

UNECE Forestry & Timber Market Report for Ireland 2014

Compiled on behalf of the Department of Agriculture, Food and the Marine
Eoin O'Driscoll
drima market research

Table of contents

1.0	Irish economy-an overview	5
1.1	2012-2013	5
1.2	2014-2015	5
2.0	Market drivers	6
2.1	Construction activity	6
2.1.1	Irish housing output	7
2.1.2	Repair, Maintenance and Improvement (RMI)	7
2.1.3	Construction inflation	7
2.2	UK construction market	9
2.2.1	The UK market for forest products	9
2.3	€/£ Exchange rate	10
2.4	Demographics	10
3.0	Policy measures	11
3.1	Research, Technological Development & Innovation (RTDI)	11
3.2	Forest research	11
3.3	Support for afforestation	11
3.3.1	Afforestation grants and premiums	11
3.3.2	Native Woodland Scheme	12
3.3.3	Forest Roads Scheme	12
3.4	Draft forestry programme (2014-2020).....	12
3.5	Energy policy and support measures	13
3.5.1	Strategy for Renewable Energy (2012-2020).....	13
3.5.2	Energy Performance of Buildings Directive (EPBD).....	14
3.6	National renewable energy targets	14
3.7	Meeting national renewable energy targets	14
3.8	Wood-biomass energy outlook to 2020.....	15
3.9	National climate change strategy (2007-2012).....	16
4.0	Developments in forest products markets.....	17
4.1	Irish roundwood harvest.....	17
4.2	Private forest estate.....	17
4.3	Demand forecast	18
4.4	Forecast of roundwood supply	18
4.5	Mobilising roundwood supply	18
4.6	Sources & uses of wood fibre	19
4.7	Sawn timber	19
4.8	Wood residues	23
4.9	Wood-based panels (WBP).....	23
4.10	Wood biomass energy.....	24
4.10.1	Contribution of renewables to heat and electricity demand.....	25
4.11	Pulp & paper	25
4.12	Builders merchanting	25
4.13	Trade in forest products	25
4.14	Balance of payments	25
4.15	Value added products - wooden furniture.....	26
4.16	Voluntary forest certification.....	27
4.16.1	Schemes	27
4.16.2	Certified forest products	27
5.0	Irish forests & the environment	27
6.0	New developments	28
6.1	New Forestry Bill	28
6.2	National Forest Policy Review.....	28
6.3	Value of the Irish forestry and forest products sector	28
6.4	Employment	28
6.5	Glennon Brothers, 100 years a growing	28

6.6	Innovation in forest products.....	29
6.7	Teagasc Talking Timber	29
6.8	National Forest Inventory (NFI)	30
6.9	Plant health.....	30
7.1	Economic indicators.....	32
7.1.1	An economic overview of the Irish economy (2001-2015f).....	32
7.1.2	Value of construction output in current prices (2006-2015f)	33
7.1.3	Forest products production in Ireland (2008 -2015f).....	34
7.1.4	Irish timber imports and exports (2008-2013).....	35
8.0	References	36

Tables

Table 1: Actual and estimated GDP growth in key markets (2012-2014).....	6
Table 2: Actual and forecast house completions in the Republic of Ireland (1990-2016f).	8
Table 3: Output of the Repair, Maintenance and Improvement (RMI) sector (2010-2013).	8
Table 4: Wholesale price index for building materials (2005-2013).	8
Table 5: House starts and completions in the UK (1998-2014).....	9
Table 6: UK imports of sawn timber and wood-based panel products (2005-2013).	10
Table 7: Ireland's share of UK forest products market by product type (2011-2013).....	10
Table 8: Historic & forecasted €/£ exchange rates by quarter (2011-2015).	10
Table 9: Annual expenditure on forest schemes (2005-2015).	12
Table 10: REFIT III tariffs under the new SEAI CHP/AD CHP schemes.	14
Table 11: Renewable energy targets to 2020 by type.	14
Table 12: Progress towards meeting Ireland's renewable energy targets.	14
Table 13: Estimated roundwood demand on the island of Ireland in 2020.....	15
Table 14: Estimated demand for forest-based biomass for energy production on the island of Ireland in 2020.	15
Table 15: Total roundwood harvest including firewood in the Republic of Ireland (2008-2013).	17
Table 16: Roundwood available for processing in the Republic of Ireland (2008-2013).	17
Table 17: Area of new forests planted in the Republic of Ireland by area and by ownership (2005-2013).....	18
Table 18: Sources of wood fibre (2008-2013).....	19
Table 19: Uses of wood fibre (2008-2013).....	19
Table 20: Sawmills on the island of Ireland by size and location.....	20
Table 21: Roundwood available for processing in the Republic of Ireland (2008-2013).....	21
Table 22: Sawn timber and round stake output by product and year for the Republic of Ireland (2008-2013).....	21
Table 23: Self-sufficiency in sawnwood (2008-2012):.....	21
Table 24: Top softwood exporters to Ireland (2008-2013).....	22
Table 25: Main hardwood exporters to Ireland (2008-2013).....	22
Table 26: Production of wood residues in 000 m ³ (2008-2013).	23
Table 27: Wood-based panel manufacturers in the Republic of Ireland (November 2014).	23
Table 28: Production and exports of wood-based panels in and from the Republic of Ireland (2008-2013).	23
Table 29: Use of forest-based biomass and as a proportion of total roundwood harvest (2008-2013).....	24
Table 30: Output use of forest-based biomass and associated greenhouse gas emissions mitigation (2008-2013).	24
Table 31: Volume and value of the domestic firewood market in the Republic of Ireland (2008-2013).	25
Table 32: Timber and paper products trade, volume and value (2008-2013).	26
Table 33: Balance of payments trade in the value of forest products (2008-2013).	26
Table 34: The value of wooden furniture imports & exports to/from the Republic of Ireland (2008-2013).	26
Table 35: Employment in the forestry and forest products sector in the Republic of Ireland.	28
Table 35: Timber and paper products trade, volume and value (2008-2013).	35
Table 36: Overall balance of trade in the value of timber products (2008-2013).	35
Table 37: Self-sufficiency in sawnwood (2008-2013).....	35

1.0 Irish economy-an overview

1.1 2012-2013

Ireland is a small, open economy¹, highly dependent on trade. In 2013, the Irish economy returned to growth. Net exports were the main driver of this growth, while domestic demand remained weak. Economic activity in Ireland's main export markets strengthened during the second half of last year. This pace of growth is expected to accelerate in 2014.

- At market prices, Gross Domestic Product (GDP) was €175 billion and grew in volume by 0.4% over 2012. This reflected a small decline in domestic demand offset by a small positive contribution from exports.
- Domestic demand came close to stabilisation in 2013.
- Over the same period, Gross National Product (GNP), increased by 1.8%.
- Exports grew by 0.3% in 2013. Following a progressively weak performance during 2012, exports declined sharply in the first quarter of 2013 but rebounded in the second quarter of the year in line with improving external demand conditions
- The labour market recorded a very strong performance in 2013, with almost all metrics surpassing expectations. Importantly, 2013 marked the end of five years of employment losses.
- Inflation as measured by the Consumer Price Index (CPI) was 0.5% for 2013.
- Personal consumption, which accounts for nearly two thirds of domestic demand, fell by 0.8% while Government expenditure grew by 1.4% over 2012.
- Ireland has restructured and recapitalised its banking system. Within this restructured system, the main domestic banks are now at the early stages of securing normal market funding.
- In 2006, at the peak of the housing bubble, some 93,419 housing units were completed across the country, 19,470 of them in Dublin. In 2013, a total of 8,301 homes were completed with just 1,360 in Dublin.

1.2 2014-2015

Irish GDP is projected to increase by 2.1% in 2014, with GDP growth of 3.2% forecast for the period 2015-2018. Given the assumption that exports will lead the way, and in particular the important role that the foreign-owned sector is likely to play, the pace of GNP growth is assumed to be somewhat lower, averaging 2.6%.

Employment growth of 2.2 per cent is projected for 2014. This is driven by a combination of strong carryover from 2013, together with the improved outlook for domestic demand. Employment growth is supported by strengthening labour demand in the services sector in particular and is consistent with both the outlook for services exports. On the assumption of a further expansion of the labour force, unemployment is projected to average 11.1% in 2013 and 10.3% in 2015.

The Government's primary macroeconomic policy objective is to put the economy back on a sustainable growth path so as to move to a point where sustained net employment creation is taking place. Recent reports^{2,3,4} have shown that:

- The Government's National Recovery Plan⁵ targets a total adjustment of €15bn over four years with the objective of reducing the annual deficit to less than 3% of GDP by 2014⁶. 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.
- It is forecast that GDP will grow by 2.1% in 2014, 3.2% in 2015 and 2.8% in 2016^{7,8}.

¹

<http://www.centralbank.ie/polstats/econpolicy/Documents/Domestic%20Economy%20Overview%20from%20Quarterly%20Bulletin%20QB%201%202014.pdf>

² <http://www.finance.gov.ie/documents/publications/reports/2013/spuifin2013.pdf>

³ <http://www.esri.ie/UserFiles/publications/QEC2013AUT.pdf>

⁴ <http://www.finance.gov.ie/documents/publications/reports/2013/spuifin2013.pdf>

⁵ <http://www.budget.gov.ie/The%20National%20Recovery%20Plan%202011-2014.pdf>

⁶ <http://www.davy.ie/content/pubarticles/nationalplan20101125.pdf>

⁷ <http://www.ntma.ie/business-areas/funding-and-debt-management/irish-economy/>

- In the first quarter of 2014, real GDP grew by 2.7%.
- The latest Department of Finance forecasts for the period 2014-2018 suggest real GDP growth is set to accelerate in the coming years. It forecasts 2.1% growth in real GDP in 2014, followed by 2.7% in 2015 and 3-3.5% out to 2018.
- Ireland remains fully committed to meeting fiscal targets and reducing the deficit to below 3% of GDP in 2015.
- For 2014 and over the medium term, the pace of economic expansion is projected to strengthen. This is based on the assumption of a continued modest recovery in domestic demand and an improvement in the economic activity in key export markets.
- It is expected that the volume of exports of goods and services will increase by 3.5% in 2014 and by 5.1% in 2015.
- Investment in building and construction is forecast to remain broadly unchanged in 2014.
- A recent report from the Housing Agency on future housing supply requirements for the period 2014 to 2018 suggests a total requirement of just under 80,000 dwelling are required over this period.
- On the basis of house completion, planning permission and commencement data it seems likely that investment in housing will remain subdued in 2014.
- Any significant recovery in the housing market and in the construction sector is not expected until 2015, or even later in the decade.
- The rate of unemployment is set to decline to 11.1% in 2014 and 10.3% in 2015.
- Private consumer expenditure is forecast to rise by 1.4% in 2014 and 1.6% in 2015.
- Inflation as measured by the CPI is forecast to increase by 0.7% in 2014 and 1.5% in 2015.
- The actual and expected growth in the GDP of Ireland's export markets is shown in Table 1.

Table 1: Actual and estimated GDP growth in key markets (2012-2014).

	2012	2013	2014
	% change		
World (excluding EU)	3.9	4.0	4.5
United States	2.2	1.9	2.6
Euro area	-0.6	-0.3	1.4
United Kingdom	0.0	0.9	1.9

2.0 Market drivers

2.1 Construction activity

The volume of output of the Irish construction industry bottomed out in 2013 and started to recover slowly during the second half of the year. It is predicted that this recovery will continue. An 8% increase in value of output during 2014 (5% in volume and 3% inflation) is predicted. This forecasted output of €8.95 billion in 2014 is only 23% of the peak output level of €38.6 billion reached in 2007. It is unanimously agreed that the 2007 level of output at almost 24% of GNP was unsustainable; however the current level at just 6% of GNP is only half of the recognised optimal level of 12% for a developed economy⁹.

The demand for forest products is closely related to the level of house building, to timber frame use and to demand in key export markets¹⁰. In Ireland, the level of residential house completions has steeply declined since 2006^{11,12}.

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 €8.1 billion in 2012, or 6.1% of GNP.

Based on a comparison with the size of the construction industry in other countries, it is considered that an economy the size of Ireland should be capable of sustaining a construction industry equivalent to around 12% of

⁸ https://www.davy.ie/research/public/printPdf.htm?id=econforecast20140812_11082014.htm

⁹ http://www.bruceshaw.com/knowledgecentre/chapters/ireland#chapter_section_2

¹⁰ <http://www.coillte.ie/fileadmin/templates/pdfs/BaconReport.pdf>

¹¹ <http://www.environ.ie/en/PublicationsDocuments/FileDownload.20136.en.pdf>

¹² <http://www.cso.ie/en/releasesandpublications/er/pbci/productioninbuildingandconstructionindexquarter42012/#.UpjuDcRfCKE>

GNP (10% of GDP) over the medium-term, without the negative repercussions associated with previous periods of overbuilding. This would imply an industry with an output of €15 billion^{13,14}.

However, there are some positive developments which are likely to create niche opportunities for construction. These include the energy sector, where the semi-State companies have encouraging capital investment plans; and the emerging green economy and associated opportunities for the retro-fitting of homes. The Government has committed to achieving, by 2020, a 20% reduction in energy demand across the whole of the economy through energy efficiency measures. It is expected that the residential sector will contribute 35% of the targeted savings, thus generating opportunities for improving the energy efficiency of the residential building stock.

Recent analysis by the Economic and Social Research Institute (ESRI) has estimated that, in coming years, increases in population will result in the formation of at least 20,000 new households each year, each requiring a separate dwelling. In addition, a number of existing dwellings will disappear through redevelopment or dilapidation. The results suggest an ongoing need for at least 25,000 new dwellings a year over the coming fifteen years¹⁵.

The construction sector is where the greatest amount of uncertainty lies. Employment in the sector is currently just over 100,000, still well below the 275,000 peak. Construction sector output is still down 75% from peak levels in 2007. Housing starts in 2013 were just 4,700, still well below levels closer to 80,000 during the boom years; current estimates suggest that 25,000 starts are required to satiate natural demographic demand. Planning bottlenecks, a lack of equity finance and constrained land availability may be holding back supply, particularly in urban areas.

2.1.1 Irish housing output

In 2013, house completions declined by 2.2% over 2012 (Table 2). However, a recent report from the Housing Agency on future housing supply requirements for the period 2014 to 2018 suggests that just under 80,000 dwellings are required across 272 urban settlements nationally, an average of 15,932 units per annum over the five years (ranging from 9,526 in 2014 to 20,853 in 2018). It estimates that 47% of total supply over the period is required across the Dublin Region¹⁶.

However, a rebound in housing construction now appears to be underway, albeit off an extremely low base and still well below necessary levels to satiate natural demographic demand. Growth in construction activity is signalled by the pick-up in housing starts, reflecting supply shortages in certain areas, and double-digit growth in home renovation spending in recent quarters¹⁷.

Housing completions were 3,941 in the first five months of 2014, up 31.5% on the same period in 2013. Housing commencements surged in early 2014, with 4,343 in February alone. In January and February 2014, commencements surpassed the entire 4,700 total recorded in 2013. A recent report by Davy Stockbrokers forecasts house completions of 9,850 in 2014, rising to 12,150 in 2015 and 14,600 in 2016 (Table 2)¹⁸.

In May 2014, the Government launched its Construction 2020 Strategy to address constraints on housing supply¹⁹.

2.1.2 Repair, Maintenance and Improvement (RMI)

In 2013, expenditure on RMI grew by 6.5% over 2012 to reach €2.03 billion (Table 3)²⁰. This includes 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 stock²¹.

2.1.3 Construction inflation

In 2013, the wholesale price index for building materials showed a 0.8% increase on 2012 (Table 4)²².

¹³ <http://www.dkm.ie/uploads/pdf/reports/Irish%20Construction%20Industry%20in%202012%20DKM%20SCSI.pdf>

¹⁴ http://www.forfas.ie/media/25072013-Irelands_Construction_Sector_Outlook_and_Strategic_Plan_to_2015-Press-Release.pdf

¹⁵ <http://www.merrionstreet.ie/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf>

¹⁶ <http://www.merrionstreet.ie/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf>

¹⁷ <http://www.finance.gov.ie/sites/default/files/Ireland's%20SPU%202014%20Final%2029%20April%202014.2.pdf>

¹⁸ https://www.davy.ie/research/public/printPdf.htm?id=econforecast20140812_11082014.htm

¹⁹ <http://www.merrionstreet.ie/en/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf>

²⁰ https://www.davy.ie/research/public/printPdf.htm?id=econforecast20140812_11082014.htm

²¹ http://www.forfas.ie/media/19072013-Irelands_Construction_Sector-Publication.pdf

²² www.cso.ie

Table 2: Actual and forecast house completions in the Republic of Ireland (1990-2016f).

	House completions	Growth rate 1990 = 100		House completions	Growth rate 1990 = 100
1990	19,539	100.00	2004	76,954	393.85
1991	19,652	100.58	2005	80,957	414.34
1992	22,464	114.97	2006	93,419	478.12
1993	21,391	109.48	2007	78,027	399.34
1994	26,863	137.48	2008	51,724	264.72
1995	30,575	156.48	2009	26,420	135.22
1996	33,725	172.60	2010	14,602	74.73
1997	38,842	198.79	2011	10,480	53.63
1998	42,349	216.74	2012	8,488	43.44
1999	46,512	238.05	2013	8,301	42.48
2000	49,812	254.94	2014f	9,850	50.42
2001	52,602	269.22	2015f	12,150	62.18
2002	57,695	295.28	2016f	14,600	74.72
2003	68,819	352.21			

Table 3: Output of the Repair, Maintenance and Improvement (RMI) sector (2010-2013).

	Value in billion €	% change year on year
2010	2.81	
2011	2.24	-20.9
2012	1.91	-14.5
2013	2.03	6.5

Table 4: Wholesale price index for building materials (2005-2013).

	2007	2008	2009	2010	2011	2012	2013
Index 2005 = 100	141.5	147.1	141.6	116.6	119.6	122.6	123.6
% change year on year		4.0	-3.7	-17.7	2.6	2.5	0.8

2.2 UK construction market

The UK construction market is the key export outlet for forest products manufactured in Ireland. However, house building in the UK has been on a long term downward trend since 1970. The number of houses built across the UK, fell from 378,000 in 1969/70 to 141,000 in 2013/14 (Table 5)²³. In 2012/2013, England had one of the lowest house building rates since 1923, with just 108,190 completions²⁴.

Table 5: House starts and completions in the UK (1998-2014).

	Starts	1998 = 100	Completions	1998 = 100
1998	186,720		178,290	
1999	192,910	1.03	184,010	1.03
2000	183,480	0.98	184,010	1.03
2001	194,140	1.04	175,370	0.98
2002	197,110	1.06	174,200	0.98
2003	213,190	1.14	183,210	1.03
2004	225,050	1.21	190,590	1.07
2005	233,890	1.25	206,620	1.16
2006	222,610	1.19	214,000	1.20
2007	218,920	1.17	219,070	1.23
2008	118,570	0.64	218,530	1.23
2009	124,420	0.67	178,780	1.00
2010	138,470	0.74	152,940	0.86
2011	135,300	0.72	137,400	0.77
2012	127,450	0.68	146,840	0.82
2013	186,720	1.00	135,510	0.76
2014	192,910	1.03	140,850	0.79

2.2.1 The UK market for forest products

The UK is a significant importer of sawn timber and panel products. In 2013, 5.5 million cubic metres of sawn timber products were imported into the UK (Table 6)²⁵. However, in volume terms, the size of this market has declined by 34% over the period 2005-2013. Panel imports into the UK declined by 25% over the same period. In 2013, the key suppliers of forest products to the UK²⁶ were;

- Sweden (46%), Latvia (14%) and Finland (13%) provided the majority of imports of sawn softwood to the UK.
- Most particleboard imports²⁷ to the UK came from Germany (25%), France (22%) and Ireland (15%).
- Ireland (34%), Germany (24%) and Spain (11%) were the principal sources of fibreboard imports.
- Most paper and paperboard imports came from Sweden (19%), Germany (17%) and Finland (15%).

Ireland's market share of the UK sawn softwood timber market doubled from 3.34% in 2007 to 6.68% in 2013. Moreover, in 2013, the Republic of Ireland was the fourth largest exporter of sawn softwood timber to the UK. There are further opportunities for the Irish sawmilling sector to grow its market share in the UK.

In 2013, Ireland was the largest exporter of fibreboard including medium density fibreboard (MDF) to the UK (Table 7). Over the same period, Ireland was the second largest exporter of particleboard including oriented strand board (OSB) to the UK. The reduction in particleboard exports from Ireland to the UK was in part caused by the closure in 2011 by Finsa Forest Products Ltd of its particleboard plant at Scariff, Co Clare.

²³ <https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building>

²⁴ <http://www.hbf.co.uk/media-centre/facts-statistics/>

²⁵ <http://www.forestry.gov.uk/forestry/infid-9hxecv>

²⁶ <http://www.forestry.gov.uk/website/forstats2014.nsf/LUContents/45A4416DC7F75A9D8025735600334221>

²⁷ Particleboard data includes OSB.

Table 6: UK imports of sawn timber and wood-based panel products (2005-2013).

	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
2012	5,100	2,700	7,800
2013	5,500	2,962	8,462

Table 7: Ireland's share of UK forest products market by product type (2011-2013).

	Market share % by volume		
	2011	2012	2013
Sawn softwood	6	7	7
Particleboard including OSB	24	20	15
Fibreboard including MDF	36	36	34

2.3 €/£ Exchange rate

Historic movements in the €/£ exchange rate are shown in Table 9²⁸. A recent forecast by the Royal Bank of Scotland Group (RBS) estimates that by the first quarter of 2015, Sterling will have appreciated in value by 5% against the Euro (Table 8)^{29,30}.

Table 8: Historic & forecasted €/£ exchange rates by quarter (2011-2015).

Historic	€/£	£/€	Forecast	€/£	£/€
2013-Q1	1.18	0.85	2014-Q4	1.25	0.80
2013-Q2	1.17	0.86	2015-Q1	1.26	0.79
2013-Q3	1.20	0.84	2015-Q2	1.26	0.79
2013-Q4	1.19	0.84	2015-Q3	1.26	0.79
2014-Q1	1.23	0.83	2015-Q4	1.26	0.79
2014-Q2	1.24	0.81			
2014-Q3	1.25	0.80			

2.4 Demographics

Population statistics for the year to April 2013 show there are an increasing number of Irish nationals leaving the country. Of those who emigrated, 50,900 were Irish nationals in the year to April, up from 46,500 in the year to April 2012. Total emigration (including that of other nationalities) was 89,000 over the year to April, up slightly from 87,100 the previous year³¹.

In the year to April 2013 there were 55,900 immigrants, up modestly from 52,700 a year earlier. Net emigration was similar in magnitude to the year ending in April 2012.

²⁸ <http://www.centralbank.ie/polstats/stats/exrates/Pages/default.aspx>

²⁹ <https://www.ecb.europa.eu/stats/exchange/eurofxref/html/eurofxref-graph-gbp.en.html>

³⁰ <http://www.rbs.com/news/2013/06/interest-exchange-rate-forecast.html>

³¹ <http://www.esri.ie/UserFiles/publications/QEC2013AUT.pdf>

According to the Central Statistics Office (CSO), the number of households grew by 13% between 2006 and 2011, and it has been projected that it will increase by 5% between 2011 and 2016, resulting in some 85,000 additional households³².

3.0 Policy measures

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

3.1 Research, Technological Development & Innovation (RTDI)^{33,34}

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 advice³⁵.
- Environment Research Sub-Programme
 - Some €93 million was 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 forest sector) advises the Department regarding the scope of forest research and provides advice to DAFM on issues including roundwood demand and supply.

In 2012/2013, the COFORD Council established four working groups to address the following areas:

- Update the national forest research strategy.
- Examine land availability and constraints and incentives to achieving afforestation.
- Develop a national forest management planning system.
- Improve the mobilisation of wood supply and review the national roundwood production forecast.

In October 2014, the Minister for Agriculture, Food and the Marine, Simon Coveney, TD, announced the publication of the new Strategic Research Agenda for Forestry in Ireland “*Forest Research Ireland (FORI) – meeting the needs of Ireland’s forest sector to 2017 and beyond through research and innovation*”^{36,37}.

3.3 Support for afforestation

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^{38,39,40}.

³² <http://www.merrionstreet.ie/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf>

³³ Enterprise Ireland; www.enterprise-ireland.com

³⁴ 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

³⁵ <http://www.dcenr.gov.ie/Energy/Office+of+the+Chief+Technical+Advisor/Irish+Energy+Research+Council.htm>

³⁶ <https://www.agriculture.gov.ie/media/migration/press/pressreleases/2014/october/PR14414091014.pdf>

³⁷ <https://www.agriculture.gov.ie/media/migration/research/whatsnew/ForestResearchIreland20143Layout1091014.pdf>

³⁸ http://www.teagasc.ie/forestry/financial_info/afforestation_grant_rates.asp

³⁹ http://www.teagasc.ie/forestry/docs/financial_info/AfforestationScheme2007_T&C.pdf

⁴⁰ http://www.teagasc.ie/forestry/docs/financial_info/forestrygrantrates_2009.pdf

The budget allocation for forestry for 2014 and for 2015 allows for 7,000 ha of new planting under the Afforestation, Native Woodland and FEPS Schemes, along with funding for support schemes (Table 9)^{41,42,43,44}.

Table 9: Annual expenditure on forest schemes (2005-2015).

Year	Forestry support schemes	Premia	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
2013				116.0
2014				105.0
2015				110.0

3.3.2 Native Woodland Scheme

The Native Woodland Scheme⁴⁵ 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 grant 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 project⁴⁶.

3.4 Draft forestry programme (2014-2020)

The Department of Agriculture, Food and the Marine has prepared a Draft Forestry Programme for the period 2014-2020. The preparation of the draft programme has already involved consultation with a broad range of stakeholders and a consultation paper, summarising the proposed measures, was published in March 2014⁴⁷.

In accordance with EU Directive 2001/42/EC and the European Communities (Environmental Assessment of Certain Plans and Programme) Regulations 2004 (S.I. No. 435 of 2004, as amended) the Department is now undertaking a Strategic Environmental Assessment (SEA) of the Draft Forestry Programme 2014-2020.

⁴¹ www.teagasc.ie/forestry/docs/advice/Teagasc_Situation_Outlook_Forestry_2012.pdf

⁴² <http://www.merriestreet.ie/index.php/2012/12/mcentee-welcomes-the-2013-budget-provision-for-forestry-horticulture-and-greyhound-sectors/>

⁴³ <http://www.merriestreet.ie/index.php/2012/12/mcentee-welcomes-the-2013-budget-provision-for-forestry-horticulture-and-greyhound-sectors/>

⁴⁴ <http://www.agriculture.gov.ie/press/pressreleases/2013/october/title.72218.en.html>

⁴⁵

<http://www.agriculture.gov.ie/media/migration/forestry/publications/nativewoodlandschememanual/NativeWoodlandSchemeManual2008060911.pdf>

⁴⁶ <http://www.agriculture.gov.ie/press/pressreleases/2012/january/title.60877.en.html>

⁴⁷ <http://www.agriculture.gov.ie/media/migration/forestry/publicconsultation/newforestryprogramme2014-2020/forestryprogramme2014-2020/DraftForestryProgramme20142020PubCon.pdf>

3.5 Energy policy and support measures

3.5.1 Strategy for Renewable Energy (2012-2020)

In May 2012, a Strategy for Renewable Energy (2012-2020)⁴⁸ was published by the Department of Communications, Energy and Natural Resources (DCENR)⁴⁹. 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 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.

Renewable electricity (RES-E)

The Government has set a target of 40% electricity consumption from renewable sources by 2020. In the last five years in particular, Ireland has made 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)⁵⁰. As of 27/2/2012, REFIT III, the newest REFIT scheme was made available. This scheme is outlined below.

Renewable Energy Feed-In Tariff (REFIT)

The REFIT⁵¹ 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.

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 (Table 10).

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 31/12/2030⁵².

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.

⁴⁸ http://www.dcenr.gov.ie/NR/rdonlyres/9472D68A-40F4-41B8-B8FD-F5F788D4207A/0/RenewableEnergyStrategy2012_2020.pdf

⁴⁹ <http://www.dcenr.gov.ie/>

⁵⁰ <http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division/Electricity+from+Renewables+inc+REFIT+and+AER.htm>

⁵¹ ec.europa.eu/energy_policy/doc/.../renewables_ie_en.pdf

⁵² <http://www.dcenr.gov.ie/NR/rdonlyres/05441877-FC28-4A6C-8F5F-0EEAC8271DDF/0/REFIT3TermsandConditionsAugust2012.pdf>

Table 10: REFIT III tariffs under the new SEAI CHP/AD CHP schemes.

	REFIT tariff €/MWh⁵³
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

3.5.2 Energy Performance of Buildings Directive (EPBD)

Since January 2007, in line with the European Commission's Energy Performance of Buildings Directive⁵⁴ (Directive 2002/91/EC)⁵⁵, 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 time⁵⁶.

3.6 National renewable energy targets

Ireland's national renewable energy targets are shown in Table 11⁵⁷.

Table 11: 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

3.7 Meeting national renewable energy targets

Ireland's progress towards meeting its biomass energy targets are shown in Table 12⁵⁸.

Table 12: Progress towards meeting Ireland's renewable energy targets.

Target	2010	2011	2012	2020
	% of target			
RES-E normalised	14.9	17.6	19.6	40
RES-T	2.6	3.6	3.8	10
RES-H	4.3	4.7	5.2	12
Directive (2009/29/EC)	5.5	6.4	7.1	16

⁵³ WWh: Megawatt hour.

⁵⁴ www.sei.ie/epbd/

⁵⁵ ec.europa.eu/energy/efficiency/buildings/buildings_en.htm

⁵⁶ http://www.dcenr.gov.ie/NR/rdonlyres/FC3D76AF-7FF1-483F-81CD-52DCB0C73097/0/NEEAP_full_launch_report.pdf

⁵⁷ http://www.mnag.ie/workshop_2010_7_2172276902.pdf

⁵⁸ www.seai.ie

3.8 Wood-biomass energy outlook to 2020

By 2020, the demand for roundwood is set to increase to 6.038 M m³ (Table 13)⁵⁹. Based on scenario modelling⁶⁰, 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 biomass⁶¹.

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 14⁶². 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. 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 13: Estimated roundwood demand on the island of Ireland in 2020.

	000 m³ OB
Conventional demand ⁶³	3,830
Demand for forest-based biomass for energy production	3,084
Residues from conventional demand which are used to meet energy demand ^{64,65}	-876
Total	6,038

Table 14: Estimated demand for forest-based biomass for energy production on the island of Ireland in 2020.

	Estimated demand 000 m³ 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

⁵⁹ 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.

⁶⁰ This is based on data available as of 2/11/2010.

⁶¹ This data is based on work which was undertaken by the COFORD Supply Group (2010).

⁶² 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.

⁶³ Conventional demand is roundwood used (for processing) by the sawmilling and by the boardmill sectors.

⁶⁴ The use of post consumer recovered wood (PCRW) is excluded

⁶⁵ 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 m³ 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 m³ OB. It is estimated that by 2020 the use of sawmill/panel residues for energy production will have increased to 876,000 m³ OB.

3.9 National climate change strategy (2007-2012)

Ireland signed the United Nations Framework Convention on Climate Change (UNFCCC⁶⁶) in June 1992 and ratified it in April 1994. As a signatory to the Kyoto Protocol⁶⁷, Ireland is committed to limiting its greenhouse gas (GHG) emissions to 13% above the 1990 level by 2008–2012⁶⁸.

The Irish forest sector has a key role to play in addressing climate change, through carbon sequestration and through materials substitution and the displacement of fossil fuels. Forests established as a result of grant-aid under the State/European Union (EU) funded afforestation schemes since 1990 are expected to contribute to a removal of over 16 million tonnes of carbon dioxide (CO₂) over the Kyoto period (2008-2012). There is also significant further 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 GHG⁶⁹ emissions.

Since 2006, the use of wood biomass energy in Ireland has resulted in an estimated Total emissions saving of 2.56 million tonnes of CO₂.

At the Durban climate change conference held in late 2011⁷⁰, 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 is now mandatory on the basis of a projected reference level approach for most parties. Harvest in pre-1990 forests over and above those in the reference level will result in debits at the national level⁷¹.

At the request of the Minister for the Environment, Community and Local Government, the Secretariat of the National Economic and Social Council (NESC)⁷², undertook an analysis to inform the development of Irish climate change policy. The NESC Climate Change project included 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 NESC climate change report which was completed in December 2012⁷³ states that afforestation will have a critical bearing on overall carbon neutrality in Ireland. It states that with current planting rates, by 2050 Irish forests could sequester in the region of 1.8 Mt CO₂; if the rate increased to 20,000 ha per annum, then the potential could be between 7 and 8 Mt CO₂ sequestered in 2050.

⁶⁶ unfccc.int

⁶⁷ unfccc.int/kyoto_protocol/items/2830.php

⁶⁸ www.environ.ie/en/PublicationsDocuments/FileDownload,1861,en.pdf

⁶⁹ GHG: Green House Gas.

⁷⁰ http://unfccc.int/meetings/durban_nov_2011/meeting/6245.php

⁷¹ http://www.teagasc.ie/forestry/docs/advice/Teagasc_Situation_Outlook_Forestry_2012.pdf

⁷² <http://www.nesc.ie/>

⁷³

http://www.nesc.ie/assets/files/Ireland%20and%20the%20Climate%20Change%20Challenge_Connecting%20How%20Much%20with%20How%20To_Main_Report.pdf

4.0 Developments in forest products markets

4.1 Irish roundwood harvest

In 2013, 3.04 million m³ of roundwood was harvested in the Republic of Ireland (Table 15)⁷⁴, while over the same period, 2.85 million m³ of roundwood was processed⁷⁵, a 10% increase on 2012 (Table16).

Table 15: Total roundwood harvest including firewood in the Republic of Ireland (2008-2013).

	2008	2009	2010	2011	2012	2013
000 m ³ OB						
Coillte harvest	2,337	2,428	2,517	2,492	2,485	2,588
Private harvest	118	155	387	460	354	448
Total	2,455	2,583	2,904	2,952	2,839	3,036

Table 16: Roundwood available for processing in the Republic of Ireland (2008-2013).

	2008	2009	2010	2011	2012	2013
000 m ³ OB						
Commercial softwood						
Imports less exports	106	-63	28	55	-18	49
Coillte	2,279	2,354	2,217	2,299	2,269	2,474
Private sector	118	130	463	386	343	328
Commercial hardwood						
Imports less exports	0	0	0	0	0	-1
Coillte	1	3	0	1	1	2
Private sector	0	0	0	1	1	1
Total	2,504	2,424	2,708	2,742	2,596	2,853

4.2 Private forest estate

In the period (1981-2013), over 250,000 hectares of forest were established by private growers in Ireland^{76, 77}. 232,616 hectares of this estate has been planted since 1990. 84% of private forest owners are farmers⁷⁸. 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 old⁷⁹. The level of afforestation over the period 2005-2013 is shown in Table 17.

⁷⁴ The split of harvest between Coillte and the private sector has been revised from that shown in previous editions of the Market Statement for Ireland. This is based on updated harvest data for the period shown.

⁷⁵ Excluding firewood and hardwood.

⁷⁶ http://www.teagasc.ie/forestry/docs/technical_info/articles/Teagasc_forestry_situation_outlook_2010.pdf

⁷⁷ <http://www.agriculture.gov.ie/forests/forests-service/forests-service-general-information/forest-statistics-and-mapping/afforestation-statistics/>

⁷⁸

http://www.teagasc.ie/forestry/docs/technical_info/articles/IUFRO%20The%20Farm%20Forest%20Resource%20and%20Rural%20Development%20in%20Ireland%202006.pdf

⁷⁹ http://www.teagasc.ie/publications/2012/1070/Forestry_Outlook_JohnCasey.pdf

Table 17: Area of new forests planted in the Republic of Ireland by area and by ownership (2005-2013).

	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
2012	60	6,592	6,652
2013	3	6,249	6,252

4.3 Demand forecast

Historically the Irish wood 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 use⁸⁰.

4.4 Forecast of roundwood supply

Over the next decade and a half, the projected roundwood harvest from Irish forests will increase significantly. The COFORD national roundwood production forecast shows that over the period to 2028 the annual 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 over the past 25 years on foot of state/EU and private sector investment (Table 21)⁹⁴. Considerable scope exists to expand wood energy production, and this is in addition to supplies for sawmilling and board manufacture⁸¹.

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

4.5 Mobilising roundwood supply

Recent work undertaken by COFORD shows 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.

Work by the COFORD Wood Mobilisation Group is further examining these and other issues⁸².

⁸⁰ http://www.coford.ie/media/coford/content/publications/projectreports/roundwooddemand2011/COFORD_demand01Mar11.pdf

⁸¹ <http://www.coford.ie/media/coford/content/publications/projectreports/roundwood/Roundwood%20Prod%20Forecast%20LR%20June%202011.pdf>

⁸² http://www.teagasc.ie/forestry/docs/events/Roundwood_S_D_Eugene_Hendrick.pdf

4.6 Sources & uses of wood fibre

Wood fibre sources for the processing and wood energy sectors and residue outturn are shown in Table 18; uses are in Table 19^{83,84}. 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 panels⁸⁵.

Table 18: Sources of wood fibre (2008-2013).

	2008	2009	2010	2011	2012	2013
	000 m ³ OB roundwood equivalent (RWE) ⁸⁶					
Roundwood	2,503	2,421	2,708	2,740	2,594	2,851
Sawmill residues	846	838	842	829	853	897
Wood-based panel residues ⁸⁷	106	94	101	115	104	110
Residue imports						108
Harvest residues	0	0	0	40	30	30
Post-consumer recovered wood	208	200	280	270	250	250
Total	3,663	3,553	3,931	3,994	3,882	4,246

Table 19: Uses of wood fibre (2008-2013).

	2008	2009	2010	2011	2012	2013
	000 m ³ OB RWE					
Sawmilling	1,619	1,602	1,603	1,580	1,622	1,710
Round stake	80	88	118	116	131	117
Wood-based panels	1,462	1,286	1,400	1,340	1,276	1,407
Wood biomass energy use by the forest products sector ⁸⁸	378	431	554	572	611	704
Other uses						
Horticultural bark mulch	44	54	27	34	40	50
Wood chip for commercial biomass use	30	55	39	41	30	100
Export of forest product residues	50	37	58	196	112	88
Other uses ⁸⁹			132	115	60	70
Total	3,663	3,553	3,931	3,994	3,882	4,246

4.7 Sawn timber

Eight 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 20)⁹⁰. The majority of the logs which are supplied to Irish sawmills are certified to FSC^{91,92} and/or to PEFC⁹³ standards. In addition, Irish sawmills have their own chain of custody (CoC) certification.

⁸³ UNECE Joint Wood Energy Enquiry (2009-2014) and EUROSTAT Joint Forest Sector Questionnaire (2009-2014).

⁸⁴ Wood fibre that is reused is counted twice in this model.

⁸⁵ UNECE Joint Wood Energy Enquiry (2009-2014) & EUROSTAT Joint Forest Sector Questionnaire (2009-2014).

⁸⁶ RWE: roundwood equivalent

⁸⁷ Includes bark (from the debarking lines at Medite & SmartPly) and sawdust from the sanding of wood-based panels.

⁸⁸ Wood biomass energy is used by the forest products sector for process drying, heating and for the generation of electricity.

⁸⁹ Other uses include the production of wood pellets.

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

Table 20: Sawmills on the island of Ireland by size and location.

	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	GP Wood Ltd.	Enniskeane, Co Cork Macroom, Co Cork	www.gpwood.ie
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	www.laoissawmills.com
Medium	Woodfab Timber Ltd.	Aughrim, Co Wicklow	www.woodfabtimber.ie

In 2013, Glennon Brothers, an Irish sawmill group with operations in Ireland and Scotland celebrated 100 years in business⁹⁴. In the same year Grainger Sawmills⁹⁵ merged with Palfab Ltd.⁹⁶ to form GP Wood⁹⁷. The new group has a turnover of €49 million generating exports of €24 million.

In 2013, Irish sawmills utilised 1.83 million cubic metres of roundwood to produce 930,000 cubic metres of sawn timber. 86% of this roundwood was sold by Coillte, with the balance supplied by imports and by the private forest sector⁹⁸ (Table 21).

In value terms, 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 FAO⁹⁹ (Table 33). 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.

Over the period 2011-2013, consumption of sawn timber in the Republic of Ireland grew by 7%. In 2013, 67% of the Irish market for sawn softwood timber was supplied by domestic production with the balance being imported. Over the same period, only 4% of the Irish market for sawn hardwood was supplied domestically (Table 23).

The timber products which are produced by Irish sawmills serve three main markets: construction/structural, pallet/packaging and fencing/outdoor. The market size of these products from 2008-2013 is in Table 22¹⁰⁰.

In September 2014, Enterprise Ireland¹⁰¹ hosted three Irish construction sawnwood exporters at Timber Expo¹⁰² which took place at the NEC in Birmingham, UK. These exporters were Glennon Brothers¹⁰³, GP Wood Ltd.¹⁰⁴ and MTG (Murray Timber Group)¹⁰⁵.

⁹³ www.pefc.org

⁹⁴ http://www.glennonbrothers.ie/press/100_years_celebration.html

⁹⁵ <http://www.graingersawmills.com/>

⁹⁶ <http://www.palfab.com/>

⁹⁷ <http://www.graingersawmills.com/GP%20Wood%20Announcement.pdf>

⁹⁸ Includes the production of round stake.

⁹⁹ <http://faostat.fao.org/site/626/default.aspx#ancor>

¹⁰⁰ COFORD woodflow data 2009-2013; <http://www.coford.ie/publications/cofordconnects/>

¹⁰¹ <http://www.enterprise-ireland.com/en/>

¹⁰² <http://www.tjonline.com/features/irish-mills-make-a-stand-4386512/>

¹⁰³ <http://www.glennonbrothers.ie/>

¹⁰⁴ www.gpwood.ie

¹⁰⁵ www.mtg.ie

Table 21: Roundwood available for processing in the Republic of Ireland (2008-2013).

	2008	2009	2010	2011	2012	2013
	000 m ³ OB					
Commercial softwood						
Imports less exports	106	-63	28	55	-18	49
Coillte	2,279	2,354	2,217	2,299	2,269	2,474
Private sector	118	130	463	386	343	328
Commercial hardwood						
Imports less exports	0	0	0	0	0	-1
Coillte	1	3	0	1	1	2
Private sector	0	0	0	1	1	1
Total	2,504	2,424	2,708	2,742	2,596	2,853
Of which used by sawmills						
Sawlog	1,619	1,602	1,603	1,580	1,622	1,710
Stakewood	80	88	118	116	131	117
Total	1,699	1,690	1,721	1,696	1,735	1,827

Table 22: Sawn timber and round stake output by product and year for the Republic of Ireland (2008-2013).

	2008	2009	2010	2011	2012	2013
	000 m ³ UB					
Construction/structural	267	292	293	289	297	313
Pallet/packageging	232	254	255	251	258	272
Square edged fencing	190	208	209	206	211	223
Round stakes	51	80	107	106	119	106
Other	13	15	15	15	15	16
Total	753	849	879	867	900	930

Table 23: Self-sufficiency in sawnwood (2008-2012)^{106,107 108}.

	Sawn softwood						Sawn hardwood					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
	000 m ³ UB											
Domestic production	696	772	772	760	782	824	1	3	0	1	1	1
Exports ¹⁰⁹	387	563	658	619	534	601	2	1	1	1	0	0
Imports	346	191	205	169	116	108	65	41	37	32	28	26
Total consumption¹¹⁰	655	400	319	310	364	331	64	43	36	32	29	27
% supplied by domestic production	47	52	36	45	68	67	2	7	0	3	3	4

¹⁰⁶ Central Statistics Office; www.cso.ie & EUROSTAT Joint Forest Sector Questionnaire (2009-2014).

¹⁰⁷ Due to rounding, there are slight differences between the values shown in Table 5 and Table 7.

¹⁰⁸ Central Statistics Office; www.cso.ie & EUROSTAT Joint Forest Sector Questionnaire (2009-2014).

¹⁰⁹ Sawn timber export data for 2010 has been revised. This is based on up-dated data provided by the CSO.

¹¹⁰ Total consumption is calculated as follows: domestic production + (imports-exports).

Sawn softwood imports

The main softwood exporters to the Irish market for the period 2007-2013 are listed in Table 24¹¹¹.

Table 24: Top softwood exporters to Ireland (2008-2013).

	Volume of sawn softwood exported to Ireland in 000 m ³ UB					
	2008	2009	2010	2011	2012	2013
Sweden	90	44	42	34	26	28
Latvia	25	16	33	37	23	22
Northern Ireland	28	21	27	21	19	17
Great Britain ¹¹²	35	33	37	23	13	9
Finland	33	13	11	12	10	8
Russian Federation	37	22	18	9	8	7
Germany	62	22	26	19	7	6
Netherlands						4
Estonia		3	4	4	3	3
Canada	4	2	1	2	1	1
Belgium			2	2		1
Brazil	2					
Austria	1	5				
% of total imports	91	95	98	96	94	97

Sawn hardwood imports

In 2013, Ireland imported 26,000 m³ of sawn hardwood to a value €18.9 million, an 8.4% reduction in volume on 2012. 8,300 m³ of tropical hardwoods were imported to a value of €6.7 million. This was a 30% reduction on the volume of tropical hardwood imported in 2012. The main hardwood exporters to the Irish market for the period 2008-2013 are shown in Table 25¹¹³.

Table 25: Main hardwood exporters to Ireland (2008-2013).

	Volume of sawn hardwood exported to Ireland in 000 m ³ UB					
	2008	2009	2010	2011	2012	2013
Sweden	5	1	0.45			
United States	16	9	11	10	10	9
Cameroon	12	13	10	11	9	7
Northern Ireland	6	6	5	4	2	5
China	4	1	1	0.3	1	1
Canada	2	1	1	1	1	1
Great Britain ¹¹⁴	4	2	2	2	1	1
Ivory Coast	6	2	2	1	1	
Congo		1				
Ghana	1					
Central African Republic			1			
Germany	2	1	1	1		
% of hardwood imports	89	93	96	95	88	92

¹¹¹ Source: Central Statistics Office (CSO); www.cso.ie

¹¹² Data on sawn timber which is imported from Northern Ireland is treated separately from that which is imported from Great Britain.

¹¹³ Sources: CSO Trade Statistics www.cso.ie & EUROSTAT JFSQ for Ireland (2009-2014).

¹¹⁴ Data on sawn timber which is imported from Northern Ireland is treated separately from that which is imported from Great Britain

4.8 Wood residues

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 used for wood energy and in the manufacture of wood-based panels. Over the period 2008-2013, the production of wood residues increased by 22% (Table 26).

Table 26: Production of wood residues in 000 m³ (2008-2013).

	2008	2009	2010	2011	2012	2013
Bark	203	215	222	236	232	243
Wood chip	470	517	517	510	524	552
Sawdust	152	200	204	198	201	212
Post-consumer recovered wood (PCRW)	208	200	280	270	250	250
Total	1,033	1,132	1,223	1,214	1,207	1,257

4.9 Wood-based panels (WBP)

Three wood-based panel manufacturers are located in Ireland (Table 27)¹¹⁵.

Table 27: Wood-based panel manufacturers in the Republic of Ireland (November 2014).

	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
SmartPly Europe	1995	Oriented Strand Board (OSB)	Slieverue, Co Kilkenny

In 2013, 739,000 m³ of wood-based panels (WBP) were produced from an intake of 1.41 million m³ of wood fibre¹¹⁶, a 5% increase over 2012. A very high proportion (90%) of WBP manufacture was exported; 665,000 m³, to a value of €199 million (Table 28)¹¹⁷. WBP exports comprised mainly oriented strand board (OSB) and medium density fibreboard (MDF), manufactured by Masonite, Medite and SmartPly. Key export markets were the UK and the Benelux countries.

Table 28: Production and exports of wood-based panels in and from the Republic of Ireland (2008-2013).

	2008	2009	2010	2011	2012	2013
Production (000 m ³)	779	709	758	736	704	739
Export volume (000 m ³)	614	580	660	616	630	665
Export value (€ million)	195	147	179	173	179	199

In July 2014, the OSB manufacturer SmartPly Europe, a subsidiary of Coillte Panel Products (CPP), announced that it would replace the multi-daylight press at its facility near Waterford¹¹⁸. SmartPly have since placed an order with Siempelkamp for a forming and press line including a Contiroll continuous press. In addition, Siempelkamp will also deliver materials handling equipment downstream from the resin application system, the cooling and stacking line, a high-stack storage system as well as the cut-to-size and packing line. Siempelkamp will carry out the installation, commissioning and the trial run¹¹⁹.

The upgrade of SmartPly's Waterford facility is part of a €59 million investment being made by CPP. Depending on market conditions, this investment will increase SmartPly's capacity of 350,000 m³¹²⁰. Products from the new

¹¹⁵ EUROSTAT / FAO Joint Forest Sector Questionnaire (JFSQ) for Ireland (2009-2014)

¹¹⁶ Includes pulpwood, wood chips, sawdust and post-consumer recovered wood (PCRW).

¹¹⁷ EUROSTAT Joint Forest Sector Questionnaire (2009-2014).

¹¹⁸ <http://www.coillte.ie/aboutcoillte/news/article/view/coillte-welcomes-approval-of-EUR59m-investment-in-smartply-facility/>

¹¹⁹ http://www.siempelkamp.com/index.php?id=2135&L=0&tx_ttnews%5Btt_news%5D=827&cHash=86ee62de1bef4689398e8f98624546e3

¹²⁰ <http://www.smartply.com/news/coillte-welcomes-approval-of-59m-investment-in-smartply-facility>

line are expected to be available towards the end of 2015. As part of this investment, a panel products innovation centre will also be developed on the SmartPly site.

4.10 Wood biomass energy

In 2013, 33.5% of the roundwood harvested in the Republic of Ireland was used for energy generation, mainly within the forest products sector (Table 29). Since 2006, the use of wood biomass energy in Ireland has resulted in an estimated greenhouse gas (GHG) emission saving of 3.67 million tonnes of carbon dioxide (CO₂). Wood-biomass fuels used by the sector are shown in Table 29.

In 2013, the output of the forest-based biomass energy sector grew by 13.8% over 2012 (Table 30). In 2013, 230,000 m³ of firewood was used in the Republic of Ireland to a value of €33million, showing that it is providing a steady and a growing market for first thinnings (Table 31). In addition, firewood is also harvested by forest owners for their own use.

Table 29: Use of forest-based biomass and as a proportion of total roundwood harvest (2008-2013).

	2008	2009	2010	2011	2012	2013
	000 m³ OB RWE					
Wood-biomass use by the energy ¹²¹ and forest products industry	384	438	554	572	611	660
Roundwood chipped for primary energy use	63	53	39	41	30	100
Domestic firewood use	171	184	199	214	225	230
Short rotation coppice (SRC)	1	4	1	5	5	5
Wood pellets and briquettes	82	110	121	129	144	161
Charcoal	2	2	2	5	2	1
Total	703	791	916	966	1,017	1,157
Of which supplied from domestic resources	676	737	841	896	910	1,034
Roundwood harvest						
Roundwood available for processing	2,504	2,424	2,708	2,740	2,594	2,852
Firewood harvest	171	184	199	214	225	230
Total roundwood harvest	2,675	2,608	2,907	2,954	2,819	3,082
Wood-biomass use as a % of total roundwood harvest	25.3	28.3	28.9	30.3	32.3	33.5

Table 30: Output use of forest-based biomass and associated greenhouse gas emissions mitigation (2008-2013).

	Unit	2008	2009	2010	2011	2012	2013
		Output					
Heat	TJ	4,857	5,273	6,306	6,604	6,808	7,002
Electricity	TJ	112	240	372	378	477	491
Total	TJ	4,969	5,513	6,678	6,982	7,285	7,493
CO ₂ abated	000 tonnes	380	422	511	534	557	573

¹²¹ This includes co-firing of wood biomass at Edenderry Power; www.edenderrypower.ie

Table 31: Volume and value of the domestic firewood market in the Republic of Ireland (2008-2013).

	000 m ³ OB	€ million
2008	171	24.83
2009	184	26.75
2010	199	28.80
2011	214	30.97
2012	225	32.56
2013	230	33.33

4.10.1 Contribution of renewables to heat and electricity demand

Renewable energy^{122,123} contributing to Ireland's thermal energy requirements is dominated by industrial biomass use, in particular the use of waste wood to produce heat in the manufacture of wood-based panels, joineries and wood processing plants and the use of tallow from rendering plants for heat.

In 2012, renewable heat (RES-H) accounted for 5.2% of all thermal energy. RES-H grew from 2.6% in 1990 to 5.0 % in 2011. Since 2005, the use of renewable heat by industry has remained relatively static while use in the residential and services sectors has increased by 122% and 400% respectively, albeit from quite low bases. Over the period 1990-2012, the overall use of renewable heat grew by 108%¹²⁴.

Wind energy¹²⁵ dominates the renewable electricity sector (RES-E) sector. Over the period 1990-2012, the share of electricity from renewable energy has increased fourfold, from 4.9% to 19.6%. Most of this increase took place since 2000.

4.11 Pulp & paper

All pulp and paper used in the Irish market is imported. In 2013, pulp & paper imports represented 75% of Irish forest product imports (by value). Over this period, 478,000 metric tonnes of pulp and paper products, to a value of €381 million, were imported into Ireland. This was a 3.7% increase over 2012.

4.12 Builders merchanting

The reduction in Irish building output has had a significant knock on effect on the Irish builder's merchant sector and on its suppliers. However, the sector is beginning to show signs of recovery.

The Grafton Group is Ireland's largest builders merchant. Its Irish builder's merchanting business returned to growth in the second half of 2013, while its DIY business in Ireland stabilised¹²⁶. In 2013, timber and forest products were responsible for 18% of the turnover of its Irish builder's merchant business.

4.13 Trade in forest products

In 2013, exports of forest products from the Republic of Ireland were valued at €339 million, a 12% increase on 2012. Wood-based panels (WBP) accounted for €199 million, the balance comprising paper and sawn timber exports. Export volumes of WBP increased by 11% over 2012 (Table 32)¹²⁷.

4.14 Balance of payments

In value terms, 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 FAO¹²⁸ (Table 33). 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.

¹²² http://www.seai.ie/Publications/Statistics_Publications/Renewable_Energy_in_Ireland/Renewable-Energy-in-Ireland-2012.pdf

¹²³ At the time of writing, data for 2013 was not available.

¹²⁴ Source: UNECE Joint Wood Energy Enquiry (JWEE); 2009 -2014.

¹²⁵ http://www.seai.ie/Publications/Statistics_Publications/Renewable_Energy_in_Ireland/Renewable-Energy-in-Ireland-2012.pdf

¹²⁶ <http://www.graftonplc.com/downloads/pdfs/2013-Annual-Report.pdf>

¹²⁷ Includes import/export figures for sawn timber, wood-based panels and pulp/paper products only. Data are taken from Ireland's EUROSTAT Joint Forest Sector Questionnaire (JFSQ) returns (2009-2014). 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

¹²⁸ <http://faostat.fao.org/site/626/default.aspx#ancor>

Table 32: Timber and paper products trade, volume and value (2008-2013).

	Imports											
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
	000 m ³						€ million					
Sawn timber	412	232	242	201	145	134	141	66	74	64	54	51
Wood-based panels	264	181	166	195	204	194	108	68	65	68	75	78
	000 tonnes											
Pulp products	29	32	41	54	47	50	20	22	31	45	45	41
Paper products	526	379	370	383	415	428	520	308	313	333	339	340
Total							789	464	483	510	513	510
	Exports											
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
	000 m ³						€ million					
Sawn timber	389	564	658	619	534	601	54	51	85	83	73	81
Wood-based panels	614	580	660	616	630	665	195	147	179	173	179	199
	000 tonnes											
Pulp products	2	0	1	0	0	0	0	0	0	0	0	0
Paper products	77	45	33	59	68	81	69	45	44	52	51	59
Total							318	243	308	308	303	339

Table 33: Balance of payments trade in the value of forest products (2008-2013).

	2008	2009	2010	2011	2012	2013
	€ million					
Sawn timber	-87	-15	11	19	19	30
Wood-based panels	87	79	114	105	104	121
Pulp products	-20	-22	-31	-45	-45	-41
Paper and paper-board products	-451	-263	-269	-281	-288	-281
Total	-471	-221	-175	-202	-210	-171

4.15 Value added products - wooden furniture

In 2013, wooden furniture to the value of €163 million was imported into the Republic of Ireland. However, the value has declined by 49% over the period 2008-2013. The value of the furniture exported from Ireland declined by 3% over the same period (Table 34)¹²⁹.

Table 34: The value of wooden furniture imports & exports to/from the Republic of Ireland (2008-2013).

	2008	2009	2010	2011	2012	2013
	€ million					
Imports	317	177	168	147	152	163
Exports	35	24	26	25	26	34
Net imports	282	153	142	122	126	129

¹²⁹ Source: EUROSTAT JFSQ for Ireland (2009-2014).

4.16 Voluntary forest certification

4.16.1 Schemes

In 2011, Coillte (the State forestry board)¹³⁰ celebrated 10 years of FSC certification for its forests. These forests have been certified to the Forest Stewardship Council (FSC) scheme since May 2001. This third party certification demonstrates that Coillte's forests are well managed in accordance with strict environmental, social and economic criteria. The certificate is issued for a period of five years. In 2006, Coillte successfully retained its FSC certificate following a full audit of its forests. In the interim years, strict audits were carried out on Coillte's forests to ensure that FSC criteria were being met in Coillte's forests¹³¹. In late 2012, a new FSC standard for Ireland was launched.

In 2012, PEFC International announced the endorsement of the Ireland Scheme for Sustainable Forest Management^{132,133}. In 2014, Coillte became dual PEFC and FSC certified¹³⁴.

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 issue¹³⁵.

4.16.2 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.

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)¹³⁶ and/or by the Programme for the Endorsement of Forest Certification (PEFC)¹³⁷. It is estimated that 18 million people visit Irish forests for recreation purposes each year. This activity has been valued at €97 million, which in turn generates €268 million in economic activities in rural communities¹³⁸.

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 sequestered 11 million tonnes (Mt) of carbon dioxide (CO₂). Over this 5 year period, this represents a projected saving to the Irish taxpayer of €220 million. By 2020, the amount of CO₂ which will be sequestered annually from Irish forests is estimated to increase to over 4 million tonnes per annum¹³⁹.

¹³⁰ www.coillte.ie

¹³¹ http://www.coillte.ie/coillteforest/responsible_forest_management_and_certification/certification_introduction/

¹³² <http://www.pefc.org/news-a-media/general-sfm-news/news-detail/item/904-the-future%E2%80%99s-looking-greener-in-ireland>

¹³³ http://www.itga.ie/Conference2013/PEFC_Certification_WilliamMerivale.pdf

¹³⁴ http://www.coillte.ie/coillteforest/responsible_forest_management_and_certification/certification_introduction/

¹³⁵ http://www.teagasc.ie/forestry/docs/advice/Teagasc_Situation_Outlook_Forestry_2012.pdf

¹³⁶ www.fsc.org

¹³⁷ www.pefc.org

¹³⁸ <http://www.coford.ie/publications/forestry2030/irishforestryandtheeconomy/>

¹³⁹ <http://www.agriculture.gov.ie/media/migration/2020/2020strategy/2020Forestry.doc>

6.0 New developments

6.1 New Forestry Bill

In 2013, a new Forestry Bill^{140,141,142} was introduced to the Houses of the Oireachtas (Irish Parliament). The purpose of the new Bill is to reform and to update the legislative framework relating to forestry. This is currently governed by legislation dating back to 1946. The Department of Agriculture, Food and the Marine has had widespread consultation with stakeholders regarding the contents of the Bill¹⁴³.

6.2 National Forest Policy Review

In March 2010, the then Government commissioned a National Forest Policy Review, as part of its commitments in its Programme for Government.

The Report (Forests, products and people - Ireland's forestry policy – a renewed vision) of that Group, of which the Chairman and some other members of the COFORD Council Forest Research Working Group (CCFRWG) were members, was published on 2 July 2014¹⁴⁴.

6.3 Value of the Irish forestry and forest products sector

In 2012, the Irish forest sector generated approximately €2.29 billion in value to the Irish economy¹⁴⁵.

6.4 Employment

The Irish forestry and forest products sector employs over 12,000 people, the majority in rural Ireland (Table 35)^{146,147}. 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 economy¹⁴⁸.

Table 35: Employment in the forestry and forest products sector in the Republic of Ireland.

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

6.5 Glennon Brothers, 100 years a growing

In November 2013, the timber processing firm, Glennon Brothers, celebrated 100 years in business at a gala event, held in Dublin. The keynote address was delivered by An Taoiseach, (Irish Prime Minister) Mr. Enda Kenny, T.D.¹⁴⁹.

Over 500 people were in attendance at the event, including Minister of State with responsibility for Forestry, Mr. Tom Hayes, T.D., the British Ambassador to Ireland, Mr. Dominick Chilcott, key customers and industry stakeholders from Ireland and the UK.

¹⁴⁰ <http://www.oireachtas.ie/documents/bills28/bills/2013/4313/b4313d.pdf>

¹⁴¹ <http://www.merionstreet.ie/index.php/2013/11/forestry-bill-2013-stakeholder-consultation/>

¹⁴² <https://www.agriculture.gov.ie/media/migration/legislation/Forestry%20Bill%202013%20-%20Regulatory%20Impact%20Analysis.pdf>

¹⁴³ <http://www.merionstreet.ie/index.php/2013/11/hayes-opens-ifa-farm-forestry-national-conference-2013/?cat=12>

¹⁴⁴ <http://www.agriculture.gov.ie/media/migration/forestry/forestpolicyreviewforestsproductsandpeople/00487%20Forestry%20Review%20-%20web%2022.7.14.pdf>

¹⁴⁵ COFORD Forestry 2030 papers updated (www.coford.ie)

¹⁴⁶ http://www.forestry.ie/forestry_economy.htm

¹⁴⁷ Dr Áine Ní Dhubháin and Dr Richard Moloney, COFORD FORECON Project (2010 overview)

<http://www.coford.ie/media/coford/content/researchprogramme/projectreports/forecon2008.pdf>

¹⁴⁸ Dr Áine Ní Dhubháin and Dr Richard Moloney, COFORD FORECON Project (2010 overview)

<http://www.coford.ie/media/coford/content/researchprogramme/projectreports/forecon2008.pdf>

¹⁴⁹ http://glennonbrothers.ie/press/100_years_celebration.html

6.6 Innovation in forest products

Irish timber processors have continued to invest in innovation in processing and products¹⁵⁰.

- Such new products include the development of eased edge structural carcassing¹⁵¹ by the Murray Timber Group (MTG).
- Other timber processors including GP Wood¹⁵² 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 Brothers¹⁵³.
 - In 2013/2014, Glennon Brothers has invested €12 million in its new planing facility at its Fermoy sawmill¹⁵⁴.
- Over the past 3 years, Masonite Ireland has developed 2 new door facings. These have enabled it to develop new markets in India and continue to grow their export sales steadily.
- In 2013, revenues from the sales of new product generating sales revenue of €14 million at Coillte Panel Products (CPP)¹⁵⁵. This was a 40% increase on 2012.
 - Such products include Medite Tricoya¹⁵⁶ and SmartPly ToughPly¹⁵⁷.
 - In 2013, Medite Tricoya was chosen as Product of the Year at the Sustain Magazine Awards¹⁵⁸.
 - In 2013, CPP developed new market opportunities in the US and Russia for OSB and in Belgium for MDF.
- Dempsey Timber Engineering (DTE)¹⁵⁹, a subsidiary of Glennon Brothers continued to grow its market in the UK.
- Laois Sawmills has developed new markets for wood residues and wood pellets¹⁶⁰.
- Woodfab Timber¹⁶¹ has installed a combined heat and power (CHP) plant at its facility in Aughrim, Co Wicklow, thus enabling it to reduce its energy costs.

6.7 Teagasc Talking Timber

In September 2014, Teagasc, (the Agriculture and Food Development Authority) in association with the Forest Service and the Irish timber industry, held two regional timber marketing events in counties Kilkenny and Westmeath. More than five hundred forest owners, with forests coming up for thinning, attended one of these two events. The forest and timber processing sector were also strongly represented at both events. More than fifty trade stands were present, facilitating forest owners who have timber for sale to make contact with timber buyers in their area¹⁶².

¹⁵⁰ [http://www.ibec.ie/IBEC/Press/PressPublicationsdoclib3.nsf/vPages/Newsroom~forestry-sector-looks-to-export-market-for-growth-10-09-2012/\\$file/IFFPA+Report+2012+Final.pdf](http://www.ibec.ie/IBEC/Press/PressPublicationsdoclib3.nsf/vPages/Newsroom~forestry-sector-looks-to-export-market-for-growth-10-09-2012/$file/IFFPA+Report+2012+Final.pdf)

¹⁵¹ www.mtg.ie/construction_timber.html

¹⁵² <http://gpwood.ie/>

¹⁵³ www.glennonbrothers.ie/press/france2.html

¹⁵⁴ http://www.kallfass-online.com/en/news/2013_HK51

¹⁵⁵ http://annualreport2013.coillte.ie/03_Coillte_Divs/Coillte_Pan_Pro.html

¹⁵⁶ www.medit-europe.com/meditetricoya/index.asp

¹⁵⁷ <http://www.smartply.com/products/toughply-new>

¹⁵⁸ <http://www.meditetricoya.com/news/seeking-sustainability-look-no-further-than-medit-tricoya>

¹⁵⁹ <http://www.dte.ie/v2/default.php?content=index.php>

¹⁶⁰ <http://www.laoissawmills.com/pellets1/wood-pellets/>

¹⁶¹ <http://www.woodfabtimber.ie/>

¹⁶² <http://www.teagasc.ie/news/2014/201409-16.asp>

6.8 National Forest Inventory (NFI)

The primary purpose of the NFI is to assess on an ongoing basis changes to the forest estate. The first phase of the NFI¹⁶³, completed in 2006, was the starting point against which subsequent stages must be measured and compared. The field data collection for the second phase was completed in December 2012. In late 2013, the results of the second NFI were made available¹⁶⁴. The continuation of the NFI for a 3rd cycle is being planned for 2014 and is essential to:

- meet Ireland's commitment to Sustainable Forest Management (SFM);
- comply with international and national reporting obligations, e.g. FAO; EUROSTAT and UNECE;
- forecast timber production at national level, which is a prerequisite for national forest industry planning and development and
- provide information to help ensure that Ireland can fully comply with reporting and accounting for forestry related aspects of land use, land-use change and forestry (LULUCF) under the UN Framework Convention on Climate Change and the recent EU decision on accounting for LULUCF.

6.9 Plant health

Following confirmation of a finding of Ash Dieback (*Chalara fraxinea*) in Ireland in October 2012 (on plants imported from continental Europe), an ongoing major survey of ash has been carried out by the Department of Agriculture, Food and the Marine. This included targeted and systematic ash surveys of plantations, nurseries, roadsides, landscape and farm landscape plantings and hedgerows.

During 2013, *Chalara fraxinea* (ash dieback disease) and *Phytophthora ramorum* disease outbreaks in Japanese larch continued to be of major concern. In relation to ash dieback, surveys for the disease were intensified following the first confirmed finding in October 2012. In addition to forest surveys, staff in the wider Department also surveyed horticultural nurseries, garden centres, private gardens, roadside landscaping and farm agri-environment scheme plantings where findings were made in all categories. At the end of 2013 there was 41 confirmed findings of the disease in forestry plantations and 65 findings in non-forestry settings. Significantly the disease was also detected for the first time on native hedgerow ash at two separate locations. At both locations the disease had previously been confirmed present on imported trees¹⁶⁵.

As of 29 October 2013, there have been a total of 101 confirmed findings of the disease located throughout the country¹⁶⁶. Surveying for the disease will continue during 2014 and appropriate measures implemented. While the disease remains unregulated under the EU Plant Health Directive, national measures introduced in 2012 will remain in place but they are subject to EU review. Close co-operation under the All Ireland Chalara Control Strategy will continue along with participation in the European Cooperation in Science and Technology (COST) funded research action into the disease (FRAXBACK).

The control strategy has been developed jointly by the Department of Agriculture and Rural Development (DARD) and The Department of Agriculture, Food and the Marine (DAFM) in conjunction with Agri-Food and Biosciences Institute (AFBI). These measures include:

- Ash has been temporarily delisted as an approved species under the afforestation grant scheme.
- On 26th October, 2012, legal measures were introduced to prohibit the importation into Ireland of plant material from areas infected by ash dieback.
- On 6th November 2012, further legislation was introduced to restrict the importation of ash wood.

Since the first finding in Ireland of *Phytophthora ramorum* in Japanese larch in 2010, the Forest Service continued during 2013 to conduct ground and aerial surveys of larch with the assistance of the Air Corps and Coillte. At the start of 2013 the disease had been detected in Japanese larch at 16 separate locations. Following the 2013 survey the disease has been detected in larch at an additional 12 locations with a number of others under investigation. Forest surveys in 2013 also made single detections for the first time in Ireland in *Vaccinium myrtillus* and *Gaultheria shallon*. In previous years surveys of forests the disease has also been detected on beech, noble fir, Spanish chestnut and European silver fir growing in close proximity to infected Japanese larch. Further findings of the disease were

¹⁶³ <http://www.agriculture.gov.ie/nfi/>

¹⁶⁴ <http://www.agriculture.gov.ie/nfi/nfifsecondcycle2012/nationalforestinventoryresultsdata2012/>

¹⁶⁵ <http://www.agriculture.gov.ie/media/migration/publications/2014/ARO2014010714.pdf>

¹⁶⁶ <http://www.agriculture.gov.ie/press/pressreleases/2013/october/title.72457.en.html>

detected in 2013 on invasive wild rhododendron. *Phytophthora kernoviae* was also detected on wild rhododendron at two new locations in 2013.

6.10 Windblow damage

Storm force winds occurred on 12 separate days between the 5th December 2013 and the 12th February 2014. This series of storms led to a large increase in rainfall on land throughout the country that was already heavily saturated. The most severe wind storm named ‘Storm Darwin’, occurred on the 12th February 2014 and was associated with an active depression off the south coast that tracked steadily north-eastwards over the country¹⁶⁷.

Generally, storm events in Ireland do not give rise to large scale damage in our forests. However, the frequency and ferocity of the recent storm events, compounded by waterlogged soils on many sites, led to extensive damage. While initial estimates put the area damaged at less than 1% of the total forest area, locally the damage has been severe, with significant volumes of roundwood impacted.

A Windblow Taskforce in which stakeholders in the forestry sector have come together under the chairmanship of the Minister of State with responsibility for Forestry, Tom Hayes TD, to co-ordinate a response to this storm damage. The Windblow Taskforce is currently engaged in the following activities:

- Estimate the area, volume and extent of the damage nationally;
- Make recommendations to address the many issues that will arise in relation to the windblow event and
- Make recommendations for the orderly removal of windblown timber from damaged forests.

¹⁶⁷ <https://www.agriculture.gov.ie/forests-service/windblow/>

7.0 Tables

7.1 Economic indicators

7.1.1 An economic overview of the Irish economy (2001-2015f)^{168,169,170,171}

Criteria/year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014f	2015f
Output - real annual growth %															
Government spending	9.8	7.1	3.2	1.8	4.6	5.3	6.9	2.2	-4.4	-6.9	-2.1	-2.1	1.4	-1.7	-1.1
Personal consumption	5.4	3.8	3.2	3.8	6.6	5.7	5.9	-15	-5.4	0.9	-1.2	-1.2	-0.8	1.4	1.6
Exports	8.6	4.5	0.5	7.3	3.9	4.4	8.6	-0.8	-3.8	6.2	5.4	1.6	0.3	3.5	5.1
Imports	7.2	2.4	-1.2	8.6	6.5	4.4	5.6	-2.9	-9.7	3.6	-0.4	0.0	-0.1	3.1	4.6
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	1.7	0.5	0.3	1.0
Gross Domestic Product (GDP)	5.7	6.0	4.3	4.3	5.5	5.7	6.0	-3.4	-5.5	-1.1	2.2	0.2	0.4	2.1	3.2
Gross National Product (GNP)	3.8	2.8	5.5	3.9	5.3	6.5	4.4	-5.3	-8.1	0.5	-1.6	1.8	2.0	2.2	2.5
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	€174.7	€182.7	€194.3
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	€132.6	€147.5	€155.5	€165.2
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	13.9	14.6	14.6	13.1	11.1	10.3

¹⁶⁸ Central Bank of Ireland Quarterly Report Q1 2014: <http://www.centralbank.ie/publications/Documents/Quarterly%20Bulletin%20QB%201%202014.pdf>

¹⁶⁹ Department of Finance, Ireland's Stability Programme, April 2014 update: <http://www.finance.gov.ie/what-we-do/economic-policy/publications/presentations/irelands-stability-programme-april-2014-update>

¹⁷⁰ ESRI Quarterly Economic Commentary, Autumn 2014: http://www.esri.ie/_uuid/0d17fc57-8726-40ab-b362-d4877cb921a4/index.xml?id=4086

¹⁷¹ <http://www.centralbank.ie/polstats/econpolicy/Documents/Forecast%20Summary%20Table%20from%20Quarterly%20Bulletin%20No.%204%202014.pdf>

7.1.2 Value of construction output in current prices (2006-2015f)^{172,173,174}

	2006	2007	2008	2009	2010	2011	2012	2013f ¹⁷⁵	2014f	2015f
Residential construction € billion	25.21	23.39	17.49	7.65	4.89	3.76	3.55	3.76	4.02	4.38
Private non-residential construction € billion	6.25	7.12	6.00	2.46	0.67	0.58	0.69	0.68	0.69	0.71
Productive infrastructure (civils) € billion	5.28	5.77	6.62	5.99	4.47	3.18	2.90	2.75	2.76	2.82
Social infrastructure € billion	1.89	2.33	2.48	1.95	1.67	1.17	0.93	0.89	1.02	1.07
Total output € billion	38.63	38.61	32.59	18.05	11.70	8.69	8.08	8.08	8.49	8.98
% residential	65.3	60.6	53.7	42.4	41.8	43.3	44.0			
Housing construction % GNP	13.5	11.4	7.9	2.8	3.9	3.0	2.8			
Annual house building cost index (1991 = 100) ¹⁷⁶	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	-7.0			
Total construction output (% volume change year on year)		-0.6	-15.6	-34.2	-27.9	-20.9	-15.3	-3.8	5.1	5.8

¹⁷² <http://www.dkm.ie/uploads/pdf/reports/2010%2010%20CIRO%20FINAL%20REPORT.pdf>

¹⁷³ <http://www.dkm.ie/uploads/pdf/reports/Irish%20Construction%20Industry%20in%202012%20DKM%20SCSI.pdf>

¹⁷⁴ <http://www.scsi.ie/constr2012>

¹⁷⁵ f: forecast

¹⁷⁶ [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](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 (2008 -2015f)^{177,178,179}

Category	Unit	2008	2009	2010	2011	2012	2013	2014f	2015f
Roundwood	1000 m ³	2,232	2,429	2,618	2,635	2,918	2,571	2,598	2,819
Coniferous	1000 m ³	2,203	2,346	2,514	2,513	2,787	2,664	2,501	2,717
Non-coniferous	1000 m ³	30	83	104	122	131	88	97	102
Wood fuel, including wood for charcoal	1000 m ³	52	167	181	195	208	203	220	230
Coniferous	1000 m ³	24	87	78	74	79	118	125	130
Non-coniferous	1000 m ³	28	80	103	121	129	85	95	100
Industrial roundwood	1000 m ³	2,180	2,262	2,437	2,440	2,710	2,548	2,378	2,589
Coniferous	1000 m ³	2,179	2,259	2,437	2,439	2,708	2,545	2,376	2,587
Non-coniferous	1000 m ³	1	3	0	1	2	3	2	2
Sawlogs and veneer logs	1000 m ³	1,359	1,497	1,425	1,391	1,580	1,472	1,554	1,552
Coniferous	1000 m ³	1,358	1,494	1,425	1,390	1,578	1,469	1,552	1,550
Non-coniferous	1000 m ³	1	3	0	1	2	3	2	2
Pulpwood (round & split)	1000 m ³	734	678	893	936	1,000	970	921	926
Coniferous	1000 m ³	734	678	893	936	1,000	970	921	926
Non-coniferous	1000 m ³	0	0	0	0	0	0	0	0
Other industrial roundwood	1000 m ³	87	87	118	113	129	106	109	109
Coniferous	1000 m ³	87	87	118	113	129	106	0	0
Non-coniferous	1000 m ³	0	0	0	0	0	0	0	0
Wood chips and particles	1000 m ³	523	516	517	510	561	552	550	560
Wood residues	1000 m ³	169	167	168	165	182	179	174	200
Sawnwood	1000 m ³	696	774	772	761	837	824	818	822
Coniferous	1000 m ³	696	772	772	760	836	823	817	821
Non-coniferous	1000 m ³	1	2	0	1	1	1	1	1
Of which: tropical	1000 m ³	0	0	0	0	0	0	0	0
Wood-Based Panels (WBP) ¹⁸⁰	1000 m ³	779	709	758	736	740	739	740	745
Particle board (including OSB)	1000 m ³	377	329	358	278	280	NA	NA	NA
Of which: OSB	1000 m ³	270	274	291	278	280	NA	NA	NA
Fibreboard	1000 m ³	402	380	400	457	460	NA	NA	NA
Hardboard	1000 m ³	0	0	0	0	0	0	0	0
MDF (Medium Density Fibreboard)	1000 m ³	340	340	360	373	375	NA	NA	NA
Insulating board	1000 m ³	0	0	0	0	0	0	0	0
Other fibreboard	1000 m ³	61	40	40	85	85	NA	NA	NA
Recovered paper	1000 mt	448	471	510	525	540	389	395	400
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

¹⁷⁷ EUROSTAT / Irish JQ1 Return (2009-2014).

¹⁷⁸ f: figures for 2014 & 2015 are forecast.

¹⁷⁹ These figures are in cubic metres underbark.

¹⁸⁰ For reasons of commercial sensitivity, it is not possible to split WBP by product type

7.1.4 Irish timber imports and exports (2008-2013)

Table 36: Timber and paper products trade, volume and value (2008-2013).

	Imports											
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
	000 m ³						€ million					
Sawn timber	412	232	242	201	145	134	141	66	74	64	54	51
Wood-based panels	264	181	166	195	204	194	108	68	65	68	75	78
Pulp products	000 tonnes											
	29	32	41	54	47	50	20	22	31	45	45	41
Paper and paper-board products	526	379	370	383	415	428	520	308	313	333	339	340
Total							789	464	483	510	513	510
	Exports											
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
	000 m ³						€ million					
Sawn timber	389	564	658	619	534	601	54	51	85	83	73	81
Wood-based panels	614	580	660	616	630	665	195	147	179	173	179	199
Pulp products	000 tonnes											
	2	0	1	0	0	0	0	0	0	0	0	0
Paper and paper-board products	77	45	33	59	68	81	69	45	44	52	51	59
Total							318	243	308	308	303	339

Table 37: Overall balance of trade in the value of timber products (2008-2013)¹⁸¹.

	2008	2009	2010	2011	2012	2013
	€ million					
Sawn timber	-87	-15	11	19	19	30
Wood-based panels	87	79	114	105	104	121
Pulp products	-20	-22	-31	-45	-45	-41
Paper and paper-board products	-451	-263	-269	-281	-288	-281
Total	-471	-221	-175	-202	-210	-171

Table 38: Self-sufficiency in sawnwood (2008-2013)¹⁸².

	Sawn softwood						Sawn hardwood					
	2008	2009	2010	2011	2012	2013	2008	2009	2010	2011	2012	2013
	000 m ³ UB											
Domestic production	696	772	772	760	782	824	1	3	0	1	1	1
Exports	387	563	658	619	534	601	2	1	1	1	0	0
Imports	346	191	205	169	116	108	65	41	37	32	28	26
Total consumption ¹⁸³	655	400	319	310	364	331	64	43	36	32	29	27
% of sawn timber market which is supplied by domestic production	47	52	36	45	68	67	2	7	0	3	3	4

¹⁸¹ Negative values show a surplus of imports over exports.

¹⁸² Central Statistics Office; www.cso.ie & EUROSTAT Joint Forest Sector Questionnaire (JFSQ) (2009-2014).

¹⁸³ Total consumption is calculated as follows: domestic production + (imports-exports).

8.0 References

The following references have been used in the compilation of this Market Report.

Annual Review & Outlook for Agriculture, Food and the Marine 2013/2014
<http://www.agriculture.gov.ie/media/migration/publications/2014/ARO2014010714.pdf>

Central Statistics Office, Irish Trade Statistics for 2013; Personal communication
www.cso.ie

COFORD Roundwood Demand Group, All Ireland Roundwood Demand Forecast (2011-2020), COFORD, Dublin.
http://www.coford.ie/media/coford/content/publications/projectreports/roundwooddemand2011/COFORD_demand01Mar11.pdf

Coillte Annual Reports (2011-2013)
<http://annualreport2011.coillte.ie/>
http://www.coillte.ie/aboutcoillte/publications/annual_reports/2012_reports/
<http://annualreport2013.coillte.ie/>

Construction 2020, A Strategy for a Renewed Construction Sector (May 2014)
<http://www.merrionstreet.ie/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf>

Economic & Social Research Institute (ESRI); Quarterly Economic Commentary (QEC) Autumn 2014; David Byrne, David Duffy, John FitzGerald, Kieran McQuinn and Ciara Morley
http://www.esri.ie/publications/latest_publications/view/index.xml?id=4086

Energy Future for Ireland, the Energy Policy Framework; (2007-2020), Department of Communications, Energy and Natural Resources: www.dcmnr.gov.ie/Energy/Energy+Planning+Division/Energy+White+Paper.htm

EUROSTAT/FAO Joint Forest Sector Questionnaire (JFSQ) for Ireland (2009-2014)
<http://faostat3.fao.org/browse/F/FO/E>

Forestry and a low carbon economy – a background paper; Maarten Nieuwenhuis and Eugene Hendrick

Housing Supply Requirements in Ireland's Urban Settlements (2014 – 2018), Overview April 2014, National Housing Agency; <https://www.housing.ie/Housing/media/Media/Publications/Future-Housing-Supply-Requirements-Report.pdf>

Ireland's Construction Sector: Outlook and Strategic Plan to 2015, Forfás, Dublin (September 2013)
<http://www.forfas.ie/publication/search.jsp?ft=/publications/2013/title.10996.en.php>

Ireland National Climate Change Strategy (2007-2012), Department of the Environment, Heritage and Local Government; www.environ.ie/en/PublicationsDocuments/FileDownload,1861.en.pdf

Ireland National Development Plan (NDP); 2007-2013; Government Publications, Dublin.
www.ndp.ie/viewdoc.asp?fn=/documents/NDP2007-2013/NDP-2007-2013-English.pdf

The Irish Construction Sector Outlook (2014)
http://www.scsi.ie/construction_sector_outlook_2014

The Irish Housing Market, David Duffy and John FitzGerald, special article in Quarterly Economic Commentary, Summer 2012, pp.63-76, Economic and Social Research Institute (ESRI), Dublin
http://www.esri.ie/publications/latest_publications/view/index.xml?id=3557

Irish Stability Programme, April 2014 Update, Department of Finance
<http://www.finance.gov.ie/what-we-do/economic-policy/publications/presentations/irelands-stability-programme-april-2014-update>

The National Recovery Plan (2011-2014)
<http://www.budget.gov.ie/The%20National%20Recovery%20Plan%202011-2014.pdf>

OECD Economic Surveys, Ireland, September 2013.
http://www.oecd.org/eco/surveys/2013%20Economic%20Survey%20IRELAND_Overview_Eng_FINAL%2030%20Aug.pdf

Phillips, H. 2011. All Ireland Roundwood Production Forecast (2011-2028). COFORD, Department of Agriculture, Food and the Marine, Dublin.

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

Renewable Energy in Ireland 2012 update

http://www.seai.ie/Publications/Statistics_Publications/Renewable_Energy_in_Ireland/Renewable-Energy-in-Ireland-2012.pdf

Strategy for Renewable Energy (2012-2020), Department of Communications, Energy and Natural Resources, May 2012

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

UK Timber Utilisation Statistics 2010-2012 Estimates, Forestry Commission (GB);

[http://www.forestry.gov.uk/pdf/TimberUtilisationReport2010-2011Estimates.pdf/\\$FILE/TimberUtilisationReport2010-2011Estimates.pdf](http://www.forestry.gov.uk/pdf/TimberUtilisationReport2010-2011Estimates.pdf/$FILE/TimberUtilisationReport2010-2011Estimates.pdf)

<http://www.forestry.gov.uk/website/forstats2013.nsf/LUContents/45A4416DC7F75A9D8025735600334221>

Towards a New National Climate Policy: Interim Report of the NESC Secretariat, June 2012

http://files.nesc.ie/nesc_secretariat_papers/nesc_secretariat_paper_03_2012.pdf

UNECE Joint Wood Energy Enquiry (JWEE) Report for Ireland (2009-2014)

Woodflow and Biomass Use in Ireland (2013), COFORD Connects Note, Gordon Knaggs & Eoin O'Driscoll;

<http://www.coford.ie/media/coford/content/publications/cofordarticles/Coford%20Connects%20-PP34.pdf>