

## **“Tropical Deforestation – why bother?”**

### **(An Irish foresters perspective)**

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**\* Paper given at public meeting organised by Society of Irish Foresters, December 1988**

A former and esteemed member of this society, the late Dr. Eileen McCracken informs us in the introduction to her book “The Irish Woods since Tudor Times” that in 1600 about 12.5% of Ireland was under forest, this had reduced to 2% by 1800. When the inquiry committee was set up in 1907 under T.P. Gill, Secretary of the Department of Agriculture and Technical Instruction, to examine the problems associated with the deforestation of Ireland the area under forest had reduced to less than 1.6%. The ready availability of Irish woods and forests to help the 1914 – 1918 war effort reduced this cover even more, a reduction which continued for another eleven years.

Unlike forest cover in other climates, the reduction of forest cover in Ireland had little impact upon the physical welfare of the ordinary people of Ireland. They relied on the forest for neither fuel or food. Yet there was a realisation that in spite of the generations of deprivation and hardship, woods and forests were key cultural and economical elements to the identity of a new and struggling nation. Their demise was lamented in song and verse and led to the ready acceptance at an early stage of the new nations development, that their replacement was essential.

Today Irish people know the value of their forests and are grateful to the enlightenment of previous generations for their foresight and sacrifice. Ireland’s forests now cover approximately 6% of the land mass of the State and represent an investment valued by the Review Group on Forestry in 1985 at between £600 million and £1,100 million. Although by European standards our area of forest is small, it does represent about £300 for

Table 1: WOOD IMPORTS 1977-1987

DIVISIONS	1977			1987	
	Value of Imports (IR£1977)	*Value in (IR£1987)	Imports in Tonnes	Value of Imports (IR£1987)	Imports in Tonnes
24 Wood Raw Materials	39,015,000	83,771,569	256,561	55,143,000	198,659
25 Pulp/Waste paper	6,199,000	13,310,264	33,260	7,649,000	20,853
63 Wood/Manufacturers	19,480,000	41,826,738	61,027	44,420,000	74,674
64 Paper/paperboard	84,613,000	181,677,913	222,723	298,763,000	385,515
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	149,307,000	320,586,484	573,571	405,975,000	679,701

\* By General Wholesale Price Index.

every citizen of the state; probably the largest per capita investment in afforestation in Europe.

Historically this investment had more of a social dimension than an economic one, in so far as the choice criteria for land use was based on what was best for farming rather than what was the best economic investment. This social dimension recognised mainly the employment potential of forestry but also in a vague sort of way, its contribution to the social ills of rural Ireland as well as improving its landscape. Like the arts, everybody was in favour of the enterprise. It was expected of course to make a financial contribution, perhaps too much in the light of the type of land that was planted. The break even date, not to mention the pay back dates, were lost in the uncertainties of the future.

Ireland's forests which mainly comprise of conifer species, are indeed now making a substantial impact on her national trade statistics. They contribute handsomely to the reduction of timber deficits which are now an estimated 55% as opposed to 85% ten years ago. However despite this favourable situation, the low percentage of broadleaf species in the forest estate results in Ireland importing tropical timbers to satisfy the demand for high quality hardwood.

### **Tropical Wood Imports**

Trade in tropical hardwoods within these islands was originally based on supplies from the British colonies. There are two main end-use areas, furniture and joinery. The furniture trade in solid wood was originally based on Honduras mahogany. On depletion of this resource the trade turned to substitutes; African mahogany and Shorea species from South East Asia. Brazilian mahogany has now become a major species.

The joinery trade was based on softwoods. With the decline in quality, allied to a lack of preservative treatment, the Irish joinery trade sought a species which would withstand the rigours of the Irish climate. Iroko, commonly referred to as "Teak", was found to be suitable and is now the major species imported.

In order to determine trends in imports of tropical timbers an examination of the trade statistics for timber and timber products imports, their volumes, values and costs was made for the years 1977 and 1987. The statistics for total wood imports are given in table 1 and for imports of tropical timbers in table 2.

Following consultations with the Central Statistics Office, it was decided that all cash values be converted to 1987 (Irish) pounds using the General Wholesale Price Index. This was considered more appropriate than the Consumer Price Index since the product was subject to further manufacturing processes. The index is 451.2 for 1977, and 969.8 for 1987. The base year is 1953. In effect this has meant that general wholesale prices increased by

Table 2: TROPICAL WOOD IMPORTS – 1977-1987

COUNTRY	1977 Imports			Price per Tonne IR£1987
	Value in IR£(1977)	*Value in IR£(1987)	Tonnes	
Ivory Coast	2,078,575	4,467,646	11,254	397
Ghana	1,497,493	3,218,681	5,980	538
Brazil	1,897,332	4,078,086	7,755	526
Europe	303,842	653,072	323	2,022
Malaysia	272,720	586,179	1,892	310
Philippines	283,375	609,080	1,040	586
Nigeria	83,893	180,318	296	609
Congo	1,086	2,334	2	1,167
Liberia	108,528	233,268	538	434
Singapore	47,719	102,566	224	458
Zaire	—	—	—	—
Taiwan	7,560	16,249	25	648
Cameroon	3,783	8,131	23	361
Guyana	44,943	96,600	149	649
Kenya	32,330	69,489	89	781
Mozambique	28,681	61,646	39	1,571
S.A & Namibia	567,372	1,219,498	1,988	613
Argentina	9,207	19,789	36	555
Indonesia	41,143	88,432	245	361
Mauritania	2,396	5,150	19	269
Cape Verde	825	1,773	4	443
Central Africa	10,598	22,779	52	438
Somalia	3,232	6,947	18	386
Madagascar	3,280	7,050	15	470
Honduras	4,043	8,690	10	832
Belize	3,543	7,615	17	443
Panama	6,606	14,199	34	421
French Guyana	3,704	7,961	20	398
Ecuador	3,545	7,620	7	1,089
Bangladesh	2,385	5,126	17	302
Burma	15,931	34,242	8	4,566
Thailand	896	1,926	1	1,825
South Korea	28,572	61,412	74	830
Japan	38,508	82,768	39	2,150
Angola	4,983	10,710	14	765
Uganda	4,156	8,933	18	496
Total Tropics	7,446,785	16,005,967	32,263	496

\* By General Wholesale Price Index.

tariff numbers 44.03, 44.04, 44.05, 44.11, 44.13, 44.14)

COUNTRY	1987 Imports			Change in Price per Tonne (%)	Change in value of imports since 1977 (%)
	Value in IR£ 1987	Tonnes	Price per Tonne IR£ 1987		
Ivory Coast	7,694,556	25,524	301	-24	72
Ghana	6,618,665	17,993	368	-32	106
Brazil	3,815,511	6,413	595	13	-6
Europe	1,673,495	780	2,146	6	156
Malaysia	284,690	774	368	19	-51
Philippines	290,635	589	494	-16	-52
Nigeria	107,056	223	480	-21	-41
Congo	46,524	108	429	-63	1,893
Liberia	66,741	86	776	79	-71
Singapore	31,671	76	418	-9	-69
Zaire	19,322	20	966	-	-
Taiwan	17,888	17	1,058	63	10
Cameroon	364,336	574	635	76	4,381
Guyana	5,240	10	502	-23	-95
Kenya	8,092	6	1,349	73	-88
Mozambique	-	-	-	-	-
S.A. & Namibia	-	-	-	-	-
Argentina	-	-	-	-	-
Indonesia	-	-	-	-	-
Mauritania	-	-	-	-	-
Cape Verde	-	-	-	-	-
Central Africa	-	-	-	-	-
Somalia	-	-	-	-	-
Madagascar	-	-	-	-	-
Honduras	-	-	-	-	-
Belize	-	-	-	-	-
Panama	-	-	-	-	-
French Guyana	-	-	-	-	-
Equador	-	-	-	-	-
Bangladesh	-	-	-	-	-
Burma	-	-	-	-	-
Thailand	-	-	-	-	-
South Korea	-	-	-	-	-
Japan	-	-	-	-	-
Angola	-	-	-	-	-
Uganda	-	-	-	-	-
Total Tropics	21,044,422	53,193	396	-20	31.5

2.149 times in that ten year period. This compares with a consumer price increase of 2.752 times for the same period.

While imports of all wood raw material reduced by 23% in the period 1977 to 1987, imports of tropical wood increased by 64%. The imports from the Ivory Coast, the largest supplier, increased by 126%. Tropical wood imports therefore constitute an important and significant element in the overall wood imports. In 1977 it constituted 13% of the wood raw material imports. This had risen to 27% in 1987.

Table 2 gives the accumulated totals of tropical wood imports as obtained from custom tariff numbers. An examination of the custom tariff numbers (tariffs, 44.03, 44.04, 44.05, 44.11, 44.13, and 44.14.) reveal that tropical wood imports include wood raw material as well as manufactured and part manufactured products which often reappears in exports of wood manufactured products. From the descriptions given in the trade statistics it is difficult to ensure that the products within the custom tariffs and trade divisions are comparable in every respect for the years under study.

As can be seen from Table 2

– Ireland now import 86% of all her tropical wood requirements from three countries. (In 1977 the proportion was 72%.)

38% from Ivory Coast (27% in 1977)

31% from Ghana (20% in 1977)

18% from Brazil (25% in 1977)

– 58% of the remainder comes through Europe while the rest comes from 11 different countries;

6 in Africa

4 in Asia

1 in South America

– In the years 1977 – 1988, the value of tropical wood imports increased by 72% while the volume has increased by 65%. The price per tonne decreased in effect by an average of 20%. This price decrease varied from 32% in the case of Ghana; 24% in the case of the Ivory coast. Brazil, Liberia, Cameroon, Kenya, Malaysia recorded price increases in excess of 10%.

To put this into context, in the ten year period under review Ireland experienced a drop of 15% in the price paid for wood raw material while the export of Irish wood raw material had a drop of 9%. Exports have therefore been doing comparatively well.

On the other hand tropical countries get 20% less for their wood, the Ivory Coast and Ghana getting 24% and 32% less respectively. This explains the use of considerably more African Wood than was used in 1977.

### **Ecological effects**

Apart from the economic consequences of such importations there are ecological consequences also.

It is estimated that the average production per hectare i.e. harvestable wood from mature tropical forest is about 20 well scattered cubic meters. The remainder of the forest is of low quality and is invariably felled and, if not used for either fuelwood or charcoal, is burned on site.

The volume of tropical wood imports was 53,193 tonnes in 1987, a direct conversion at the rate of 20 tonnes per ha. gives a tropical forest area of 2,700 ha. per annum to meet Irish needs. However some of the import tariffs include elements of processed wood e.g. parquet flooring etc and the conversion factor of 20 tonnes per ha. is unlikely to be correct. An area closer to 4,000 ha. or even greater is more likely. Whether all this area represents permanent destruction of the tropical forest resource cannot be definitely stated. There have been considerable efforts made in many parts of the tropics to redress the destruction of forests. Of necessity there has to be a reliance on exotic species such as Eucalyptus for the reforestation efforts. This in turn can affect the flora and fauna associated with these natural forests and can indeed threaten the genetic diversity which is regarded as the reason d'être for all conservation.

### **The role of Ireland and Irish Foresters**

In satisfying our tropical wood demands we are using the equivalent production of about 10 hectares (almost 25 acres) of tropical forest per working day. We are using it in the redecoration of our pubs, our shop fronts, our offices, our homes, our Universities and even our picket fences. Our demands increased by 64% in ten years. If we are to reduce this demand we must look for substitute or alternative supplies. We know that we can produce wood in Ireland at a greater rate than almost anywhere else in Europe, but can we substitute any of this wood to reduce our hunger for tropical woods?

Most of our present wood production is in two species Sitka spruce and lodgepole pine which at present, helps to supply more than 50% of our sawn wood requirements. We expect a doubling of our home grown wood supply in the next 10 years and a tripling within the next 20 years. Most of this wood will be used in the non-visible end of timber use i.e. roof trusses, conventional rafters, joists and general construction. At present approximately 4 cubic meters of wood is used in the average house construction. Taking conversion and other losses into account, this is broadly equivalent to the annual production on one hectare of Irish forest.

### **Use of alternative species**

Up to now very little lodgepole pine has been used in joinery. Recent research into the uses of lodgepole pine has shown that the species can

replace imported red deal for joinery purposes. The species has another attribute, it is decorative and given a change in wood use fashion, it could be used as a decorative wood in panelling.

Within the next ten years a radical change in our dependancy on tropical woods for decoration could shift to lodgepole pine and Douglas fir if there is a demand that these species be used, which could come about with a real increase in the price of tropical woods.

Ash grown to veneer quality could find a ready market as a substitute for much of Ireland's tropical imports. At present Ireland is largely dependant upon the United States of America for most of her joinery ash. Traditionally in Ireland ash is grown for hurley manufacturing which has a different rotation length to that required for decorative, veneer or joinery purposes. As yet very little genetic or tree improvement work has been done with this species in Ireland. In effect Ireland is dependant upon wild stock for seed with little more than the broadest of phenotype selection. Recent times has seen the import of ash seedlings from Europe which in time may improve selection processes.

If an impact is to be made upon the importation of decorative woods genetic research must continue on ash, cherry, and sycamore together with those conifer species with potential, Douglas fir and lodgepole pine. Ireland could stand to win handsome markets for quality material in the years ahead when the market experiences a world shortage of quality hardwoods. Tree improvement work on sweet chestnut and oak, could prove to be worthwhile but in the context of the longer rotations necessary for these species, they are unlikely to receive major attention unless there is a new realisation of the future economic benefit of broadleaf production.

Our national effort should provide for the replacement for our dependency on tropical wood. A strategy orientated towards quality broadleaf production should receive priority. To date calls for broadleaf production has been primarily made by conservationists with particular emphasis upon indigenous species. While this may be a valid conservation objective, the economic realities (within which Irish foresters must operate) are that broadleaf production cannot at present compete with conventional conifer species. With the disappearance of much of the tropical forests, a new urgency exists to provide for the demands of the future where wood usage will make new demands upon quality, particularly visual quality. Our indigenous species can provide for this market niche. They will not do so however unless there is a substantial increase now in investment into tree improvement.

### **Ireland's Contribution to Development**

Ireland has had a long tradition of contributing to the development of emerging countries, particularly in areas of education and the spread of



Christianity. Latterly, Ireland has engaged in other activities more closely associated with economic development. However, as yet only a handful of Irish foresters have had the opportunity of working in developing countries. In tandem with other disciplines, foresters are the appropriate people to comprehend the problems associated with deforestation; and while most Irish foresters may not be familiar with the vagaries of tropical forestry practice, it is not in either the nature or tradition of Irish people, and Irish foresters in particular, to shun challenges.

We must recognise the legitimate right of tropical wood exporting countries to harness their forest resources, in fact it is right that we encourage them to do so but only within the context of sustained yield management. Given the opportunity to serve as part of Ireland's contribution to aid programmes, I would expect that many of our foresters would play their part in helping to redress the silvicultural, economic and social problems associated with tropical deforestation.

Writing in 'The Foresters Journal' in 1918 about the destruction of Irelands forest The Marquis MacSwiney of Mashanaglass said, *"Time has come for action, for immediate action, there is not an instance to be lost. It rests with us to repair the damage done and to provide for the future; it our duty to do so and we cannot fail in this sacred duty without incurring the legitimate reprobation of generations to come."*

Time has come for action today in a much larger theatre. The commitment that served to lay the basis for Ireland's forest industry today can now help to lay the foundations of change in those countries which face social, economic, and ecological disaster by our hunger for the fruits of their forests. Our foresters can provide that commitment given the opportunity to do so. The future awaits their service.

#### Acknowledgements

I wish to thank John Downey, Damien Dunne, Peter Dodd, Declan Ward, Kevin Collins, Ray Keogh, Pat Hannick, Veronica Dunne and Angela Hogan, of the Forest Service; Pat Colclough and Gordon Knaggs of Eolas, whose friendly help in so many different ways is greatly appreciated.

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