Competitiveness of Tropical Timbers at the US Market.

General overview of the U.S. wood Market

The consumption of timber products in the U.S. have increased from about 339 Million m^3 in 1965 to 566 Mm^3 in 2005. It is estimated that the consumption of timber products by market segment in 2005 was: lumber (53%), pulp products (32%), plywood and veneer (7%), fuelwood (7%), and other industries (1%). The consumption growth rates from 1965 till 2005 were the highest for pulpwood 45%, followed by lumber 43%, plywood 32% and fuelwood 33%.

The US per capita consumption of timber products has remained relatively steady, oscillating between 1.7 to 2.35 cubic meters per person per year from 1965 through 2005. There exists a decreasing trend in the proportion of consumption versus production of U.S. timber products, i.e. the rise of imports carried out a diminution of production and the overall employment in the U.S. forest products industry has decreased since 2000. In 2005, overall US consumption of timber products exceeds US production by 119 M m^3 . Hence offering huge opportunities for oversees producers to market their products in the US, and particularly for SMFE from tropical developing countries to access specific niche markets.

Exports

The U.S. wood exports are growing reaching a total of $6.3 billion in 2006 . Hardwood lumber, hardwood logs and softwood lumber showed the largest increases. Close to 60 % of the value of US exports consists of low-value products like logs and lumber.

Imports

In 2006 the U.S. imported $23 billion in wood and wood products (excluding furniture), representing a 45% increase since 2002. Soft wood and hardwood lumber make up 40% of US imports, while 60% are value-added products. In 2005 the U.S. imported $17 billion in furniture and furniture parts (47% increase from 2002). It is estimated that imported furniture now constitute over 52% of all wood furniture being sold in the U.S. market.

It is expected that the growth of Chinese exports to the U.S. will continue in the range of about 8% growth per year for the next three years; maintaining its status of a major importer of roundwood and lumber, and a major exporter of finished wood products.

U.S. Imports of Tropical Timber.

It is estimated that the U.S. imported about $1.6 billion of tropical wood products (not including furniture) in 2006. Major segments are: tropical hardwood plywood which accounted

for an estimated 30% of overall hardwood plywood imported; and tropical hardwood flooring accounting for 45% of wood flooring imports. In addition, the U.S. consumes approximately 350,000 m^3 of tropical hardwood lumber, which represents about 20% of the total hardwood lumber imported into the U.S. market but 40% of import value (i.e. tropical lumber is sold a higher price than U.S. domestic hardwood). Major value-added market segments in the U.S. hardwood industry where tropical hardwoods have important participation are: decking, flooring and furniture.

Some 75% of the US tropical wood products market (mainly plywood, bulk furniture and the wood engineered flooring) is off-limits for SMFE from tropical countries in view of the scale of manufacturing and marketing complexity, and the huge capital requirements.

Although the overall imports of hardwood lumber into the U.S. have increased significantly during last ten years, the imports of tropical hardwood lumber rose from 0.2 million cubic meters in 1995 to 0.4 million cubic meters in 2006. But the imports of temperate hardwoods surpass remarkably the imports of tropical hardwood. Imports of temperate hardwood increased from almost 0.6 million cubic meters to nearly 1.5 million cubic meters in 2005. These trends suggest that there exists in the U.S. a preference for Northern temperate wood species, i.e. substitutes for red oak or white oak, rather than tropical hardwoods.

It appears that the increasing trend observed in the imports of tropical wood products (excluding furniture) would remain constant at a 9% growth rate in value. Some of the factors that will impact the utilization of tropical hardwood products in the U.S. are: a) the anticipated decline of the construction industry should not impact negatively the imports of tropical hardwood, since tropical wood market operates mainly in finished products such as flooring, decking, stock moulding and furniture; b) green politics against the emission of formaldehydes in the plywood industry or the utilization of endangered wood species; c) markets are shifting to more engineered wood products (particularly in flooring industry) and d) Free Trade Agreements (FTA) that the U.S. government is negotiating with potential exporters of forest products to the U.S. .

Cossio conducted a research in 2007 regarding the importation of tropical wood species and found that importers in general are not concerned about the environmental implications of the harvesting of tropical timbers from the rainforest. Importers are more concerned about the

price and the regulations to the trade of illegal logging, rather than environmental certification. Surveyed importers stated that the only reason for importing certified wood products (i.e. from environmentally certified forests) is the corporate image or the final consumer demand. SMFE from rainforests should not expect premium prices for environmentally certified forest products (although some states like Texas, North Carolina, California, New York, Oregon and Wisconsin are willing to pay premium for certified tropical hardwoods).

U.S. imports of tropical wood comprise 2% of overall U.S. consumption of secondary wood products. As a result they compete in the same markets than U.S. woods (hardwoods and softwoods), but for different market niches . There are some markets in which substitute products can become a threat for imported tropical hardwoods. For example wood plastic decking, or engineered flooring. But the uniqueness of tropical hardwoods (texture, color, natural durability) make them suitable for high-end secondary wood products such as decorative veneer, garden furniture, doors, moulding, or decking. Tropical wood products hardly can compete with inexpensive and mass produced commodities like indoor wood products, interior doors or indoor furniture. SMFE from developing countries simply can not compete with economies of scale from major corporations having their manufacturing base in China, Canada, Finland, Sweden or Russia (and more recently also Vietnam).

Rather then just exporting ruff sawn lumber (as most commonly done by tropical SMFE by now), greatest opportunities for SFME from developing countries appear in niche markets with added value to tropical timber species into products for outdoor decking and furniture, massive wood flooring, and specialty moldings / millworks.

Relevant U.S. Market Segments for Tropical Hardwoods products from SMFE in developing countries.

Outdoor Decking

In 2002, the market of tropical decking represented only one percent of the residential decking market in the U.S. (a $3 billion industry). The high durability of plastic decking encourages its use (lifespan of 50 years) over tropical lumber (lifespan of 20-30 years) and treated lumber (lifespan of 10-15 years). In 2001, treated Southern Yellow Pines represent 65% of the US residential decking market followed by other (imported temperate) treated species

(8%), redwood (8%), red cedar (6%), treaded ponderosa 5%, treated Douglas/hemlock 4, plastic decking 3 and tropical hardwoods only 1 %.

In a study (in 2005) by The Freedonia Group , the demand for decking was projected to increase at a rate of 2.8% per year through 2009 and that despite the increasing alternatives for decking construction, like plastic or aluminum, wood decking will remain the preferred material to produce and repair decks in the U.S. The U.S. decking market will reach $6 billion by 2009. It is estimated that 60% of new homes come with a deck and 4% of all households add a deck each year.

The most important factors in the purchase decision include: quality, durability and installed stability (to reduce the risk of a deck to crash). Cost has an average impact. Tropical hardwoods were ranked as having the least performance problems. It is expected that the use of treated wood will decrease due to regulations in the use of chemicals and because consumer are much more negative toward the use of treated decking (i.e. with chromated copper arsenic – CCA). However, wood plastic decks show fastest growth to gain more market share.

In 2004 the Center for International Trade in Forest Products (CINTRAFOR) performed a study of home builders and deck builders across the U.S. to identified the material most used in decking construction . In general, treated lumber is the preferred material for decking construction with 90% of market share (91.2% of decks use treated lumber in their substructure, 28.3% in the surface, and 27.8% in deck accessories). They also found that the material used in “deck surface applications” was dominated by wood-plastic composite products (39.6% of decks surfaces use this material). Wood-plastic composites are also the preferred material for accessories used in deck construction (29.5%). Synthetic decking materials comprise 15% of decks built now and their number increases by 25% each year.

Although the actual market share for tropical timbers (with high natural durability) for outdoor decking is still very limited, is anticipated to increase significantly and fast as consumers move away from treated wood. In addition this market is very specific to given regions within the US such as California. Ipé is the most common species and consumer preferences are for high durable timbers (mainly from from natural forests).

Flooring

Hardwood floors account for about 7% of the flooring market. The U.S. hardwood flooring is a market of about $1.4 billion per year. The market share of tropical hardwood in the U.S. represents less then 10%. In 2005 hardwood flooring consumption in the U.S. reached 49 million m2. Oak (red or white) is the preferred species for wood flooring with almost 80% of the domestic use, followed by hard maple 8.9% and hickory 1.2% and other domestic species. However, there is an increasing demand for exotic wood species.

The market for wood flooring in the U.S. will continue growing at a compound annual rate of 7% from 2006 to 2010, bringing the demand for wood flooring at the end of the decade to more than $3 billion.. Oak flooring will continue to dominate demand with more than 50% of the U.S. market and of which much of the demand is coming from do-it yourselfers.

The U.S hardwood flooring market is highly consolidated, with the top five players holding more than 60% of the market. The market of flooring is extremely competitive. The competition can be divided as follows:

- *By type of floor*: with the market trends showing consumers moving toward more hard-surface flooring in new homes and renovations, both hardwoods and ceramics will likely continue to take market share away from carpet, vinyl and rubber flooring.
- *By type of wood floor*. Because the current trend to DIY wood floorings (ease of installation) there is a trend to use engineered flooring rather than solid strip flooring.
- *By country*. China and Brazil are the benchmark of imported wood flooring. Although there is an important growth in the imports from South American countries, Asian countries are growing faster such as Taiwan and Malaysia.

U.S. manufacturers are concerned about the effect of the current Chinese expansion in the flooring market, anticipating the same effect observed in the furniture industry currently.

Engineered flooring is the most popular segment with the highest market growth (mainly through DIY chains). However, its manufacturing is off reach for SFME in view of being a high capital intensive industry. Best chances for SFME from the tropics appear to be in the pre-finished solid flooring segment by using highly durable and decorative tropical timbers.

Outdoor Furniture

The U.S. has more than doubled the imports of wood furniture during the period 1999-2006 (i.e. from $6.7 billion to $15.6 billion. Imported wooden furniture products accounted for $15.6 billion in 2006 !). The demand for outdoor furniture and grills ($5 billion industry) will grow 5.4% annually through 2008. The increasing popularity for decks, patios and porches contributes to this phenomenon.

Metal outdoor furniture is the preferred material in the U.S., accounting for 60% of total demand in 2003 (within this market, tubular aluminum remains popular due to its lower cost over wrought iron or other metal outdoor furniture). Plastic outdoor furniture (17% of total demand in 2003) is expected to be the fastest growing material due to its ease of caring, high durability, and the introduction of many up-scale designs into the market. Wood represented approximately 5% of the demand of outdoor furniture in 2003. Outdoor furniture from durable, decorative tropical timbers offers huge opportunities for SME from developing countries to supply quality products as well as scope for obtaining high profit margins. Their manufacturing is labor-intensive without requiring high capital machinery investments. SFME would benefit from marketing and export support (eventually through producer/traders associations) . Successful example is the teak based artisanal furniture export industry from Indonesia.

Moulding and Millwork

There is a great variety of products that can be found in the U.S. millwork industry, such as doors, windows, moulding and several wood assemblies for construction. “Wood entry door” is the major joinery product relevant to the tropical timber producers. It is estimated that 15 million entry (exterior) doors were sold in the U.S. in 2005 (approx. 63 million interior doors). Nevertheless, steel-made doors dominate the market of entry doors and wooden exterior doors represent only 10% of the market, i.e. approximately 1.4 million wood entry doors were sold in 2005 . Solid wood interior doors are unusual in the U.S.; a small percentage is manufactured for up-scale housing, and tropical wood species such as mahogany are commonly used to this purpose.

The market for moldings is expected to grow at a rate of 3.7% annually through 2008. This is a very diversified market, with products that meet almost any specific need and budget. The competition is not among species of wood, but among other materials such as plastic

moldings (estimated growth of 7% until 2008). Metal moldings and other engineered products (including MDF) will grow by 6.1% annually. It is projected that wood-based moldings will grow only 2.1% annually.

Imports of tropical hardwood mouldings into the U.S. reached $81 million in 2006. That is 50% of overall hardwood moulding imports ($192 million in 2006). From mid 1990s to 2005 the imports of hardwood moulding increased from $65 million to $200 million; but they decreased to $192 million by 2006. China has increased its market share of U.S. imports of tropical moulding from 15% (in 2002) to 39% (in 2006).

Opportunities for SFME for this market segment seems more difficult in view of the limited market share for timbers in general (and tropical in particular) and the very competitive nature of this market due to competition from SFME based in the US. In addition, mahogany as the main tropical species, is CITES listed, further contributing to a rather negative image that the use of tropical timbers has with environmentally concerned consumers.

Opportunities in the U.S. market for SMFEs from developing countries

SMFEs in the U.S. contribute over 37% of the total employment in the solid wood products processing sector. Despite the dramatic decrease in employment for the sector as a whole, there can be seen an increasing contribution to employment from firms with fewer than 100 employees and particularly from firms with fewer than 20. In the case of the wood furniture industry in the U.S., the impact of imports from China brought about the emergence of SMFEs to fulfill the smaller, but sizeable niche markets (mostly urban) that are demanding higher end furniture which incorporates strong design aesthetics and is not mass produced. SMFEs in the tropics can take advantage of the fragmentation of the U.S. wood furniture industry to provide low volume and aesthetic wood species to this sector, but will have to compete with the growing production by SMFE based in the US.

It is evident that there are good marketing opportunities in the U.S. for tropical timber products produced by oversees SMFEs. Price is not rated as important factor for importers of tropical hardwoods. Thus, SMFEs should focus on establishing long-term relationships with importers, distributors, or manufacturers, providing consistent supply and reliable delivery. Environmental friendly certified tropical hardwoods would have competitive advantage,

although at no premium prices. Fostering the associations between SMFEs can provide good opportunities for accessing markets where mass production is required. Such associations can benefit from the support of NGOs or government in promotion, training, marketing and forest management .In order to compete with economics of scale, SMFEs must remain competitive by getting more involved with the housing industry and the supply chain to homebuilders . Companies in the tropics may focus on developing “custom wood products” in order to capture specific market niches and reduce cycle times. The latter means that SMFEs should be in narrow contact with builders and their associations to understand their needs.

Even though the Chinese impact in the U.S. hardwood flooring market, there exist some opportunities for SMFEs of the tropics in the fixed-width lumber, which remains strong in the U.S. market. There exist another opportunity in pre-finished wood flooring products, where lighter species have advantage due to their ease in staining. SMFEs that manufacture decks from tropical hardwoods should meet the standards and design required in the U.S. marketplace. Milling practices, technology and services should consider to provide margin for errors in dimensions to compensate variations in wood and site design; and that KD is not required, since the moisture content of decking varies from 15% to 25%. Tongued/grooved decking offers great opportunities for tropical producers, due to its high cost in the U.S. market. However, this endeavor would require appropriate technology and skills to meet the U.S. standards.

Tropical sawn timber continues to face environmental criticism in important export markets. In addition, the related transport costs are much higher in comparison to using temperate timber. Moreover, some of the major timber exporters such as Malaysia, Indonesia and Brazil are expected to continue to cut their exports of primary products in the future because of the growing domestic consumption, and due to the expansion of further processing for exports. Thus, SFMEs in developing countries should increase their capacity for secondary processing tropical wood products. Also, the identification of appropriate lesser-known wood species (LKS) is crucial for accessing specific niche markets.

An overlooked competitive advantage for SFMEs in the forest products industry is the e-commerce. More and more timber and timber products are traded via e-commerce. Companies worldwide are gradually converting to e-commerce driven in order to improve the planning and

management of sourcing, transport and storage of products. At the same time to reduce production and logistic costs. Specialized web sites focused on e-commerce are more common, such as timberweb, globalwood, or International Timber Exchange .

Key support to SMFEs in tropical countries that NGO's, Governments and international organizations can provide are to strengthen producer and trade associations and to provide relevant market intelligence that can be applied by to successfully capture market share in oversees niche markets. An example of such work is the Bolivian Forestry Chamber (CFB) (http://www.cfb.org.bo/CFBInicio/) which provides such support to the wood processing sector in Bolivia and benefited from support from USAID, SIDA among others.