

Life-cycle analysis could be a boon for timber, but how should the tropical trade take advantage of it?

by Michael Adams

ITTO Secretariat

Yokohama, Japan

itto-mis@itto.or.jp

A LONG with prices, optimism in the tropical timber trade seems to be declining. But while markets almost everywhere—China being the notable exception—remain depressed, there is some good news for timber. It's all in an acronym: LCA.

LCA stands for life-cycle analysis, which is a method of measuring the total impact of a product on the environment, from the extraction of the raw materials, through the manufacturing process, to the product's service life and its eventual disposal or recycling. LCAs measure, among other things, 'embodied energy'—the energy used to produce, transport, process and maintain the product—so that similar products made of different materials can be compared. LCAs also take into account the extent to which resources are depleted or damaged in the manufacture, use and disposal of the product.

LCA has been attracting attention as a methodology for realistically comparing the 'environmental friendliness' of different materials. And, for the first time in a long while, wood is getting some positive press. A new report by the UK Department of the Environment and Transport has found that windows made of timber are more environmentally friendly than those made of polyvinyl chloride (PVC), a kind of plastic. For example, the PVC window system tested was found to consume over three times more energy in the production phase, while the energy consumption for wood windows was attributable mainly to the coatings applied to the wood to reduce weathering. In addition, wood windows were found to generate significantly less waste than PVC throughout the life-cycle. The environmental organisation Greenpeace is reportedly urging architects and specifiers to use windows made of timber over PVC because of its superior environmental performance.

The UK study is not the only recent evidence pointing to the advantages of wood. Work in Australia by the Forest and Wood Products Research and Development Corporation and other work in Malaysia on meranti has confirmed the superior environmental qualities of wood

compared to its steel, aluminium, concrete and plastic competitors.

But the good news must be tempered on two fronts. The first is that any timber produced using unsustainable harvesting techniques and/or environmentally unsound processing methods will almost certainly fail in LCA comparisons, even against steel and PVC. The articles in this *TFU* devoted to reduced impact logging demonstrate the considerable challenge faced by the industry in adapting logging techniques to minimise forest damage while at the same time maintaining reasonable profits.

Housing 'stops'

The other cause for worry is the current state of the market and its immediate prospects. House-building is a very useful guide to economic activity and is a leading indicator of demand for wood products for construction, joinery and furniture and fittings. Recent figures for the world's biggest economies reinforce concerns about the global economic slowdown and give little encouragement to timber producers.

As *Figure 1* shows, housing starts in the United States have fallen from their peak of 2–3 years ago but have weathered the economic downturn fairly well so far. They began to decline in mid 2000, but the drop was minimal. Total starts in 2000 amounted to 1.60 million units, compared to 1.68 million units in 1999.

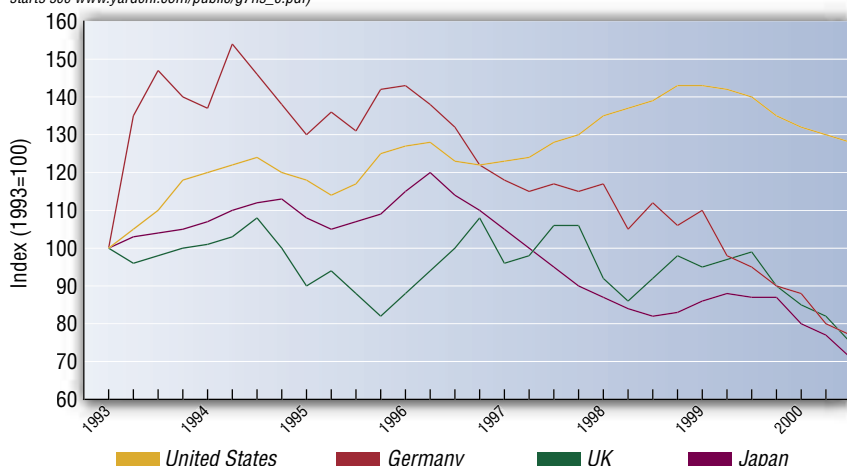
The prospects seem gloomier in the near future. Even though mortgage rates are likely to fall, forecasts suggest that total US housing starts will reach only 1.47 million by year's end. While tropical hardwoods are not widely used in construction, the markets for tropical timber in the joinery, fittings and furniture sectors have been hit badly and prices have declined. Next year may again show some improvement, with starts estimated to climb to about 1.53 million units.

The picture is even darker in Japan, where house-building is stagnant at levels well below those of the early 1990s (*Figure 1*). In April, Japan's Forestry Agency released its projections of wood supply and demand for 2001; it predicted that total demand would be less than 2000. Demand for lumber could be 3.6% less than last year and the first drop in three years, while the volume of plywood will also decline due to slower housing starts, which have been sluggish since the beginning of this year. Overall demand for building materials is expected to stay very weak.

Adding to the problem is the dollar/yen exchange rate, which has moved from 108–109 yen per dollar at the beginning of this year to 124–125 in March/April. Such a big change was unexpected and importers were unprepared. Since the market is so depressed importers are unable to pass on the high exchange costs to end-users and are currently having to absorb the losses.

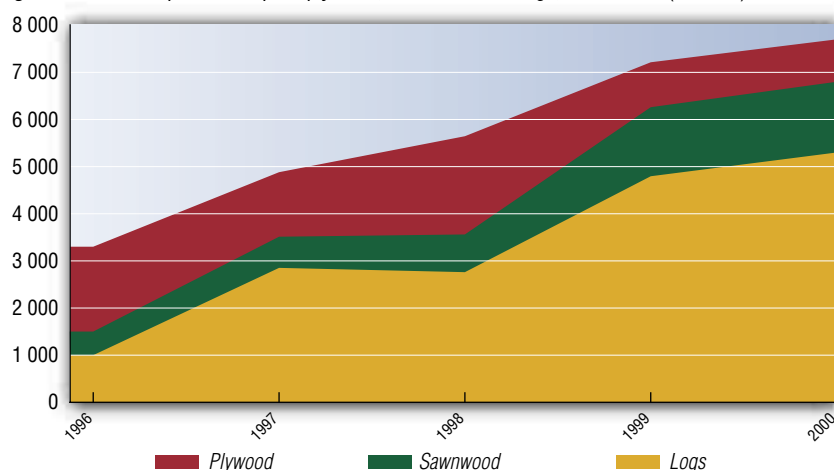
Housing crisis

Figure 1: Housing starts in the G7 group of countries, 1993–2000 (For a comprehensive dataset of housing starts see www.yardeni.com/public/g7hs_c.pdf)



Logging on

Figure 2: China's imports of tropical plywood, sawnwood and logs, 1996–2000 ('000 m³)



In Germany, one of the biggest housing markets in Europe, new orders for residential building have been falling for the past two years and plunged further at the end of 2000. This compounds recent worries about a sharp decline in German business confidence.

Prospects for the German economy within a slowing euro-zone are being viewed with concern. Chancellor Schröder has acknowledged that official forecasts of 2.6–2.8% economic growth this year will be hard to reach. Average growth predicted by the nation's leading economic institutes has been revised sharply downwards to 2.1% in 2001 and 2.2% in 2002.

While no one is predicting a recession in Germany, growth of around 2% is a far cry from the 4.4% growth achieved in the first half of last year (before declining rapidly in the second half to just 1%). An overall growth rate of 3% last year was still the country's best performance since re-unification but all the countries in the 12-nation euro-zone except Italy did better.

The story in the UK is not much rosier: housing starts had been ticking along only to fall in the first quarter of this year. By the time this article goes to press the European Central Bank will no doubt have buckled to pressure to lower interest rates and this could help at least to set a bottom to the decline in residential housing.

Lower economic growth and housing starts in the main consumer countries have had a significant impact in tropical producer countries. Prices for tropical timbers have at best remained flat or, as with plywood, have fallen again after modest gains at the end of last year.

China continues to shine

There is some good news in the marketplace: China. You could say the trade is bullish on China since there is little else to be bullish on.

Demand will increase in 2001

China's markets for wood products have changed considerably since the introduction of the Natural Forest Protection Program. The huge reduction in domestic log harvests, first felt in 1998, led to a massive increase in imports and significant changes in domestic consumption.

The Chinese government is committed to maintaining current economic growth through active fiscal policies and this will further stimulate demand for wood. Moreover, since this is also the first year of the country's 10th Five-year Plan, many large infrastructure projects have been initiated.

Competition among importers

For two years now, competition between log importers in China has been fierce, often to the detriment of the market. The volume of log imports has been climbing in recent years (Figure 2) and both the sources of logs and the range of species have widened considerably. While this process is expected to continue this year, the new element will be a focus on log shipments of smaller quantities and imports of more high-grade logs.

Although the consumption of wood is expected to increase this year, market demand is unlikely to be as feverish as over the past two years, when it was characterised by periods of frantic imports followed by overstocking and price-cutting. Chinese analysts point to a growing maturity in the business that will moderate such wild swings. Purchases are now

more likely to be driven by demand than speculation, and log stockpiles will start to shrink. Overall, analysts expect log imports to fall from current levels, while sawnwood imports will likely increase further in the medium term.

Trading futures

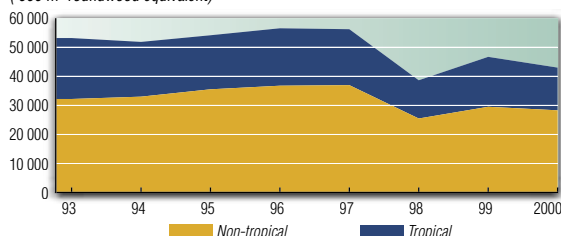
All this negative news leaves the tropical timber trade at risk to more competition. Even Chinese demand will moderate over coming months and years, and arresting the decline in the export markets of Europe, the us and Japan will take considerable effort. Where in its life-cycle does the trade now sit? Can it renew itself? Without doubt it faces considerable challenges—environmental and economic—to stay competitive with other products and, in particular, with other timbers. To regain market share the trade must go on the offensive to promote tropical hardwoods; LCA might just provide the clarion call the trade needs.

CORRECTION

The two figures accompanying the article 'The ups and downs of North Asia' by Mike Adams and Jairo Casteño in *TFU* 11/1 were incorrect. They should have appeared as shown below.

Japan imports

Figure 1: Japan's primary timber product imports, 1993–2000 ('000 m³ roundwood equivalent)



China imports

Figure 2: China's primary timber product imports, 1993–2000 ('000 m³ roundwood equivalent)

