

Land Use Policy Group

*The UK statutory
conservation, countryside
and environment agencies*

World timber trade and implementing sustainable forest management in the United Kingdom

A report to the Woodland Policy Group

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FORESTRY
HORIZONS

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1 Executive Summary

1.1 Executive Summary - English

Introduction

This think-piece was commissioned by the interagency Woodland Policy Group (WPG) as a preliminary examination of the present and future relationship between the UK and the world timber trade in order to identify areas where further investigation by the Land Use Policy Group (LUPG) might be worthwhile. The authors were asked to explore the extent to which international factors affect UK woodland conservation and ways in which adverse impacts might be countered.

Current forest resources

The ratio of felling to increment of growth in Western Europe (WE) has declined from 96 % in 1960 to 70 % today. Average annual increment increased from 3.3 m³/ha in 1960 to around 4.6 m³/ha now, with standing volumes/ha up from 80 m³/ha to 135 m³/ha. Through afforestation and abandonment of agricultural land, forest areas in WE have increased by 11 % since 1960.

UK forest area is now around 12 %, but new planting is only 8,000 ha/year, compared with 40,000 ha/yr in the early 1970s. Timber production in the private sector remains well below annual increment, particularly for hardwoods.

Harvesting and consumption declined dramatically in Russia in the early 1990s but both are now at record levels. Conifer production in WE has increased more rapidly than consumption, but the reverse is true for hardwoods, where imports are now 5 Mm³/yr. Production and consumption of both fibreboard and particleboard are rising rapidly, as are printing and writing paper. Total demand for raw wood materials in WE in 2000 was 525 Million tonnes (Mt).

In the UK, softwood timber production increased by 28.2 % between 1995 and 2004, whilst hardwood timber production decreased by 42.0 %. Exports increased to 11 % of total production in 2004, and this is a new factor for the UK. Tonnage of timber passing through sawmills has increased by 27 % over this period, and sawmills have modernised significantly. Coniferous roundwood imports to the UK have increased by 652 % since 1990, whereas hardwood roundwood declined by 47 %. The UK imported 960,000 tonnes of hardwoods/annum between 2000-2004, including 458,000 tonnes of tropical hardwoods.

Future trends in production and consumption

Growing stock in Russia is 82 billion m³, with an annual increment of 900 Mm³, but removals are only 132 Mm³/yr, and increased exploitation may keep WE prices depressed in future. Three factors mitigate against this: a.) rapid economic growth in Russia itself, b.) export taxes rising to 80 % at the end of 2008, and c.) the sharp rise of consumption in China (where softwood imports are increasing at 4 Mm³ per year, 80 % of which is provided by Russia). Official imports are 20 Mm³/yr, but true imports may be several times this. India is also becoming a major importer, with demand predicted to rise from 60 Mm³ in 2005 to 153 Mm³ in 2020, and domestic production likely to meet only 60 Mm³.

By 2020 total production and consumption of coniferous sawnwood in WE will be in balance at 89 Mm³/yr. Fibreboard and particle board production will continue to grow at around 3 % annually. Hardwood imports will increase to 8.4 Mm³/yr.

Overall production and consumption of industrial roundwood will increase more than 40 % from 2000 to 2020, with the ratio of fellings to net annual increment rising in all countries.

Most of the projected 38 % rise in production in the UK between 2004 and 2019 is on private estates, but it will peak around 2020 and decline to 2050. Future UK levels of hardwood production may be around 1 Mm³/yr, but prices are low and conventional markets uncertain.

Financial profitability

Forestry contributed to 2.5 % of UK GDP in 2005 and directly employs almost 30,000 people in fulltime jobs, but its upstream economic, social and environmental benefits are much greater.

Direct and indirect subsidies to agriculture remain many times greater than to forestry, yet the UK relies on imports for 72 % of its timber needs and faces a growing need for bioenergy material. The dip in production after 2020 is likely to introduce a supply shortage.

Coniferous standing sales and sawlog prices have been in decline since 1990, and in real terms are 25 % of their March 1996 levels. Yet an index of the profitability of forestry, taking into account all sources of income and expenditure, shows an annual return of 3 % over the past 5 years. Over the past three years forestry has been more profitable than either gilts or bonds. Furthermore, price rises for softwood from the Baltic States has equilibrated prices across Europe and the current trend of UK softwood prices is upward.

Socio-economic factors

Socio-economic valuations for GB forestry suggests a value for public good delivery of £365 ha/yr, or £1 ha/yr. One source for public expenditure on biodiversity indicated that grants to support management of England's SSSI woodlands averages £45 ha/yr.

Forestry provides high value public benefits but the market-based remuneration that woodland owners receive bears little relation to this.

Public-procurement policies and downstream support for timber products may deliver a viable forest sector at less public cost than through direct forest management subsidies. Nonetheless, support for 'forest-environment' payments is envisaged by all the UK countries in their draft Rural Development Plans 2007-2013, and can be used to stimulate sustainable management.

Energy supply, carbon and emissions

The EU has ambitious targets to meet 20 % of total energy demand from renewables, and 10 % of transport fuel from biofuel by 2010¹. It assumes that wood energy will provide 55 Mtoe² annually for electricity generation and 75 Mtoe for heating by 2010. Member states are being pressed to help meet these targets. However, a study of the '*environmentally compatible bioenergy potential of existing forests*' in the EU predicts that only a further 42 Mtoe can be produced annually without environmental impact, or without disrupting existing timber markets. The numbers therefore do not balance, and point to significant future shortage of wood resource.

¹ These targets were increased from 12 % and 5.75 % at the EU Summit on 9th March 2007.

² Million tonnes oil equivalent (oil has an energy content/ tonne approx double that of dry wood).

A 2003 study estimated that the total available wood resource in GB was 3.1 Mt/yr, reducing to 1.76 Mt/yr (dry weight) (~0.85 Mt oil equivalent) if competition with conventional forestry were avoided.

Bioenergy is a high priority for the UK Government, and an English Woodfuel Strategy is awaited soon. Use of wood-chips and pellets in co-generation power plants is at least 164,000 t/yr, and five wood-only power plants are being planned or built with a total planned intake of 1.5 Mt/yr (green). This again suggests that the UK, like Europe, may experience a shortage of fuel supply for bioenergy in the medium-term, and certainly after 2020.

Energy accounting, embodied energy calculations, and life-cycle environmental impact analyses are modern methods to contrast the energy and environmental impacts of different types of building material. Timber housing shows clear advantages using these methods, and should be favoured in planning and procurement policies, and initiatives such as Wood for Good given continued support.

The value of forests, forest vegetation and forest soils in sequestering carbon is illustrated using the latest UNFCCC returns. Carbon is now a traded commodity, and at current prices the carbon sequestered annually in UK forest land is worth around £150 million.

UK forest policy

The UK countries differ widely in their forest resources (e.g. type, ownership), stakeholder interests and policy instruments. Each nation has a separate forestry strategy; the England Forestry Strategy is due for publication in 2007. The private sector in England is keen to see more emphasis on production and future markets, matching that in the Welsh, N Irish and Scottish strategies. FC England and Defra support production forestry but believe market forces should dominate and that there is no place for public intervention.

Much is changing in UK forestry due to globalised wood markets, climate change and CAP reform. The professional expertise of scientists, managers and business requires clear future strategies and implementation plans at regional levels.

The Forestry Commission's research agency, Forest Research, must continue to foster strong links with stakeholder needs, and identify future trends and changing research needs. Future research priorities could be: utilisation of farm woodlands, species for warmer climates and enhanced environmental protection, systems for combined timber and bioenergy production, and the need to produce quality broadleaves. The current emphasis on the breeding and improvement of Sitka spruce appears disproportional to the interests of the private sectors of England and Wales. The involvement of the private sector in research trials is a welcome dimension. It is encouraging that national offices are setting their own research agendas.

Conclusions – the wider context

A stronger cross-sectoral approach is needed to make policy-makers and the public aware of the energy, environmental and social benefits of forestry. This includes awareness of the role of forestry in agricultural, trade, energy, environmental and social policies.

Climate change offers both opportunities (mitigation and adaptation roles) and threats to the forest sector. The sector should be proactive in analysing these impacts, quantifying the role and value of forests in a changing climate, and proposing innovations.

The emerging bio-energy revolution provides great opportunities for the sector but the implications for biodiversity and landscape must be considered and planned for. Joined-up thinking across a wide range of stakeholders is needed, and private innovation should be encouraged and documented.

Monitoring of environmental and social benefits from forests and forestry remains important despite some informative recent publications. New quantitative techniques of life-cycle energy analysis should be used to inform policy.

Conclusions – the forest sector

The economic viability of UK forestry may be threatened by imports from Russia, although log export taxes and growing prosperity in Russia, China, India and elsewhere should ensure long-term softwood price increases. Certification and control of illegal timber (e.g. FLEGT) or wood-product imports should help maintain hardwood prices. Certification of imported timber should improve employment quality such as wages, training and career prospects, as well as the working environment and safety. It also should maintain prices for the benefit of the home-grown sector.

A key need is to strengthen links between forest owners and forest industries on a regional basis. Regional forest strategies and implementation plans are part of this effort, but there is a need to better understand the private-sector timber resource, and how and when it is likely to be offered to the market. An assessment should also be made of the timber resource in linear features and in areas of less than 2 ha, as these are not included in current resource inventories.

Other concerns include: a.) a lack of quality students at all levels; b.) woodland resources, particularly in SE and SW England being purchased as investments for their land value without any intention to manage for timber (hobby owners and 'lotting'); c.) the collapse of UK hardwood timber markets and insufficient support for the sector through e.g. Rural Development Plan support; d.) insufficient support for breeding and improvement of native hardwoods and species which may perform well under a changing climate.

Public and private procurement of wood products needs to be encouraged, perhaps through voluntary energy-offsets. These schemes can be quantified by research into the embodied energy and life-cycle energy consumption of wood versus other construction materials

Regional and local marketing advantages need to be explored and promoted, with lessons learnt from continental European working practises.

Forest certification is increasingly important in the wood-chain. Strategies for supporting owners in achieving a required status could be explored (e.g. group certification, incorporation in grant schemes), in collaboration with policy makers. Arguments that support domestic timber production, procurement and marketing need to be developed and communicated, to attract public funding towards innovation and business development. The private sector needs to become less reliant on grant income and to base management decisions on building long-term silvicultural investments.

Closer working relations between interests representing social, environmental and economic elements of the forestry sector must be developed to counter polarisation of strategies and vision.