

Forestry And Industrial Development

John Kerrigan

What does forestry have in common with icebergs?

As this is a symposium and not question time, I don't expect an answer but let me tell you a story I heard recently which led me to ask the question. A member of the Council for Forest Research and Development was speaking to a farmer who had just observed harvesting operations in a forest near his farm. He said it took two men one week to clear 40 acres of forest and his conclusion was that, if that was the contribution that forestry made to employment, then he didn't think much of it.

Now, we can, of course, smile indulgently at the lack of knowledge displayed or, more realistically maybe, we can admit that the comment shows what a poor communications job we in the forestry industry have done. Isn't it disappointing to realise just how true the statement can be "we can't see the wood for the trees"? It's all the more disappointing when one thinks about just what a story there is to tell about forestry and about wood. Just like all that fresh water hidden beneath the surface in the iceberg, there is the great success story of Irish forestry which really should be communicated to a wide public audience. Of course, it's a complex, integrated story, and modern

media don't like that – the sensational headline or the ten second, talking-head soundbite is more effective in selling newspapers or improving the TAM ratings.

Yet, all of us working in forestry have to understand its many facets, make choices amongst conflicting demands and live with the consequences – in many cases, consequences that will last for generations. Indeed, I often wonder whether there is a higher proportion of gamblers in the forestry industry than elsewhere – not many sectors have to invest now and wait 40 years to see if they're right!

And just think about the number of different interests laying claim to a forest! How does one reconcile these claims so that the balance is optimised? What does "optimised" mean – that in itself could produce a long and detailed argument.

Other speakers here today are far more competent than I to comment on these issues but, when talking about forestry in the industrial development context, I think it is very important to say that no part of the forestry sector, – least of all those involved with the industrial exploitation of forests – can afford to ignore this complex and increasingly controversial backdrop. I use the word exploitation deliberately

because, although it is often used negatively and emotively in connection with industrial activity, anybody involved in forestry is an exploiter. Those who sow seeds are exploiting the ability to turn them into young trees. Those who invest in forestry are exploiting its ability to give a longterm return which will help to pay someone's pension; those who walk in the forests are exploiting the beauty and shelter of the trees; those who cut them down and saw them up and the customers who buy the resulting forest products are exploiting their profit potential, utility and aesthetic appeal. All of this activity in Ireland provides jobs for more than 10,000 people or – almost one in every 100 of the labour force. In other words, more than £0.5m is earned every working day of the year by people employed in the forestry industry.

I am sure that most of you in this audience, when you drive behind a load of logs (and you have 60,000 opportunities to do that every year!) will have a fair idea what forest it came from and you will be able to size it up very quickly in terms of diameter, quality and so forth. But give a thought as well to that £0.5m a day in wages and all the other economic spin-offs and I think you can be justifiably proud of the very significant contribution which forestry is making now in this country. Look at these figures:

Table 1
Forestry in Ireland
– Key Indicators

• 50,000,000	
plants grown worth	£3.5 m
• 529,000 hectares of Forest	
• 2,000,000 cu m of	
logs harvested annually	

• Employment 10,000 +	
(Sawmills, panel mills,	
harvesting, transport 4,000?)	
• Sawmill and	
Panel Mill output	£140m
• Exports	£70m
• Import Substitution	£70m
• 60,000 truck loads	
of logs to mills	
• 15,000 loads of	
processed timber exported	
• 15,000 loads of	
processed timber	
to home market.	

By way of comparison, here is a selection of export figures for some other products, to show where wood fits in:

Table 2

<i>Product</i>	<i>£m</i>
	<i>Exports</i>
Mushrooms	28
Glassware	55
Wood/Wood-based Panels	70
Fish	176
Cheese	228
Meat	1000

So, forestry is a major contributor to industrial development in Ireland. It employs thousands of people and helps create employment for thousands more through its demand for goods and services. For example, sawmills pay about £1.5m a year in insurance premiums, over £300,000 in telephone and postage bills and the same again in accountants' fees. They are big electricity users, paying to the tune of nearly £2m a year. The industry generates £70m in exports and £70m in import substitution. All in all, a considerable success story.

But no industry nowadays can

breathe easily if it is to survive - least of all one which is trying to match the needs of today's market on the basis of species selection and planting decisions made decades ago.

Essentially, forestry is a relatively low-margin, cyclical, commodity, mature, global industry. The good news, however, is that global demand for timber will tend to stay ahead of supply for the foreseeable future. Therefore, if – but only if – the Irish forestry industry can achieve and constantly maintain competitiveness, there will be a market for Irish forest products and the success story can continue. However, the next three years will have to see fairly dramatic changes in the structure, cost base and products of the industry, if it is to take on the formidable competition lining up against it in the global market place.

To put that statement in perspective I want to:

- Look at the major developments in Irish forestry-based industrial development in the 1980s and 90s.
- Review how the industry stands today in terms of its strengths, weaknesses, opportunities and threats.
- Do some crystal gazing on likely developments over the next 20 years.
- Outline some of the actions required for industry survival and development in the future.
- And conclude by suggesting a possible size, and shape of industry which might emerge over the next 20 years. Let's look firstly, then, at the main milestones in the industrial side of forestry during the 1980's and 1990's:

1980s

- Big investment in sawmill capacity and technology assisted by the IDA.
- Start-up, failure and takeover of big mill in Fermoy.
- Medite start-up.
- Finsa takeover in Scariff.
- Buoyant market position towards the end of the decade.
- Introduction of SRII Quality Standard for Structural Timber.
- Irish timber dominance in home market for pallet and fencing.
- Sawn timber exports grew from 17,000 cu m to almost 150,000 cu m.
- Share of home market in structural timber grew from negligible to 60%.
- Coillte established as commercial semi-State body.

1990s

- Severe market slump in 1991 - 1993
- Simons Report on export development for sawmilling
- Currency crisis, very high interest rates and high log prices led to massive industry financial losses.
- Market Development Fund assistance helped to stabilise the sector.
- From mid 1993, market turnaround; gradual improvement.
- Sawn timber exports continued to grow from 150,000 cu m to 250,000 cu m (estimated 1993)
- New investment underway in sawmills, Medite, OSB.
- Distribution of log harvest (1992)

Direct to Medite/Finsa	16.0
Log Export	11.0
Poles	0.5
Stakewood	5.5
Sawmills	67.0
	100.0

Next, I would like to summarise

what a "SWOT" analysis of the industry might look like. The SWOT technique looks at the strengths, weaknesses, opportunities and threats facing an organisation or a sector and is a useful way to get a snapshot of how things are at a given point in time.

Strengths

- Disease-free status of Irish forests.
- Several experienced and technically advanced production units.
- Well established in Irish and UK markets.
- Spectacular record of success in home and export market penetration over more than a decade.
- Some experience in other markets, e.g. mainland Europe for panel products and residues and Japan for machined timber. Medite, for instance, sells to more than 50 countries.
- Introduction of SRll and kiln drying for structural timber.
- Establishment of Coillte as a semi-State company with reducing cost base and commercial mandate.
- Simons Report and Simons Task Force have given more detailed knowledge of industry issues in sawmilling.
- Industry information database improving gradually.
- Medite expansion and OSB mill help to provide demand balance for pulp material and residues.

Weaknesses

- Quality of Resource.
- Supply limitations in the medium term.
- Mismatch of raw material cycle with the market/business cycle.
- Monopoly supplier.
- Inefficient, very time-consuming and sometimes unresponsive raw

material supply arrangements.

- Lack of independent industry disputes resolution mechanism.
- Log price is not linked to market prices and can move in contrary direction or in a disproportionate way.
- Conflicting demands for scarce raw material, e.g. stakes versus pulp
- Sometimes irrational competition for log supplies because of mismatch of available volume to mill capacity. High fixed mill overheads drives need for high capacity utilisation, even at uneconomic log costs.
- Commodity market characteristics.
- Relative size in relation to markets means Irish sawmills are price takers.
- Dependence on Irish/UK markets.
- Rigid/unclear/inconsistent public policy.
- Lack of cohesive institutional/organisational framework.
- Lack of timber education at Third Level.
- Production units scale, cost structure and relative lack of financial strength.
- Family-owned companies can be resistant to external pressures for change.
- High proportion of low value-added products (sawmills).
- Inadequate research and development effort, to develop value-added products.
- Inefficient harvesting, measurement and transport logistics.
- High transport costs to export markets.

Opportunities

- Projected growth in global demand for timber and wood products.

- Environmental and plant health difficulties for North American producers have reduced exports to Europe.
- Environmental factors favour wood over other materials.
- Opportunities in specific markets/niches.
- Opportunities for increased small-wood value-added through existing (e.g. fencing) and new (e.g. glulam, LVL) products.
- Further import substitution in Irish market.
- Opportunities for market cooperation in Ireland/UK.
- Expansion in demand for residues.
- Increased volumes of supply from Coillte in medium term.
- Growth in supplies from private sector/NIFS in long term.
- Opportunity to influence European Standards through CEN attendance/monitoring.
- Improved industry/education/research coordination/results dissemination through COFORD.
- Benefits from S.T.E.P. (Structural Timber Education Programme) in medium term.
- Establishment of National Forestry Institute.
- Forest Industry Strategy Study will help set strategic direction.
- Positive EU/Government/National Plan indications for forestry and wood processing sector.
- Implementation of sawmilling restructuring proposals.
- Utilisation of planned/recent new investments to improve competitiveness.
- Stable industrial relations environment through PESP/Programme for Competitiveness and Work.

Threats

- Adverse global economic or natural occurrences.
- Risk of heavy dependence on one species.
- Growth in demand for sawn softwood is projected to be less than for other timber products/uses.
- Potential competition in medium term (3 - 5 years?) from lower cost, more effective producers, especially Eastern Europe and from producer countries with increasing outputs, e.g. New Zealand, Chile.
- Increased volumes from UK forests.
- Saturation of UK market.
- EU membership for Scandinavian countries.
- GATT Agreement.
- Substitute materials may reduce demand for wood.
- OSB mill/Medite expansion may create over-demand for smallwood, adversely affecting supplies/prices for sawmills.
- CEN Standards may undermine Irish timber for some applications.
- Environmental factors.
- Lack of coherent policy for the sector/industry.
- Forestry/timber processing-sectors are under separate EU Structural Fund Operational Programmes.
- Competition Act threat to contract/restructuring arrangements.

So, with the perspective of where the industry has come from and where it stands now, let's look next into the crystal ball and think out loud about likely developments over the coming 20 years. In many ways, this is an impossibly long timeframe in the context of how quickly things change nowadays, but bear in mind that some trees which are likely to be turned into

structural timber at the end of that 20 year period are already standing in the forest for 20 years!

The Forest Service has rightly decided to ask all participants in the industry for their views on what sort of forestry strategy should be put in place for the next 20 years. In preparing its submission, the Irish Timber Council put forward the following as the principal forces which we feel are likely to affect the processing side of the industry over the timeframe of the strategy:

- Global demand for sawn softwood is likely to grow, but slowly; demand for wooden panel products is likely to grow more rapidly.
- The availability of logs is likely to be a limiting factor for several years for the Irish forestry industry.
- In the medium to longer term, the expansion in log supply will be very significant. By the end of the strategy study period, volumes in the 20 cm plus category will have tripled compared to 1992, while those in the 14 - 19 cm category will have doubled. Supplies from private forests will begin to impact on overall log availability towards the end of the strategy study period and supplies from Northern Ireland forests will increase by more than 50%.
- Supply of hardwood logs is unlikely to be a significant factor in the sawmill industry during the study period. Global forestry industry competition in the sawmilling industry will increase. Producer countries such as Russia, the Baltic States, New Zealand and Chile will be increasingly effective competition, necessitating an initial, major step improvement in Irish competitiveness and continuous smaller improvements thereafter. Examination of efficient sawmills in other countries suggests that output per worker, for example, should be a multiple of current levels as just one factor in competitiveness.
- Various factors will lead to pressure for new/revised CEN Standards, some of which may be inimical to Irish timber.
- Low-cost producers, changes in Standards and environmental factors will depress margins for pallet timber, probably to uneconomic levels, especially in export markets.
- Adequate profitability on smallwood processing will depend on adding-value by conversion of some smallwood to structural uses (e.g. studding; fencing; glulam/LVL and other reconstituted products).
- Later in the period, substantial extra volumes of residues will become available, indicating the need for further residue-using industries in Ireland.
- Given the projected growth in large sawlog, the product mix in most sawmills will tend to change substantially in favour of structural timber, driven by log supply changes but depending crucially on market demand to absorb the changed output.
- Matching the available supply to the market factors outlined will require serious commitment to research and development and to market expansion by substituting structural timber for other materials, e.g. concrete/steel.
- Reconstituted and engineered wood products can be expected to be of increasing importance.
- Growth in UK homegrown timber and increasing volumes of Irish

timber going to the UK will lead to competition and market pressures. Cooperation with UK producers will be required as well as success in other markets for Irish timber.

- The above factors suggest that, over the 20 year period, there will be a trend in Ireland towards large, integrated timber processing plants able to process small and large sawlog into a range of value-added sawn products and reconstituted timber products (utilizing both small sawn wood and residues) to gain optimum usage on one site of the entire raw material supply available to a particular processor.
- It is also likely that the larger Irish units will become international in character and scale through acquisition or establishment of processing units in the main markets or in timber producing countries.
- The commodity nature of the industry, coupled with the relative increase in the Irish share of total timber products supply will expose log prices to large cyclical swings and perhaps to a downward trend over time. As a response to pressures for greater competitiveness, improved efficiencies in the supply chain will be essential, including a stable, long-term supply and market-related pricing mechanism and greater efficiencies in areas such as timber measurement and harvesting/haulage logistics. Road improvements and major reductions in transport costs to export markets will be essential. The forest industry in Ireland will have to adapt to an "all Ireland" approach and work in close co-operation in order to achieve all possible opera-

tional efficiencies.

Having looked at developments over the last decade and a half, then looked at the current status of the industry and finally looked at the principal forces likely to have an impact in the future, we have some indication of the scope of the job to be done, if we are to gain optimum advantage from two facts:

- The supply of timber from Irish forests will show a very big increase over the next 20 years.
- Demand for timber is likely to exceed supply, worldwide.

However, despite what we sometimes seem to think, nobody will buy Irish timber products just because they love the Irish! Logs will move out of Irish forests, sawn timber and residues will move out of Irish sawmills and MDF, OSB and chipboard will move out of panel mills, only if those companies can offer a combination of quality, price and service at least as good as the competition - whether that competition is Irish, British, Eastern European, Chilean, New Zealand or any other.

Given the success of the industry to date, there is no reason why we should be afraid of this challenge - but there is certainly no reason why we should feel too calm about it either! I believe that success will depend primarily on the vision, leadership, entrepreneurship and energy of those who own and operate the forest resource, the sawmills and the panel mills and on the quality of the support they receive from education, business, research and the development agencies. I would have to say that, in many ways, ours is an industry that has succeeded in spite of itself, as the record of pulling together in a common direction is not that great. On the other hand, if it is true

that the track record of the last decade was achieved by a not particularly well-united-industry, just imagine what could be done if we could collectively get our act together!

I believe that the Forestry Strategy Review which is going on at present may provide a unique opportunity for industry-wide agreement and I hope all the players will take that opportunity in an open-minded, objective and constructive way. ITC has put forward to the Review Committee the following suggested actions to be taken in the short, medium and long term.

Short term: (1994-1997)

Action

- Conclude Strategy Review
- Establish institutional framework and agree Forestry Industry Strategic Plan.
- Develop industry forecasting model and database to enable optimum matching of raw material resource with existing and projected market opportunities.
- Finalise and implement log supply contract/pricing index mechanism.
- Proactively promote industry co-operation in transport, harvesting and marketing.
- Appoint Industry Regulator to ensure equitable treatment amongst stakeholders and to provide an important element of a balanced, comprehensive framework for development of the industry.
- Finalise 5 year research and development programme.
- Establish National Forestry Institute.
- Identify/test new markets.
- Improve Irish and UK market co-operation.
- Refine and implement sawmill

restructuring programme as an urgent priority:

- Substantial improvement in competitiveness.
- Reduce unit-costs.
- Reduce capacity/rationalise locations.
- Management development.
- Efficiency investment.
- No capacity expansion for five years.
- Agree on standard methods for timber measurement.
- Develop proposals for road improvements.
- Improve harvesting/haulage logistics.
- Review/report on possibilities of reduction of transport costs to UK/more distant markets.
- Support S.T.E.P. Programme.
- Include business skills dimension in Forestry Degree programmes.
- Explore markets for added-value/new product opportunities.
- Develop promotional programme for timber to include positive environmental aspects; comparisons with other materials; community benefits of forestry; information to politicians/ influencers/ communities re forestry/timber processing benefits. -
- Monitor/influence CEN developments.
- Ensure political understanding/support for forestry industry.

Medium term: (1997-2000)

Action

- Continue short-term activities where relevant.
- Evaluate results of first COFORD 5 year programme and update.
- Identify new added-value products.
- Reduce dependence on pallet timber.

- Introduce value-added uses for small roundwood e.g. studding, fencing, glulam/LVL, panels.
- Explore new residue using opportunities.
- Expand capacity utilisation through extra log supplies.
- More proactive involvement in EU/CEN/OES etc. Committees.
- Research/monitoring/dissemination of global trends.
- Co-operation with UK producers.
- Promotion of sawn timber internationally in co-operation with other producers.
- Increased output of structural timber.

Long term: (2000-2015)

Action

- Continue with short/medium term actions as relevant.
- Reduce monoculture dependency.
- Establish additional residue using industries.
- Evaluate results of COFORD programme and update.
- Expand industry capacity.
- Utilise private sector supplies.
- Review Coillte operations and ownership.
- Develop larger Irish units as integrated timber processing plants.
- Internationalise larger Irish units.

ITC has estimated that the once-off costs of implementing this action programme total about £110 million and the continuing annual costs are about £5.5 million. Some existing expenditure is duplicated in the continuing annual figure but, on the whole, if one spreads over the period the capital investments included, for example, for new residue-using industries, we are talking about net extra spending of

about £10 million per annum by all sources, public, private and EU. Of course, these figures don't include the existing and planned significant amounts projected to be spent under the Forestry Operational Programme, CAP Reform Schemes and so on. I would make two points in support of this proposed Action Programme:

- Without initial and on-going spending on efficiency and competitiveness improvement, the forestry industry is unlikely to have a successful future and sunk investment to date would be put at risk. There is therefore an element of "no choice" involved.
- Many of the actions proposed would result in incremental benefits arising from improved competitiveness, higher prices due to more effective marketing/promotion and higher revenues resulting from value-added products.

It has been estimated that the total value of output of the timber processing industry (i.e. sawmills and panel mills) should exceed £300 million by the year 2000. If, through the incremental investment incorporated in these actions, that figure can be substantially increased because of greater efficiency, added value, etc., then an overall net extra annual expenditure of £10 million covering both "no choice" and "incremental benefit" expenditure is defensible. Obviously, case-by-case justification should be demanded as each action is considered at the appropriate time.

I want to conclude the crystal ball gazing by looking at what the industry might look like in 20 years time.

Table 3
*Irish Forestry-Based
Industrial
Development – 2015*

<i>Key Indicators</i>	<i>1994</i>	<i>2015- probable</i>	<i>2015- possible</i>
Hectares of forest	529,000	740,000	960,000
Annual logs harvest (cu m)	2,000,000	3,500,000	4,000,000
* “Industrial” employment	4,000	5,200	6,050
Mill output (constant £m)	140	355	410
Exports	70	275	325
Import Substitution	70	80	85
Truckloads to mills/year	60,000	105,000	120,000
Loads exported	15,000	36,000	42,000
Loads to home market	15,000	17,000	18,000

* Sawmills, panel-mills, other primary processing, harvesting, transport.

Obviously, this must be highly speculative but the projections listed in Table 3 are attainable.

Finally, I want to return to my comment at the beginning of this address about the need for effective communications. There are at least four reasons why I believe there is an urgent need to get our act together on this issue:

- Forestry based industrial development is one of Ireland’s fastest growing industries and thousands of jobs depend on it.
- Together with tourism and the food industry, forestry will be a key contributor in coming years to rural development.
- Competing materials (concrete, steel, PVC) have done a much better job of convincing consumers of their benefits.
- Misinformation, misunderstanding and lack of information have positioned wood negatively from an environmental point-of-view, even though wood has a far better story to tell on environmental grounds than competing materials.

Over the past few years, some positive steps have been taken which should certainly be welcomed and acknowledged:

- The Wood Marketing Federation advertising campaign of three years ago.
- The Forest Service/Irish Forest Industry Chain videos for schools.
- Wood marketing Federation sponsorship of the ‘Our House’ TV series.
- The Structural Timber Education Programme.
- The COFORD “Irish Timber – Use and Applications”.
- The planned ITTA promotional campaign.

But there must be a more consistent and better co-ordinated approach in our industry so that the positive image which wood should enjoy on the basis of objective criteria is put before the public.

John Kerrigan, Director, Irish Timber Council