

Topic Paper No 3

Market Demand for Timber

Background

Forest products demand in Scotland and the UK has to be viewed in the context of the global and European forest industry. Projections of changes in future demand are closely linked to projected growth in GDP. This has been estimated at 2.5% to 2010 and 2.3% after 2010. Several recent studies^{1,2} of demand growth in Europe (E15) suggest an increase of 6-7% annual growth for coniferous sawnwood, 14-22% for particle and fibre board, and 17% - 25% increase for paper and board products. Fuel wood increase was estimated at 3%. With the new accession states joining the EC these figures are very likely to be projected to be rather higher as European growth is characterised by more rapid rates of growth in the eastern part of Europe than in the western part.

In the UK estimates of market growth are rather more conservative. One forecast has estimated growth of sawn timber products at 0.8%, 1% for wood based panel and 1.9% for paper and board.³ Another has taken the UNFAO estimates and projected them forward for the UK as shown below.⁴

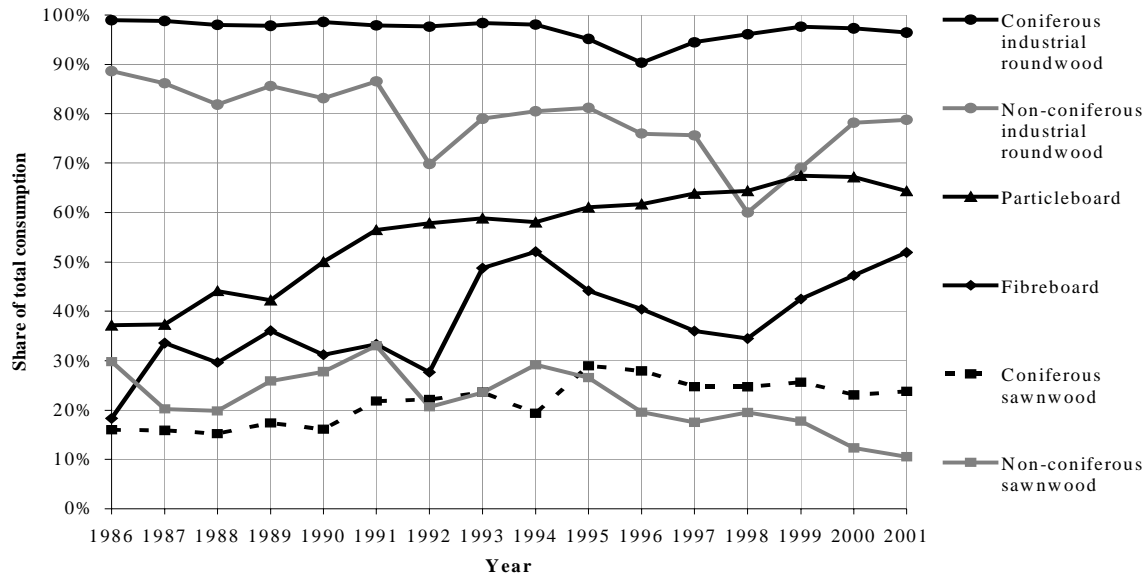
Fig 1. UK solid wood market projections to 2021

	Actual 2001	Projections (5-year average)			
		2002 - 2006	2007 - 2011	2012 - 2016	2017 - 2021
Consumption					
Coniferous sawnwood	9.4	9.8	10.1	10.4	10.8
Non-coniferous sawnwood	0.8	0.7	0.8	0.8	0.9
Plywood and veneer sheets	1.5	1.0	1.1	1.1	1.1
Particleboard	3.5	3.6	3.8	4.1	4.3
Fibreboard	1.3	1.5	1.7	1.8	2.0

Whiteman A. 2003

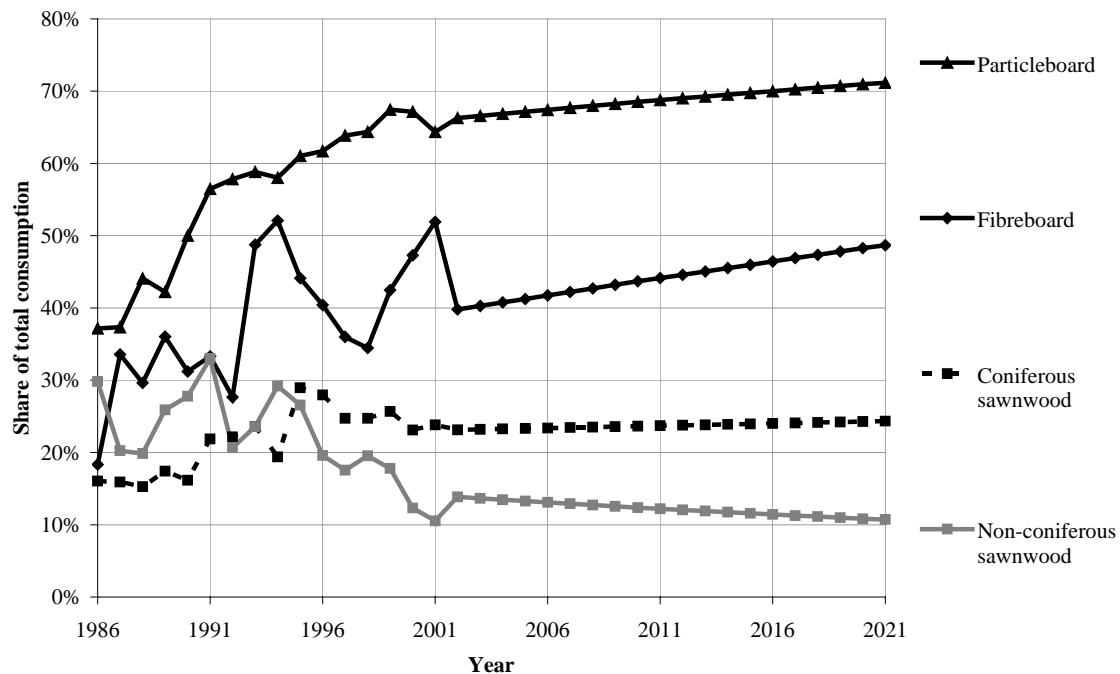
In the recent past Scottish production has grown at rates of around 7% that have enabled the industry to increase its penetration of the domestic market through import substitution. For example, market share of sawn wood has increased from 16% to 24% since 1986 while fibre board and particle board enjoy around 50 – 65% market share. See Figure 2 below (Whiteman A. 2003).

Figure 2. Trends in UK domestic production market share 1986 - 2001



Projecting these trends forward shows continued growth in market share for panel products and marginal growth for sawn timber as can be seen in Figure 3 below. (Whiteman 2003)

Figure 3. UK solid wood product market projections to 2021



Domestic demand for forest products is therefore increasing. However, the success of forest products is conditional on consumer perceptions and the ability of the sector to promote forest products as sustainable and “fit for purpose” material⁵. While there is still some potential for increased use of recycled material in some sectors of the forest industries, the optimum use of recovered material in the paper sector will be

reached this decade⁶. Access to virgin fibre is therefore of increasing importance to company strategies for future development.

Historical context

In Scotland, since the 1970's, forecasts of timber supply potential availability have shown an increasing trend, which is projected to rise to a maximum annual supply of 10.4 million m³ around 2020. After that, supply will fall back over the next 20 years to less than is being produced today. This poses a challenge for both the growing sector, and the processing sector. The former must consider how best to resolve this peak of supply. The latter must decide whether the time horizon is sufficient to justify large scale capital investment. Historically, the processing sector has responded positively to the increase in the forest resource, and supply and demand have remained in balance. Past growth rates have been around 7% per annum. However, the more rapid increase in supply during the last five years has resulted in significant volumes of fibre being exported, as for the first time, home processing and supply have become imbalanced. This is a result of the more rapid growth in availability over the more recent past.

Benefit of sustained level of supply

“Normality” is a concept familiar to foresters, and was a sound basis for continued management long before the term sustainability was coined. For normality is a tool for forest management and sustainable economic and social development. It avoids boom and bust economics, it provides a consistent product mix for industry to process, and it maintains and supports a diverse and well managed forest estate. The debate tends to focus on the scale at which normality should be applied, rather than the concept itself. Normality at the Scotland level is a prize within the grasp of the forest industry. The increasing potential availability curve offers a unique opportunity to set the forest industry on a long term path to sustained prosperity. Normality does not build in growth in the long term however, so it does not fully recognise the link to markets and economic growth in which growth itself represents “normality”. Nevertheless, it provides a helpful framework to consider the relationship between forestry production and market consumption.

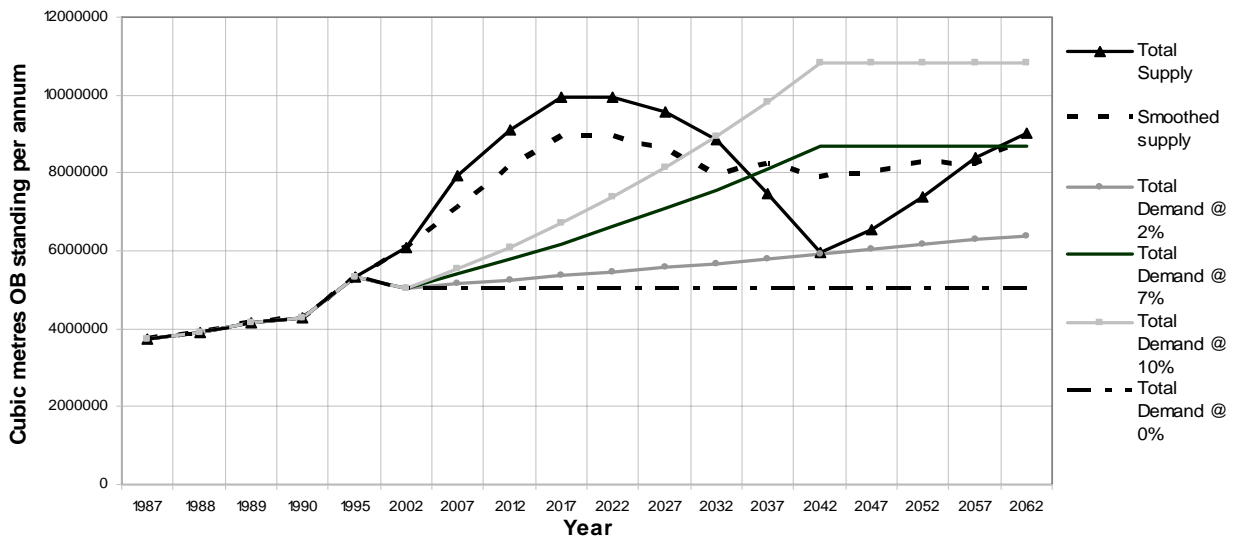
There are a number of social and economic costs associated with cyclical or high growth followed by contraction in production:

- high level of investment required in the short term to harvest timber volumes which then result in over-capacity;
- unstable or volatile market conditions which can deter private growers from entering the market and processors from investing;
- likelihood that home-grown material will be exported for processing with little value adding within Scotland; and
- risk of disinvestment and the impact of negative multipliers in the downturn phase.

Looking forward it may be helpful to consider some alternative scenarios for timber production which relate to market demand.

One scenario might be to conceive of normality as the level of present production with no further growth. Another scenario might be to seek normality at a production level resulting from 2% growth p.a. (the growth in UK market demand). Following past trends, a third scenario might be based on 7% p.a. growth for one short rotation. A fourth scenario might aim for normality at a higher level resulting say from 10% growth for one short rotation. These scenarios are shown graphically below in Figure 4.

Figure 4. Demand forecast scenarios for Scotland



What are the implications of these four scenarios?

1. Present production as normality

- Does not address the issue of peak of potential availability which will mean that this material will mature beyond its economic utility and be unlikely to have any economic value.
- Sustainable forest management will become increasingly difficult as costs increase without economic benefit.
- Environmental and social value will be offset by high risk of costly wind throw.
- Industry will be unable to grow or to develop new markets.
- Scotland relies on others for resources and carbon benefits.
- Counter to Scottish Forestry Strategy (SFS) aspirations.

2. 2% growth for a rotation

- Does not address the issue of peak of potential availability.
- Does not address the downturn.
- Industry can only grow modestly.
- Large-scale projects will have only medium term viability.
- No new import substitution is likely as UK production will only keep pace with UK market growth.
- Counter to SFS aspirations.

3. 7% growth for a rotation

- Management of the peak enables most of the peak material available to be utilised.
- UK industry grows at a rate commensurate with the demand for panel products which helps to sustain this industry.
- Markets develop for more UK material which helps to sustain new industries like bio-energy.

4. 10% growth for a rotation

- Only sustainable for a relatively short period.
- High associated investment risk owing to issues of supply continuity.
- There would be risk of disinvestment by processors following a peak of production.
- Growth rate is going to be hard to achieve owing to requirement for high planting rates.
- Maximises carbon benefits.

Discussion

Theoretically, it would be possible to sustain the past rate of growth until 2035, when the forecast indicates some 8-8.5 million m³ per annum will be available. Under the current supply forecasts, the following 7 years would see a reduction of 2 million m³ per year in terms of the estimate of available supply. However, in practice, investment would slow down significantly after 2020 as the time horizon of the supply side becomes too short to allow acceptable returns on investment. For industry to maintain a consistent rate of expansion into the next production upturn phase an annual growth rate of only 2% would be possible.

It is an interesting coincidence that normality of production can be achieved at around 8-8.5 million m³ per annum. This fits very closely to the 7% annual growth potential of the processing sector. It is also capable of being delivered in line with the SFS aspiration of increasing the forest area in Scotland to 25% of the land area by 2050.

Some strategic issues

- Should Scottish forestry aim to achieve normality or continuing growth?
- If so at what level of production?
- If not what policy should govern production and new planting?
- How can we approach the issues surrounding the peak of supply potential availability should there be no commensurate increase in market demand?

Roger Coppock (Forestry Adviser) and Cedric Wilkins
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June 2005

¹ Whiteman A. (1996), Revised Forecasts of the Supply and Demand for Wood in the United Kingdom: Technical Paper 19, Forestry Commission

² Kangas K. and Baudin B. (2003), Modelling and Projections of Forest Products Demand, Supply and Trade in Europe: A study prepared for the European Forest Sector Outlook Study (EFSOS), United Nations.

³ Jaakko Poyry Market Development Study for the Forestry Commission 1998

⁴ Adrian Whiteman, FAO, Paper presented to the ICF Conference, Edinburgh, April 2003

⁵ Kangas K. and Baudin B. (2003), Outlook for Long-term Supply of Demand for Forest Products on the European Forest Sector Outlook Studies. Paper presented to Seminar on the STRATEGIES FOR THE SOUND USE OF WOOD Poiana Brasov, Romania 24-27 March 2003

⁶ Jaakko Poyry Consulting. (2003), Scottish Forest Industry Investment Opportunity. Report prepared for Scottish Enterprise.