UNECE Timber Committee Market Report for Ireland 2012

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Table of Contents

Tables

1.0 Irish economy-an overview

1.1 2010-2011[1,2]

Real Gross Domestic Product (GDP) recorded annual contractions in 2008, 2009 and 2010, resulting in a peak-to-trough decline of 12.4% (Q4 2007 to Q4 2010). Real GDP returned to growth in 2011 (1.4%) on the back of a strong export performance[3]. In 2011, GDP was valued at €159 billion. This is the first time since 2007 that the Irish economy experienced positive GDP growth in a full year. Export growth slowed in 2011 due to an economic slow-down in some of Ireland's key markets. However, it still remains the main positive in the Irish economy, continuing to offset falls in domestic demand.

- At market prices, GDP was worth €159 billion. It grew in volume by 1.4% over 2010.
- Gross National Product (GNP), declined by 2.5%.
- The domestic economy has remained constrained by high unemployment, falling Government spending and the sharp fall in investment. In 2011, the domestic economy contracted by 4.1%.
- In 2011, construction output declined by 20.9% over 2010[4].
- The number of house completions fell to under 10,500.
- Exports performed strongly in 2011, growing by 5.1% in value over 2010.
- Personal consumption, which accounts for nearly two thirds of domestic demand, fell by 2.4% while Government expenditure was 4.3% down on 2010.
- Investment in residential construction declined by 28.2% over 2010.
- Data from the quarterly national housing survey (QNHS) as provided by the Central Statistics Office (CSO) show that the numbers at work in 2011 fell by 38,000.
- At year end, the Irish rate of unemployment stood at 14.4% up from 13.6% in 2010. Around 330,000 jobs have been lost since employment peaked in the second half of 2007, with the construction, retail and manufacturing sectors particularly hard hit. The construction sector has accounted for around half of the total jobs lost[3].
- Inflation picked up over the course of 2011, with the annual CPI ending the year at 2.6%, up from 1.0%% a year earlier.

1.2 2012-2013[4]

With domestic demand still expected to act as a drag on the economy in 2012, albeit a moderating one, the external sector is again likely to be the principal factor determining growth in the Irish economy. Ireland is continuing to undertake a comprehensive adjustment programme to reduce its macro-economic imbalances and restore its banking system to health. Despite robust export growth, weak domestic demand and ongoing fiscal consolidation have prevented an economic recovery from unfolding so far. Recent economic forecasts[5] produced by the Irish Economic & Social Research Institute (ESRI) forecast that:

- The slowdown in the UK and the Euro area represent clear downside risks to Ireland in 2012. However, that said the US is expected to expand at a reasonable pace in 2012. Export growth remains the main positive for the economy and is likely to be the most significant driver of growth in the short to medium term[6].
- Government spending will continue to fall as further fiscal consolidation is implemented. It is estimated the Government will have to enact another circa €9bn in austerity measures in the three year period 2013-2015 to return the Government deficit to sustainable levels.
- A very modest rise in GDP of 0.6% is forecast for 2012.
- Flat employment growth is expected in 2012 with unemployment remaining stable at 14.4%.

[1] http://www.esri.ie/publications/latest_publications/view/index.xml?id=3558
[2] http://www.esri.ie/UserFiles/publications/QEC2012AUT_ES.pdf
[3] http://www.finance.gov.ie/documents/publications/reports/2012/irisheconpersmay2012.pdf
[4] http://www.scsi.ie/constr2012
[5] http://www.esri.ie/UserFiles/publications/QEC2011Sum_ES.pdf
[6] http://www.bankofireland.com/fs/doc/wysiwyg/d3838-boi-gm-irish-economy-overview-may-2012.pdf

- It is expected that the volume of exports of goods and services will increase by 5.6% in 2012 and by 6.2% in 2013. The actual and expected growth in the imports of some key trading partners is shown in Table 1[7].

Table 1: Actual and forecast import growth (%) in key markets of the OECD (2009-2013f).

Trading partner	Actual and forecast import volume growth (%) in key export markets				
	2009	2010	2011	2012f	2013f
Austria	-6.3	3.3	1.9	1.1	2.5
Belgium	-4.6	3.6	1.7	0.0	2.0
Canada	-8.2	7.3	2.9	1.6	2.7
France	-6.2	5.2	2.3	0.5	2.6
Germany	-3.1	5.5	3.0	2.4	3.1
Netherlands	-2.8	5.2	1.3	2.9	2.3
United Kingdom	-6.3	4.6	0.8	0.8	0.3
United States	-9.0	8.0	2.7	1.3	2.9
OECD region	-7.0	6.3	2.5	0.9	2.5

- It is forecast that the rate of unemployment will average 14.8% in 2012 and 14.6% in 2013.
- Inflation is set to rise by 1.9% in 2013.
- Private consumption is forecast to fall by 2.3% in 2012 and 2.3% in 2013.
- The output of the construction sector is forecast to decline by a further 14.5% in 2012 and by 6.6% in 2013.
- The Government's National Recovery Plan[8] targets a total adjustment of €15bn over four years with the objective of reducing the annual deficit to less than 3% of GDP by 2014[9]. Of the €15bn, some €10bn will come from expenditure cuts and €5bn from tax increases.
- If these targets are achieved, the debt/GDP ratio will peak at 108% in 2013 before beginning a downward trajectory thereafter.

2.0 Market drivers

2.1 Construction activity

The demand for forest products is closely related to the level of house building, to timber frame use and to demand in key export markets[10]. In Ireland, the level of residential house completions has declined significantly since 2006[11].

Overall, the Irish construction sector remains in an exceptionally weak phase. Having peaked at close to €39 billion or almost 25% of GNP in 2006, the ensuing adjustment has led to the value of output falling to €8.7 billion in 2011, or 7% of GNP. The fall-back in construction will see the value of output decline again this year to an estimated €7.5 billion, or by 14.5% in volume terms. Thus construction will record its fifth year in a row of a contraction in output, reaching just 6% of GNP. The preliminary assessment for 2013 is for a further decline in the volume of output of 6.6% as all sectors are expected to be weaker in 2013.

2.1.1 Irish housing output

The Irish housing market continues to stagnate. The continuing weak demand for new housing units is illustrated by the decline in planning permissions being granted. In 2011, house completions declined by 28.2% over 2010. However, a bottom to the residential property market does not appear to be imminent[12].

[7] http://www.oecd.org/eco/economicoutlookanalysisandforecasts/economicoutlookannextables.htm
[8] http://www.budget.gov.ie/The%20National%20Recovery%20Plan%202011-2014.pdf
[9] http://www.davy.ie/content/pubarticles/nationalplan20101125.pdf
[10] http://www.coillte.ie/fileadmin/templates/pdfs/BaconReport.pdf
[11] http://www.environ.ie/en/PublicationsDocuments/FileDownLoad,20136,en.pdf
[12] http://www.bankofireland.com/fs/doc/wysiwyg/d3838-boi-gm-irish-economy-overview-may-2012.pdf

Continued uncertainty about prices, combined with a desire to see a sustained stabilisation before people enter the market means that housing demand is likely to remain weak in 2013[13]. The actual and forecast output of the sector for the period 1990-2012 is shown in Table 2**[14].**

Table 2: House completions in the Republic of Ireland (1990-2012f).

	House completions	**Growth rate 1990 = 100**
1990	19,539	100.00
1991	19,652	100.58
1992	22,464	114.97
1993	21,391	109.48
1994	26,863	137.48
1995	30,575	156.48
1996	33,725	172.60
1997	38,842	198.79
1998	42,349	216.74
1999	46,512	238.05
2000	49,812	254.94
2001	52,602	269.22
2002	57,695	295.28
2006	68,819	352.21
2004	76,954	393.85
2005	80,957	414.34
2006	93,419	478.12
2007	78,027	399.34
2008	51,724	264.72
2009	26,420	135.22
2010	14,602	74.73
2011	10,480	53.63
2012f[15]	5,000	25.59

2.1.2 Repair, Maintenance and Improvement (RMI)

In 2010, the total housing RMI market was worth an estimated €2.83 billion. This covers investment by households in major housing improvements and minor housing repair works, as well as public sector investment in the refurbishment of the public housing stock. In terms of expenditure by the private sector, the overall volume of housing RMI expenditure is estimated to have declined by 10% in 2011, as household incomes continued to be affected by adverse developments in the economy.

Notwithstanding the boost from energy efficiency measures and a focus on renovation and improvement works by the local authority sector, overall investment in housing RMI is forecast to decline by almost 8.5% in volume terms in 2012 as private household incomes and local authority funding continue to be affected by austerity and fiscal consolidation measures[16].

[13] http://www.esri.ie/UserFiles/publications/QEC2012SUM.pdf
[14] http://www.cso.ie/px/Doehlg/Database/DoEHLG/Housing%20Statistics/Housing%20Statistics.asp
[15] http://www.scsi.ie/constr2012
[16] http://www.scsi.ie/constr2012

2.2 UK construction market

The UK construction market is a key export outlet for forest products manufactured in Ireland. In the past year, the UK housing market has grown for the first time since 2005-06. In 2011-12, UK house completions increased by 4% over 2010-11 (Table 3)[17].

Table 3: House starts and completions in the UK (1998-2012).

	Starts	Completions	1998 = 100
1998-99	186,720	178,290	
1999-00	192,910	184,010	1.03
2000-01	183,480	175,370	0.98
2001-02	194,140	174,200	0.98
2002-03	197,110	183,210	1.03
2003-04	213,250	190,590	1.07
2004-05	225,050	206,620	1.16
2005-06	233,890	214,010	1.20
2006-07	222,620	219,070	1.23
2007-08	219,020	218,540	1.23
2008-09	118,870	178,850	1.00
2009-10	124,460	153,190	0.86
2010-11	139,430	140,790	0.79
2011-12	129,878	146,470	0.82

2.2.1 The UK market for forest products

The UK is a significant importer of sawn timber and panel products. In 2011, 4.9 million cubic metres of sawn timber products were imported by the UK. However, in volume terms, the size of this market has declined by 41% over the period 2005-2011. Wood-based panel imports declined by 28% over the same period (Table 4)[18].

In 2011, the Irish forest products sector was the largest exporter of MDF and the second-largest exporter of particleboard and OSB to the UK.

Table 4: UK imports of sawn timber and wood-based panels (2005-2011).

	Sawn timber	Wood-based panels	Total
	000 m^3		
2005	8,341	3,939	12,280
2006	7,963	3,959	11,922
2007	8,469	3,858	12,327
2008	5,886	3,389	9,275
2009	5,240	2,500	7,740
2010	5,699	2,701	8,400
2011	4,925	2,827	7,752

[17] http://www.statistics.gov.uk/hub/people-places/housing-and-households/housing-stock
[18] **http://www.forestry.gov.uk/website/forstats2012.nsf/LUContents/5EE0DC427449DFC380257356002DD152**

Key suppliers of forest products to the UK market are below and in Table 5[19]. In 2011;

- Sweden (46%), Latvia (14%) and Finland (13%) provided the majority of imports of sawn softwood to the UK. Over the same period, Irish sawmillers had a UK market share of 6%.
- Most particleboard imports to the UK came from Germany (26%), Ireland (24%) and France (22%)[20].
- Ireland (36%), Germany (22%) and Spain (11%) were the principal sources of fibreboard imports.

Table 5: Share of UK forest product import market held by the Republic of Ireland (2011).

Product	**market share % by volume**
Sawn softwood	6
Particleboard including OSB	24
Fibreboard including MDF	36

2.3 €/£ Exchange rate

Historic movements in the €/£ exchange rate are shown in Table 6. A recent forecast by the Royal Bank of Scotland Group (RBS) estimates that by the fourth quarter of 2013 Sterling will have appreciated in value by 1.3% against the Euro (Table 6) [21,22].

Table 6: Historic & forecasted €/£ exchange rates by quarter (2010-2014).

Historic	**€/£**	**£/€**	**Forecast**	**€/£**	**£/€**
2010Q1	1.126634	0.8876	2012Q4	1.26	0.793651
2010Q2	1.173172	0.85239	2013Q1	1.27	0.787402
2010Q3	1.200408	0.83305	2013Q2	1.27	0.787402
2010Q4	1.163548	0.85944	2013Q3	1.28	0.781250
2011Q1	1.171152	0.85386	2013Q4	1.31	0.763359
2011Q2	1.132836	0.88274	2014Q1	1.32	0.757576
2011Q3	1.139471	0.8776	2014Q2	1.34	0.746269
2011Q4	1.166494	0.85727	2014Q3	1.31	0.763359
2012Q1	1.198351	0.83448	2014Q4	1.27	0.787402
2012Q2	1.234598	0.80998			
2012Q3	1.263376	0.79153			

2.4 Demographics

The Irish Economic and Social Research Institute (ESRI) estimate that that net outward migration from the Republic of Ireland was 28,000 in 2010 and 27,000 in 2011. It has forecast that net migration will reach 34,000 in 2012[23].

[19] http://www.forestry.gov.uk/website/forstats2012.nsf/LUContents/45A4416DC7F75A9D8025735600334221
[20] Particleboard imports include OSB.
[21] http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=120.EXR.Q.GBP.EUR.SP00.A
[22] http://www.rbs.com/content/dam/rbs/Documents/News/2012/06/interest-exchange-rate-forecast-june-2012.pdf

[23] http://www.emn.ie/emn/statistics

3.0 Policy measures

The following policy measures influence the Irish forest & forest products sector.

3.1 Research, Technological Development & Innovation (RTDI)[24,25]

In 2011, RTDI/Research spending within the Irish forest products sector averaged 2%. The changes in RTDI policies that will affect the Irish forest and forest products sector include.

- The newly established Irish Energy Research Council will advise on priorities for Irish energy research to 2013 and for the longer term. The Council will coordinate existing energy Research Technological Development and Innovation (RTDI) activities and provide analysis and advice[26].

- Environment Research Sub-Programme
  - Some €93 million will be invested in environmental research over the period 2007 to 2013.

3.2 Forest research

The Irish forest research programme is managed by the research division of the Department of Agriculture, Food and the Marine (DAFM). The COFORD Council (an advisory body consisting of representatives from the forestry sector) advises the Department regarding the scope of forest research and provides advice to DAFM on issues including roundwood demand and supply.

3.3 Support for afforestation

Support measures for afforestation in Ireland include

3.3.1 Afforestation grants and premiums

Afforestation grant and premium schemes provide a package to encourage the planting of new forests by compensating forest owners for the costs of forest establishment and for the income foregone during the maturation of the timber crop. The schemes provide planting and establishment grants as well as annual premiums for new afforestation. The scheme is open to farmers and non-farmers. Forests established under this scheme must meet full silvicultural standards and be managed as a commercial crop for the realisation of a profit[27,28,29].

In 2011, annual expenditure on forestry support schemes amounted to €114.5 million. The budget allocation for forestry for 2012 allows for 7,000 ha of new planting under the Afforestation, Native Woodland and FEPS Schemes, along with funding for support schemes (Table 7)[30].

Table 7: Annual expenditure on forestry schemes (2005-2012).

	Forestry support schemes	Premiums	Afforestation	Total
	€ million			
2005	13.8	58.1	38.9	110.8
2006	17.4	60.0	33.6	111.0
2007	13.9	71.6	31.6	117.1
2008	12.0	74.3	29.4	115.7
2009	8.7	70.5	31.8	111.0
2010	6.6	72.3	35.5	114.4
2011				114.5
2012				111.0

[24] Enterprise – Ireland; www.enterprise-ireland.com
[25] Ireland National Development Plan (NDP; 2007-2013); Government Publications, Dublin, Ireland; www.ndp.ie/viewdoc.asp?fn=/documents/NDP2007-2013/NDP-2007-2013-English.pdf
[26] http://www.dcenr.gov.ie/Energy/Office+of+the+Chief+Technical+Advisor/Irish+Energy+Research+Council.htm
[27] http://www.teagasc.ie/forestry/financial_info/afforestation_grant_rates.asp
[28] http://www.teagasc.ie/forestry/docs/financial_info/AfforestationScheme2007_T&C.pdf
[29] http://www.teagasc.ie/forestry/docs/financial_info/forestrygrantrates_2009.pdf
[30] www.teagasc.ie/forestry/docs/advice/Teagasc_Situation_Outlook_Forestry_2012.pdf

3.3.2 Native Woodland Scheme

The Native Woodland Scheme[31] is aimed at protecting and expanding Ireland's native woodland resource and associated biodiversity. The Native Woodland Scheme is a key biodiversity measure within Ireland's national forest policy. It also supports a wide range of other benefits and functions arising from native woodlands, relating to landscape, cultural heritage, wood and non-wood products and services, the practice of traditional woodland management techniques, environmental education, and carbon sequestration. There are two elements under the scheme, each with its own grants levels and premiums.

3.3.3 Forest Roads Scheme

The forest roads scheme provides grant-aid to forest owners to improve access to forests and facilitate thinning. There is a once off payment of 80% of eligible costs to a maximum of €35/linear metre payable on satisfactory completion of the project[32].

3.4 Energy policy and support measures

3.4.1 Strategy for Renewable Energy (2012-2020)

In May 2012, a Strategy for Renewable Energy (2012-2020)[33] was published by the Department of Communications, Energy and Natural Resources (DCENR). This document sets out five strategic goals – increasing on and offshore wind, building a sustainable bioenergy sector, fostering R&D in renewables such as wave & tidal, growing sustainable transport and building out robust and efficient networks.

This strategy document states that 'Ireland's national bioenergy resources (including forestry, energy crops and biofuels) need to be developed and supported through a cohesive approach which addresses the supply side as well as the demand side issues. The recently announced REFIT III scheme for biomass technologies (see overleaf) marks an important step in providing certainty for the sector'. It also states that 'the sustainable growth of biomass/biofuel use in the heat sector as well as in power generation and transport will be underpinned by a comprehensive National Bioenergy Strategy this year'.

The areas where this strategy which affect the wood biomass sector are outlined below.

Renewable heat (RES-H)

The Government has set a target of 12% renewable heat by 2020. The related programmes and supports are designed to support the achievement of this target. For historical, geographical and demographic reasons, renewable heat poses considerable challenges for Ireland, which the Government is determined to address.

Renewable electricity (RES-E)

The Government has set a target of 40% electricity consumption from renewable sources by 2020. In the last 5 years in particular, Ireland has made huge strides in accelerating renewable generation (RES-E). In the 2001 European RES-E Directive, Ireland was set a target of moving from 3.6% RES-E to 13.2% RES-E by 2010. Ireland achieved 14.4% RES-E in 2009 and is on track to exceed the national target of 15% in 2010.

The main support scheme for RES-E is REFIT (Renewable Energy Feed-In Tariff)[34]. As of 27/2/2012, REFIT III, the newest REFIT scheme was made available (see below).

Renewable Energy Feed-In Tariff (REFIT)

The REFIT[35] scheme provides support to renewable energy projects over a 15-year period. The new support mechanism differ from the previous programme in that it operates as a fixed feed-in tariff mechanism rather than as a competitive tendering process. Applicants to REFIT must have planning permission and a grid connection offer for their project

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[31] http://www.agriculture.gov.ie/media/migration/forestry/publications/nativewoodlandschememanual/NativeWoodlandSchemeManual2008060911.pdf

[32] http://www.agriculture.gov.ie/press/pressreleases/2012/january/title,60877,en.html

[33] http://www.dcenr.gov.ie/NR/rdonlyres/9472D68A-40F4-41B8-B8FD-F5F788D4207A/0/RenewableEnergyStrategy2012_2020.pdf

[34] http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division/Electricity+from+Renewables+inc+REFIT+and+AER.htm

[35] ec.europa.eu/energy/energy_policy/doc/.../renewables_ie_en.pdf

In May 2010, REFIT III, a revised set of tariffs for biomass combustion, anaerobic digestion (AD) and biomass fuelled combined heat and power (CHP) were announced by the Department of Communications, Energy and Natural Resources (DCENR). REFIT for biomass technologies, (REFIT III), is designed to support, for the first time, a range of technologies including Combined Heat and Power (CHP) and Anaerobic Digestion (AD) as well as for co-firing of biomass in peat power plants.

Applications for entry to the REFIT III scheme opened on 27/2/2012. This scheme is designed to incentivise the addition of 310MW of renewable electricity capacity to the Irish grid. Of this, 150MW will be high efficiency CHP (HE CHP), using both anaerobic digestion (AD) and the thermo-chemical conversion of solid biomass, while 160MW will be reserved for biomass combustion and biomass co-firing. The support for any particular project cannot exceed 15 years and may not extend beyond 31/12/2030[36].

REFIT III will also provide supports for the co-firing of biomass with peat at the peat plant at Edenderry and potentially in future, subject to technical acceptance, at Lanesborough and Shannonbridge.

REFIT offers the opportunity to expand the market for forest based biomass, particularly in light of projected increases in private forestry supply.

Table 8: REFIT III tariffs under the new SEAI CHP/AD CHP schemes.

	REFIT tariff €/MWh[37]
AD CHP ≤500 kW	150
AD CHP >500 kW	130
AD (non CHP) ≤500kW	110
AD (non CHP) >500kW	100
Biomass CHP ≤1500kW	140
Biomass CHP >1,500kW	120
Biomass combustion, using energy crops	95
Biomass combustion using all other biomass	85

3.3.6 Energy Performance of Buildings Directive (EPBD)

Since January 2007, in line with the European Commission's Energy Performance of Buildings Directive[38] (Directive 2002/91/EC)[39], the energy efficiency of all new houses and apartments in the Republic of Ireland is assessed and certified by a registered building energy rating (BER) assessor. From 2009, this scheme has been extended for existing dwellings, when they are offered for sale or lease. The BER provides information on the dwelling's energy performance and can be used to demonstrate improvements in energy efficiency over time[40].

3.5 National renewable energy targets

Ireland's national renewable energy targets are shown in Table 9[41].

Table 9: Renewable energy targets to 2020 by type.

	2015	**2016**	**2017**	**2018**	**2019**	**2020**
	%					
Renewable heat (RES-H)	8	9	10	10	11	12
Renewable electricity (RES-E)	34	36	38	40	42	44
Renewable transport (RES-T)	7	7	9	9	10	11
Overall RES	12	12	13	14	15	16

[36] http://www.dcenr.gov.ie/NR/rdonlyres/05441877-FC28-4A6C-8F5F-0EEAC8271DDF/0/REFIT3TermsandConditionsAugust2012.pdf
[37] WWh: Mega watt hour.
[38] www.sei.ie/epbd/
[39] ec.europa.eu/energy/efficiency/buildings/buildings_en.htm
[40] http://www.dcenr.gov.ie/NR/rdonlyres/FC3D76AF-7FF1-483F-81CD-52DCB0C73097/0/NEEAP_full_launch_report.pdf
[41] http://www.mnag.ie/workshop_2010_7_2172276902.pdf

3.6 Demand for wood biomass for energy use to 2020

By 2020, the demand for roundwood is set to increase to 6.038 M m^3 (Table 10)[42].

Table 10: Estimated roundwood demand on the island of Ireland in 2020.

	000 m^3 OB
Conventional demand[43]	3,830
Demand for forest-based biomass for energy production	3,084
Residues from conventional demand which are used to meet energy demand[44,45]	-876
TOTAL	6,038

Based on scenario modelling[46], the Sustainable Energy Authority of Ireland (SEAI) forecasts that by 2020, the demand for biomass for energy in the Republic of Ireland will be 53 M GJ. Forest-based biomass and waste resources could deliver about 9 M GJ each, with agricultural residues having the potential to supply a further 8 M GJ. The balance of supply is likely to comprise indigenous purpose-grown energy crops and imported biomass[47].

The demand for forest-based biomass for energy in 2020 is an aggregate of the demand for combined heat & power (CHP), heat only and co-firing. The expected demand for forest-based biomass in 2020 is shown in Table 2. To meet the 2020 renewable energy target, the demand for forest-based biomass for energy production will need to double over the period 2011 to 2020 (Table 11)[48]. This is a challenging target. However, experience in Scotland and in Austria has shown that biomass use can grow to meet challenging renewable energy targets.

Table 11: Estimated demand for forest-based biomass for energy production on the island of Ireland in 2020.

	Estimated demand 000 m^3 OB/annum	**% of total demand**
Combined heat & power (CHP)	1,550	50
Heat only	1,425	46
Co-firing	109	4
TOTAL	3,084	100

To meet the stated targets for renewable energy by 2020, the gross demand for wood biomass will increase 2-fold, from 1.589 M m^3 in 2011 to 3.084 M m^3 in 2020. Such a steep increase in wood biomass demand will require a significant investment in the sectoral supply chain, and will significantly increase the competition for wood fibre.

Achieving renewable energy targets will require significant investment in biomass fuelled combined heat and power (CHP). Before becoming operational, such facilities have at least a 2-year lead-in period.

[42] The expected demand for forest–based biomass to 2020 is based on a scenario model which was developed by SEAI; www.seai.ie , which is based on data available as of 2/11/2010.
[43] Conventional demand is roundwood used (for processing) by the sawmilling and by the boardmill sectors.
[44] The use of post consumer recovered wood (PCRW) is excluded
[45] A portion of sawmill and panel residues is used for process drying and for the production of energy. In 2011, it is estimated that 750,000 m^3 OB of such residues will be thus used on the island of Ireland. To avoid double counting, the demand for forest-based biomass (for energy production) is discounted by 750,000 m^3 OB. It is estimated that by 2020 the use of sawmill/panel residues for energy production will have increased to 876,000 m^3 OB.
[46] This is based on data available as of 2/11/2010.
[47] This data is based on work which was undertaken by the COFORD Supply Group (2010).
[48] The expected demand for forest–based biomass to 2020 is based on a scenario model which was developed by SEAI; www.seai.ie. This is based on data available as of 2/11/2010.

3.7 Biomass supply streams

Of the 53 M GJ of biomass expected to be required by 2020, forest-based biomass and waste resources could deliver about 9 M GJ each, with agricultural residues having the potential to supply a further 8 M GJ. The balance of supply would be made up of indigenous purpose-grown energy crops and imported biomass (Table 12)[49].

Table 12: Estimated supply streams which will be available to meet the biomass demand for energy production in the Republic of Ireland in 2020.

	Estimated annual supply	
	Million GJ	**%**
Biomass segregated from waste stream	9	17
Forest-based biomass	9	17
Agricultural residues	8	15
Indigenous purpose-grown energy crops and imported biomass	27	51
TOTAL	53	100
Roundwood equivalent[50] at 40-45% moisture content M m^3	7.5	
Roundwood equivalent at 4-45% moisture content N tonnes	5.5	

3.8 Meeting biomass energy targets

Ireland's progress towards meeting its biomass energy targets is discussed below.

3.8.1 Renewable heat (RES-H)

In 2011, renewable heat (RES-H) [51] provisionally accounted for 5% of all thermal energy and was one year late in meeting the national target of 5% RES-H for 2010. RES-H grew from 2.6% in 1990 to 5.0 % in 2011.

Industrial biomass energy use (mostly in the wood, food and cement sectors) accounted for 68% of all thermal renewable energy used in 2011. This corresponds to 2.9% of all thermal energy use in Ireland. Between 1990 and 2006, industrial biomass energy use increased by 167% (6% average annual growth). However, there has recently been a decrease in industrial RES-H with an average annual reduction of 2% since 2006. The industrial biomass demand in 2011 remained unchanged at the 2010 demand level.

Residential biomass energy use increased by 9.5% between 1990 and 2011 (0.5% average annual growth). However the average annual growth rate increased in recent years to 18% between 2005 and 2010.

3.8.2 Renewable electricity (RES-E)

In 2011, the share of electricity generated from renewable energy sources (RES-E)[52] was 17.6%.Wind energy accounted for over 13% of all electricity generation in 2011, hydro accounted for 2.6% and the remaining 2% was from bioenergy sources (mainly biomass co-firing and landfill gas). In 2011, wind power installed generating capacity reached 1,631 MW.

The EU Directive 2001/77/EC target for Ireland of 13.2% RES-E by 2010 was exceeded with RES-E at 14.8% in 2010. However, the national target of 15% RES-E by 2010 was narrowly missed, due to lower than average wind speeds and rainfall levels in that year. The breakdown of gross electrical consumption by fuel source for the period 1990-2011 is shown in Table 13[53,54].

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[49] This supply data is base on work which was undertaken by the COFORD Roundwood Supply Group (2010) http://www.coford.ie/media/coford/content/publications/projectreports/roundwood/Roundwood%20Prod%20Forecast%20LR%20June%202011.pdf

[50] http://www.teagasc.ie/forestry/docs/events/Roundwood_S_D_Eugene_Hendrick.pdf

[51] http://www.seai.ie/Publications/Statistics_Publications/Renewable_Energy_in_Ireland_2011.pdf

[52] http://www.seai.ie/Publications/Statistics_Publications/Renewable_Energy_in_Ireland_2011.pdf

[53] http://www.seai.ie/Publications/Statistics_Publications/Renewable_Energy_in_Ireland_2011.pdf

[54] http://www.cso.ie/px/sei/Dialog/varval.asp?ma=SEI04&ti=Fuels+Used+in+Electricity+Production+(ktoe)+by+Fuel+Type+and+Year&path=../DATABASE/SEI/Energy Balance Statistics/&lang=1

Table 13: Gross electricity consumption percentage by fuel source (1990-2011) (provisional).

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011
		Gross electricity consumption % by fuel source								
Coal	39.8	36.5	27.0	26.5	22.9	21.5	19.0	16.0	17.2	19.7
Peat	17.4	13.5	8.5	8.5	7.8	7.7	10.0	10.4	8.6	9.2
Oil	12.5	20.3	27.5	20.5	17.8	13.7	11.0	9.3	8.8	6.8
Gas	28.5	28.1	35.1	38.7	45.3	51.1	53.9	56.5	59.0	54.6
Renewables	1.8	1.5	1.8	2.8	3.6	4.1	5.3	6.5	5.6	8.9
Net imports	0.0	0.0	0.1	3.0	2.6	1.9	0.7	1.2	0.7	0.8
% of electrical consumption supplied by biomass[55]	0.0	0.0	0.0	0.04	0.06	0.04	0.12	0.25	0.50	0.61

3.9 National climate change strategy (2007-2012)

Ireland signed the United Nations Framework Convention on Climate Change (UNFCCC[56]) in June 1992 and ratified it in April 1994. As a signatory to the Kyoto Protocol[57], Ireland is committed to limiting its greenhouse gas (GHG) emissions to 13% above the 1990 level by 2008–2012[58].

The Irish forestry sector has a key role to play in addressing climate change, through carbon sequestration and through the development of renewable energy resources. Forest areas established as a result of grant-aid under the State/European Union (EU) funded afforestation schemes since 1990 are expected to contribute an annual average emission reduction of 2.074 million tonnes of carbon dioxide (CO_2) over the Kyoto period (2008-2012). There is also significant potential for wood fuel to displace fossil fuel, particularly in the generation of heat in industrial, commercial, domestic and institutional markets. In doing so, it can help reduce Ireland's GHG[59] emissions.

Since 2006, the use of wood biomass energy in Ireland has resulted in a total emissions saving of 2.56 million tonnes of carbon dioxide (CO_2).

At the Durban climate change conference held in late 2011[60], new carbon accounting rules for land use, land-use change and forestry (LULUCF) were agreed. The rules will apply under a second commitment period of the Kyoto Protocol, which will run from 2013 to the end of 2017 or 2020, whichever is agreed in the coming year. Accounting for pre-1990 forests now becomes mandatory on the basis of a projected reference level approach for most parties. The reference level is the estimated net carbon stock change over the period to 2020, based on business-as-usual harvest and growth levels in all managed pre-1990 forests. Increased levels of harvest in pre-1990 forests over and above those in the reference level will result in debits at the national level[61].

The NESC Secretariat, at the request of the Minister for the Environment, Community and Local Government, is undertaking analysis to inform the development of Irish climate change policy. The NESC Climate Change project includes the development of potential policies and measures to reduce greenhouse gas emissions in agriculture, transport, heat in buildings and renewable energy supply; and, a basis for a national transition to a low-carbon future by 2050. The work will be completed by 31 December 2012. An interim report was submitted to the Minister at the end of June 2012[62].

[55] Data as provided by the Sustainable Energy Authority of Ireland (SEAI) does not split biomass use by type. As such, the consumption total includes electricity generated by all biomass sources, including tallow and wood-based biomass, although the latter is predominant source.
[56] *unfccc.int*
[57] *unfccc.int/kyoto_protocol/items/2830.php*
[58] www.environ.ie/en/PublicationsDocuments/FileDownLoad,1861,en.pdf
[59] GHG: Green House Gas.
[60] http://unfccc.int/meetings/durban_nov_2011/meeting/6245.php
[61] http://www.teagasc.ie/forestry/docs/advice/Teagasc_Situation_Outlook_Forestry_2012.pdf
[62] http://files.nesc.ie/nesc_secretariat_papers/nesc_secretariat_paper_03_2012.pdf

4.0 Developments in forest products markets

Developments in the Irish forestry and forest products sector are outlined below.

4.1 Irish roundwood harvest

In 2011, 2.74 million cubic metres of roundwood was processed in the Republic of Ireland, virtually un-changed on 2010. In 2011, the harvest of industrial roundwood from privately owned forests declined by 16.6% over 2010 (Table 14)[63].

Table 14: Roundwood available for processing in the Republic of Ireland (2008-2011).

	2008	2009	2010	2011
	000 m^3 OB			
Imports less exports	106	-63	28	55
Coillte harvest	2,279	2,354	2,217	2,299
Private sector harvest	118	130	463	386
TOTAL	2,503	2,421	2,708	2,740

4.2 Private forest estate

The private forest sector now accounts for 47% of the national forest estate or 5% of total land area of the Republic of Ireland. There are approximately 19,500 private forest owners, of which 84% are classed as farmers. These manage over 340,000 hectares of forest.

In the period (1981-2011), over 250,000 hectares of forest were established by private growers in Ireland[64]. 219,712 hectares of this estate has been planted since 1990. 84% of private forest owners are farmers [65]. Much of this estate is now available for harvesting. However, the full potential of this farm forest resource for rural development in Ireland has not yet been fully realised. 42% of the private forest estate in Ireland is less than 25 years old[66]. In 2011, afforestation in Ireland declined by 20% over 2010 (Table 15) [67].

In 2011, over 1,500 hectares of forest were damaged by forest fires. Coillte lost 1,000 hectares of forest while 600 hectares of private forest were destroyed.

Table 15: Area of new forests planted in the Republic of Ireland by area and by ownership.

	State	Private	Total
	ha		
2005	64	10,032	10,096
2006	25	8,012	8,037
2007	0	6,947	6,947
2008	67	6,182	6,249
2009	35	6,613	6,648
2010	4	8,310	8,314
2011	62	6,591	6,653

4.3 Forecast of roundwood supply

Over the next 17 years, the supply of roundwood to be harvested from Irish forests will increase significantly. A recent COFORD report shows that over the period to 2028 the production capacity of Ireland's forests will almost double to 7 million cubic metres, from the current 3.79 million. Almost all of the increase in supply is set to come from privately-owned forests in the Republic; those areas established

[63] Excluding firewood and hardwood.
[64] http://www.teagasc.ie/forestry/docs/technical_info/articles/Teagasc_forestry_situation_outlook_2010.pdf
[65] http://www.teagasc.ie/forestry/docs/technical_info/articles/IUFRO%20The%20Farm%20Forest%20Resource%20and%20Rural%20Development%20in%20Ireland%202006.pdf
[66] http://www.teagasc.ie/publications/2012/1070/Forestry_Outlook_JohnCasey.pdf
[67] http://www.agriculture.gov.ie/forestservice/forestservicegeneralinformation/foreststatisticsandmapping/afforestationstatistics/

over the past 25 years on foot of state/EU and private sector investment (Table 16)[94]. Considerable scope exists to expand wood energy production, and this is in addition to supplies for sawmilling and board manufacture[68].

Table 16: Forecast of potential net realisable volume production by assortment category from the private forest estate in the Republic of Ireland (2011-2028).

	Tip -7cm	7-13 cm	14-19 cm	20cm +	Total
	000 m^3 OB				
2011	39	225	90	55	409
2012	39	225	102	57	423
2013	35	190	106	73	404
2014	41	229	150	45	465
2015	47	264	183	57	551
2016	52	297	196	72	617
2017	64	377	284	91	816
2018	56	317	191	122	686
2019	65	366	290	195	916
2020	78	492	486	262	1,318
2021	85	485	555	463	1,588
2022	84	483	528	404	1,499
2023	93	502	784	848	2,227
2024	84	490	657	617	1,848
2025	72	427	634	703	1,836
2026	76	441	715	886	2,118
2027	101	544	1,209	1,605	3,459
2028	96	519	1,090	1,620	3,325

However, realising this increase in potential production will entail significant capital investment in roads, harvesting equipment and in information technology (IT) systems by forest owners, contractors and by the State.

4.4 Demand forecast

Historically the Irish timber processing sector has processed all of the roundwood which has been harvested from Irish forests. In addition there is a lot of scope for the private forest sector to supply wood for energy use[69]. Work which was undertaken for the COFORD Demand Report[70] shows that the projected level of demand for roundwood on the island of Ireland in 2020 from both the conventional timber processing sector[71] and from the emerging wood biomass energy sector is shown in Table 17[72].

[68] http://www.coford.ie/media/coford/content/publications/projectreports/roundwood/Roundwood%20Prod%20Forecast%20LR%20June%202011.pdf

[69] http://www.coford.ie/iopen24/pub/reilly.pdf.pdf

[70] http://www.coford.ie/media/coford/content/publications/projectreports/roundwooddemand2011/COFORD_demand01Mar11.pdf

[71] Conventional roundwood demand is defined as the demand for roundwood for processing by the sawmills and boardmills. The use of wood fibre for process drying and heating is included in biomass numbers.

[72] http://www.coford.ie/media/coford/content/publications/projectreports/roundwooddemand2011/COFORD_demand01Mar11.pdf

Table 17: Estimated roundwood demand on the island of Ireland in 2020.

	000 m^3
Conventional demand[73]	3,830
Wood biomass energy demand	3,084
Residues from conventional demand which are used to meet energy demand	-876
TOTAL	6,038

4.5 Mobilising roundwood supply

Recent research work which was undertaken by COFORD[74] showed that the following challenges need to be overcome if the forecast roundwood harvest from the Irish private forest estate is to be realised. These include:

- Improving the accessibility (for timber harvesting) of the Irish private forest estate;
- Continuing Forest Service grant assistance for the development of forest roads;
- Developing a "standardised low cost" roundwood sales system which facilitates roundwood sales in the Irish private forest estate, and;
- The combination of private woodlots into larger sales units which can be harvested more economically.

4.6 Sources & uses of wood fibre

Wood fibre sources for the processing and wood energy sectors and residue out-turn are shown in Table 18[75]; uses are in Table 19[76,77]. Wood residues are primarily used as feedstock for sawmill kilns and for process heat in the manufacture of wood-based panels (WBP). Post-consumer recovered wood (PCRW) is increasingly being used for wood energy and in the manufacture of wood-based panels.

Table 18: Sources of wood fibre (2008-2011)**.**

	2008	**2009**	**2010**	**2011**
	000 m^3 OB roundwood equivalent (RWE)[78]			
Roundwood[79]	2,503	2,421	2,708	2,740
Sawmill residues	846	838	842	829
Wood-based panel residues[80]	106	94	101	115
Harvest residues	0	0	0	40
Post-consumer recovered wood	208	200	280	270
TOTAL	3,663	3,553	3,931	3,994

[73] Conventional demand is taken as the demand for roundwood from the sawmilling and panel sectors
[74] http://www.coford.ie/iopen24/pub/lynn.pdf.pdf
[75] EUROSTAT JFSQ (2009-2012).
[76] UNECE Joint Wood Energy Enquiry (2009-2012) and EUROSTAT Joint Forest Sector Questionnaire (2009-2012).
[77] Wood fibre that is reused is counted twice in this model.
[78] RWE: roundwood equivalent
[79] Data is from Table 1.
[80] Includes bark (from the debarking lines at Medite & Smart*Ply)* and sawdust from the sanding of wood-based panels.

Table 19: Uses of wood fibre (2008-2011).

	2008	2009	2010	2011
	000 m^3 OB RWE			
Sawmilling	1,619	1,602	1,603	1,580
Round stake	80	88	118	116
Wood-based panels	1,462	1,286	1,400	1,340
Wood biomass energy use by the forest products sector[81]	378	431	554	572
Other uses				
Horticultural bark mulch	44	54	27	34
Wood chip for commercial biomass use	30	55	39	41
Export of forest product residues	50	37	58	196
Other uses			132	115
TOTAL	3,663	3,553	3,931	3,994

4.7 Wood residues

Wood residues are primarily used as feedstock for sawmill kilns and for process heat in the manufacture of wood-based panel (WBP). Post-consumer recovered wood (PCRW) is increasingly being used for wood energy and in the manufacture of wood-based panels. Over the period 2008-2011, the production of wood residues increased by 18% (Table 20) [82.]

Table 20: Production of wood residues (2008-2011).

	2008	2009	2010	2011
	000 m^3 RWE			
Bark	203	215	222	236
Wood chip	470	517	517	510
Sawdust	152	200	204	198
Post-consumer recovered wood	208	200	280	270
TOTAL	1,033	1,132	1,223	1,214

4.8 Firewood use in Ireland

In 2011, 214,000 m^3 of firewood was used in Ireland to a value of €31million, showing that it is providing a steady and a growing market for first thinnings (Table 21)[83]. In addition, firewood is also harvested by forest owners for their own use.

Table 21: Volume and value of the domestic firewood market in Ireland (2008-2011).

	000 m^3 OB	€ million
2008	171	24.83
2009	184	26.75
2010	199	28.80
2011	214	30.97

[81] Wood biomass energy is used by the forest products sector for process drying, heating and for the generation of electricity.
[82] UNECE Joint Wood Energy Enquiry (2009-2012).
[83] drima market research study

4.9 Voluntary forest certification

4.9.1 Schemes

Coillte (the state forestry board) forests have been Forest Stewardship Council certified since 2001.[84] A new FSC standard for Ireland will be launched in 2012.

In 2012, PEFC International announced the endorsement of the Ireland Scheme for Sustainable Forest Management.

To date, certification has not been a major issue for private forest owners. However, as the private forests' contribution to the national yearly harvest increases, certification is likely to become an issue[85].

4.9.2 Certified forest products

All major sawmills and panel mills have chain-of-custody procedures associated with product certification. The demand for certified timber products in the Irish market is still relatively small and there is no strongly developed public procurement policy for them.

4.10 Value added products; wooden furniture

In 2011, wooden furniture to the value of €147 million was imported into the Republic of Ireland. However, the value has declined by 54% over the period 2008-2011. The value of the furniture exported from Ireland declined by 29% over the same period (Table 22)[86].

Table 22: The value of wooden furniture imports & exports by the Republic of Ireland (2008-2011)**.**

	2008	2009	2010	2011
	€ million			
Imports	317	177	168	147
Exports	35	24	26	25
Net imports	282	153	142	122

4.11 Trade in forest products

In 2011, forest products to a value of €308 million were exported from Ireland; un-changed on 2010. This includes wood-based panels, sawn timber and pulp and paper products (Table 23). In 2011, the value of wood-based panel exports declined by 3.4% over 2010. This was caused by the cessation of particleboard manufacture by Finsa Forest Products.

4.12 Balance of payments

In value terms, the Republic of Ireland became a net exporter of sawn timber in 2010. This was for the first time since 1961, when global forest products statistics began to be compiled by FAO[87]. It marked the continuation of a trend apparent since 2008, with the gap between exports and imports closing due to the collapse of the domestic construction market and increased levels of exports, mainly to the UK. Wood-based panel exports declined marginally in value (-3.4%) in 2011, due to the closure of Finsa Forest Products (Table 23)[88].

[84] http://www.coillte.ie/coillteforest/responsible_forest_management_and_certification/certification_introduction/
[85] http://www.teagasc.ie/forestry/docs/advice/Teagasc_Situation_Outlook_Forestry_2012.pdf
[86] Source: EUROSTAT JFSQ for Ireland (2009-2012).
[87] http://faostat.fao.org/site/626/default.aspx#ancor
[88] Includes import/export figures for sawn timber, wood-based panels and pulp/paper products only. Data are taken from Ireland's EUROSTAT JFSQ returns (2009-2012). Roundwood, sawmill residues and secondary processed timber products are not included. Trade data for the JFSQ is provided by the Central Statistics Office (CSO); www.cso.ie

Table 23: Timber and paper products trade, volume and value (2008-2011).

	Imports							
	2008	**2009**	**2010**	**2011**	**2008**	**2009**	**2010**	**2011**
	000 cubic metres				**€ million**			
Sawn timber	412	232	242	201	141	66	74	64
Wood-based panels	264	181	166	195	108	68	65	68
	000 tonnes							
Pulp products	29	32	41	54	20	22	31	45
Paper and paper-board products	526	379	370	383	520	308	313	333
TOTAL					789	464	483	510
	Exports							
	000 cubic metres				**€ million**			
Sawn timber	389	564	658	619	54	51	85	83
Wood-based panels	614	580	660	616	195	147	179	173
	000 tonnes							
Pulp products	2	0	1	0	0	0	0	0
Paper and paper-board products	77	45	33	59	69	45	44	52
TOTAL					318	243	308	308

The Republic of Ireland remains a net overall importer of timber and paper products, due largely to paper and paper-board products (Table 24)[89].

Table 24: Balance of trade in the value of forest products (2008-2011).

	2008	**2009**	**2010**	**2011**
	€ million			
Sawn timber	-87	-15	11	19
Wood-based panels	87	79	114	105
Pulp products	-20	-22	-31	-45
Paper and paper-board products	-451	-263	-269	-281
TOTAL	-471	-221	-175	-202

4.13 Sawn timber

Nine companies form the core of the Irish sawmilling sector, providing the main market for the sawlog and stakewood which is harvested from Irish forests (Table 25)[90]. The majority of the logs which are supplied to Irish sawmills are certified to FSC[91,92] or to PEFC[93] standards. In addition, Irish sawmills have their own chain of custody (CoC) certification.

In 2011, sawmills processed 1.7 million m^3 of roundwood, resulting in output of 0.76 million m^3 of sawn timber (Tables 26 and 27)[94]. Over the period 2008-2011, in line with the reduction in construction activity, the domestic sawn timber market declined by 53%. Over the same period, sawn timber exports grew by 60% (Table 28). In 2011, 41% of the Irish market for sawn timber was supplied by indigenous production with the balance being imported (Table 28).

[89] Negative values show a surplus of imports over exports.
[90] Source: drima market research survey.
[91] FSC: Forest Stewardship Council; www.fsc.org
[92] The Forest Stewardship Council (FSC) is an independent, non Governmental, not for profit organisation established to promote the responsible management of the world's forests; www.fsc.org
[93] www.pefc.org
[94] Includes the production of round stake.

Table 25: Sawmills on the island of Ireland by size and location**.**

Sawmill size	Sawmill	Location(s)	Website
Large	Balcas Ltd.	Enniskillen, Co Fermanagh, Northern Ireland	www.balcas.com
Large	ECC Timber Products Ltd.	Corr na Móna, Co Galway	www.ecc.ie
Large	Glennon Brothers Ltd.	Longford, Co Longford Fermoy, Co Cork	www.glennonbrothers.ie
Large	Grainger Sawmills Ltd.	Enniskeane, Co Cork	www.graingersawmills.com
Large	Murray Timber Group	Ballygar, Co Galway Ballon, Co Carlow	www.mtg.ie
Medium	Coolrain Sawmills Ltd.	Coolrain, Co Laois	www.gardendeckingfencing.ie
Medium	Laois Sawmills Ltd.	Portlaoise, Co Laois	
Medium	Palfab Ltd.	Macroom, Co Cork	www.palfab.com
Medium	Woodfab Timber Ltd.	Aughrim, Co Wicklow	www.woodfabtimber.ie

Table 26: Roundwood available for processing in the Republic of Ireland (2008-2011)**.**

	2009	2010	2011
	000 m^3 OB		
Log imports less exports	-63	28	55
Coillte	2,354	2,217	1,580
Private	130	463	386
Roundwood processed	2,421	2,708	2,740
Of which used by sawmills			
Sawlog	1,602	1,603	1,580
Stakewood	88	118	116
TOTAL	1,690	1,721	1,696

Timber products produced by Irish sawmills serve three main markets: construction/structural, pallet/packaging and fencing. Market size of these products from 2008-2011 is in Table 27[95].

Table 27: Sawn timber output by product and year for the Republic of Ireland (2008-2011).

	2008	2009	2010	2011
	000 m^3 UB			
Construction/structural	267	292	293	289
Pallet/packaging	232	254	255	251
Square edged fencing	190	208	209	206
Round stakes	51	80	107	106
Other	13	15	15	15
TOTAL	753	849	879	867

[95] COFORD woodflow data 2009-2012.

Table 28: Percentage of sawn timber demand that is domestically produced (2008-2011).

	2008	2009	2010	2011
	000 m^3 UB			
Domestic production (softwood)	701	772	772	761
Domestic production (hardwood)	1	2	0	0
Exports[96]	-389	-564	-658	-619
Imports	412	232	242	201
TOTAL	725	442	356	343
% of sawn timber demand which is supplied by domestic sawmills	43	48	32	41

Sawn softwood imports

The main softwood exporters to the Irish market for the period 2007-2011are listed in Table 29[97].

Table 29: Top softwood exporters to Ireland (2007-2011).

	Volume of sawn softwood exported to Ireland in 000 m^3 UB				
	2007	2008	2009	2010	2011
Sweden	122	90	44	42	34
Great Britain[98]	80	35	33	37	23
Germany	72	62	22	26	19
Finland	70	33	13	11	12
Russia	67	37	22	18	9
Latvia	63	25	16	33	37
Northern Ireland	47	28	21	27	21
Brazil	18	2			
Estonia			3	4	4
Canada	17	4	2	1	2
Belgium				2	2
Austria	7	1	5	0	
% of total imports	92	91	95	98	96

Sawn hardwood imports

Domestic sawn hardwood production is small, amounting to just 748 m^3 of sawn hardwood in 2011. In 2011, Ireland imported 32,000 m^3 of sawn hardwood (value €224 million), a 13.5% reduction on 2010. The top hardwood suppliers for the period 2007-2011 are shown in Table 30[99].

[96] Sawn timber export data for 2010 has been revised. This is based on up-dated data provided by the CSO.
[97] Source: Central Statistics Office (CSO); www.cso.ie
[98] Data on sawn timber which is imported from Northern Ireland is treated separately from that which is imported from Great Britain.
[99] Sources: CSO Trade Statistics www.cso.ie & EUROSTAT JFSQ for Ireland (2009-2012).

Table 30: Top hardwood exporters to Ireland (2007-2011).

	Volume of sawn hardwood exported to Ireland in 000 m^3 UB				
	2007	**2008**	**2009**	**2010**	**2011**
Cameroon	35	12	13	10	11
United States	27	16	9	11	10
Ivory Coast	11	6	2	2	1
Northern Ireland	11	6	6	5	4
China	10	4	1	1	0.3
Canada	5	2	1	1	1
Sweden	5	5	1	0.45	
Great Britain[102]	4	4	2	2	2
Congo			1		
Ghana	3	1			
Central African Republic				1	
Germany	3	2	1	1	1
% of hardwood imports	93	89	93	96	95

4.14 Wood-based panels (WBP)[100]

Three wood-based panel manufacturers are located in Ireland (Table 31)[101]. In early 2011, Finsa Forest Products announced that it was ceasing production of particleboard. Finsa continues to supply Irish customers from its factories in France, Portugal and Spain.

Table 31: Wood-based panel manufacturers in the Republic of Ireland (October 2012).

Company	Established	Product(s)	Location
Masonite Ireland	1997	Thin MDF/Moulded door facings	Drumsna, Co Leitrim
Medite-Europe	1983	Medium Density Fibreboard (MDF)	Clonmel, Co Tipperary
Smart*Ply* Europe	1995	Oriented Strand Board (OSB)	Slieverue, Co Kilkenny

In 2011, 736,000 m^3 of wood-based panels (WBP) were produced from an intake of 1.34 million m^3 of wood fibre[102], a 2.9% reduction over 2010 (Table 32). As stated, this can be traced to Finsa Forest Products ceasing the manufacture of particleboard in January 2011. A very high proportion (84%) of WBP manufacture was exported; 616,000 m^3, to a value of €173 million (Table 32)[103]. WBP exports comprised mainly oriented strand board (OSB) and medium density fibreboard (MDF), manufactured by Masonite, Medite and Smart*Ply*. Key export markets were the UK and the Benelux countries.

Table 32: Production and exports of wood-based panels in and from the Republic of Ireland (2008-2011).

	2008	**2009**	**2010**	**2011**
Production (000 m^3)	779	709	758	736
Export volume (000 m^3)	614	580	660	616
Export value (€ million)	195	147	179	173

4.15 Pulp & paper

- All pulp and paper used in the Irish market is imported.
- Pulp & paper imports represent 65% of Irish forest product imports (by value).
- In 2011, 383,000 metric tonnes of pulp and paper products were imported into Ireland. This was a 3.5% increase on 2010.
- These imports were worth €333 million.

[100] EUROSTAT / FAO Joint Forest Sector Questionnaire (JFSQ) for Ireland (2009-2012)
[101] COFORD Woodflow for Ireland (2011).
[102] Includes pulpwood, wood chips, sawdust and post-consumer recovered wood.
[103] EUROSTAT Joint Forest Sector Questionnaire (2009-2011).

4.16 Builders merchanting

The reduction in Irish building output is having a significant knock on effect on the Irish builder's merchant sector and on its suppliers.

4.17 Wood biomass energy

4.17.1 Biomass input & energy output

In 2011, 33% of the roundwood harvested in the Republic of Ireland was used for energy generation, mainly within the forest products sector (Table 33). Since 2006, the use of wood biomass energy in Ireland has resulted in an estimated greenhouse gas (GHG) emission saving of 2.56 million tonnes of carbon dioxide (CO_2). This saving averages 427,000 tonnes of CO_2 per annum.

In 2011, 214,000 m^3 of firewood was used in Ireland to a value of €31million, showing that it is providing a steady and a growing market for first thinnings (Table 34) [104]. In addition, firewood is also harvested by forest owners for their own use. The wood-biomass fuels which were used by the sector are shown in Table 35[105].

In 2011, the output of the forest-based biomass energy sector grew by 4.5% over 2010 (Table 36) [106].

Table 33: Use of forest-based biomass as a percentage of total roundwood harvest in the Republic of Ireland (2010-2011).

	2010	2011
	000 m^3 OB RWE	
Forest-based biomass use by Edenderry Power	79	85
Forest-based biomass used for energy production and process drying in sawmills and wood-based panel mills	475	487
Roundwood chipped for primary energy use	39	41
Domestic firewood use	199	214
Short rotation coppice (SRC)	1	5
Wood pellets and briquettes	121	129
Charcoal	2	2
TOTAL	916	963
Roundwood harvest		
Roundwood available for processing	2,708	2,740
Firewood harvest	199	214
TOTAL	2,907	2,954
Forest-based biomass as a % of total roundwood harvest	31.5	32.6

Table 34: Volume and value of the domestic firewood market in the Republic of Ireland (2008-2011).

	000 m^3 OB	€ million
2008	171	24.83
2009	184	26.75
2010	199	28.80
2011	214	30.97

[104] drima market research study
[105] Source: UNECE JWEE return for Ireland (2009-2012).
[106] Source: UNECE Joint Wood Energy Enquiry (JWEE) 2009 -2012

Table 35: Wood biomass fuel use by sector in Ireland (2008-2011).

Fuel category	End use	000 m^3 OB RWE			
		2008	2009	2010	2011
Firewood	Domestic heating	171	184	199	214
Wood chips	Commercial heating	63	53	39	41
Short rotation coppice (SRC)	Commercial heating	1	4	1	5
Wood pellets and briquettes	Domestic and commercial heating	82	110	121	129
Charcoal	Domestic use	2	2	2	5
Biomass use by the energy[107] and forest products industry	Process drying/heating /CHP	384	438	554	572
TOTAL		703	791	916	966
Use by the energy and forest products sectors (%)		55	55	60	59

Table 36: Output of the forest-based biomass energy sector (2008-2011).

	Unit	2008	2009	2010	2011
		Output			
Heat	TJ	4,857	5,273	6,306	6,604
Electricity	TJ	112	240	372	378
TOTAL	TJ	4,969	5,513	6,678	6,982
CO_2 abated	000 tonnes	380	422	511	534

4.17.2 Potential socio-economic contribution of bioenergy

In 2012, a socio-economic study carried out by DKM Economic Consultants on behalf of the Irish Bioenergy Association (IrBEA)[108] stated in relation to the achievement of 2020 bioenergy targets[109]:

- It could create over 3,600 jobs in the bioenergy sector.
- An investment of €1.5 billion in the sector would be needed to meet Ireland's 2020 targets for renewable electricity (RES-E), renewable heat (RES-H) and renewable transport (RES-T), of which an estimated 55% would be spent in Ireland.
- It would reduce the cost of energy imports by 7.5%.
- The use of bioenergy for heating would reduce costs for domestic and industrial users.
- The achievement of biomass energy targets would reduce Ireland's greenhouse gas emissions (GHG) by over 3 million tonnes of carbon dioxide (CO_2) per annum by 2020.
- The value of the emission reduction could be €94 million by 2020 (based on the level of carbon tax envisaged in the Government's National Recovery Plan 2011-2014[110]).

5.0 Irish forests & the environment

The Irish forest sector has strong environmental and non timber benefits. All major Irish timber processors and growers are certified by the Forest Stewardship Council (FSC)[111] or by the Programme for the Endorsement of Forest Certification (PEFC)[112]. It is estimated that 18 million people visit Irish forests for

[107] This includes co-firing of wood biomass at Edenderry Power; www.edenderrypower.ie
[108] http://www.irbea.ie/
[109] http://www.seai.ie/Renewables/Bioenergy_Roadmap.pdf
[110] http://www.budget.gov.ie/The%20National%20Recovery%20Plan%202011-2014.pdf
[111] www.fsc.org
[112] www.perfc.org

recreation purposes each year. This activity has been valued at €97 million, which in turn generates €268 million in economic activities in rural communities[113].

In addition, Ireland's forests create an opportunity to conserve and enhance biodiversity at both a local and a national level.

Over the five year period of the Kyoto Protocol (2008-2012), Irish forests will sequester 11 million tonnes (Mt) of carbon dioxide (CO_2). Over this 5 year period, this represents a total projected saving to the Irish taxpayer of €220 million. By 2020, the amount of CO_2 which will be sequestered annually from Irish forests is estimated to increase to over 4 million tonnes per annum[114].

6.0 New developments

6.1 Value of the Irish forestry and forest products sector

A recent report which was undertaken by University College Dublin has shown that in 2010, the Irish forestry and forest products sector generated approximately €2.2 billion in annual output representing almost 1.4% of GDP[115].

6.2 Employment

The Irish forestry and forest products sector employs over 12,000 people, the majority in rural Ireland (Table 37)[116,117]. A study which carried out by University College Dublin (UCD) estimated that an annual afforestation programme of 15,000 ha would on average, create 490 direct jobs. Most of these jobs would be based in rural communities in forest establishment, forest management, timber harvesting, and road haulage and in timber processing. The study indicated that for every 100 jobs in the forestry sector that an extra 70 full-time equivalent jobs are provided in other sectors of the economy[118].

Table 37: Employment in the forestry and forest products sector in the Republic of Ireland.

Sector	No employed
Forestry development sector	3,125
Forest products sector	3,907
Indirect /contract employment	4,907
TOTAL	11,939

6.3 Innovation in forest products

In recent years Irish timber processors have developed innovative new products[119].

- Such new products include the development of eased edge structural carcassing[120] by the Murray Timber Group (MTG) and the development of Smart*Ply* SiteProtect[121] by Coillte Panel Products (CPP).
- Other timber processors including Grainger Sawmills[122] have grown their market share in the UK. In addition, the Irish forestry and forest products sector has developed new markets for its products and services. These include the ongoing development of the French market by Glennon Brothers[123].

[113] http://www.coford.ie/publications/forestry2030/irishforestryandtheeconomy/
[114] http://www.agriculture.gov.ie/media/migration/2020/2020strategy/2020Forestry.doc
[115] http://www.merrionstreet.ie/index.php/2012/06/shane-mcentee-launches-irish-forestry-online-resource/
[116] http://www.forestry.ie/forestry_economy.htm
[117] Dr Áine Ní Dhubháin and Dr Richard Moloney, COFORD FORECON Project (2010 overview) http://www.coford.ie/media/coford/content/researchprogramme/projectreports/forecon2008.pdf
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[120] www.mtg.ie/construction_timber.html
[121] www.smartply.com/siteprotect/
[122] www.graingersawmills.com/
[123] www.glennonbrothers.ie/press/france2.html

- In 2011, Coillte Panel Products (CPP) launched Medite Tricoya[124]. This accetyleted MDF product offers superior performance in exterior uses. Research undertaken with the Fraunhofer Institute for Wood Research[125], Wilhelm-Klauditz-Institut (WKI), in Germany concludes that the performance of Medite Tricoya is so outstanding that it will allow it to be used in applications that have not previously been possible.
- Over the past two years, Masonite Ireland has developed two new door facings. These have enabled it to develop new markets in India and continue to grow their export sales steadily.
- Dempsey Timber Engineering[126], a subsidiary of Glennon Brothers continued to grow its market in the UK.
- In November 2011, Imperative Energy, a supplier of biomass energy solutions as named "Best of BioEnergy" by the Global Cleantech Cluster Association[127].
- Woodfab Timber is currently installing a combined heat and power (CHP) plant at its facility in Aughrim, Co Wicklow, thus enabling it to reduce its energy costs.

[124] www.medite-europe.com/meditetricoya/index.asp
[125] http://www.wki.fraunhofer.de/en.html
[126] http://www.dte.ie/v2/default.php?content=index.php
[127] http://www.globalcleantech.org/

7.0 Tables

7.1 Economic Indicators

7.1.1 An economic overview of the Irish economy (2001-2013f)[128,129,130,131,132],

Criteria/year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012f	2013f
Output - real annual growth %													
Government spending	9.8	7.1	3.2	1.8	4.6	5.3	6.9	2.2	-4.4	-6.5	-4.3	-2.2	-2.2
Personal consumption	5.4	3.8	3.2	3.8	6.6	5.7	5.9	-15	-5.4	1.0	-2.4	-2.3	-2.0
Exports	8.6	4.5	0.5	7.3	3.9	4.4	8.6	-0.8	-3.8	6.2	5.1	5.6	6.2
Imports	7.2	2.4	-1.2	8.6	6.5	4.4	5.6	-2.9	-9.7	3.6	-0.3	2.2	5.5
Consumer Price Index (CPI)	4.9	4.6	3.5	2.2	2.4	4.0	4.9	4.1	-4.5	-1.0	2.6	1.9	1.8
Gross Domestic Product (GDP)	5.7	6.0	4.3	4.3	5.5	5.7	6.0	-3.4	-5.5	-0.8	1.4	1.8	2.1
Gross National Product (GNP)	3.8	2.8	5.5	3.9	5.3	6.5	4.4	-5.3	-8.1	0.9	-2.5	-0.2	0.7
Expenditure on Gross Domestic (GDP) & Gross National Product (GNP)													
GDP at market prices € billion	€116.8	€129.9	€138.9	€147.6	€161.2	€175.8	€189.8	€180.0	€160.6	€156.5	€159.0	€161.8	€166.2
GNP at market prices € billion	€97.8	€106.2	€117.2	€124.4	€135.9	€150.3	€161.2	€154.7	€130.2	€127.0	€123.9	€126.3	€127.3
Other economic variables													
Unemployment (As % of the labour force)	4.0	4.6	4.7	4.5	**4.4**	4.4	4.6	6.3	11.8	13.6	14.4	14.8	14.6

[128] ESRI, Quarterly Economic Commentary, Summer 2010; http://www.esri.ie/UserFiles/publications/RB20100201/QEC2010Sum_ES_Summary%20Table.pdf
[129] f: Figures for 2012 and 2013 are forecast.
[130] ERSI Quarterly Economic Commentary, Summer 2011; http://www.esri.ie/UserFiles/publications/QEC2011Sum_ES.pdf
[131] ERSI Quarterly Economic Commentary, Summer 2012; http://www.esri.ie/UserFiles/publications/QEC2012SUM_ES.pdf
[132] ERSI Quarterly Economic Commentary, Autumn 2012; http://www.esri.ie/UserFiles/publications/QEC2012AUT_ES.pdf

7.1.2 Value of construction output in current prices (2006-2013f) [133,134].

	2006	2007	2008	2009	2010	2011	2012f	2013f
Residential construction € billion	25.21	23.39	17.49	7.65	4.89	3.76	2.97	
Private non-residential construction € billion	6.25	7.12	6.00	2.46	0.67	0.58	0.69	
Productive infrastructure (civils) € billion	5.28	5.77	6.62	5.99	4.47	3.18	2.91	
Social infrastructure € billion	1.89	2.33	2.48	1.95	1.67	1.17	0.93	
Total output € billion	38.63	38.61	32.59	18.05	11.70	8.69	7.50	
% residential	65.3	60.6	53.7	42.4	41.8	43.3	39.6	
Housing construction % GNP	13.5	11.4	7.9	2.8	3.9	3.0	2.4	
Annual house building cost index (1991 = 100)[135]	194.2	201.7	209.4	206.4	208.7	203.1	203.1	
Total construction output (% value change year on year)	-0.7	-2.1	-19.8	-50.1	-4.8	-25.7	-13.7	
Total construction output (% volume change year on year)		-0.6	-15.6	-34.2	-27.9	-20.9	-14.5	-6.6

[133] http://www.dkm.ie/uploads/pdf/reports/2010%2010%20CIRO%20FINAL%20REPORT.pdf
[134] http://www.dkm.ie/uploads/pdf/reports/Irish%20Construction%20Industry%20in%202012%20DKM%20SCSI.pdf
[135] http://www.cso.ie/px/doehlg/Dialog/varval.asp?ma=HSM09&ti=House+Building+Cost+Index+(Base+Jan+1991=100)+by+Month+and+State&path=../Database/DoEHLG/Housing%20Statistics/&lang=1

7.1.3 Forest products production in Ireland (2006 -2013f)[136,137,138].

Category	Unit	2006	2007	2008	2009	2010	2011	2012f	2013f
Roundwood	1000 m^3	2,671	2,710	2,232	2,429	2,618	2,635	2,918	2,938
Coniferous	1000 m^3	2,654	2,682	2,203	2,346	2,514	2,513	2,787	2,797
Non-coniferous	1000 m^3	17	27	30	83	104	122	131	141
Wood fuel, including wood for charcoal	1000 m^3	15	32	52	167	181	195	208	224
Coniferous	1000 m^3	5	12	24	87	78	74	79	85
Non-coniferous	1000 m^3	11	20	28	80	103	121	129	139
Industrial roundwood	1000 m^3	2,656	2,678	2,180	2,262	2,437	2,440	2,710	2,714
Coniferous	1000 m^3	2,650	2,671	2,179	2,259	2,437	2,439	2,708	2,712
Non-coniferous	1000 m^3	6	7	1	3	0	1	2	2
Sawlogs and veneer logs	1000 m^3	1,789	1,725	1,359	1,497	1,425	1,391	1,580	1,600
Coniferous	1000 m^3	1,782	1,718	1,358	1,494	1,425	1,390	1,578	1,598
Non-coniferous	1000 m^3	6	7	1	3	0	1	2	2
Pulpwood (round & split)	1000 m^3	760	828	734	678	893	936	1,000	1,000
Coniferous	1000 m^3	760	828	734	678	893	936	1,000	1,000
Non-coniferous	1000 m^3	0	0	0	0	0	0	0	0
Other industrial roundwood	1000 m^3	107	125	87	87	118	113	129	139
Coniferous	1000 m^3	107	125	87	87	118	113	129	139
Non-coniferous	1000 m^3	0	0	0	0	0	0	0	0
Wood chips and particles	1000 m^3	606	545	523	516	517	510	561	568
Wood residues	1000 m^3	254	229	169	167	168	165	182	184
Sawnwood	1000 m^3	1,094	985	696	774	772	761	837	848
Coniferous	1000 m^3	1,091	981	696	772	772	760	836	847
Non-coniferous	1000 m^3	3	4	1	2	0	1	1	1
Of which: tropical	1000 m^3	0	0	0	0	0	0	0	0
Wood-Based Panels (WBP)	1000 m^3	937	918	779	709	758	736	740	740
Particle board (including OSB)	1000 m^3	436	440	377	329	358	278	280	280
Of which: OSB	1000 m^3	308	310	270	274	291	278	280	280
Fibreboard	1000 m^3	501	479	402	380	400	457	460	460
Hardboard	1000 m^3	0	0	0	0	0	0	0	0
MDF (Medium Density Fibreboard)	1000 m^3	413	396	340	340	360	373	375	375
Insulating board	1000 m^3	0	0	0	0	0	0	0	0
Other fibreboard	1000 m^3	88	83	61	40	40	85	85	85
Recovered paper	1000 mt	444	458	448	471	510	525	540	555
Paper and paperboard	1000 mt	0	0	0	0	0	0	0	0
Packaging materials	1000 mt	45	45	45	45	45	45	45	45
Case materials	1000 mt	45	45	45	45	45	45	45	45

[136] EUROSTAT / Irish JQ1 Return (2007-2012).
[137] F: figures for 2012 & 2013 are forecast.
[138] These figures are in cubic metres underbark.

7.1.4 Irish timber imports and exports (2008-2011)

Table 38: Timber and paper products trade, volume and value (2008-2011).

	Imports							
	2008	**2009**	**2010**	**2011**	**2008**	**2009**	**2010**	**2011**
	000 cubic metres				**€ million**			
Sawn timber	412	232	242	201	141	66	74	64
Wood-based panels	264	181	166	195	108	68	65	68
	000 tonnes							
Pulp products	29	32	41	54	20	22	31	45
Paper and paper-board products	526	379	370	383	520	308	313	333
TOTAL					789	464	483	510
	Exports							
	000 cubic metres				**€ million**			
Sawn timber	389	564	658	619	54	51	85	83
Wood-based panels	614	580	660	616	195	147	179	173
	000 tonnes							
Pulp products	2	0	1	0	0	0	0	0
Paper and paper-board products	77	45	33	59	69	45	44	52
TOTAL					318	243	308	308

In value terms, the Republic of Ireland became a net exporter of sawn timber in 2010. This was for the first time since 1961, when global forest products statistics began to be compiled by FAO[139] (Table 39)[140]. It marked the continuation of a trend apparent since 2008 (and more apparent in the case of export volumes) with the gap between the value of exports and imports closing due to the collapse of the domestic construction market and increased levels of exports, mainly to the UK.

Table 39: Balance of trade in the value of forest products (2008-2011).

	2008	**2009**	**2010**	**2011**
	€ million			
Sawn timber	-87	-15	11	19
Wood-based panels	87	79	114	105
Pulp products	-20	-22	-31	-45
Paper and paper-board products	-451	-263	-269	-281
TOTAL	-471	-221	-175	-202

[139] http://faostat.fao.org/site/626/default.aspx#ancor
[140] Negative values show a surplus of imports over exports.

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