. Rwanda needs charcoal which neighbouring countries can export. The products that are likely to be traded across the selected countries are softwood and hardwood timber, treated transmission poles and charcoal, in that order.

Trade of timber and other tree products

The 1999 moratorium on tree harvesting in public forests in Kenya and the complete ban in 2002 precipitated a shortage of sawnwood for construction in the country. In response, the government zero-rated duty on imports of sawnwood to fast-track processing of import documents to ease the supply constraint facing the construction sector.

This increased imports from neighbouring countries, thus putting the country in a pivotal position in sawnwood trade in the region. The imported sawnwood was mostly *P. patula* from Tanzania that entered the Kenyan markets by April 2003.

Table 2 indicates that in 2004, Kenya imported 21,199 tonnes of softwood with Tanzania contributing 76 per cent and Uganda 24 per cent of this. Similarly, in 2005 Kenya imported 27,484m³ with Tanzania accounting for 98 per cent and Uganda 2 per cent. The imports of softwood sawnwood from DR Congo and Uganda has since stopped giving credence to suspicion that softwood sawnwood imported from these countries may have been from illegally harvested from public forests in western Kenya. The imports from Tanzania since 2004 have been largely pine sawnwood that has dominated market outlets in Mombasa, Kilifi and Malindi, and later Nairobi, Machakos and Kitui, among others. Imports of *Cupressus lusitanica* sawnwood from Malawi by Tanzanian merchants were reported in Mombasa in 2005 but there has been no new delivery since then.

Also in 2005, a Mombasa based company was cleared to import iroko and sapele hardwoods (resp. *Chlorophora excelsa* and *Entandrophragma cylindricum*) from the Guinean rainforest (West Africa) for production of high value Lamu design furniture (Cheboiwo, 2006).

Table 2: Tree product imports into Kenya from ECA countries in 2004 and 2005

Year	Species	Uganda	Tanzania	DR Congo	Total
2004	Cypress/pines	3,935 tonnes	11,600 tonnes	40 tonnes	21,199 tonnes
2005		510m ³	26,974m ³	-	27,484m ³

Source: Forest Department, Marketing Section (2006).

¹ Textile plants use steam, produced by firewood, for drying processes.

In 2004, Kenya imported from Tanzania, its leading exporter, 40,000 pallets and 11,200m³ of muhugu (*Brachylaena huillensis*), 450 tonnes of blackwood (*Dalbergia melanoxylon*), 100 tonnes of cedar (*Juniperus procera*) and 128 tonnes of charcoal.

During the same period, Kenya imported 100 tonnes of mahogany from Zambia, 250 tonnes from Uganda and 100 tonnes from DR Congo. It also imported 480 m³ of teak (*Tectona grandis*) from DR Congo and Sudan. However, these figures have to be taken with caution. Hardwood imports into Kenya from Central Africa are mostly done by Ugandan merchants, while Tanzanian merchants import southern African woods. These merchants falsify documents to circumvent strict exploitation controls of indigenous hardwoods or for other reasons, and the figures may not reflect the true origin of the hardwoods entering the Kenyan market.

In 2007, trade statistics show that Kenya imported 85,000m³ of softwood mostly from Tanzania and 21,000m³ of hardwood from other ECA countries worth Ksh1.8 billion (Cheboiwo, 2008). The imports that crossed legally in 2007 through the Busia border from Uganda and by extension from DR Congo and southern Sudan were 4,550m³ that comprised 330m³ mvule (*Milicia excelsa*) and 1,245m³ mahogany (most likely *Khaya senegalensis* and *K. anthotheca*) (Cheboiwo, 2008).

There are potential imports of hardwood into Kenya from Southern Sudan, mostly mahogany from vast savannah woodlands and teak sawnwood from plantations. Our surveys in 2008 indicate that Southern Sudan is facing a serious shortage of softwood sawnwood for its fast expanding construction industry. This has forced developers to use valuable prime hardwood sawnwood in low-value construction activities such as scaffolding and low-value furniture. Thus, there is high potential for exports of softwood sawnwood into Southern Sudan by Kenya, Tanzania and Uganda among other ECA countries with large softwood plantation sectors.

Trade in treated transmission poles

Kenya has been facing serious shortages of semi-processed transmission pole wood for its five treatment plants for the last seven years. Despite their high capacity in excess of 300,000 per year, the local plants can hardly meet the 97,000 pieces needed per year by the power transmission sector. Since 2001, Kenya has been importing about 20,000 pieces from South Africa annually, at a cost of about Ksh 10,500 per piece (Table 4) indicating an annual expenditure of Ksh 210 million. In 2006, Kenya ordered 47,000 pieces from a consortium of Tanzanian suppliers lead by Sao Hill, estimated at about Ksh 520 million.

Trade in transmission poles is set to expand in the region and Kenya is well positioned to take advantage of this. Its raw materials base is quickly growing through rapid expansion of short-rotation plantations mostly *E. grandis* by tea companies and farmers within the last five years. Though treatment plants in Kenya have expanded to eight by June 2006, there may be need for further expansion to meet the expanding supplies of poles and demand for treated poles in the regional markets. Southern Sudan is a large emerging market for various treated poles in its accelerated infrastructure developments. These range from power distribution to construction sector materials. The significance of trade in treated transmission poles is attested

to by the fact that in 2007 Kenya imported 150,000 pieces of treated poles worth Ksh 1.6 billion from various countries.

Local tree growers can take advantage of the current high demand for treated transmission poles in the power transmission sector estimated at over 100,000 pieces per year. Taking an average farm gate price for semi-processed poles at a lower range of Ksh 1,200 and upper range at Ksh 2,500 and delivery price of treated transmission pole at Ksh 11,000, farmers and tea companies can earn between Ksh 120 - 250 million a year from the sale of semi-processed poles. Similarly, the transmission poles processing sector can earn up to Ksh 1.1 billion a year from the sale of treated transmission poles, excluding the expanding regional market.

Standards and certification requirements for the export and import trade

There are few standard-related hindrances to movement of most tree products across borders in the region except for a few specialised structural products of limited interest. It was only Kenya and Tanzania that reported some standard requirements for export and import of tree products. However, the survey revealed that standards mostly observed at exit and entry points were sanitary inspections and certifications.

Conclusions

Differentiated production and consumption patterns offer vast potential for trade in tree products within the ECA region. The tree products with great potential to be traded across the countries include sawnwood, construction poles, firewood, charcoal and treated transmission poles. Kenya is a net importer of various trees products and thus strategically placed to become a regional hub for secondary processing and exporter of finished products. The ban on harvesting in public forests and diversification on market niches has opened opportunities for various tree products from the East and Central African region to flow into the Kenyan market.

Policy reforms carried out by ECA countries in the forestry sector have created opportunities for the development of efficient and competitive tree product trade in the region. However, trade flows in volumes and values have remained low because there are still policy barriers and other bottlenecks. Kenya stands to benefit through open trade with ECA countries as opposed to trade restriction, especially when the restriction on harvesting of its vast plantations is lifted. As part of its contribution to Vision 2030, the forestry sector should factor in forestry industrialisation and trade strategy to position the country to become the hub for high-value processing and value addition. The emerging trade is good for Kenya for it will not only ease the pressure on local tree product supplies but will also provide an opportunity to exploit the potential for vast resources in the region and to expand the country's presence in the regional trade in knock-down furniture. This is attested by recent trade statistics that show that in 2007, Kenya imported 85,000m³ of softwood (mostly from Tanzania) and 21,000m³ of hardwood and 150,000 poles worth Ksh 3.6 billion ■

Email jkchemangare@yahoo.com or kefri-ln@africaonline.co.ke