Forestry Commission

Forestry Statistics 2011

A compendium of statistics about woodland, forestry and primary wood processing in the United Kingdom

NATIONAL STATISTICS

FOREST SERVICE

Contents

0.Introduction
1.Woodland Areas and Planting
1.1. Area of woodland: 2011
1.2. Area of woodland: changes over time
1.3. Woodland area by ownership
1.4. Certified woodland area
1.5. Land use
1.6. National Inventory of Woodland and Trees
1.6.1. Woodland area by ownership type
1.6.2. Woodland area by main tree species
1.6.3. Woodland area by age
1.6.4. Number of trees
1.7. Area of Farm Woodland
1.8. New planting & restocking by forest type
1.9. New planting & restocking by ownership
1.10. New planting and restocking: time series
2.UK Grown Timber
2.1. Wood production
2.1.1. Summary: wood production
2.1.2. Private sector softwood removals survey
2.1.3. Origin of non-FC/ FS removals
2.1.4. Origin of FC/ FS removals
2.1.5. Softwood availability forecasts
2.2. Deliveries of UK grown roundwood
2.2.1. Softwood deliveries
2.2.2. Hardwood deliveries
2.3. Sawmills - All Mills
2.3.1. Summary: consumption & production
2.3.2. Number of sawmills by size
2.3.3. Number of sawmills by country
2.3.4. Number of sawmills by type of wood sawn
2.3.5. Consumption of softwood by size of mill
2.3.6. Consumption of softwood by country
2.3.7. Production of sawn softwood by size of mill
2.3.8. Production of sawn softwood by country
2.4. Sawmills - Larger Mills
2.4.1. Softwood consumption and production
2.4.2. Source of softwood logs
2.4.4. Sawn softwood product markets

2.4.4. Other softwood products
2.4.5. Sawmill employment
2.5. Pulp & paper
2.5.1. Inputs for the integrated pulp & paper mills
2.5.2. Production of paper
2.6. Woodbased panels
2.6.1. Inputs for woodbased panel products
2.6.2. Production of woodbased panel products
2.7. Miscellaneous products
2.7.1. Softwood round fencing manufacturers
2.7.2. Roundwood purchased by softwood round fencing manufacturers
2.8. Exports
2.9. Certification
2.9.1. Volume certified
2.9.2. Chain of custody certificates
2.10. Woodfuel and pellets
2.10.1. Woodfuel supply by sawmills and round fencing manufacturers
3.Trade
3.1. Apparent consumption of wood in the UK
3.2. Apparent consumption of wood products in the UK
3.3. Flow of recovered paper
3.4. UK import quantities by product
3.5. UK export quantities by product
3.6. UK import values by product
3.7. UK export values by product
3.8. Origin of wood imports
4.UK Forests and Climate Change
4.1. Carbon cycle
4.2. Forest carbon stock
4.3. Carbon sequestration
4.4. Public Opinion of Forestry - climate change
5.Environment
5.1. Ancient and semi-natural woodland
5.2. Protected forest areas
5.3. Populations of wild birds
5.4. Woodland vegetation
6.Recreation
6.1. Visits to woodland - household surveys
6.1.1. England
6.1.2. Scotland
6.1.2.1. Number of visits
6.1.2.2. Woodland visit characteristics

6.1.3. Wales
6.1.3.1. Woodland visit characteristics
6.1.4. Public Opinion of Forestry Survey - woodland visitors
6.1.5. Public Opinion of Forestry Survey - woodland visitors by age group
6.2. Visits to woodland - on-site surveys
6.2.1. All Forests Survey
6.2.1.1. Wales All Forests Survey
6.2.1.2. Scotland All Forests Survey
6.2.2. Quality of Experience
6.2.3. Northern Ireland Forest Service day visitors
6.3. Forestry Commission facilities and activities
6.4. Public access to woodland
6.4.1. Woods for People
6.4.2. Space for People
7.Employment & Businesses
7.1. Employment: Annual Business Survey (ABS)
7.2. Employment in primary wood processing
7.3. Forest Employment Survey: employers
7.4. Forest Employment Survey: activity
7.5. Forest Employment Survey: travel to work
7.6. Health & safety
7.7. Establishments in the primary wood processing industries
7.8. VAT and/ or PAYE registered businesses
8.Finance & Prices
8.1. Timber prices
8.2. Financial return from forestry investment
8.3. Gross value added
8.4. Government expenditure on public forests
8.5. Other government expenditure on forestry
8.6. Grant schemes
9.International Forestry
9.1. Forest cover: international comparisons
9.2. Forest area by country
9.3. Annual changes in forest area
9.4. Carbon stocks in forest biomass
9.5. Wood removals
9.6. Production of wood products
9.7. Apparent consumption of wood products
9.8. World trade in forest products
10.Glossary
11.Sources
11.1. Sources: Woodland area and planting

11.1.1. Sources: Woodland area
11.1.2. Sources: Woodland Inventories
11.1.3. Sources: New planting & restocking
11.2. Sources: Timber
11.2.1. Sources: Wood production
11.2.2. Sources: Private Sector Softwood Removals Survey
11.2.3. Sources: Sawmill Survey
11.2.4. Sources: Pulp & paper
11.2.5. Sources: Woodbased panels
11.2.6. Sources: Survey of Round Fencing Manufacturers
11.2.7. Sources: Other deliveries
11.2.8. Sources: Comparison of removals and deliveries of UK softwood roundwood
11.2.9. Sources: Estimation of hardwood removals from non-FC/ FS woodlands
11.2.10. Sources: Woodfuel and pellets
11.2.11. Sources: Conversion factors
11.3. Sources: Trade
11.4. Sources: UK Forests and Climate Change
11.5. Sources: Environment
11.6. Sources: Public Opinion of Forestry
11.7. Sources: Recreation
11.8. Sources: Employment and businesses
11.9. Sources: Finance & prices
11.10. Sources: International Forestry
15.Accessibility
15.1. Figure 1.1 - Main tree species
15.2. Figure 1.2 - Age profile of woodland
15.3. Figure 1.3 - Area of farm woodland, 1981-2010
15.4. Figure 1.4 - New planting in the UK, 1976-2011
15.5. Figure 1.5 - Restocking in the UK,1976-2011
15.6. Figure 2.1 - Deliveries of UK softwood roundwood
15.7. Figure 2.2 - Deliveries of UK hardwood roundwood
15.8. Figure 2.3 - Inputs for the integrated pulp & paper mills
15.9. Figure 2.4 - Inputs to woodbased panel mills
15.10. Figure 3.1 - Country of origin of sawn softwood imports to the UK, 1962-2010
15.11. Figure 4.1 - Carbon cycle
15.12. Figure 4.2 - Net annual change in carbon (CO2 equivalent) in UK woodlands
15.13. Figure 4.3 - Public opinion on ways in which forests and woodlands can impact on climate change
15.14. Figure 5.1 - UK populations of wild birds
15.15. Figure 6.1 - Frequency of visits to woodland
15.16. Figure 7.1: Accidents to employees: Total reported accidents per 1000 employees
15.17. Figure 8.1 - Coniferous standing sales and sawlog price indices in real terms, 1984-2011

15.18. Figure 8.2 - IPD UK Forestry Index: Returns from forestry
15.19. Figure 8.3 - GB grant money paid in 2010-11 by type of grant
15.20. Figure 9.1 - Forest cover: international comparisons, 2010
15.21. Figure 9.2 - Forest area by country, 2010
15.22. Figure 9.3 - Countries with largest changes in forest area, 2000-2010
15.23. Figure 9.4 - Carbon stock per hectare in forest biomass by region, 2010
15.24. Figure 9.5 - Wood removals by region, 2009
15.25. Figure 9.6 - Largest net importers of forest products, 2009
15.26. Figure 9.7 - Largest net exporters of forest products, 2009
15.27. Figure - Conversion factors between cubic metres and green tonnes

0 Introduction

Forestry Statistics is a compendium of statistical information about woodland, forestry and primary wood processing in the UK.

Where possible, statistical information in this publication covers the whole of the United Kingdom, and is broken down to give figures for England, Wales, Scotland and Northern Ireland. We would like to acknowledge the contribution of Northern Ireland's Forest Service in providing a wide range of statistics for this publication, which has made it possible to have more comprehensive coverage of the UK. However, there are some topics for which data are currently only available for Great Britain (excluding Northern Ireland), and these tables are labelled as being GB only.

As a National Statistics output, this publication concentrates on topics for which the data meet National Statistics quality standards. However some topics outside the scope of National Statistics are included, to give a more rounded picture; any such tables are footnoted as 'not National Statistics'. This means that they have not been subject to National Statistics quality assurance procedures, but does not necessarily imply that they are of poorer quality.

To navigate this publication, please use the links on the left hand side of the screen to access the contents list, to use the search facility or to select a range of pages to print. The back to Statistics button will access the Forestry Commission's Statistics home page. Individual pages provide further links to relevant tables and sources, and you can use the "previous" and "next" links at the top of the screen to page through the publication.

The tables within each chapter (including data for charts) are available to download as Excel spreadsheets on the cover page to each chapter. In addition, longer time series (in EXCEL and PDF formats) are available for some tables within the Statistics by Topic pages at www.forestry.gov.uk/statistics.

Selected statistics from this publication are available in Forestry Facts and Figures 2011.

The Forestry Commission also publishes a range of other Official Statistics, available at www.forestry.gov.uk/statistics.

A National Statistics publication

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Forestry Commissions statistical revisions policy

Revisions to statistics can occur when further data become available or errors are corrected. The Forestry Commission will normally revise statistics when the figures next appear in any publication. However, if the revision is significant (i.e. resulting in a major change to the published figures), a note showing the revisions will be published as soon as possible on the Forestry Commission website and distributed to all known recipients. In addition, the web versions of any current publications affected will be revised. See our full revisions policy for further information.

Quality

Summary information on quality is available in the Sources chapter of this publication. More details are provided in quality reports for individual topics, available from our Quality web page.

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1 Woodland Areas and Planting

This section contains information about the extent of woodland in the United Kingdom. International comparisons are provided in the International Forestry chapter.

The woodland area figures for Great Britain in 2011, shown in tables 1.1 to 1.5, are based on 2010 data obtained from the National Forest Inventory map. For comparison with earlier years, 2010 estimates based on both current and previous data sources have been included in time series tables.

Use the links on the right to access data and sources on UK woodland area and planting.

A copy of all woodland area and planting tables is available to download as an Excel spreadsheet.

Longer time series are also available for some tables. These can be accessed from our Woodland Area and Planting Statistics web page.

1.1 Area of woodland: 2011

The area of woodland in the UK at 31 March 2011 is 3.1 million hectares. Of this total, 1.4 million hectares (45%) is in Scotland, 1.3 million hectares (42%) is in England, 0.3 million hectares (10%) is in Wales and 0.1 million hectares (3%) is in Northern Ireland.

Table 1.1 Area of woodland[1] by ownership & forest type at 31 March 2011

Forest type and ownership	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
Conifers[3]					
FC/ FS woodland[2]	155	98	447	55	755
Non-FC/ FS woodland	256	69	633	10	968
Total	**411**	**167**	**1 081**	**66**	**1 724**
Broadleaves[3,4]					
FC/ FS woodland[2]	59	16	33	6	114
Non-FC/ FS woodland	827	121	276	17	1 240
Total	**886**	**137**	**309**	**22**	**1 355**
Total					
FC/ FS woodland[2]	214	114	481	61	870
Non-FC/ FS woodland	1 083	190	909	27	2 209
Total	**1 297**	**304**	**1 390**	**88**	**3 078**

Source: Forestry Commission, Forest Service, National Forest Inventory.

Notes:

1. Figures for England, Wales and Scotland are based on 2010 data obtained from the National Forest Inventory (NFI) and adjusted for new planting, but at present no adjustment is made for woodland recently converted to another land use. The NFI did not include Northern Ireland.

2. Forestry Commission woodland area is estimated from GIS data for Forestry Commission land and the National Forest Inventory map, to give figures that are consistent with the definition of woodland used in the NFI. This differs from the previous methodology for estimating Forestry Commission woodland area that excluded integral open space and excluded land recently converted to other land uses.

3. Conifer/ broadleaf breakdowns for England, Wales and Scotland are estimated, based on breakdowns produced for woodland areas using previous data sources.

4. Broadleaves include coppice and coppice with standards.

1.2 Area of woodland: changes over time

The 3.1 million hectares of woodland in the UK in 2011 represents 12.7% of the total land area; this percentage ranges from 6.5% in Northern Ireland to 17.8% in Scotland.

Table 1.2 Woodland area in the United Kingdom

Year	England		Wales		Scotland		Northern Ireland[2]		UK	
	Area (000 ha)	%[1]	Area (000 ha)	%[1]	Area (000 ha)	%[1]	Area (000 ha)	%[1]	Area (000 ha)	%[1]
1086	..	~15	..	..	..	..	..	..	..	..
c1350	..	~10	..	..	..	~4	..	..	..	..
17thC	..	~8	..	..	..	~4	..	~1.5	..	..
1905	681	5.2	88	4.2	351	4.5	15	1.1	1 140	4.7
1924	660	5.1	103	5.0	435	5.6	13	1.0	1 211	5.0
1947	755	5.8	128	6.2	513	6.6	23	1.7	1 419	5.9
1965	886	6.8	201	9.7	656	8.4	42	3.1	1 784	7.4
1980	948	7.3	241	11.6	920	11.8	67	4.9	2 175	9.0
1995-99	1 097	8.4	287	13.8	1 281	16.4	81	6.0	2 746	11.3
2010[3]	1 294	9.9	304	14.6	1 385	17.8	88	6.5	3 070	12.7
2011[3]	1 297	10.0	304	14.7	1 390	17.8	88	6.5	3 078	12.7

Not National Statistics.

Source: Forestry Commission, Forest Service.

Notes:

1. Percentage of the total surface area excluding inland water. The total surface areas, excluding inland water are taken from the UK Standard Area Measurements (published by the Office for National Statistics).

2. For Northern Ireland, 17th century figure is estimate for all Ireland, 1905 figure is estimate for Ulster 1908, 1947 figure assumes no change from 1939-40 Census.

3. Figures for England, Wales and Scotland are based on 2010 data obtained from the National Forest Inventory and adjusted for new planting, but at present no adjustment is made for woodland recently converted to another land use. The NFI did not include Northern Ireland.

.. denotes data not available.

1.3 Woodland area by ownership

The Forestry Commission/ Forest Service owned or managed 28% of the total woodland area in the UK in 2011. This proportion ranged from 16% of the woodland area in England to 69% in Northern Ireland.

Table 1.3 Area of woodland in the UK by ownership, 2007-2011

Ownership	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
Forestry Commission / Forest Service[2]					
2007	202	107	457	61	827
2008	202	106	452	61	821
2009	201	105	447	61	814
2010 (original)	199	105	443	61	809
2010 (revised)[1]	216	114	485	61	876
2011[1]	214	114	481	61	870
Non-FC/FS woodland					
2007	922	178	884	26	2 010
2008	925	179	890	26	2 020
2009	928	179	894	26	2 027
2010 (original)	931	179	900	27	2 037
2010 (revised)[1]	1 078	189	900	27	2 194
2011[1]	1 083	190	909	27	2 209
Total woodland					
2007	1 124	285	1 341	87	2 837
2008	1 127	285	1 342	87	2 841
2009	1 128	284	1 341	88	2 841
2010 (original)	1 130	284	1 343	88	2 846
2010 (revised)[1]	1 294	304	1 385	88	3 070
2011[1]	1 297	304	1 390	88	3 078

Source: Forestry Commission, Forest Service, 1995-99 National Inventory of Woodland and Trees, National Forest Inventory.

Notes:
1. 2011 and 2010 (revised) figures for England, Wales and Scotland are based on 2010 data obtained from the National Forest Inventory (NFI). 2010 (original) figures and data for earlier years are based on previous data

sources. The NFI did not include Northern Ireland.

2. Forestry Commission woodland area for 2011 and 2010 (revised) is estimated from GIS data for Forestry Commission land and the National Forest Inventory map, to give figures that are consistent with the definition of woodland used in the NFI. This differs from the previous methodology for estimating Forestry Commission woodland area that excluded integral open space and excluded land recently converted to other land uses.

1.4 Certified woodland area

Forest certification assesses forest management practices against an agreed standard and awards a label to those forest products that meet the standard. In order for products to achieve certification, both forest management practices and the Chain of Custody, which tracks timber from forest to retail outlet, must be assessed.

1.3 million hectares of woodland in the UK were certified in March 2011. This represented 43% of the total UK woodland area, varying from 26% in England to 72% in Northern Ireland.

Table 1.4 Woodland area certified[1,2], March 2011

Ownership	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
Forestry Commission/ Forest Service[3]	214	114	481	61	870
Non-FC/ FS	122	19	313	2	456
Total woodland area certified	**335**	**133**	**793**	**63**	**1 325**

Source: Forest Stewardship Council, Forestry Commission, Forest Service.

Notes:

1. All certified woodland in 2011 is certified under the Forest Stewardship Council (FSC) scheme. Some of these woodlands are also certified under the Programme for the Endorsement of Forest Certification (PEFC) scheme.

2. The estimates are based on UK data published by FSC, supplemented by data from individual certificates and other sources. Where possible, figures are for the woodland area certified, rather than the land area certified.

3. The Forestry Commission/ Forest Service areas are the latest areas, as shown in Table 1.1, rather than the areas shown on the certificates. As the Forestry Commission woodland areas in Table 1.1 are now based on data from the National Forest Inventory (NFI) together with GIS data for Forestry Commission land, this gives a higher estimate for FC woodland area than shown in previous editions of Forestry Statistics.

Data:

Longer time series of the above table are available from the Woodland Area and Planting Statistics *web page.*

Figures showing volumes of certified timber and Chain of Custody certificates are provided in tables 2.29 and 2.30.

1.5 Land use

Woodland accounted for 79% of all Forestry Commission/ Forest Service land in the UK in 2011. This proportion was highest in Wales (92%) and lowest in Scotland (74%).

Table 1.5 Land use of the FC and FS, 2007-2011

Year (ending 31/3)	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
Woodland					
2007	202	107	457	61	827
2008	202	106	452	61	821
2009	201	105	447	61	814
2010 (original)	199	105	443	61	809
2010 (revised)[1]	216	114	485	61	876
2011	214	114	481	61	870
Other land[2]					
2007	55	18	210	14	297
2008	56	18	215	14	304
2009	57	19	219	14	309
2010 (original)	57	19	217	14	308
2010 (revised)[1]	40	10	175	14	240
2011	40	10	174	14	238
Total FC/ FS land area					
2007	257	124	666	76	1 124
2008	258	124	667	76	1 125
2009	258	124	665	76	1 123
2010	257	124	660	75	1 116
2011	254	124	654	75	1 108

Source: Forestry Commission, Forest Service.

Notes:

1. 2011 and 2010 (revised) figures for the breakdown of Forestry Commission land use is estimated from GIS data for Forestry Commission land and the National Forest Inventory (NFI) map, to give figures that are consistent with the definition of woodland used in the NFI. This differs from the previous methodology for estimating Forestry Commission woodland area that excluded integral open space and excluded land recently converted to other land uses.

2. 'Other land' includes agricultural land and areas of moorland and mountain.

1.6 National Inventory of Woodland and Trees

This section contains information extracted from the 1995-99 National Inventory of Woodland and Trees.

1.6.1 Woodland area by ownership type

44% of the GB woodland area in 1995-99 was personally owned. A further 35% was owned or managed by the Forestry Commission.

Table 1.6 Area of woodland in GB by ownership type

Ownership type	England	Wales	Scotland	GB
				thousand hectares
Forestry Commission	223	120	539	882
Other public body (not FC)	27	5	13	45
Local authority	61	8	11	80
Private forestry or timber business	7	6	28	41
Other private business	147	26	101	273
Personal	481	96	533	1 110
Charity	68	8	14	90
Community ownership or common land	4	1	0	5
Unclassified	4	1	13	18
Total	**1 022**	**270**	**1 253**	**2 545**

Not National Statistics.

Source: 1995-99 National Inventory of Woodland and Trees.

Notes:

1. Excludes woods of less than 2 hectares.

1.6.2 Woodland area by main tree species

Over one half (53%) of the total woodland area in Great Britain is made up of conifers although this proportion ranges from 31% in England to 72% in Scotland.

Sitka spruce accounted for almost one half (49%) of the conifer area in Great Britain, followed by Scots pine (16%) and Lodgepole pine (10%). Amongst broadleaf species, Oak covered 23% of the broadleaf area, followed by Birch (16%) and Ash (13%).

Table 1.7 Area of woodland in GB by main tree species

Species	England	Wales	Scotland	GB
				thousand hectares
Conifers				
Scots pine	82	5	140	227
Corsican pine	41	3	2	47
Lodgepole pine	7	6	122	135
Sitka spruce	80	84	528	692
Norway spruce	32	11	35	79
European larch	14	1	9	23
Japanese/hybrid larch	33	22	56	111
Douglas fir	24	11	10	45
Other conifer	19	6	5	30
Mixed conifer	9	0	8	18
Total Conifers	**340**	**149**	**916**	**1 406**
Broadleaves				
Oak	159	43	21	223
Beech	64	9	10	83
Sycamore	49	7	11	67
Ash	105	19	5	129
Birch	70	13	78	160
Poplar	11	1	0	12
Sweet chestnut	12	1	0	12
Elm	4	0	1	5
Other broadleaves	84	18	18	120
Mixed broadleaves	91	8	62	160
Total broadleaves	**648**	**118**	**206**	**971**
Total - all species	**988**	**266**	**1 123**	**2 377**

Felled	15	9	23	47
Coppice[1]	22	0	1	24
Open space[2]	72	11	134	217
Total woodland	**1 097**	**287**	**1 281**	**2 665**

Not National Statistics.

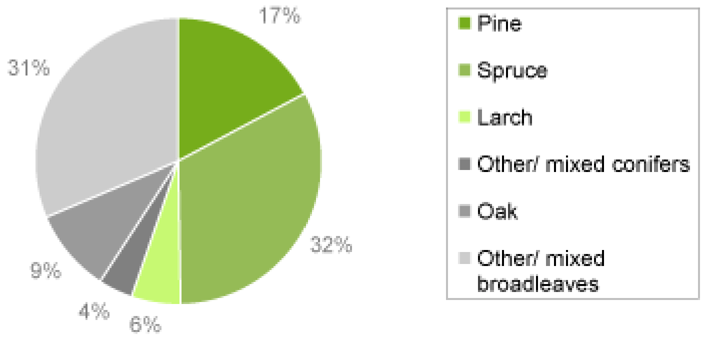
Source: 1995-99 National Inventory of Woodland and Trees.

Notes:

1. Coppice includes coppice with standards.

2. Areas of integral open space, each less than 1 hectare.

Figure 1.1 Main tree species in GB



Not National Statistics.

Source: 1995-99 National Inventory of Woodland and Trees.

1.6.3 Woodland area by age

Two thirds of woodland area in GB consists of trees planted after 1950. Conifers tend to have a shorter rotation with 87% of conifers, but just 39% of broadleaves planted after 1950.

Table 1.8 Area of woodland in GB by planting year classes

Planting year	England	Wales	Scotland	GB
				thousand hectares
Conifers				
pre-1861	2	0	4	6
1861-1900	5	0	9	14
1901-1910	1	0	1	3
1911-1920	6	0	7	13
1921-1930	7	1	13	22
1931-1940	16	4	17	37
1941-1950	36	10	43	89
1951-1960	67	33	129	228
1961-1970	74	38	203	314
1971-1980	59	24	234	317
1981-1990	36	21	215	273
1991-	32	17	41	89
Total conifers	**340**	**149**	**916**	**1 406**
Broadleaves				
pre-1861	34	1	12	46
1861-1900	89	24	31	144
1901-1910	19	4	5	27
1911-1920	55	9	11	75
1921-1930	60	9	16	85
1931-1940	56	20	15	91
1941-1950	85	16	25	126
1951-1960	80	15	27	121
1961-1970	59	8	22	90
1971-1980	42	4	17	63
1981-1990	33	4	15	52
1991-	36	3	11	50
Total broadleaves	**648**	**118**	**206**	**971**

Total				
pre-1861	35	1	16	52
1861-1900	94	24	40	157
1901-1910	21	4	6	30
1911-1920	61	9	18	88
1921-1930	67	10	29	107
1931-1940	72	25	31	128
1941-1950	121	26	69	215
1951-1960	146	47	156	350
1961-1970	133	46	225	404
1971-1980	101	28	251	380
1981-1990	70	26	230	325
1991-	68	20	52	140
Total	**988**	**266**	**1 123**	**2 377**

Not National Statistics.

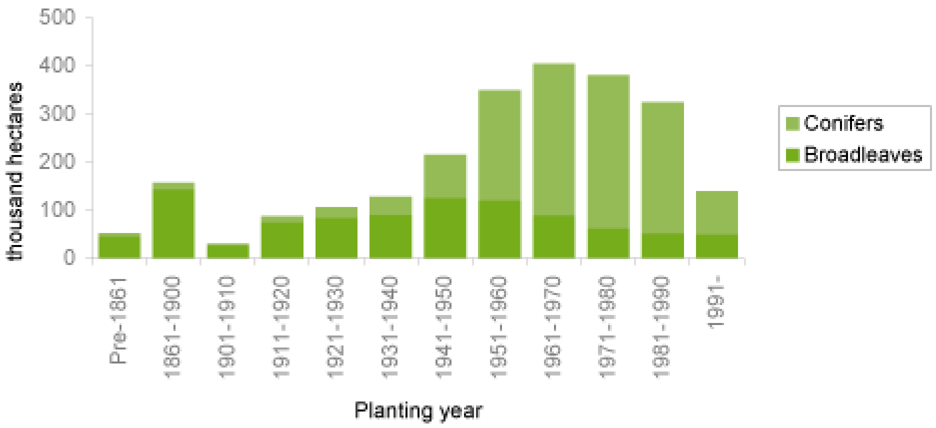
Source: 1995-99 National Inventory of Woodland and Trees.

Notes:

1. Excluding felled, coppice and open space.

2. Age is determined from records where these are available. Where records were not available or were clearly inaccurate, age-class was assigned by reference to similar crops of known age in the locality.

Figure 1.2 Age profile of woodland in GB



Not National Statistics.

Source: 1995-99 National Inventory of Woodland and Trees.

1.6.4 Number of trees

There are estimated to be around 3.8 billion trees in Great Britain. The majority of these (56%) are in Scotland, with a further 34% in England and the remainder in Wales.

Table 1.9 Number of trees in GB

	England	Wales	Scotland	GB
				million trees
Conifers (woods over 2 ha)	523	252	1 892	2 667
Broadleaves (woods over 2 ha)	577	92	188	857
Small woods and other	179	38	73	290
All trees	**1 279**	**382**	**2 154**	**3 814**

Not National Statistics.

Source: 1995-99 National Inventory of Woodland and Trees.

1.7 Area of Farm Woodland

Agricultural Censuses run by Defra (Department for Environment, Food and Rural Affairs) and the devolved administrations collect annual information on the land-use of farms. The table below shows the area of woodland on farms.

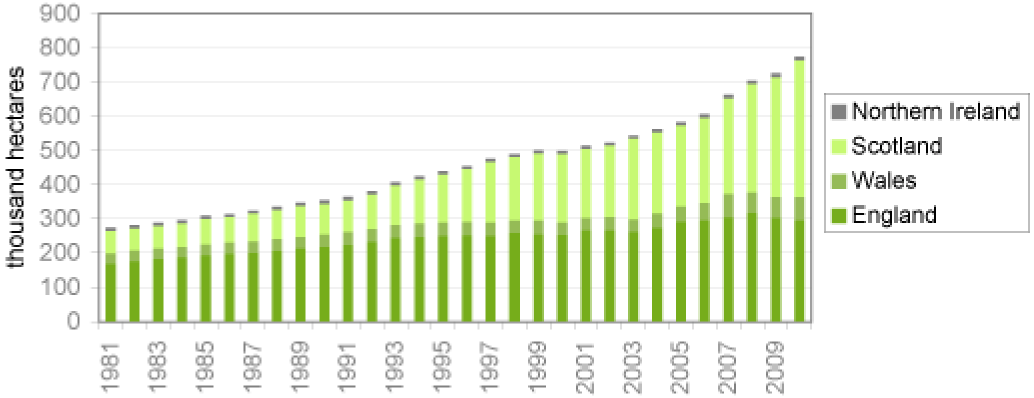
The area of farm woodland in the UK has increased from 514 thousand hectares in 2001 to 774 thousand hectares in 2010. Around one half (52%) of all farm woodland is in Scotland, with a further 38% in England, 9% in Wales and the remainder in Northern Ireland.

Table 1.10 Area of farm woodland, 2001-2010

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
2001	266.2	36.7	202.9	8.2	513.9
2002	267.0	38.8	209.9	7.9	523.6
2003	262.9	36.5	236.6	8.4	544.4
2004	274.1	41.7	239.0	8.2	563.0
2005	291.7	44.9	238.0	8.6	583.2
2006	296.0	51.3	249.3	9.6	606.2
2007	305.4	67.9	279.9	9.9	663.1
2008	318.8	59.2	317.3	9.9	705.2
2009	303.7	60.8	350.8	10.3	725.7
2010	295.3	69.1	399.4	10.2	774.0

Source: June Agricultural Census - Defra, Welsh Government, The Scottish Government, Northern Ireland Executive.

Figure 1.3 Area of farm woodland, 1981-2010



Source: June Agricultural Census - Defra, Welsh Government, The Scottish Government, Northern Ireland Executive.

1.8 New planting & restocking by forest type

The total area of new planting and restocking in the UK was 22.2 thousand hectares in 2010-11. Restocking accounted for 63% of this total. Broadleaved species accounted for around four fifths (81%) of the new planting area but just 27% of the restocking area in 2010-11.

Table 1.11 New planting & restocking by forest type

Year (ending 31/3)	New planting			Restocking			Total		
									thousand hectares
	Conifers	Broadleaves	Total	Conifers	Broadleaves	Total	Conifers	Broadleaves	Total
England									
2006-07	0.1	3.1	3.2	1.8	0.9	2.8	1.9	4.0	5.9
2007-08	0.1	2.5	2.6	2.0	1.5	3.5	2.1	4.0	6.1
2008-09	0.0	2.5	2.5	1.7	1.7	3.5	1.7	4.2	6.0
2009-10	0.0	2.3	2.3	1.5	1.3	2.8	1.5	3.6	5.1
2010-11	0.0	2.5	2.5	2.3	1.7	4.0	2.3	4.2	6.5
Wales									
2006-07	0.0	0.5	0.6	2.1	0.9	3.0	2.2	1.4	3.6
2007-08	0.0	0.2	0.2	1.5	0.8	2.3	1.5	1.0	2.5
2008-09	0.0	0.2	0.2	1.4	0.8	2.2	1.4	1.0	2.4
2009-10	0.0	0.2	0.2	1.3	0.8	2.1	1.3	1.0	2.3
2010-11	0.0	0.3	0.3	1.3	0.8	2.1	1.3	1.1	2.4
Scotland									
2006-07	2.0	4.6	6.6	10.6	1.8	12.4	12.6	6.4	19.0
2007-08	0.7	3.4	4.2	10.8	1.8	12.6	11.5	5.2	16.7
2008-09	1.2	2.3	3.4	8.2	1.4	9.6	9.3	3.7	13.0
2009-10	0.5	2.2	2.7	8.0	1.5	9.5	8.6	3.7	12.3
2010-11	1.5	3.6	5.1	5.6	1.3	6.9	7.1	4.9	12.0
Northern Ireland									
2006-07	0.0	0.5	0.5	0.7	0.1	0.8	0.8	0.5	1.3
2007-08	0.1	0.5	0.6	0.5	0.0	0.5	0.6	0.5	1.1
2008-09	0.0	0.3	0.3	0.8	0.1	0.8	0.8	0.3	1.1
2009-10	0.0	0.2	0.2	0.7	0.0	0.7	0.7	0.2	0.9

2010-11	0.0	0.2	0.3	1.0	0.0	1.0	1.0	0.3	1.3
UK									
2006-07	2.1	8.7	10.8	15.3	3.6	19.0	17.5	12.3	29.8
2007-08	0.9	6.7	7.5	14.8	4.1	18.9	15.7	10.7	26.4
2008-09	1.2	5.2	6.4	12.1	4.0	16.1	13.3	9.3	22.6
2009-10	0.5	4.9	5.4	11.5	3.6	15.1	12.0	8.5	20.5
2010-11	1.5	6.6	8.2	10.3	3.8	14.0	11.8	10.4	22.2

Source: Forestry Commission, Forest Service, grant schemes.

Notes:

1. Non-FC/ FS figures are based on areas for which grants were paid during the year, together with an estimate of areas planted without grant aid. Figures for grant-aided planting under Rural Development Contracts in Scotland relate to calendar years.

2. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.

3. Includes natural colonisation and natural regeneration.

Data:

Longer time series of the above table are available from the Woodland Area and Planting Statistics *web page.*

1.9 New planting & restocking by ownership

In 2010-11 most new planting (90%) took place on non-FC/FS land. In contrast, almost three quarters of restocking (71%) took place on FC/FS land.

Table 1.12 New planting & restocking by ownership

Year (ending 31/3)	New Planting			Restocking			Total		
									thousand hectares
	FC/FS	Non-FC/FS	Total	FC/FS	Non-FC/FS	Total	FC/FS	Non-FC/FS	Total
England									
2006-07	0.2	2.9	3.2	1.9	0.9	2.8	2.1	3.9	5.9
2007-08	0.1	2.5	2.6	2.1	1.4	3.5	2.3	3.8	6.1
2008-09	0.0	2.5	2.5	1.8	1.6	3.5	1.9	4.1	6.0
2009-10	0.0	2.3	2.3	1.5	1.3	2.8	1.5	3.6	5.1
2010-11	0.0	2.5	2.5	2.5	1.5	4.0	2.5	4.0	6.5
Wales									
2006-07	0.0	0.6	0.6	2.0	1.0	3.0	2.0	1.6	3.6
2007-08	0.0	0.2	0.2	2.0	0.4	2.3	2.0	0.6	2.5
2008-09	0.0	0.2	0.2	1.6	0.6	2.2	1.6	0.8	2.4
2009-10	0.0	0.2	0.2	1.4	0.6	2.1	1.4	0.8	2.3
2010-11	0.0	0.3	0.3	1.4	0.7	2.1	1.4	1.0	2.4
Scotland									
2006-07	0.0	6.6	6.6	6.4	6.0	12.4	6.4	12.6	19.0
2007-08	0.0	4.2	4.2	5.9	6.7	12.6	5.9	10.8	16.7
2008-09	0.9	2.5	3.4	5.2	4.4	9.6	6.1	7.0	13.0
2009-10	0.7	2.0	2.7	3.6	6.0	9.5	4.3	7.9	12.3
2010-11	0.8	4.3	5.1	5.3	1.7	6.9	6.1	5.9	12.0
Northern Ireland									
2006-07	0.0	0.5	0.5	0.8	0.1	0.8	0.8	0.5	1.3
2007-08	0.0	0.5	0.6	0.5	0.1	0.5	0.5	0.6	1.1
2008-09	0.0	0.3	0.3	0.6	0.3	0.8	0.6	0.6	1.1
2009-10	0.0	0.2	0.2	0.6	0.1	0.7	0.6	0.3	0.9
2010-11	0.0	0.3	0.3	0.9	0.2	1.0	0.9	0.5	1.3
UK									
2006-07	0.2	10.6	10.8	11.0	8.0	19.0	11.2	18.6	29.8

2007-08	0.2	7.4	7.5	10.4	8.5	18.9	10.6	15.8	26.4
2008-09	0.9	5.5	6.4	9.2	6.9	16.1	10.1	12.4	22.6
2009-10	0.7	4.7	5.4	7.1	8.0	15.1	7.9	12.7	20.5
2010-11	0.8	7.3	8.2	10.0	4.1	14.0	10.8	11.4	22.2

Source: Forestry Commission, Forest Service, grant schemes.

Notes:

1. Non-FC/ FS figures are based on areas for which grants were paid during the year, together with an estimate of areas planted without grant aid. Figures for grant-aided planting under Rural Development Contracts in Scotland relate to calendar years.

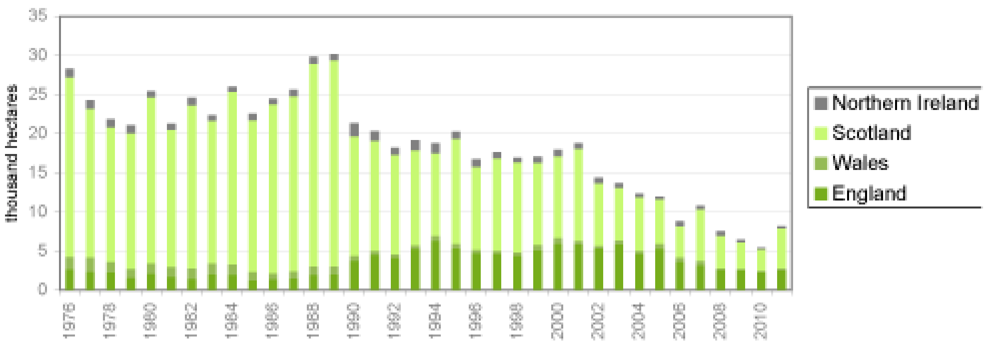
2. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.

3. Includes natural colonisation and natural regeneration.

Longer time series of the above table are available from the Woodland Area and Planting Statistics *web page.*

1.10 New planting and restocking: time series

Figure 1.4 New planting in the UK, 1976-2011



Source: Forestry Commission, Forest Service, grant schemes.

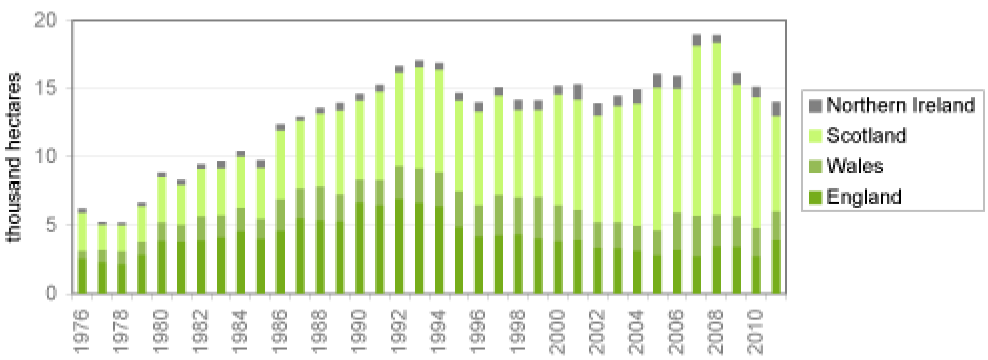
Notes:

1. Non-FC/ FS figures are based on areas for which grants were paid during the year, together with an estimate of areas planted without grant aid. Figures for grant-aided planting under Rural Development Contracts in Scotland relate to calendar years.

2. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.

3. Includes natural colonisation.

Figure 1.5 Restocking in the UK, 1976-2011



Source: Forestry Commission, Forest Service, grant schemes.

Notes:

1. Non-FC/ FS figures are based on areas for which grants were paid during the year, together with an estimate of areas planted without grant aid. Figures for grant-aided planting under Rural Development Contracts in Scotland relate to calendar years.

2. *The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.*

3. *Includes natural regeneration.*

2 UK Grown Timber

This section covers the production of timber from woodland, and the primary processing of harvested wood to give basic wood products. International comparisons of timber production are available in the International Forestry chapter.

Timber originating from conifers is known as softwood and that from broadleaves is known as hardwood.

Use the links on the right to access data and sources on timber.

A copy of all timber tables is available to download as an Excel spreadsheet.

Longer time series are also available for some tables. These can be accessed from our Timber Statistics web page.

2.1 Wood production

Figures for wood production (or removals) are expressed in green tonnes (i.e. weight when freshly felled). The data are derived from a number of sources:

FC/ FS figures are obtained from Forestry Commission and Forest Service administrative systems;

Non-FC/ FS softwood figures are obtained from the Private Sector Softwood Removals Survey;

Total hardwood figures are estimated from hardwood deliveries figures, which are compiled from surveys of the UK-grown timber industry, trade associations and expert estimates.

Use the links on the right to access data and sources on wood production.

2.1.1 Summary: wood production

A total of 9.6 million green tonnes of softwood was produced in the UK in 2010. This was an increase of 12% from the previous year. UK hardwood production totalled 0.5 million green tonnes in 2010.

FC/ FS woodlands accounted for 48% of softwood production but only 13% of hardwood production.

Table 2.1 Wood production, 2001-2010

Year	Softwood			Hardwood[1]		
	FC/ FS woodland	Non-FC/ FS woodland	Total softwood	FC/ FS woodland	Non-FC/ FS woodland	Total hardwood
						thousand green tonnes
2001	4 604	2 891	7 494	145	486	632
2002	4 650	2 972	7 622	118	502	620
2003	4 817	3 491	8 308	117	445	562
2004	4 894	3 618	8 512	113	399	513
2005	4 579	3 894	8 473	101	492	593
2006	4 582	3 917	8 499	45	392	438
2007	4 653	4 369	9 022	40	400	440
2008	4 415	4 016	8 432	43	388	431
2009	5 126	3 434	8 560	87	449	536
2010	4 625	4 941	9 567	70	465	535

Source: Forestry Commission, Forest Service, industry surveys, industry associations.

Notes:

1. Most hardwood production in the UK comes from non-FC/ FS woodland; the figures are estimates based on reported deliveries to wood processing industries and others.

Data:

Longer time series of the above table, including estimates by country (England/ Scotland/ Wales/ Northern Ireland) are available from the Timber Statistics web page.

In addition, an estimated 0.1 million green tonnes of softwood brash and stumps were removed from UK woodlands in 2010.

2.1.2 Private sector softwood removals survey

It is estimated that a total of 4.9 million green tonnes of softwood was removed from non-FC/ FS woodlands in 2010. This is a 44% increase from the previous year.

Table 2.2 Private sector softwood removals survey, 2001-2010

Year	Survey results[2]		% change	Estimated UK total
				thousand green tonnes
	Previous year	Latest year		
2001	1 634	1 837	12%	2 891
2002	1 839	1 891	3%	2 972
2003	1 891	2 221	17%	3 491
2004	2 293	2 376	4%	3 618
2005	2 595	2 793	8%	3 894
2006	3 081	3 099	1%	3 917
2007	3 105	3 463	12%	4 369
2008	3 527	3 243	-8%	4 016
2009	3 146	2 690	-14%	3 434
2010	2 696	3 879	44%	4 941

Source: Private Sector Softwood Removals Survey

Notes:

1. Removals from non-FC/ FS woodlands only.

2. Survey results exclude Northern Ireland before 2004.

2.1.3 Origin of non-FC/ FS removals

It is estimated that 75% of all softwood removals from non-FC/ FS woodlands were harvested in Scotland, 14% in England, 9% in Wales and the remainder in Northern Ireland in 2010.

Table 2.3 Non-FC/ FS softwood removals by country, 2001-2010

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
2001	544	375	1 942	29	2 891
2002	383	346	2 213	29	2 972
2003	522	320	2 620	29	3 491
2004	498	323	2 767	30	3 618
2005	595	296	2 963	40	3 894
2006	627	348	2 920	21	3 917
2007	656	409	3 275	29	4 369
2008	671	350	2 971	25	4 016
2009	561	337	2 512	24	3 434
2010	710	456	3 718	57	4 941

Source: Private Sector Softwood Removals Survey

Data:

Longer time series of the above table, including estimates for hardwood removals and for removals from FC/ FS woodlands are available from the Timber Statistics web page.

2.1.4 Origin of FC/ FS removals

Information on removals from Forestry Commission (FC) and Forest Service (FS) woodlands is extracted from administrative systems.

A total of 4.6 million green tonnes of softwood was removed from FC/ FS woodlands in 2010, a 10% decrease from the 2009 figure, but similar to the level in previous years. Over one half (53%) of FC/ FS softwood removals in 2010 occurred in Scotland, 25% in England, 14% in Wales and 9% in Northern Ireland.

Table 2.4 FC/ FS softwood removals by country, 2001-2010

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
2001	1 075	779	2 354	396	4 604
2002	1 103	894	2 268	385	4 650
2003	1 107	880	2 405	424	4 817
2004	1 204	783	2 527	380	4 894
2005	1 165	673	2 388	353	4 579
2006	1 152	612	2 454	364	4 582
2007	1 211	584	2 496	363	4 653
2008	1 100	556	2 362	398	4 415
2009	1 213	717	2 773	423	5 126
2010	1 142	644	2 434	405	4 625

Source: Forestry Commission, Forest Service.

Data:

Longer time series of the above table, including estimates for hardwood removals and for removals from non-FC/ FS woodlands are available from the Timber Statistics web page.

2.1.5 Softwood availability forecasts

Softwood availability forecasts are taken from the 2005 forecast, published in September 2006 (not National Statistics). Strictly, they are forecasts of availability rather than production, as they do not take account of financial factors or the state of markets, which may cause production to be delayed or brought forward. More information and detailed breakdowns of GB forecasts are available in UK: new forecast of softwood availability in the November 2006 edition of Forestry & British Timber.

Softwood production in the UK is projected to increase to an annual average of almost 12 million green tonnes over the five year period 2017 to 2021. The majority of this softwood is projected to come from non-FC/ FS woodland.

Table 2.5 Softwood availability forecasts

Annual average in the five years	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
FC/ FS					
2007 - 2011	1 119	645	2 644	370	4 778
2012 - 2016	1 170	721	3 083	474	5 447
2017 - 2021	1 148	649	3 355	468	5 620
2022 - 2026	981	610	3 024	433	5 048
Non-FC/ FS					
2007 - 2011	1 520	547	2 995	16	5 078
2012 - 2016	1 638	610	3 583	16	5 847
2017 - 2021	1 763	622	3 959	16	6 361
2022 - 2026	1 800	610	4 095	16	6 522
Total softwood					
2007 - 2011	2 639	1 193	5 638	386	9 856
2012 - 2016	2 807	1 331	6 666	490	11 294
2017 - 2021	2 910	1 271	7 315	484	11 980
2022 - 2026	2 781	1 220	7 119	449	11 570

Not National Statistics.

Source: 2005 UK Forecast of Softwood Availability (Forestry Commission, 2006)

No forecasts are published for hardwood.

2.2 Deliveries of UK grown roundwood

Figures for deliveries of UK grown roundwood to wood processing industries and others are expressed in green tonnes (i.e. weight when freshly felled). The data are derived from a number of sources, including surveys of the UK-grown timber industry, trade associations and expert estimates. Further details on data sources and methodology are available using the links on the right.

The statistics presented on deliveries cover summary tables for softwood and hardwood, as well as more detailed tables. Use the links on the right to access data and sources on deliveries.

2.2.1 Softwood deliveries

A total of 9.4 million green tonnes of UK grown softwood was delivered to UK wood processing industries and others in 2010. This is a 13% increase from the 2009 level.

Sawmills accounted for the majority of softwood deliveries (60%). A further 15% of softwood was delivered to woodbased panel mills and 5% to integrated pulp and paper mills. Woodfuel accounted for 11% of all softwood deliveries in 2010.

The quantity of softwood delivered directly for woodfuel is estimated to have increased by 62% between 2009 and 2010. Over the same period, there have also been increases in the quantity of softwood deliveries for export (34%), woodbased panels (21%) and sawmills (9%). In contrast, there have been decreases between 2009 and 2010 in the quantity of softwood deliveries for pulpmills (16%), other uses (16%) and round fencing (5%).

Table 2.6 Deliveries of UK grown softwood, 2001-2010

Year	Sawmills	Pulpmills	Woodbased panels	Fencing	Woodfuel[1]	Other[2]	Exports[3]	Total
								thousand green tonnes
2001	4 598	668	1 680	324	100	31	61	7 463
2002	4 677	696	1 456	289	100	29	133	7 380
2003	4 812	704	1 486	264	100	45	307	7 718
2004	4 953	483	1 525	272	100	79	610	8 021
2005	4 924	500	1 502	317	100	95	705	8 143
2006	5 210	481	1 365	274	100	114	643	8 187
2007	5 565	472	1 362	319	200	113	759	8 790
2008	4 933	515	1 219	359	300	128	733	8 187
2009	5 133	511	1 135	367	650	160	347	8 304
2010	5 616	428	1 375	349	1 050	135	467	9 419

Source: industry surveys, industry associations.

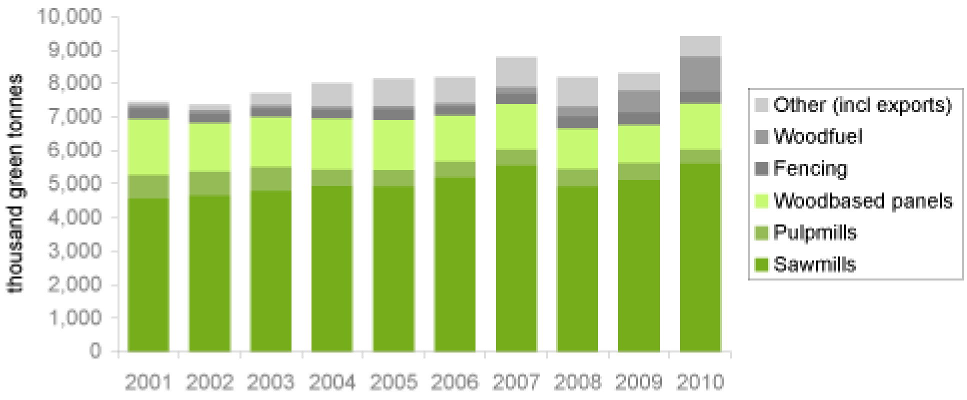
Notes:

1. Woodfuel reported here is derived from stemwood, and from 2007 include estimated roundwood use for biomass energy. The figures include estimates by the Expert Group on Timber and Trade Statistics.

2. Includes shavings and poles. Quantities for some uses are estimates by the Expert Group on Timber and Trade Statistics.

3. Exports exclude Northern Ireland before 2004.

Figure 2.1 Deliveries of UK grown softwood



Source: industry surveys, industry associations.

2.2.2 Hardwood deliveries

A total of 0.5 million green tonnes of UK grown hardwood were delivered to UK wood processing industries and others in 2010, unchanged from the level in the previous year.

The majority of UK hardwood deliveries (75%) were used for woodfuel.

Table 2.7 Deliveries of UK grown hardwood, 2001-2010

Year	Sawmills	Pulpmills	Woodbased panels	Woodfuel[1]	Other[2]	Total
						thousand green tonnes
2001	183	209	35	150	55	632
2002	162	210	43	150	55	620
2003	138	215	4	150	55	562
2004	92	214	2	150	55	513
2005	72	214	2	250	55	593
2006	64	54	1	250	70	438
2007	66	0	5	300	69	440
2008	66	0	2	300	63	431
2009	76	0	1	400	59	536
2010	75	0	1	400	59	535

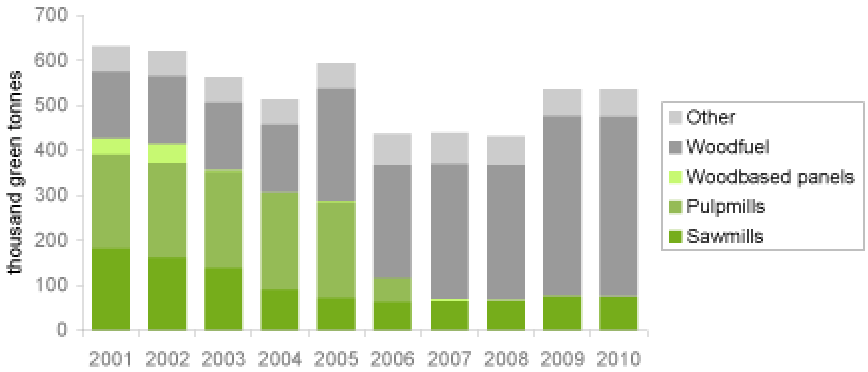
Source: industry surveys, industry associations.

Notes:

1. Woodfuel reported here is derived from stemwood, and from 2007 include estimated roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics. The apparent increase in woodfuel from 2004 to 2005 reflects a new estimate of the level of hardwood deliveries for woodfuel and should not be interpreted as an increase in a single year. Woodfuel includes wood for charcoal; charcoal production in the UK is estimated to be about 5 thousand tonnes, with about 7 green tonnes of wood required to make one tonne of charcoal.

2. Includes round fencing and roundwood exports. Quantities for hardwood fencing and some other uses are estimates by the Expert Group on Timber and Trade Statistics.

Figure 2.2 Deliveries of UK grown hardwood



Source: industry surveys, industry associations.

Notes:

1. Other includes woodfuel, round fencing and roundwood exports.

2.3 Sawmills - All Mills

Data are collected by the Forestry Commission in an annual Sawmill Survey. Summary results, covering number of mills, consumption and production are available for all mills. More detailed figures are available for larger mills only (sawmills producing at least 10 thousand m^3 sawnwood).

Consumption units are given in green tonnes. For production, the units used are m^3 sawnwood.

Use the links on the right to access data and sources on sawmills.

2.3.1 Summary: consumption & production

Sawmills consumed a total of 5.7 million green tonnes of softwood in 2010, an increase of 8% from the 2009 figure. Over the same period, hardwood consumption decreased by 1%, to 94 thousand green tonnes in 2010.

Table 2.8 Consumption and production by UK sawmills, 2001-2010

Year	Softwood				Hardwood			
consumption: thousand green tonnes, **production:** thousand m^3 sawnwood								
	Consumption of			Production	Consumption of			Production
	UK grown	Imported	Total		UK grown	Imported	Total	
2001	4 598	239	4 838	2 583	183	17	200	97
2002	4 677	235	4 912	2 619	162	18	180	91
2003	4 812	225	5 037	2 669	138	18	157	81
2004	4 953	226	5 178	2 722	92	28	120	60
2005	4 924	272	5 196	2 727	72	34	106	53
2006	5 210	266	5 476	2 859	64	22	85	45
2007	5 565	263	5 828	3 079	66	19	85	44
2008	4 933	174	5 107	2 755	66	20	86	44
2009	5 133	158	5 291	2 809	76	19	95	48
2010	5 616	103	5 719	3 053	75	19	94	48

Source: Sawmill Survey

2.3.2 Number of sawmills by size

A total of 189 sawmills processed UK roundwood in 2010. Around two thirds of sawmills produced less than five thousand m^3 sawnwood (softwood and hardwood).

Table 2.9 Number of sawmills by size of mill, 2001-2010

Year	Size of mill (total production)[1]						Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 +	
2001	101	91	28	24	12	15	271
2002	92	81	26	24	10	16	249
2003	91	76	22	23	12	16	240
2004	86	67	20	23	10	18	224
2005	85	60	20	19	9	20	213
2006	84	59	19	21	10	20	213
2007	82	54	17	20	12	20	205
2008	76	54	17	20	11	19	197
2009	79	50	14	23	10	19	195
2010	73	52	13	24	8	19	189

Source: Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m^3.

Data:

Longer time series of the above table are available from the Timber Statistics web page.

2.3.3 Number of sawmills by country

The majority of the 189 active sawmills in 2010 (98) were in England, 65 were in Scotland, 17 in Wales and 9 in Northern Ireland.

Table 2.10 Number of sawmills by country, 2001-2010

Year	England	Wales	Scotland	Northern Ireland	UK
2001	144	27	85	15	271
2002	130	23	81	15	249
2003	124	22	79	15	240
2004	113	21	75	15	224
2005	108	20	71	14	213
2006	108	21	71	13	213
2007	105	20	70	10	205
2008	103	18	68	8	197
2009	101	17	68	9	195
2010	98	17	65	9	189

Source: Sawmill Survey

Data:

Longer time series of the above table, and for mills in England by region, are available from the Timber Statistics web page.

2.3.4 Number of sawmills by type of wood sawn

Nearly two thirds of the 189 active sawmills in 2010 processed softwood only. A further 30% processed both softwood and hardwood, and the remaining 5% processed only hardwood.

Table 2.11 Number of sawmills by type of wood sawn, 2001-2010

Year	Softwood only	Hardwood only	Both	Total
2001	174	25	72	271
2002	160	22	67	249
2003	154	20	66	240
2004	143	18	63	224
2005	142	16	55	213
2006	142	19	52	213
2007	134	16	55	205
2008	134	12	51	197
2009	130	10	55	195
2010	122	10	57	189

Source: Sawmill Survey

2.3.5 Consumption of softwood by size of mill

Sawmills with total sawnwood production of 10 thousand cubic metres or more accounted for 93% of the total softwood consumed by sawmills in 2010.

Table 2.12 Consumption of softwood by size of mill, 2001-2010

Year	Size of mill (total production)[1]						Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 +	
							thousand green tonnes
2001	40	280	295	634	846	2 742	4 838
2002	33	248	279	659	680	3 013	4 912
2003	29	239	227	598	835	3 110	5 037
2004	31	218	216	630	686	3 397	5 178
2005	29	230	232	518	579	3 607	5 196
2006	29	200	243	613	661	3 730	5 476
2007	30	184	203	585	840	3 985	5 828
2008	31	197	190	599	660	3 430	5 107
2009	35	183	163	664	577	3 668	5 291
2010	33	188	155	744	537	4 062	5 719

Source: Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m^3.

Data:

Longer time series of the above table are available from the Timber Statistics web page.

2.3.6 Consumption of softwood by country

Mills in Scotland consumed one half (51%) of the 5.7 million green tonnes of softwood delivered to UK sawmills in 2010. A further 30% was consumed by mills in England, 10% in Wales and 9% in Northern Ireland.

Table 2.13 Consumption of softwood by country, 2001-2010

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
2001	1 435	724	2 016	662	4 838
2002	1 362	720	2 167	662	4 912
2003	1 433	777	2 166	662	5 037
2004	1 394	813	2 310	662	5 178
2005	1 416	746	2 349	685	5 196
2006	1 603	757	2 430	686	5 476
2007	1 674	759	2 683	713	5 828
2008	1 533	599	2 415	560	5 107
2009	1 548	538	2 672	532	5 291
2010	1 694	583	2 913	528	5 719

Source: Sawmill Survey

Data:

Longer time series of the above table, and for mills in England by region, are available from the Timber Statistics web page.

2.3.7 Production of sawn softwood by size of mill

UK sawmills produced a total of 3.1 million cubic metres of sawn softwood in 2010, a 9% increase from the 2009 figure.

Sawmills with total sawnwood production of 10 thousand cubic metres or more accounted for 93% of the total sawn softwood produced by sawmills in 2010.

Table 2.14 Production of sawn softwood by size of mill, 2001-2010

Year	Size of mill (total production)[1]						Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 +	
							thousand cubic metres
2001	24	163	167	355	429	1 446	2 583
2002	19	147	159	360	354	1 580	2 619
2003	16	142	130	328	443	1 610	2 669
2004	17	126	119	331	368	1 761	2 722
2005	17	116	121	278	317	1 877	2 727
2006	17	118	128	326	359	1 911	2 859
2007	17	109	111	315	437	2 090	3 079
2008	18	116	104	315	369	1 834	2 755
2009	20	108	89	352	326	1 914	2 809
2010	19	109	84	395	304	2 143	3 053

Source: Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m^3.

Data:

Longer time series of the above table are available from the Timber Statistics web page.

2.3.8 Production of sawn softwood by country

1.6 million cubic metres (51%) of sawn softwood was produced by sawmills in Scotland in 2010. A further 30% was produced by mills in England, 10% in Wales and the remaining 9% in Northern Ireland.

Table 2.15 Production of sawn softwood by country, 2001-2010

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand cubic metres
2001	786	381	1 075	342	2 583
2002	750	381	1 147	342	2 619
2003	780	392	1 156	342	2 669
2004	744	408	1 228	342	2 722
2005	746	368	1 247	365	2 727
2006	853	378	1 297	332	2 859
2007	884	385	1 452	359	3 079
2008	846	303	1 313	293	2 755
2009	860	267	1 413	268	2 809
2010	927	291	1 560	275	3 053

Source: Sawmill Survey

Data:

Longer time series of the above table, and for mills in England by region, are available from the Timber Statistics web page.

2.4 Sawmills - Larger Mills

The following, more detailed, tables are available for larger mills (those producing at least 10 thousand m^3 sawnwood) only. These mills are estimated to account for 93% of all sawn softwood produced in 2010.

2.4.1 Softwood consumption and production

Additional information for 2010 was collected from mills that, based on their responses to previous surveys, were believed to produce more than 10 thousand m^3 of sawnwood.

Total softwood consumption by all sawmills covered by the detailed sawmill survey was 5.3 million green tonnes. Sawn softwood production was 2.8 million m^3 and other softwood products (chips, bark, sawdust, etc) amounted to 2.7 million tonnes.

Sawmills in Scotland accounted for around half (52%) of all softwood consumption by larger mills. A further 28% was consumed by mills in England, 10% in Wales and the remaining 10% in Northern Ireland.

Table 2.16 Larger mills[1], 2010: softwood consumption and production

	England	Wales	Scotland	Northern Ireland	UK
Number of mills	16	6	26	3	51
Consumption (thousand green tonnes)	1 503	556	2 772	512	5 343
Sawnwood production (thousand m^3)	818	276	1 480	267	2 841
Other products (thousand tonnes)	698	318	1 453	265	2 734

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2.4.2 Source of softwood logs

Of all softwood sawlogs consumed by larger sawmills in 2010, 60% came from Scotland, 19% from England, 13% from Wales and 6% from Northern Ireland. The remaining 2% were imported from other countries. This was similar to the breakdown by source in previous years.

96% of softwood sawlogs used by Scottish mills in 2010 came from Scotland. The corresponding proportions of mills' log use coming from within the same country were 56% for England, 75% for Wales and 63% for Northern Ireland.

Table 2.17 Larger mills[1], 2010: source of softwood logs

Source	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
England	844	76	112	0	1 033
Wales	247	419	2	0	668
Scotland	411	61	2 658	84	3 214
Northern Ireland	0	0	0	325	325
Total UK logs	**1 503**	**556**	**2 772**	**409**	**5 240**
Other countries	0	0	0	103	103
Total log consumption	**1 503**	**556**	**2 772**	**512**	**5 343**

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

Table 2.17a Larger mills, 2006-2010: source of softwood logs

Year	Source					Total
	England	Wales	Scotland	Northern Ireland	Other countries	
						per cent of total consumption
2006	24	14	50	6	5	100
2007	23	13	54	5	5	100
2008	24	13	54	5	4	100
2009	22	12	57	7	3	100
2010	19	13	60	6	2	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2.4.4 Sawn softwood product markets

In 2010, 36% of sawn softwood produced by larger sawmills was used for fencing, 32% for packaging and pallets, 31% for construction, and the remaining 2% went to all other markets.

Table 2.18 Larger mills[1], 2010: sawn softwood product markets

Product market	England	Wales	Scotland	Northern Ireland	UK
					per cent of total product markets
Construction	21	17	38	34	31
Fencing	49	30	28	43	36
Packaging/ pallets	28	48	33	21	32
Other	2	5	1	1	2
Total	**100**	**100**	**100**	**100**	**100**

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

Table 2.18a Larger mills, 2006-2010: sawn softwood product markets

Year				Product market	Total
	Construction	Fencing	Packaging / pallets	Other	
					per cent of total product markets
2006	34	38	28	1	100
2007	35	38	26	1	100
2008	33	36	29	2	100
2009	30	35	35	1	100
2010	31	36	32	2	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2.4.4 Other softwood products

Other products (excluding sawnwood) from softwood amounted to 2.7 million tonnes in 2010. Around two fifths (41%) of these other products were sold to wood processing industries in the form of chips and 15% were sold to these industries as bark or in other formats. A further 20% of other products were sold to bio-energy (including pellet manufacturers) and 21% were sold to others.

The proportion of other products that were sold to wood processing industries has declined from 81% in 2007 to 57% in 2010. Over the same period, the proportions sold to bio-energy and other sales have increased.

Table 2.19 Larger mills[1], 2010: other softwood products

Destination and type of product[2]	England	Wales	Scotland	Northern Ireland	UK
					per cent of total other softwood products
Sold to wood processing industries					
Wood chips	53	61	37	10	41
Bark	5	4	1	0	2
Sawdust & other	20	22	11	0	13
Total	**78**	**87**	**50**	**10**	**57**
Sold to bio-energy (incl pellet manufacturers)					
Wood chips	9	2	16	52	16
Bark	0	0	0	1	0
Sawdust & other	1	0	4	15	4
Total	**10**	**2**	**20**	**68**	**20**
Other sales					
Wood chips	4	3	11	5	8
Bark	5	5	10	9	8
Sawdust & other	3	2	7	7	5
Total	**12**	**11**	**27**	**21**	**21**

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2. The table does not show internal use for heat/ energy, sales of firewood and other products disposed of as waste, which together account for around 2% of other softwood products.

Table 2.19a Larger mills, 2006-2010: other softwood products

Year	Destination				Total
	Sold to wood processing industries	Sold to bio-energy (incl pellet manufacturers)	Other sales	Other[2]	
					per cent of total other softwood products
2006	79	9	12	0	100
2007	81	8	11	0	100
2008	74	13	12	1	100
2009	63	18	18	1	100
2010	57	20	21	2	100

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2. Other includes internal use for heat / energy, sales of firewood and other products disposed of as waste.

2.4.5 Sawmill employment

There were estimated to be 3.0 thousand full time equivalent staff employed directly by sawmills producing at least 10 thousand m^3 of sawnwood in 2010. This represented an 11% increase on the total for 2009.

Table 2.20 Larger mills[1], 2010: sawmill employment

Employment type	England	Wales	Scotland	Northern Ireland	UK
					full time equivalents
Direct					
Line & production workers	765	219	1 198	259	2 441
Managerial & administrative staff	140	28	196	83	447
Haulage of logs to the mill	42	1	23	3	69
Total direct employment	**947**	**248**	**1 417**	**345**	**2 957**
Others[2]					
Line & production workers	43	9	69	1	122
Managerial & administrative staff	1	0	3	0	4
Total contract employment	**44**	**9**	**72**	**1**	**126**

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2. Excludes haulage employment on contract.

Table 2.20a Larger mills, 2006-2010: sawmill employment

Employment	Line & production workers	Managerial & administrative staff	Haulage of logs to the mill	Total employment
				full time equivalents
Direct				
2006	2 347	407	91	2 845
2007	2 411	407	38	2 856
2008	2 115	393	47	2 555
2009	2 189	419	56	2 664
2010	2 441	447	69	2 957

Others[2]				
2006	58	3	..	61
2007	62	6	..	68
2008	36	8	..	44
2009	65	10	..	75
2010	122	4	..	126

Source: Sawmill Survey (detailed)

Notes:

1. Sawmills producing at least 10 thousand m^3 sawnwood (softwood and hardwood).

2. Excludes haulage employment on contract.

2.5 Pulp & paper

Statistics on inputs to the pulp & paper industry only cover the integrated pulp & paper mills in the UK that use UK roundwood. There were four such mills until 2003, three from 2004 and two from spring 2006. Figures on inputs are provided by the UK Forest Products Association.

Figures on production of pulp and paper are provided by the Confederation of Paper Industries, and cover all paper production in the UK.

2.5.1 Inputs for the integrated pulp & paper mills

The integrated pulp & paper mills in the UK consumed 526 thousand tonnes (all softwood) in 2010, a 17% decrease from the previous year.

UK roundwood represented 81% of the inputs for the integrated pulp & paper mills in 2010, with the remaining 19% coming from sawmill products.

Table 2.21 Inputs for the integrated pulp & paper mills[1], 2001-2010

Year	UK roundwood[2]		Sawmill products		Total[3]	
						thousand green tonnes
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
2001	668	209	323	0	991	209
2002	696	210	307	0	1 003	210
2003	704	215	234	0	938	215
2004	483	214	143	0	626	214
2005	500	214	138	0	638	214
2006	481	54	145	0	626	54
2007	472	0	161	0	633	0
2008	515	0	152	0	667	0
2009	511	0	120	0	631	0
2010	428	0	98	0	526	0

Source: UK Forest Products Association

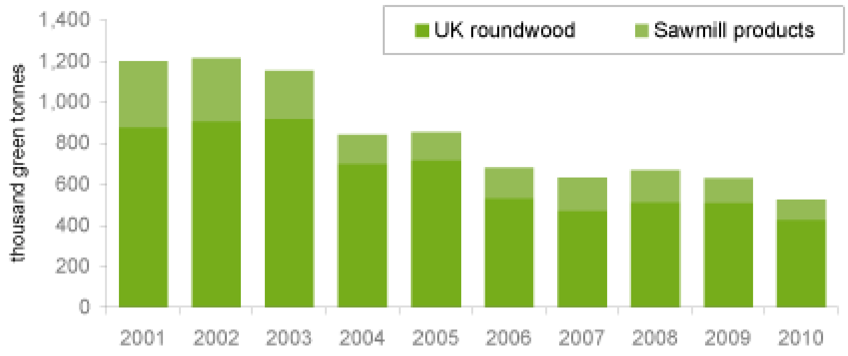
Notes:

1. Excludes inputs of recycled paper and cardboard.

2. UK roundwood derived from stemwood.

3. Includes inputs from imported roundwood and chips.

Figure 2.3 Inputs to integrated pulp and paper mills



Source: UK Forest Products Association

2.5.2 Production of paper

Figures for the production of paper are provided by the Confederation of Paper Industries. They cover all paper production from UK mills, not just those using UK roundwood.

A total of 4.3 million tonnes of paper was produced by UK paper mills in 2010, unchanged from the level in the previous year.

Table 2.22 Production of paper and paperboard, 2001-2010

Year	Graphic papers (incl newsprint)	Sanitary & household papers	Packaging materials	Other	Total paper & paperboard
					thousand tonnes
2001	2 627	738	2 190	649	6 204
2002	2 526	823	2 207	662	6 218
2003	2 532	808	2 240	646	6 226
2004	2 632	806	2 230	572	6 240
2005	2 654	801	1 989	595	6 039
2006	2 483	805	1 999	301	5 588
2007	2 229	834	1 852	313	5 228
2008	2 063	783	1 838	299	4 983
2009	1 609	736	1 702	246	4 293
2010	1 637	729	1 640	294	4 300

Source: Confederation of Paper Industries

2.6 Woodbased panels

Woodbased panels are oriented strand board (OSB), wood chipboard and cement bonded particleboard (which are all types of particleboard), and medium density fibreboard (MDF) and other fibreboard (which are both types of fibreboard).

Statistics on woodbased panels are provided by the Wood Panel Industries Federation (WPIF).

2.6.1 Inputs for woodbased panel products

A total of 1.4 million green tonnes of UK roundwood was consumed by the woodbased panel products sector in 2010. A further 1.6 million green tonnes of sawmill products and 1.1 million tonnes of recycled wood fibre were also consumed in 2010.

The 2010 inputs represented a 21% increase in UK roundwood, a 14% increase in sawmill products and a 5% increase in recycled wood fibre from the levels in 2009

Table 2.23 Inputs to woodbased panel mills, 2001-2010

Year	UK roundwood[1]		Sawmill products		Imports[2]		Total		
	Soft wood	Hard wood	Soft wood	Hard wood	Soft wood	Hard wood	Soft wood	Hard wood	Recycled wood fibre[3]
									thousand green tonnes
2001	1 680	35	1 675	0	13	25	3 368	60	675
2002	1 456	43	1 669	0	13	0	3 138	43	932
2003	1 486	4	1 682	4	22	0	3 190	8	993
2004	1 525	2	1 778	0	9	0	3 312	2	1 078
2005	1 502	2	1 732	2	6	0	3 240	4	1 043
2006	1 365	1	1 794	0	3	0	3 162	1	1 173
2007	1 362	5	1 940	0	2	0	3 304	5	1 230
2008	1 219	2	1 591	0	0	0	2 810	2	1 119
2009	1 135	1	1 435	0	0	0	2 570	1	1 065
2010	1 375	1	1 631	0	7	1	3 013	2	1 120

Source: Wood Panel Industries Federation

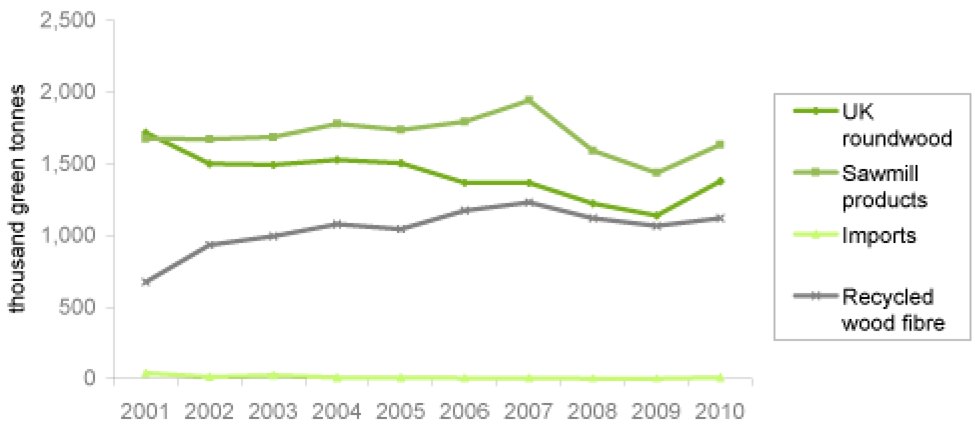
Notes:

1. UK roundwood derived from stemwood.

2. Imports include roundwood, wood products and products from imported wood.

3. Recycled wood fibre is wood fibre recovered from both pre- and post-consumer wood waste for use in woodbased panel production. Quantities are as delivered.

Figure 2.4 Inputs to woodbased panel mills



Source: Wood Panel Industries Federation

2.6.2 Production of woodbased panel products

A total of 3.4 million m^3 of woodbased panel products was produced in 2010, an 11% increase on the 2009 total. Around three quarters (77%) of woodbased panel products produced in the UK were particleboard (including oriented strand board (OSB)).

Table 2.24 Woodbased panel production, 2001-2010

Year	Particleboard[1]	Fibreboard[2]	Total
			thousand cubic metres
2001	2 498	757	3 255
2002	2 446	771	3 217
2003	2 526	835	3 361
2004	2 653	880	3 533
2005	2 557	841	3 398
2006	2 626	872	3 498
2007	2 684	865	3 549
2008	2 431	709	3 140
2009	2 370	660	3 030
2010	2 594	776	3 370

Source: Wood Panel Industries Federation

Notes:

1. Includes Oriented Strand Board (OSB).

2. Includes Medium Density Fibreboard (MDF).

2.7 Miscellaneous products

Softwood

Data for softwood fencing are obtained from the Survey of Round Fencing Manufacturers. Figures for other uses are reported by manufacturers or are estimated by representatives of the wood processing industries.

Around 1.1 million green tonnes of UK softwood were estimated to have been used directly for woodfuel (including biomass energy) in 2010, an increase of 62% from the previous year. A further 349 thousand green tonnes of UK softwood were consumed by round fencing manufacturers and 135 thousand green tonnes for other uses in 2010.

Table 2.25 Miscellaneous uses of UK softwood roundwood, 2001-2010

Year	Fencing	Woodfuel[1]	Other[2]	Total
				thousand green tonnes
2001	324	100	31	455
2002	289	100	29	418
2003	264	100	45	409
2004	272	100	79	451
2005	317	100	95	512
2006	274	100	114	488
2007	319	200	113	633
2008	359	300	128	787
2009	367	650	160	1 178
2010	349	1 050	135	1 534

Source: Survey of Round Fencing Manufacturers, industry associations.

Notes:

1. Woodfuel reported here is derived from stemwood, and from 2007 include estimated roundwood use for biomass energy. The figures include estimates by the Expert Group on Timber and Trade Statistics.

2. Includes shavings, poles and woodwool.

Hardwood

An estimated 400 thousand green tonnes of UK hardwood were used for woodfuel (including biomass energy) in 2010. A further 30 thousand green tonnes were estimated to have been consumed by round fencing manufacturers and 29 thousand green tonnes for other uses, including exports.

2.7.1 Softwood round fencing manufacturers

There were 65 active round fencing manufacturers in 2010.

Table 2.26 Number of softwood round fencing manufacturers, 2001-2010

Year	Size category (consumption)[1]				Total
	< 1	1 - < 5	5 - < 10	10 +	
2001	39	33	8	6	86
2002	32	25	10	7	74
2003	25	28	9	6	68
2004	25	30	8	6	69
2005	24	25	8	8	65
2006	25	31	7	6	69
2007	29	28	10	8	75
2008	22	27	11	7	67
2009	22	26	13	7	68
2010	22	24	13	6	65

Source: Survey of Round Fencing Manufacturers

Notes:

1. Categories are based on total softwood consumption, in thousand green tonnes.

Data:

Longer time series of the number of softwood round fencing manufacturers, by size category and by country (England/ Scotland/ Wales/ Northern Ireland) are available from the Timber Statistics web page.

2.7.2 Roundwood purchased by softwood round fencing manufacturers

A total of 369 thousand green tonnes of softwood (UK grown and imported) was purchased by softwood fencing manufacturers in 2010. This represents a decrease of 6% from the 2009 total of 394 thousand green tonnes.

Table 2.27 Roundwood purchased by softwood round fencing manufacturers, 2001-2010

Year	Size category (consumption)[1]				Total
	< 1	1 - < 5	5 - < 10	10 +	
					thousand green tonnes
2001	12	78	65	191	345
2002	11	66	74	159	310
2003	9	66	68	143	285
2004	8	73	59	154	293
2005	8	65	56	235	364
2006	9	83	52	156	301
2007	11	67	66	201	345
2008	8	68	70	239	385
2009	7	66	82	239	394
2010	7	63	86	213	369

Source: Survey of Round Fencing Manufacturers

Notes:

1. Categories are based on total softwood consumption, in thousand green tonnes.

2. This table includes purchases of both UK grown and imported softwood, whereas table 2.25 relates to UK grown softwood only.

Data:

Longer time series of roundwood purchased by softwood round fencing manufacturers, by size category and by country (England/ Scotland/ Wales/ Northern Ireland) are available from the Timber Statistics web page*.*

2.8 Exports

UK softwood exports in 2010 consisted of 301 thousand green tonnes of industrial roundwood (excluding sawlogs) and 166 thousand green tonnes of logs, giving a total of 467 thousand green tonnes of roundwood. This corresponded to a 34% increase in the quantity of softwood roundwood exports since 2009, but remained lower than the level in the period 2004 to 2008.

The UK also exported 136 thousand tonnes of chips in 2010, an 8% increase from the previous year.

Table 2.28 Summary of softwood exports, 2001-2010

Year	Roundwood			Chips
	Industrial roundwood[2]	Logs	Total	
				thousand green tonnes
2001	61	..	61	..
2002	133	..	133	..
2003	217	90	307	..
2004	465	145	610	320
2005	560	145	705	150
2006	505	138	643	214
2007	588	171	759	251
2008	556	176	733	176
2009	244	104	347	125
2010	301	166	467	136

Source: industry associations

Notes:

1. *Data for exports from Northern Ireland before 2004 are not available.*
2. *Includes all roundwood other than sawlogs.*

.. denotes data not available.

2.9 Certification

Forest certification assesses forest management practices against an agreed standard and awards a label to those forest products that meet the standard. In order for products to achieve certification, both forest management practices and the Chain of Custody, which tracks timber from forest to retail outlet, must be assessed.

Use the links on the right to access data and sources on certification (including certified woodland area).

2.9.1 Volume certified

Respondents to Forestry Commission surveys were asked to report on volumes certified. 72% of non-FC/ FS softwood removals in 2010 were from certified sources. As all Forestry Commission and Forest Service woodland is certified, this equates to 85% of all softwood removals in 2010 from certified sources.

83% of sawmills' roundwood consumption and 78% of sawnwood production by sawmills in 2010 was certified. For round fencing manufacturers, 62% of total softwood consumption was certified.

Table 2.29 Per cent of volume certified, 2002-2010

Year	Removals[1]		Sawmills		Round fencing manufacturers
	Softwood from non-FC/ FS woodland	Total softwood removals	Consumption (softwood and hardwood)	Production (softwood and hardwood)	Consumption (softwood)
					per cent certified volume
2002	40	77	65	62	14
2003	55	81	67	50	36
2004	74	89	80	63	58
2005	68	85	76	71	53
2006	66	85	81	64	46
2007	76	88	78	65	54
2008	64	83	82	75	62
2009	68	87	83	77	51
2010	72	85	83	78	62

Source: industry surveys

Notes:

1. For all removals from FC/ FS woodland, the source is certified.

2.9.2 Chain of custody certificates

Sawmills and round fencing manufacturers were also asked whether they held a Chain of Custody certificate. 54% of sawmills who participated in the survey and responded to the question in 2010 reported that they held a Chain of Custody certificate. This proportion varied with size of mill, from 20% of mills producing less than 5 thousand m^3 sawnwood to 100% of those producing 25 thousand m^3 sawnwood or more. 43% of round fencing manufacturers who responded to the question reported holding a Chain of Custody certificate.

Table 2.30 Chain of custody certificates, 2010

	Mills holding certificate	Mills without certificate	Certification status not known[1]	Total
Sawmills (size of mill[2])				
< 5	8	33	84	125
5 - < 25	16	7	14	37
25 +	23	0	4	27
All sawmills	**47**	**40**	**102**	**189**
Round fencing manufacturers	12	16	37	65

Source: industry surveys

Notes:

1. Includes non-respondents to survey in current year.

2. Categories are based on total sawnwood production (softwood and hardwood), in thousand m^3.

2.10 Woodfuel and pellets

The sawmill survey and survey of round fencing manufacturers were extended in 2008 to request data on woodfuel sales and use from all sawmills and round fencing manufacturers, with data requested on:

- sales to bioenergy;
- sales as firewood and
- internal use for heat/ energy.

Previously, this information was only asked of larger mills (those producing at least 10 thousand m^3 sawnwood), although sales to bioenergy was introduced onto the questionnaire for smaller mills in 2006.

The following page provides data on woodfuel from the sawmill survey and survey of round fencing manufacturers.

In addition, estimates of roundwood used directly for woodfuel are provided in tables 2.6 and 2.7.

Estimates of recycled wood used for woodfuel are produced annually by the Wood Recyclers' Association. In 2010, it is estimated that 551 thousand tonnes of recycled wood were used for woodfuel, an increase of 11% from the 2009 estimate of 495 thousand tonnes.

Results from a survey of woodfuel suppliers, run in Spring 2009, were provided in Forestry Statistics 2009.

Pellet manufacture

An estimated total of 197 thousand tonnes of wood pellets and briquettes were produced in the UK in 2010, an increase of 67% from the 2009 total of 118 thousand tonnes. Not all of these pellets and briquettes will have been used for woodfuel.

Use the links on the right to access data and further information on sources on woodfuel.

2.10.1 Woodfuel supply by sawmills and round fencing manufacturers

An estimated 478 thousand green tonnes (mainly softwood) of woodfuel were supplied by sawmills in 2010 and a further 58 thousand green tonnes were supplied by round fencing manufacturers. 88% of the total woodfuel supplied was sold to bioenergy.

Table 2.31 Woodfuel supply by sawmills and round fencing manufacturers, 2006-2010

	Sales to bioenergy	Sales as firewood	Used internally for heat/ energy	Total
				thousand green tonnes
Sawmills				
2006	226	1	10	237
2007	230	2	5	238
2008	223	7	13	244
2009	346	14	21	381
2010	416	12	49	478
Round fencing manufacturers				
2008	43	12	1	56
2009	45	12	1	58
2010	53	5	0	58

Source: Sawmill Survey, Survey of Round Fencing Manufacturers

Notes:

1. Material reported as sales/ use for woodfuel, but may have been used for other purposes.

2. Sales as firewood and used internally for heat/ energy in 2006 and 2007 only relates to larger sawmills (those producing at least 10 thousand m^3 sawnwood).

3 Trade

This section contains information about UK imports and exports of wood products, and about the level of apparent consumption estimated from data for UK production, imports and exports. International comparisons are provided in the International Forestry chapter.

Information on imports and exports mainly comes from the Overseas Trade Statistics compiled by HM Revenue & Customs. The two sources are surveys of European Union (EU) internal trade (Intrastat) and customs data for trade with non-EU countries.

A copy of all trade tables is available to download as an Excel spreadsheet.

3.1 Apparent consumption of wood in the UK

Apparent consumption is the amount of timber, measured as wood raw material equivalent (WRME) underbark, used as wood and wood products by people and industries in the United Kingdom. It is calculated as total United Kingdom production plus imports, minus exports. Apparent consumption also differs from actual consumption by the extent of changes in the level of stocks. It is not practical to collect information on actual consumption.

UK production of roundwood totalled 9.7 million m^3 WRME underbark in 2010. A further 41.6 million m^3 WRME underbark of wood and wood products were imported to the UK and 5.5 million m^3 WRME underbark were exported, giving apparent consumption of 45.9 million m^3 WRME underbark. This represented a 4% increase in apparent consumption from the previous year. These figures exclude recycled wood and recovered paper (see Table 3.3 for statistics on recovered paper).

Imports accounted for 81% of all wood (production + imports) in the UK in 2010.

Table 3.1 Apparent consumption of wood in the UK, 2001-2010

Year	UK production[2]	Imports	Exports	Apparent Consumption
				million m^3 WRME underbark
2001	7.9	49.4	5.9	51.4
2002	7.8	48.5	5.8	50.4
2003	8.1	49.0	7.1	50.0
2004	8.3	53.2	7.5	54.0
2005	8.5	51.2	5.8	54.0
2006	8.4	53.6	5.9	56.1
2007	9.0	54.5	6.8	56.7
2008	8.4	46.3	5.3	49.4
2009	8.6	39.5	4.2	44.0
2010	9.7	41.6	5.5	45.9

Source: industry surveys, industry associations, UK overseas trade statistics (HM Revenue & Customs) and conversion factors to Wood Raw Material Equivalent (WRME).

Notes:

1. Excludes recovered paper.

2. UK production of roundwood is estimated from deliveries to wood processing industries and others, as in tables 2.6 and 2.7.

3.2 Apparent consumption of wood products in the UK

UK production accounted for around one third (36%) of the UK sawnwood market, 61% of the UK woodbased panel market and 43% of the UK paper market in 2010.

Table 3.2 Apparent consumption of wood products[1,2] in the UK, 2010

Product	UK production	Imports	Exports	Apparent consumption
Sawnwood (thousand m^3)				
Coniferous	3 053	5 230	164	8 120
Non-coniferous	48	469	31	485
Total	3 101	5 699	195	8 605
Woodbased panels (thousand m^3)				
Veneer sheets	0	28	2	26
Plywood	0	1 264	75	1 190
Particleboard	2 594	649	278	2 965
Fibreboard	776	760	155	1 381
Total	3 370	2 701	509	5 562
Paper & paperboard (thousand tonnes)				
Newsprint	1 195	806	297	1 704
Other graphic papers	442	3 562	355	3 649
Sanitary & household papers	729	195	38	886
Packaging materials	1 640	2 208	507	3 341
Other paper & paperboard	294	55	24	325
Total	4 300	6 825	1 220	9 905

Source: industry surveys, industry associations, UK overseas trade statistics (HM Revenue & Customs).

Notes:

1. Excludes other wood products, e.g. fuelwood and round fencing.

2. Excludes roundwood and intermediate products (e.g. sawmill products, pulp and recovered paper) to avoid double counting.

3.3 Flow of recovered paper

UK production of recovered paper (the amount recovered from businesses and households in the UK) totalled 8.0 million tonnes in 2010. The amount of recovered paper which is exported rose from around 0.7 million tonnes in 2001 to 4.9 million tonnes in 2008, before decreasing to 4.4 million tonnes in 2010. Exports accounted for over one half (55%) of recovered paper produced in the UK in 2010.

Table 3.3 Flow of recovered paper, 2001-2010

Year	UK production	Imports	Exports	Apparent consumption[1]
				thousand tonnes
2001	5 521	50	694	4 877
2002	5 968	76	1 227	4 817
2003	6 304	100	2 005	4 399
2004	7 126	87	3 127	4 085
2005	7 718	78	3 329	4 467
2006	8 015	140	3 996	4 159
2007	8 617	88	4 749	3 956
2008	8 768	74	4 891	3 951
2009	8 155	94	4 444	3 805
2010	8 003	115	4 388	3 730

Source: Confederation of Paper Industries, UK overseas trade statistics (HM Revenue & Customs).

Notes:

1. Apparent consumption of recovered paper refers to use of recycled paper pulp in the UK.

3.4 UK import quantities by product

Wood imports to the UK in 2010 comprised 5.7 million cubic metres of sawnwood, 2.7 million cubic metres of woodbased panels and 1.9 million cubic metres of other wood. This represented an increase of 9% in the level of sawnwood imports and an 8% increase in woodbased panel imports from the previous year. Imports of other wood have more than doubled since 2009, but are similar to the level in 2008.

A total of 6.8 million tonnes of paper was imported into the UK in 2010, representing a 3% decrease from the 2009 figure of 7.0 million tonnes.

Table 3.4 UK import quantities, 2001-2010

Year	Wood (thousand m^3)			Pulp and paper (thousand tonnes)			
	Sawnwood	Other wood[1]	Woodbased panels	Paper	Pulp	Recovered paper	Total pulp & paper
2001	7 801	887	3 598	7 322	1 632	50	9 005
2002	8 432	1 020	3 782	7 072	1 623	76	8 771
2003	8 933	1 045	3 492	7 490	1 522	100	9 112
2004	8 583	1 048	4 114	7 528	1 636	87	9 251
2005	8 341	1 325	3 939	7 663	1 694	78	9 434
2006	7 963	1 133	3 959	7 741	1 452	140	9 332
2007	8 469	1 621	3 858	7 890	1 427	88	9 405
2008	5 886	1 921	3 389	7 403	1 344	74	8 821
2009	5 240	887	2 500	7 018	940	94	8 052
2010	5 699	1 886	2 701	6 825	1 105	115	8 045

Source: UK overseas trade statistics (HM Revenue & Customs), industry associations

Notes:

1. Includes roundwood, wood charcoal, chips, particles and residues.

3.5 UK export quantities by product

A total of 5.6 million tonnes of pulp and paper (including recovered paper) was exported from the UK in 2010. This represented a 5% increase from the previous year.

Table 3.5 UK export quantities, 2001-2010

Year	Wood (thousand m^3)			Pulp and paper (thousand tonnes)			
	Sawnwood	Other wood[1]	Woodbased panels	Paper	Pulp	Recovered paper	Total pulp & paper
2001	210	255	362	1 623	14	694	2 332
2002	272	298	424	1 546	21	1 227	2 794
2003	304	840	531	1 697	10	2 005	3 713
2004	312	1 294	519	1 557	29	3 127	4 714
2005	358	1 186	520	1 164	25	3 329	4 518
2006	415	1 214	510	1 002	24	3 996	5 022
2007	346	1 353	599	971	24	4 749	5 743
2008	222	1 289	520	1 031	10	4 891	5 932
2009	203	674	451	896	22	4 444	5 361
2010	195	1 118	509	1 220	36	4 388	5 645

Source: UK overseas trade statistics (HM Revenue & Customs), industry associations

Notes:

1. Includes roundwood, wood charcoal, chips, particles and residues.

3.6 UK import values by product

Wood product imports in 2010 were valued at a total of £6.8 billion, an increase of 16% from the 2009 total of £5.8 billion but similar to the level in 2008.

Pulp and paper (including recovered paper) comprised 68% of the total value of wood product imports in 2010, 18% was sawnwood, 12% woodbased panels and 3% other wood.

Table 3.6 UK import values, 2001-2010

Year	Wood			Pulp and paper				Total
	Sawnwood	Other wood[1]	Woodbased panels	Paper	Pulp	Recovered paper	Total pulp & paper	
								£ million
2001	1 057	73	731	3 780	599	12	4 391	6 252
2002	1 107	79	781	3 237	484	9	3 730	5 697
2003	1 225	98	767	3 509	484	10	4 003	6 094
2004	1 190	95	961	3 520	476	7	4 003	6 248
2005	1 120	114	918	3 432	517	5	3 954	6 106
2006	1 144	112	926	3 599	548	9	4 156	6 338
2007	1 516	128	914	3 741	526	7	4 275	6 833
2008	1 085	158	873	3 655	608	10	4 273	6 389
2009	953	111	677	3 635	425	11	4 071	5 811
2010	1 199	179	781	3 997	593	17	4 607	6 765

Source: UK overseas trade statistics (HM Revenue & Customs), industry associations

Notes:

1. Includes roundwood, wood charcoal, chips, particles and residues.

3.7 UK export values by product

Wood product exports from the UK were valued at a total of £1.8 billion in 2010, an increase of 18% from the 2009 total of £1.5 billion. Total exports of wood products in 2010 comprised 89% pulp and paper (mainly paper), 6% woodbased panels, 3% sawnwood and 2% other wood.

Table 3.7 UK export values, 2001-2010

Year	Wood			Pulp and paper				Total
	Sawnwood	Other wood[1]	Woodbased panels	Paper	Pulp	Recovered paper	Total pulp & paper	
								£ million
2001	31	12	74	1 197	4	75	1 276	1 393
2002	39	13	82	982	9	98	1 088	1 222
2003	47	25	91	1 002	5	173	1 181	1 345
2004	50	34	95	992	7	235	1 234	1 412
2005	52	35	102	1 002	6	278	1 286	1 475
2006	61	37	128	947	8	329	1 284	1 510
2007	70	40	107	1 013	7	407	1 427	1 645
2008	50	48	104	1 114	3	472	1 590	1 792
2009	41	21	104	1 010	10	342	1 362	1 530
2010	47	42	113	1 068	18	524	1 610	1 812

Source: UK overseas trade statistics (HM Revenue & Customs), industry associations

Notes:

1. Includes roundwood, wood charcoal, chips, particles and residues.

3.8 Origin of wood imports

Sweden (43%), Latvia (14%) and Finland (12%) provided the majority of imports of sawn softwood to the UK in 2010. Sawn hardwood was most commonly imported from the USA (24%) and other non-EU countries (26%).

UK imports of plywood commonly came from countries outwith the EU, such as China (33%), Brazil (18%) and Malaysia (13%), whilst Finland (13%)accounted for the majority of EU trade. Most particleboard imports to the UK in 2010 came from within the EU (mainly Ireland (43%), France (21%), Germany (17%) and Belgium (8%)). The EU also supplied the majority of fibreboard imports, with Ireland (38%), Germany (18%), Spain (11%) and Belgium (9%) being the principal sources.

Brazil (30%), Sweden (14%) and the USA (11%) were amongst the principal sources of wood pulp to the UK in 2010, whilst most paper imports came from Germany (20%), Finland (16%) and Sweden (16%).

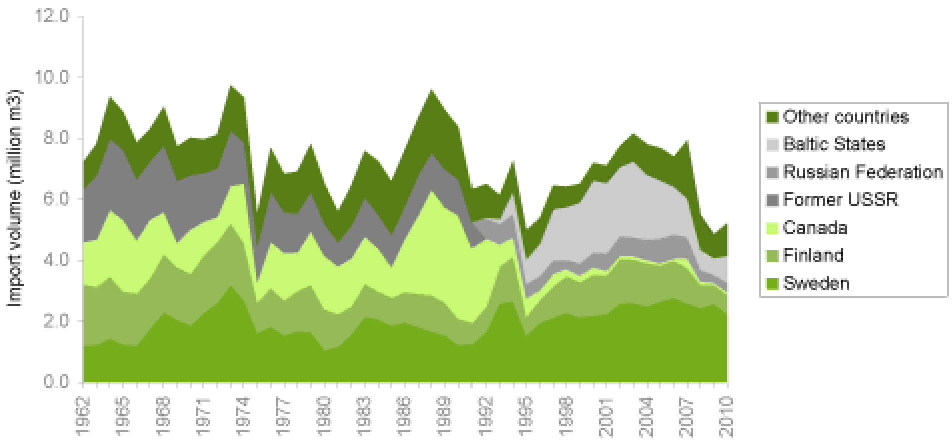
Table 3.8 Country of origin of wood imports to the UK, 2010

Source	**Sawn softwood**	**Sawn hardwood**	**Plywood**	**Particle-board**	**Fibre-board**	**Wood pulp**	**Paper and paperboard**
per cent of total UK imports (volume) in each category							
Sweden	43	1	0	0	0	14	16
Finland	12	0	13	0	2	8	16
Germany	9	7	1	17	18	1	20
France	0	7	1	21	1	0	9
Belgium	0	1	1	8	9	0	2
Spain	0	1	1	2	11	6	3
Ireland	7	3	1	43	38	0	1
Latvia	14	8	2	1	2	0	0
Other EU-27	5	21	2	8	15	13	16
Total EU-27	**91**	**48**	**22**	**98**	**96**	**43**	**82**
China	0	1	33	0	0	0	3
USA	0	24	0	1	1	11	3
Brazil	0	0	18	0	0	30	2
Russia	6	1	5	0	0	0	1
Malaysia	0	5	13	0	0	0	0
Cameroon	0	8	0	0	0	0	0

Other non-EU	3	13	9	0	2	16	9
Total non-EU	**9**	**52**	**78**	**2**	**4**	**57**	**18**

Source: UK overseas trade statistics (HM Revenue & Customs).

Figure 3.1 Country of origin of sawn softwood imports to the UK, 1962-2010



Source: FAO, UK overseas trade statistics (HM Revenue & Customs), industry associations.

4 UK Forests and Climate Change

This section contains information relating to carbon in forests and public attitudes to forestry and climate change.

In addition to the statistics presented here, information on UK forests and climate change is available from 'Combating Climate Change - a role for UK forests' (The Read Report), an independent asessment of the science published in November 2009.

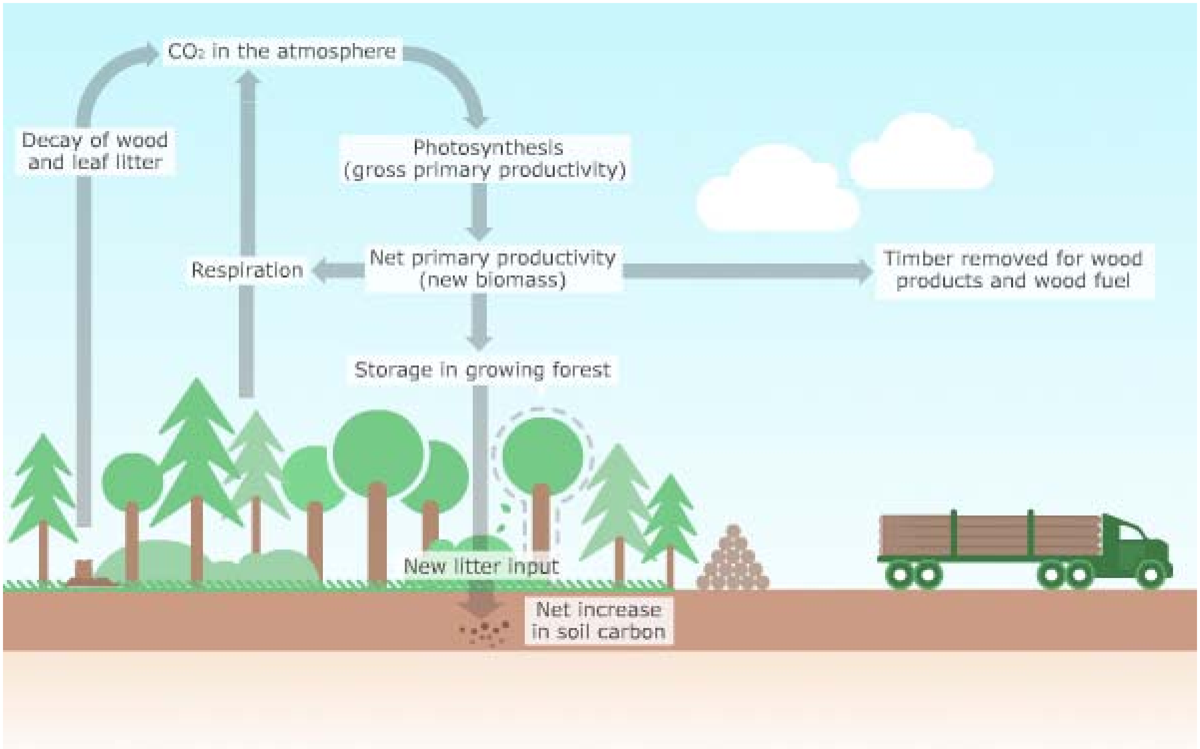
Use the links on the right to access data and sources on forests and climate change.

A copy of all UK forests and climate change tables is available to download as an Excel spreadsheet.

4.1 Carbon cycle

Figure 4.1 shows a forest's contribution to the carbon cycle. Trees absorb carbon dioxide through photosynthesis and release it through respiration; the difference is new biomass. Some of this biomass is dropped to the forest floor as litter (foliage, deadwood, etc), which in due course decays and is either released back to the atmosphere or becomes part of soil carbon. The remainder accumulates as increment in the forest, mostly as stemwood, branches or roots. A proportion of this accumulated biomass is harvested, for wood products or fuelwood; the rest is a net addition to the biomass stored in the forest.

Figure 4.1 Carbon Cycle



4.2 Forest carbon stock

The total carbon in UK forests has increased from 1990 to 2010. The carbon in forest soils accounts for most (around 75%) of total forest carbon.

Table 4.1 Forest carbon stock

	1990	2000	2005	2010
	million tonnes of carbon dioxide equivalent			
Carbon in above-ground biomass	428	431	464	506
Carbon in below-ground biomass	154	155	167	182
Carbon in dead wood	8	9	9	9
Carbon in litter	154	165	167	169
Soil carbon [1]	2 254	2 427	2 454	2 473
Total forest carbon	**2 998**	**3 188**	**3 261**	**3 338**

Not National Statistics.

Source: Forestry Commission

Notes

1. *Carbon in soil depth 0 to 100 cm.*

2. *To convert tonnes carbon dioxide equivalent (CO_2e) to tonnes carbon (C), multiply by 12/44.*

4.3 Carbon sequestration

In climate change reporting, removals to forestland, also called the forest sink, measures the net annual accumulation of carbon in forests by woody biomass, soils and litter. The annual rate is reported to have peaked in 2004 at 16 million tonnes CO_2 in total, of which 13 million tonnes CO_2 was accumulated in living biomass. The rate of accumulation is expected to fall steadily to 2020.

Under the Kyoto protocol, additional woodland planted since 1990 contributes to the UK's carbon dioxide emissions target; the rate of accumulation of carbon in these new woodlands continues to increase as woodland continues to be planted.

Reported figures do not include carbon in harvested wood products.

Table 4.2 Net carbon dioxide removals attributed to UK forestry

Year	In living biomass	Total	of which, due to land afforested since 1990	emissions due to land deforested since 1990
				million tonnes of carbon dioxide per year
1990	9.1	12.2	0.0	-0.4
1995	10.5	13.7	0.3	-0.3
2000	9.9	13.7	1.4	-0.7
2005	12.0	15.6	2.3	-0.6
2010	5.0	10.6	3.0	-0.6
2015	1.9	7.4	3.1	-0.5
2020	-0.9	4.4	3.6	-0.5

Not National Statistics.

Source: Inventory and projections of UK emissions by sources and removal by sinks due to land use, land use change and forestry, produced by CEH for input to 2009 final UK Greenhouse Gas Emissions (DECC, March 2011).

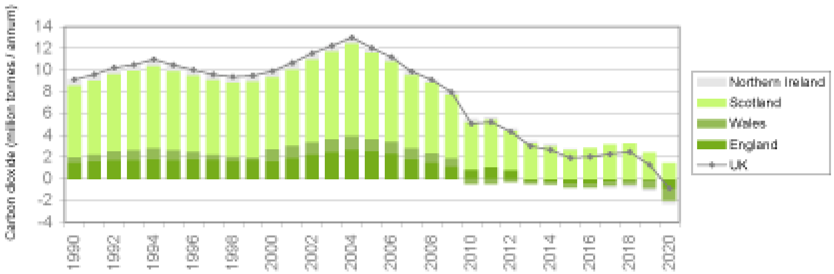
Notes:

1. Net annual accumulation of carbon in forests by woody biomass, soils and litter. Adjusted for losses from deforestation and forest wildfires. Excludes changes in UK harvested wood products.

2. Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO_2). To convert from tonnes CO_2 to tonnes carbon multiply by 12/44.

3. Future predictions of carbon uptake assume that commercial conifer plantations will be replanted when felled, and that planting of new woodland will continue at the same rate as in 2009 (mid projection).

Figure 4.2 Net annual change in carbon (CO_2 equivalent) [1] in UK woodlands



Not National Statistics.

Source: Inventory and projections of UK emissions by sources and removal by sinks due to land use, land use change and forestry, produced by CEH for input to 2009 final UK Greenhouse Gas Emissions (DECC, March 2011).

1. Net annual accumulation of carbon in living forest biomass only. Adjusted for losses from deforestation and forest wildfires. Excludes changes in carbon in litter, soils and UK harvested wood products.

2. Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO_2). To convert from tonnes CO_2 to tonnes carbon multiply by 12/44.

3. Future predictions of carbon uptake assume that commercial conifer plantations will be replanted when felled, and that planting of new woodland will continue at the same rate as in 2009 (mid projection).

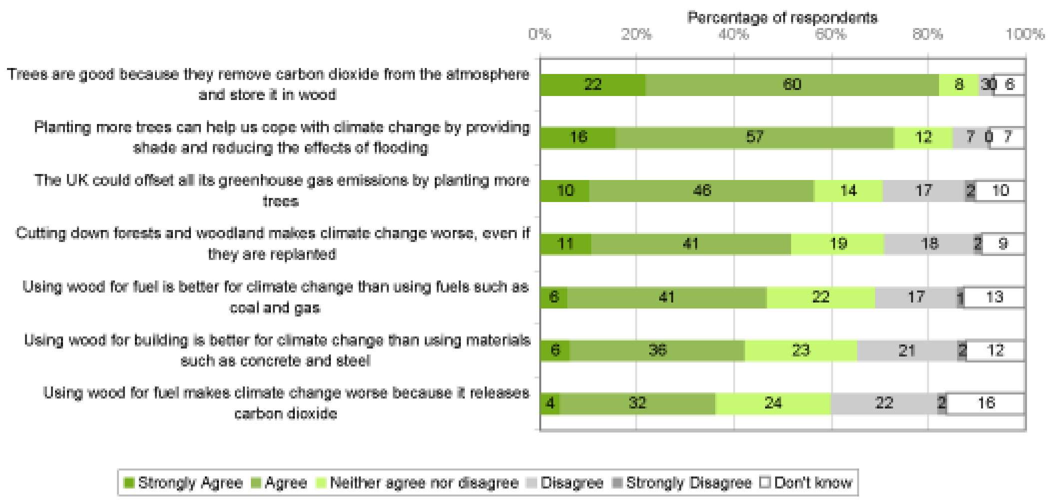
4.4 Public Opinion of Forestry - climate change

The Forestry Commission has conducted similar biennial surveys of public attitudes to forestry and forestry-related issues since 1995. The most recent set of three separate surveys was conducted in 2011; in Scotland, Wales, and across the UK as a whole. The full results are available within the 2011 Public Opinion of Forestry reports available on our website.

Questions were asked to gauge the public's agreement on climate change issues, including on the ways in which forests and woodlands can impact on climate change. Some of the public views presented below do not reflect expert opinion.

The highest level of agreement was seen with the statement "trees are good because they remove carbon dioxide from the atmosphere and store it in wood", with 82% agreeing. This compares with only 36% agreeing with the statement "using wood for fuel makes climate change worse because it releases carbon dioxide".

Figure 4.3 Public opinion on ways in which forests and woodlands can impact on climate change



Not National Statistics.

Source: UK Public Opinion of Forestry Survey 2011.

Base: 2,000 UK respondents.

Questions were also posed on how UK forests should be managed in response to the threat of climate change - see the survey reports for further details.

5 Environment

This section presents a range of information about the woodland environment, mostly using sources that are not National Statistics. More information on environmental aspects is included in the UK Indicators of Sustainable Forestry, published in October 2002 with web updates.

A copy of all environment tables is available to download as an Excel spreadsheet.

5.1 Ancient and semi-natural woodland

Ancient semi-natural woodland (ASNW) tends to be richer in plants and animals than other woodland areas. The area of ASNW has declined over the centuries and woodlands have become increasingly fragmented. The figures shown in Table 5.1 are mostly based on maps from the 1990s.

There are estimated to be around 0.6 million hectares of ancient woodland in the UK and around 0.6 million hectares of semi-natural woodland.

Table 5.1 Ancient and semi-natural woodland

Woodland type	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
ASNW[2]	206	34	89	0	329
PAWS[2]	135	28	59	1	223
OSNW[2]	210	47	44	15	316
Total ancient[1]	**341**	**62**	**148**	**1**	**552**
Total semi-natural[1]	**416**	**81**	**133**	**15**	**645**

Not National Statistics.

Source: Protected Forest Areas in the UK *(S Pryor & G Peterken, 2001), Wales from Woodlands for Wales progress report 2001-05 (2006) and Northern Ireland ancient woodland data from* Back on the Map *(Woodland Trust, 2007)*

Notes:

1. Ancient woodland is woodland that has been in continuous existence since 1600 (1750 in Scotland); Semi-natural woodland is woodland with natural characteristics (predominantly native species of trees, ground plants and animals).

2. ASNW (ancient semi-natural woodland) is both ancient and semi-natural;
PAWS (plantation on an ancient woodland site) is ancient but not semi-natural;
OSNW (other semi-natural woodland) is semi-natural but not ancient.

5.2 Protected forest areas

Woodland areas can be placed under different types of statutory and non-statutory protection.

The area of woodland that is designated as a SSSI (or ASSI) in the UK is estimated to be around 0.1 million hectares .

Table 5.2 Woodland areas under types of statutory protection

Type of protection[1]	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
SAC	24	1	22	0	47
SPA	..	1	..	..	..
NNR[2]	9	1	19	0	30
SSSI	80	9	38	2	129

Not National Statistics.

Source: Protected Forest Areas in the UK *(S Pryor & G Peterken, 2001).*

Notes:

1. SAC: Special Area of Conservation;
SPA: Special Protection Area;
NNR: National Nature Reserve;
SSSI: Site of Special Scientific Interest (ASSI in Northern Ireland).

2. For NNR, the Scottish figure is the area of NNR managed under the WGS, and probably under-estimates the total woodland in NNRs in Scotland. This has a knock-on effect on the UK total.

.. Denotes data not available.

5.3 Populations of wild birds

The index for woodland birds was expanded in 2007 to cover 38 species, of which 12 are generalists and 26 are woodland specialists (those that breed or feed mainly or solely in woodland).

Since the early 1990s, the UK woodland bird index has generally been about 20 per cent below the level of the early 1970s, with the decline predominantly in woodland specialist species.

Table 5.3 UK populations of wild birds

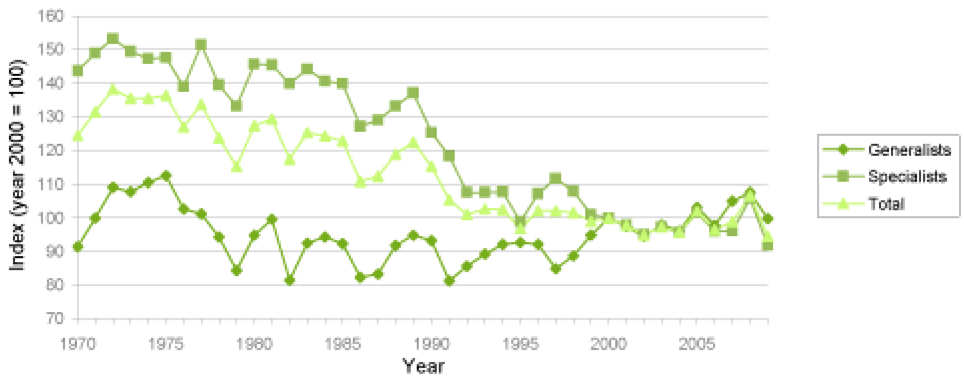
Year	Total breeding birds	Farmland birds	Seabirds	Woodland birds	Woodland generalists	Woodland specialists
						index (year 2000 = 100)
2000	100.0	100.0	100.0	100.0	100.0	100.0
2001	99.3	99.7	99.9	97.8	97.4	98.0
2002	98.3	99.1	99.3	94.9	94.5	95.1
2003	99.8	99.1	95.9	97.4	98.0	97.3
2004	97.7	97.9	88.5	95.8	96.2	95.5
2005	100.2	96.7	92.5	102.0	103.2	101.6
2006	99.9	96.2	96.3	96.5	97.7	96.0
2007	99.0	90.4	95.1	98.9	105.0	96.1
2008	102.5	92.7	91.9	106.7	107.6	105.7
2009	97.0	89.5	94.7	94.5	99.7	91.7

Source: British Trust for Ornithology (BTO), Department for Environment, Food and Rural Affairs (Defra), Joint Nature Conservation Committee (JNCC), Royal Society for the Protection of Birds (RSPB).

Notes:

1. Based on data in Wild Bird Populations statistics release (Defra, January 2011).

Figure 5.1 UK populations of woodland birds



Source: British Trust for Ornithology (BTO), Department for Environment, Food and Rural Affairs (Defra), Joint Nature Conservation Committee (JNCC), Royal Society for the Protection of Birds (RSPB).

Notes:

1. Based on data in Wild Bird Populations statistics release (Defra, January 2011).

5.4 Woodland vegetation

The Countryside Survey carried out by the Centre for Ecology and Hydrology, reports for a wide range of habitats, including conifer and broadleaved woodland. Results for 2007 show some declines in species richness. Data for Scotland show significant declines in species richness since 1998, in both broadleaved and conifer woodlands. No other changes in species richness since 1998 are statistically significant, but Wales and GB total show significant declines in species richness for broadleaves over the longer period since 1990.

The Ellenberg N fertility score has declined significantly over the longer period since 1990 for broadleaves in Scotland. There are no other significant changes in Ellenberg fertility and light scores.

Table 5.4 Vegetation richness and condition scores[1]

		England	Wales	Scotland	GB
Species richness					
Broadleaved	1990	20.8	25.8	25.3	22.6
	1998	18.9	22.8	26.9	21.3
	2007	20.1	21.6	22.1	20.9
Conifer	1990	16.0	12.2	14.2	14.5
	1998	14.2	15.7	15.6	15.3
	2007	14.9	13.9	13.7	14.1
Ellenberg light score					
Broadleaved	1990	6.0	6.4	6.3	6.2
	1998	5.9	6.3	6.4	6.1
	2007	5.9	6.3	6.4	6.1
Conifer	1990	5.9	6.1	6.4	6.2
	1998	5.8	6.2	6.4	6.2
	2007	5.8	6.1	6.4	6.2
Ellenberg N fertility score					
Broadleaved	1990	5.5	4.5	4.5	5.1
	1998	5.5	4.6	4.3	5.1
	2007	5.6	4.6	4.2	5.1
Conifer	1990	4.7	3.6	3.4	3.8
	1998	4.7	3.7	3.4	3.9
	2007	4.7	3.8	3.3	3.8

Not National Statistics.

Source: Countryside Survey data (C) NERC - Centre for Ecology & Hydrology.

Notes:

1. Higher scores indicate more species, and higher levels of light and fertility.

6 Recreation

This section contains information on the number and profile of visits to woodlands across the UK, Forestry Commission facilities and activities and public access to woodland.

A copy of all recreation tables is available to download as an Excel spreadsheet.

6.1 Visits to woodland - household surveys

The information shown below in Table 6.1 has been obtained from the following general population household surveys.

- UK Day Visits Surveys (1994, 1996, 1998)
- GB Day Visits Survey (2002/3)
- Scottish Recreation Survey (2004 onwards)
- England Leisure Visits Survey (2005)
- Welsh Outdoor Recreation Survey 2008
- Monitor of Engagement with the Natural Environment (England, 2009-10, 2010-11)

It is likely that differences in survey design and methodology have contributed to a considerable proportion of the differences in results between these surveys. The figures in Table 6.1 should not be interpreted as time trends but instead as separate results from each survey.

In common with all sample based surveys, the results from each survey are subject to the effects of chance, depending on the particular survey method used and the sample acheived, thus confidence limits apply to all results from these surveys.

Table 6.1 Number of visits to woodland

Year	Journey starting point			
	England	Wales	Scotland	GB
				million visits
1994	273	12	18	303
1996	308	11	26	346
1998	321	11	22	355
2002	222	12	18	252
2004	..	..	70	..
2005	170	..	62	..
2006	..	..	76	..
2007	..	..	72	..
2008	..	64	62	..
2009	317	..	57	..
2010	326	..	63	..

Not National Statistics.

Sources:

1994, 1996, 1998: UK Day Visit Surveys, carried out by National Centre for Social Research (not available online);

2002: GB Day Visits Survey 2002-03, carried out by TNS Travel & Tourism;

England 2005: England Leisure Visits Survey (ELVS), carried out by Research International;

England 2009 on: Monitor of Engagement with the Natural Environment (MENE), carried out by TNS Travel & Tourism;

Wales 2008: Welsh Outdoor Recreation Survey 2008 carried out by IPSOS-MORI;

Scotland 2004 on: Scottish Recreation Survey, carried out by TNS Travel & Tourism.

Notes:

1. The UK and GB Day Visits Surveys collected data about day trips from home, for all countries of GB. The 1994, 1996 and 1998 surveys covered calendar years; the 2002-03 survey covered a 12-month period starting in March 2002.

2. ELVS and MENE covered trips taken in England, including those from holiday bases, by respondents living in England. ELVS ran for 12 months from February 2005. MENE results relate to 12 month periods from March to February.

3. The Welsh Outdoor Recreation Survey 2008 total shown is for trips with woodland as the main destination.

4. The Scottish Recreation Survey started in July 2003 and is scheduled to continue until 2013. It covers visits to the outdoors for leisure and recreation in Scotland by people living in Scotland. The total shown is for all trips that included a visit to woodland.

5. In each survey, visits to overseas destinations are excluded.

.. denotes data not available.

6.1.1 England

In March 2009 fieldwork commenced on the Monitor of Engagement with the Natural Environment (MENE) survey, which includes collecting information on visits to the outdoors in England. The survey is expected to run for 3 years.

Table 6.2 shows the main characteristics of visits to woodlands.

Table 6.2 Woodland visit characteristics[1] - England 2009-10 to 2010-11

	2009-10	2010-11
		per cent
Activities on trip (multi response)		
Walking with a dog	66	68
Other walking	21	21
Wildlife watching	6	5
Playing with children	6	5
Eat/ drink out	4	4
Visiting an attraction	3	3
Off road cycling or mountain biking	2	2
Road cycling	2	2
Main mode of transport		
On foot	61	62
Car/ van	35	34
Bicycle	2	2
Distance travelled (one way)		
Less than 1 mile	38	36
1 to 2 miles	25	27
3 to 5 miles	19	19
6 to 10 miles	7	8
Over 10 miles	11	10
Duration of visit (round trip)		
Up to 1 hour	26	23
1 - less than 2 hours	42	44
2 - less than 3 hours	15	16
3 hours or more	17	17

Not National Statistics.

Source: Monitor of Engagement with the Natural Environment (MENE), carried out by TNS Travel & Tourism, for Natural England, Department for Environment, Food & Rural Affairs (Defra) and Forestry Commission.

Notes:

1. All trips that included a visit to woodland.

6.1.2 Scotland

The Scottish Recreation Survey (ScRS), which measures and collects details about the Scottish adult population's participation in outdoor recreation in Scotland, began in July 2003 and will run for ten years, with 1,000 adults being interviewed in their home each month.

In 2010 an estimated 63 million recreation visits were made by Scottish residents to woodland in Scotland, either as the main destination of a visit or as part of another visit to the outdoors. Of these visits, 21 million were to Forestry Commission woodland.

Table 6.3 Estimated number of visits taken to woodlands for recreation in Scotland, 2006-2010

Year	FC woodland		Other woodland / don't know owner		Total woodland	
	All visits	Of which main destination	All visits	Of which main destination	All visits	Of which main destination
						million visits
2006	34.4	27.3	42.7	27.4	75.9	54.7
2007	28.7	21.9	45.5	31.8	71.9	53.7
2008	25.0	18.5	39.0	24.7	62.2	43.2
2009	18.1	13.0	39.8	23.7	56.5	36.7
2010	21.3	16.1	43.2	30.1	63.0	46.2

Not National Statistics.

Source: Scottish Recreation Survey, carried out by TNS Travel & Tourism, for Scottish Natural Heritage and Forestry Commission Scotland.

Notes:

1. 'All visits' are visits that include woodland; it may not have been the main destination. Some visits include both FC woodland and other woodland, so 'all visits' for total woodland are less than the sum of the two categories.

2. All results are subject to the effects of chance in sampling, so a range of uncertainty (confidence interval) should be associated with any result from the survey. The confidence intervals take into account the effect of clustering, weighting and stratification in the survey design. For example, the range of uncertainty around the 62 million visits in 2008 should be no more than +/-14%, i.e. the true figure is likely to be between around 55 and 69 million.

Table 6.4 shows the main characteristics of recreation visits, where the main destination of visit was woodland, from the latest five years of the Scottish Recreation Survey.

Table 6.4 Woodland visit characteristics [1] - Scotland, 2006-2010

	2006	2007	2008	2009	2010
					per cent

Main activity during visit					
Walking	80	83	83	85	82
Cycling	6	4	6	4	7
Family outing	6	4	5	4	4
Main transport					
On foot	58	53	53	63	51
Car/ van	37	42	40	36	44
Bicycle	3	4	5	0	4
Distance travelled					
Up to 2 miles	35	30	22	35	38
Over 2, up to 5 miles	35	40	41	35	27
Over 5, up to 20 miles	20	20	26	21	25
Over 20 miles	10	10	11	9	10
Duration of visit (round trip)					
Up to 1 hour	17	23	20	24	19
1 - less than 2 hours	46	47	41	39	40
2 - less than 3 hours	18	12	15	19	18
3 hours or more	19	18	24	18	23
Accompanied by dog	62	62	50	58	64

Not National Statistics.

Source: Scottish Recreation Survey, carried out by TNS Travel & Tourism, for Scottish Natural Heritage and Forestry Commission Scotland.

Notes:

1. *Visits where the main destination was woodland.*

6.1.3 Wales

Fieldwork for the Wales Outdoor Recreation Survey (WORS) commenced in January 2008 and ran for one year. The survey provides data on Welsh residents' participation in informal outdoor activities and visits to the outdoors, including woodland. Countryside Council for Wales (CCW) and Forestry Commission Wales (FCW) are running the survey again in 2011.

Table 6.5 shows the main charateristics of recreation visits where the main destination of visit was woodland, from the Welsh Outdoor Recreation Survey 2008.

Table 6.5 Woodland visit characteristics[1]- Wales, 2008

Woodland visit characteristics	per cent
Main activity during visit	
Walking	68
Off road cycling, mountain biking	8
Horse riding	4
Running	4
Sightseeing or visiting an attraction	4
Main transport	
Car/ van	47
On foot	43
Bicycle/ mountain bike	7
Distance travelled	
0 distance, up to 1 mile	44
Over 1 mile, up to 5 miles	26
Over 5 miles, up to 20 miles	18
Over 20 miles	12
Duration of visit (round trip)	
Up to 1 hour	10
Over 1 hour, up to 2 hours	29
Over 2 hours, up to 3 hours	25
3 hours or more	36
Accompanied by a dog	60

Not National Statistics

Source: Welsh Outdoor Recreation Survey, carried out by Ipsos-MORI, for Countryside Council for Wales (CCW) and

Forestry Commission Wales.

Notes:

1. *Visits where the main destination was woodland.*

6.1.4 Public Opinion of Forestry Survey - woodland visitors

The Public Opinion of Forestry Survey is carried out every two years and obtains people's attitudes to forestry and forestry-related issues, including visits to woodland.

The results shown in Tables 6.6 and 6.7 and Figure 6.1 have been taken from the UK and country reports on the surveys in 2011 and earlier years. The reports also include other recreation-related results, such as whether the woodlands visited were in towns or the countryside and any reasons given by survey respondents for not visiting woodlands.

In the UK 2011 survey, 67% of respondents said that they had visited woodland in the last few years for walks, picnics or other recreation.

Table 6.6 Woodland visitors[1]

Year	England	Wales	Scotland	Northern Ireland	UK
					per cent of respondents
2003	66	62	64	77	67
2005	65	69	50	67	65
2007	76	79	75	62	77
2009	77	..	57	..	77
2010	..	..	..	72	..
2011	68	68	75	..	67

Not National Statistics.

Source: UK/GB, Scotland, Wales and Northern Ireland Public Opinion of Forestry Surveys

Base: UK/GB = 4,000 respondents (2003, 2005, 2007), 2,000 respondents (2009, 2011); Scotland and Wales = 1,000 respondents each; Northern Ireland = 120 respondents (2003), 1,000 respondents (2005, 2007, 2010).

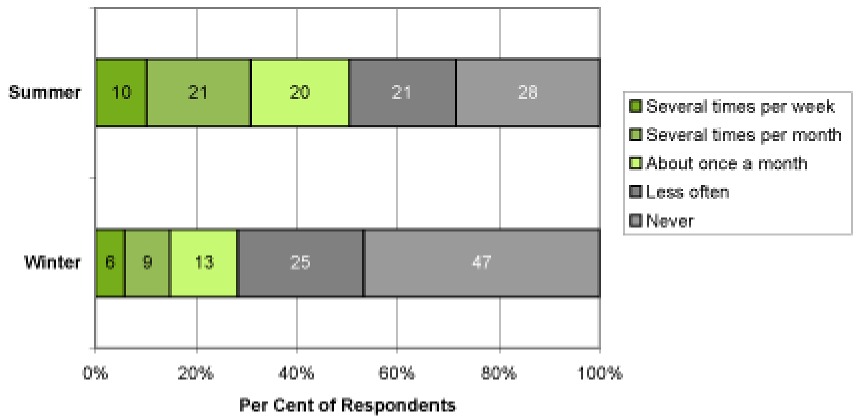
Notes:

1. Those stating that they had visited woodland in the last few years.

.. denotes data not available (survey not run that year or question not asked)

Survey respondents were asked how frequently they had visited during the previous summer and winter. Figure 6.1, which presents UK results for the 2007 to 2011 surveys, shows that respondents visited much more often during the summer, with 51% visiting at least once a month in the summer compared to 28% in the winter.

Figure 6.1 Frequency of visits to woodlands



Not National Statistics.

Source: UK Public Opinion of Forestry Surveys, 2007 to 2011.

Base: Average visit frequencies from last three UK surveys: 4,000 respondents in 2007; 2,000 in 2009; 2,000 in 2011.

6.1.5 Public Opinion of Forestry Survey - woodland visitors by age group

In the UK 2011 Public Opinion of Forestry survey, 74% of respondents aged 35 to 54 said that they had visited woodland in the last few years for walks, picnics or other recreation. This compares with 65% of respondents aged 16 to 34 and 63% of respondents aged 55 or over.

Table 6.7 Woodland visitors[1] by age group

Year	Aged 16 to 34	Aged 35 to 54	Aged 55 and over	Total
				per cent of respondents
1999	73	74	55	67
2001	75	77	63	72
2003	71	72	60	67
2005	66	74	56	65
2007	79	82	69	77
2009	78	84	69	77
2011	65	74	63	67

Not National Statistics.

Source: UK and GB Public Opinion of Forestry Surveys, 1999 to 2011.

Base: 2,000 respondents (1999, 2001, 2009, 2011); 4,000 respondents (2003, 2005, 2007).

Notes:

1. Those stating they had visited woodland in the last few years.

6.2 Visits to woodland - on-site surveys

Until 2002, a visitor monitoring programme (not National Statistics) was carried out at selected Forestry Commission woodland sites in England, Scotland and Wales. Year-on-year changes in visitor numbers were estimated by the 'Trends Index' which used data from traffic counters and other counters. Information about visitors and their views on facilities were collected by on-site visitor surveys.

In 2002 and 2003, the Forestry Commission developed new visitor monitoring systems to replace the existing national visitor monitoring programme. The 'All Forests Visitor Monitoring Survey' provides more accurate estimates of the number of visits to a wider range of Forestry Commission woodland, whilst continuing to gather information on the profile of visitors.

In addition, a new on-site survey methodology to measure visitor's 'Quality of Experience' at selected sites was adopted in England in 2004 and in Wales in 2006.

Although neither of these methods have been used in Northern Ireland, the Forest Service do collect information on the total number of paying visitors.

6.2.1 All Forests Survey

The All Forests visitor monitoring survey was undertaken in Wales (over a one-year period) and Scotland (over three years), with surveying starting in 2004.

Surveying took place from January 2004 to January 2005 with over 1,200 hours of fieldwork undertaken during 285 days. During this period, 765 face to face interviews were achieved. By stratifying all Welsh Government (WG) woodlands by estimated usage and the size of surrounding population, this study estimated that around 4.3 million visits are made annually to WG woodland in Wales.

At a combined level, the blocks selected are representative of the range of facilities and activities available in WG woodland, but this is not always the case at a district level. Approximately a fifth of each district’s forests were included in the survey.

Table 6.8 provides a summary of the key results obtained from the Wales All Forests survey.

Table 6.8 Woodland visit characteristics - Wales All Forests Survey

Woodland visit characteristics	2004
	per cent of respondents
Type of trip	
Day trip	81
Overnight trip	19
Main activity during visit	
Dog walking	40
Other walking	32
Cycling	12
Main transport	
Car / van	81
Walked	12
Cycled	3
Distance travelled (one-way)	
Less than 6 miles	46
6 to 15 miles	22
16 to 25 miles	13
Over 25 miles	19
Duration of visit (time spent in forest)	
Up to 1 hour	55

Over 1 hour, up to 2 hours	27
Over 2 hours, up to 3 hours	8
Over 3 hours	10
Frequency of visit to site of interview	
More than once a day	6
Once a day	10
1 to 3 times per week	23
1 to 3 times per month	16
1 to 3 times per year	19
Less often	7
First ever visit	19
Importance of forest and facilities in decision to visit area	
Only reason for coming	26
Very important	39
Quite important	17
Group composition	
Alone	37
Couples / groups of two	42
Groups of three or more	20

Not National Statistics.

Source: Wales All Forests Survey 2004, carried out by TNS.

All Forests surveying was carried out in Scotland across all 15 forest districts[1]. Due to the scale of this exercise, fieldwork was spread across a three-year period from June 2004 to June 2007, with over 5,000 hours of fieldwork, undertaken over 1,158 days achieving almost 2,700 face to face interviews. By stratifying all Forestry Commission Scotland (FCS) woodlands, independently in each forest district, by estimated usage and the size of surrounding population, this study estimated that around 8.2 million visits are made annually to FCS woodland.

At a combined level, the blocks selected are representative of the range of facilities and activities available in FCS woodland, but this is not always the case at a district level. Approximately a fifth of each district's forests were included in the survey.

Table 6.9 provides a summary of the key characteristics and results obtained from the Scotland All Forests survey.

Table 6.9 Woodland visit characteristics - Scotland All Forests Survey

Woodland visit characteristics	2004-2007
	per cent of respondents
Type of trip	
Day trip	82
Overnight trip	18
Main activity during visit	
Dog walking	50
Other walking	29
Cycling	11
Main transport	
Car / van	78
Walked	18
Cycled	2
Distance travelled (one-way)	
Less than 6 miles	58
6 to 15 miles	19
16 to 25 miles	10
Over 25 miles	12
Duration of visit (time spent in forest)	
Up to 1 hour	59
Over 1 hour, up to 2 hours	24
Over 2 hours, up to 3 hours	10
Over 3 hours	7
Frequency of visit to site of interview	
More than once a day	7
Once a day	13
1 to 3 times per week	25
1 to 3 times per month	17
1 to 3 times per year	17
Less often	5
First ever visit	16
Importance of forest and facilities in decision to visit area	
Only reason for coming	23
Very important	40

Quite important	17
Group composition	
Alone	42
Couples / groups of two	37
Groups of three or more	21

Not National Statistics.

Source: Scotland All Forests Survey 2004-2007, carried out by TNS.

Notes:

1. A third of FC forest districts were surveyed each year, although by the end of the project, the Kincardine and Buchan forest districts had been combined to form one forest district named Aberdeenshire.

6.2.2 Quality of Experience

A new on-site survey methodology was developed early in 2003 to measure visitors' 'Quality of Experience'. Pilot surveys were conducted in 2003 at Afan Argoed and the New Forest, prior to adoption of the methodology in England in 2003 and in Wales in 2006, with around three to five surveys carried out per year at selected sites between 2003 and 2009 and 20 surveys carried out in 2010. Reports from these surveys are published on the Forestry Commission website when results become available.

These studies were designed to investigate what constitutes quality of experience for visitors, addressing related concepts such as motivations, expectations and the needs of different groups.

For the 2003 to 2009 surveys, visitors who used a particular site at least once a month were interviewed and asked to rate both the levels of importance of different aspects of woodland and forest visits and their satisfaction with the same aspects. Visitors who visited less often were interviewed for a shorter period before being given a questionnaire to take away and return regarding their levels of satisfaction.

For the 2010 surveys, all visitors were surveyed on site.

Table 6.10 Sites of Quality of Experience surveys undertaken in England and Wales

Year	England	Wales
2003	Grizedale, Westonbirt, Whiston	-
2004	Dalby, Thetford	-
2005	Alice Holt, Cannock Chase, Forest of Dean	-
2006	Sherwood Pines, Delamere, Hamsterley	Garwnant, Nant yr Arian
2007	Fineshade, Rosliston, Whinlatter	Coed y Brenin
2008	Bedgebury, Thetford, Wyre	Cwmcarn
2009	Kielder, Dalby, Haldon	-
2010	Hamsterley, Whinlatter, Grizedale, Cannock Chase, Sherwood Pines, Salcey, Wendover, Alice Holt, Westonbirt, Beechenhurst	Coed y Brenin, Newborough, Garwnant, Gwydyr, Whitestone, Hafren, Moel Famau, Gethin, Llan Wynno, Cwm Saebran

Not National Statistics.

Source: Forestry Commission Quality of Experience surveys. 2003-2009 carried out by TNS Travel & Tourism, 2010 carried out by BMG Research.

In addition, surveys have been conducted around community forests in Thames Chase (2004), South Yorkshire (2005), North West England (2006), South Wales (2006), South West England

(2007) and North & Mid Wales (2007). These surveys examine the recreation activities undertaken by members of the local community, levels of recreational use, awareness of local open spaces, and the motivations and barriers to using Forestry Commission sites for recreation.

6.2.3 Northern Ireland Forest Service day visitors

In Northern Ireland in 2010-11, 468 thousand people visited those Forest Service sites where an admission charge was made.

Table 6.11 Day visitors to Northern Ireland Forest Service sites [1]

Year	Visitors to Forest Service sites
	thousands
2001-02	403
2002-03	460
2003-04	446
2004-05	508
2005-06	433
2006-07	410
2007-08	518
2008-09	451
2009-10	473
2010-11	468

Not National Statistics

Source: Forest Service

Notes:

1. Number of people visiting sites where an admission charge was made.

6.3 Forestry Commission facilities and activities

A breakdown of the recreation facilities and activities that were included on the recreation area of the Forestry Commission website in August 2011 is shown below. A total of 675 sites were featured on the website: 307 (45%) in Scotland, 257 (38%) in England and 111 (16%) in Wales.

Most sites had parking facilities; around three quarters of sites offered walking activities and around two fifths cycling routes and picnic sites.

Table 6.12 Number of Forestry Commission recreation facilities and activities[1,2,3], August 2011

Facilities / activities	England	Wales	Scotland	GB
				number of sites
Total sites on FC website	**257**	**111**	**307**	**675**
Facilities				
Parking - Free	187	80	248	**515**
Parking - Paid	43	7	23	**73**
Information	110	20	125	**255**
Easy Access	98	25	50	**173**
Toilets	72	15	65	**152**
Refreshments	54	7	31	**92**
Visitor Centre	30	6	20	**56**
Shop	18	5	12	**35**
Activities				
Walking	177	84	251	**512**
Picnic	114	39	107	**260**
Cycling	113	41	118	**272**
Horse Riding	76	59	80	**215**
Wildlife Activities	75	12	81	**168**
Education	54	13	22	**89**
View Point	39	14	87	**140**
Heritage	27	5	54	**86**
Fishing	27	11	17	**55**
Barbecue	31	11	6	**48**
Play Area	29	6	13	**48**

Orienteering	34	4	16	**54**
Camping	21	3	6	**30**
Arts	19	0	19	**38**
Forest Drive	13	1	3	**17**
Arboretum	7	5	7	**19**
Watersports	4	2	3	**9**
Skiing	0	0	1	**1**

Not National Statistics.

Source: Forestry Commission.

Notes:

1. Number of sites where a given facility or activity is present. These data are not directly comparable with numbers published for years before 2003.

2. Facilities and activity counts are taken from the recreation listings on the Forestry Commission website: *http://www.forestry.gov.uk/website/fchomepages.nsf/hp/GBEEE*

3. A small number of facilities or activities are double counted as they appear more than once in the database used for the website.

6.4 Public access to woodland

The Woods for People project (led by the Woodland Trust) has created a UK-wide provisional inventory of accessible woodland.

As a result of the information gathered on accessible woodland, the Woodland Trust has undertaken a major analysis of woodland access provision and deficit across the UK. This project, named Space for People, has used the accessible woodland data from the Woods for People project to develop targets for increasing woodland access.

6.4.1 Woods for People

The Woods for People project has created a UK-wide provisional inventory of accessible woodland.

At present, it does not include woodlands where the only access is on public rights of way. For Scotland, the Land Reform Act gives a right of responsible access to almost all land, but the dataset only includes woods that encourage access. Table 6.13 shows the proportions of woodland with public access (permissive) as identified by the Woods for People database.

The changes between versions of the dataset (2004 to 2010) are the result of several factors, including the development of the database between versions as areas are updated by land owners; one significant change was a reduction in England and Wales as a result of a fall in the amount of Walkers Welcome data. A list of land owners who have contributed to the project is available on the Woods for People web site.

Table 6.13 Woods for People: Publicly accessible woodland

Year	England	Wales	Scotland	Northern Ireland	UK
					per cent of all woodland area [1]
2004 [2]	37	49	57	66	**49**
2006	32	39	58	64	**46**
2007	34	40	58	64	**47**
2008	34	40	58	64	**48**
2009	37	42	59	64	**49**
2010	39	42	63	64	**52**

Not National Statistics.

Source: Woods for People (Woodland Trust)

Notes:

1. The total woodland area estimated in 2004 for the Woods for People project, not updated for later reports. For Northern Ireland, this is substantially different from the area shown elsewhere in Forestry Statistics.

2. The 2004 data are from version 1 of the Woods for People project, re-analysed in September 2007 to count only woodland areas. The higher results originally presented in the 2004 Woodland Trust Spaces for People report were based in part on total land areas, rather than woodland areas.

3. Data for 2006 to 2010 are from versions 3 to 7 of the Woods for People dataset, based on woodland areas.

6.4.2 Space for People

As a result of the information gathered on accessible woodland, the Woodland Trust has undertaken a major analysis of woodland access provision and deficit across the UK. This project, named **Space for People**, has used the accessible woodland data from the Woods for People project to develop targets for increasing woodland access.

The Space for People analysis proposes a Woodland Access Standard for people to have access to a woodland of an adequate size near to where they live. The report estimates the proportion of the population with access to nearby woods, the extent to which this could be increased by improving access and the amount of new woodland that would have to be created to give the rest of the population this level of access. Two full reports have been published so far, giving data for 2004 and 2009.

Table 6.14 Space for People: Publicly accessible woodland

% of population with access to:	England	Wales	Scotland	Northern Ireland	UK
					per cent
2 ha or more wood within 500 metres					
2004	10.2	15.7	15.3	7.5	10.8
2009	14.5	17.4	27.8	7.2	15.6
20 ha or more wood within 4 km					
2004	55.2	72.3	54.4	50.3	55.8
2009	63.0	76.7	83.0	40.2	64.8

Not National Statistics.

Source: Space for People summary report (Woodland Trust, 2010).

7 Employment & Businesses

This section contains information on employment in forestry and wood processing, health & safety and the number of businesses.

A copy of all Employment & Businesses tables is available to download as an Excel spreadsheet.

7.1 Employment: Annual Business Survey (ABS)

The Annual Business Survey (ABS), formerly the Annual Business Inquiry (ABI), carried out by the Office for National Statistics (ONS) includes statistics on employment broken down by Standard Industrial Classification (SIC 2003/2007). In wood processing, SIC 20/16 (wood products) and SIC 21/17 (pulp and paper) have a much wider scope than the data on employment in primary wood processing (table 7.2) and the Forest Employment Survey (tables 7.3 to 7.5), as they include primary processing of imported material and also some secondary processing. Forestry within the SIC classification has a narrower scope than in the Forest Employment Survey, as it does not include activities like timber haulage and government administration.

The Annual Business Survey recorded average employment in 2009 of 14 thousand in forestry and 26 thousand in primary wood processing (sawmilling, panels and pulp & paper).

Table 7.1 Employment in forestry and wood processing[2], 2005-2009

Standard Industrial Classification (SIC)[1]	2005	2006	2007	2008	2009
					thousands
Forestry	12	11	13	12	14
Wood products					
Sawmilling	10	13	12	11	9
Panels	6	5	5	5	4
Secondary products	69	68	69	63	52
Total	**85**	**86**	**86**	**79**	**65**
Pulp & paper					
Pulp & paper	14	14	12	13	13
Articles of paper & paperboard	62	59	54	51	51
Total	**76**	**74**	**67**	**64**	**64**
Total wood processing	**161**	**160**	**153**	**143**	**129**
Total primary wood processing	**30**	**32**	**29**	**29**	**26**

Source: Annual Business Survey/ Annual Business Inquiry - average employment in year (Office for National Statistics, June 2009 and June 2011)

Notes:

1. Categories are based on the UK Standard Industrial Classification (SIC) categories. 2005-2007 data are based on SIC 2003; data for 2008 on are based on SIC 2007. Given the change in classifications, figures for 2008 and 2009 may not be consistent with those for previous years. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

2. Excludes other wood-using industries.

3. Pulp and paper figures for 2009 are unavailable from the Annual Business Survey. The figures shown here are estimated from the 2008 figures.

7.2 Employment in primary wood processing

There was estimated to be a total of 7,630 full time equivalent staff employed by primary wood processors in the UK in 2010. Over half of this total was employed by sawmills and a further one third by woodbased panel mills.

Table 7.2 Employment in primary wood processing, 2008-2010

Year	Sawmills	Pulp & paper	Woodbased panels	Fencing	Total
					full-time equivalents
2008	3 759	797	2 440	364	7 360
2009	3 835	820	2 225	369	7 249
2010	4 182	745	2 343	360	7 630

Source: industry surveys, industry associations.

Notes:

1. Some businesses operate sawmills and round fencing mills. Employment for such businesses may be recorded under sawmills, round fencing manufacturers or shared between the two categories.

7.3 Forest Employment Survey: employers

Tables 7.3 to 7.5 show estimates obtained from the 1998/9 employment survey (not National Statistics). The report *1998/9 Forest Employment Survey*, together with more detailed regional breakdowns, is available on the Forestry Commission website.

Total employment (including self-employment) in the forestry and primary wood processing industries in Great Britain in 1998/9 was estimated to be around 30 thousand full-time equivalents. Around one half were based in England, 36% in Scotland and 14% in Wales. 36% were employed working for primary wood processing industries, 29% for private woodland owners, 16% for forestry companies and contractors and 13% for the Forestry Commission

Table 7.3 Employment in forestry and primary wood processing industries, 1998/9

Employer[1]	England	Wales	Scotland	GB
				full-time equivalents
Forestry Commission	1 331	567	2 011	3 909
Private woodland owners	4 242	987	3 196	8 425
Forestry companies and contractors	2 077	298	2 223	4 598
Wood processing industries	5 581	2 130	2 917	10 628
Other employers	1 508	117	347	1 972
Total	**14 739**	**4 099**	**10 694**	**29 532**

Not National Statistics.

Source: Forest Employment Survey 1998/9

Notes:

1. Figures include work by contractors and self-employment as well as employees.

7.4 Forest Employment Survey: activity

The 1998/9 Forest Employment Survey reported that around 43% of employment was based in the forest, mainly in harvesting (16% of all employment), maintenance (11%) or establishment (9%). Processing accounted for the majority of non-forest employment (38% of all employment).

Table 7.4 Employment in forestry and primary wood processing by activity, 1998/9

Activity	England	Wales	Scotland	GB
				full-time equivalents
Forest based				
Forest Nurseries	421	2	201	624
Establishment	1 088	252	1 189	2 529
Maintenance	1 680	380	1 304	3 364
Harvesting	2 330	493	1 947	4 770
Road construction	181	47	179	407
Other forest	466	144	372	982
Total forest	**6 166**	**1 318**	**5 192**	**12 676**
Non-forest based				
Haulage	326	142	593	1 061
Processing	5 952	2 192	3 083	11 227
Other non-forest	2 295	447	1 826	4 568
Total non-forest	**8 573**	**2 781**	**5 502**	**16 856**
Total	**14 739**	**4 099**	**10 694**	**29 532**

Not National Statistics.

Source: Forest Employment Survey 1998/9

7.5 Forest Employment Survey: travel to work

Almost all direct workers (96%) travelled less than 20 miles to their place of employment. Contract workers were more likely to travel further, with 45% travelling more than 20 miles.

Table 7.5 Percentage of forestry workers travelling less than 20 miles to their place of employment in GB, 1998/9

Type of employment	England	Wales	Scotland	GB
				per cent of workers
Direct workers	97	80	98	96
Contract workers	56	55	54	55
Total	**72**	**68**	**68**	**71**

Not National Statistics.

Source: Forest Employment Survey 1998/9

7.6 Health & safety

Accidents involving absence from work of at least three days are reported to the Health & Safety Executive (HSE). Accident rates in forestry and primary wood processing have tended to decline in recent years, but are still higher than the averages in agriculture and manufacturing respectively.

Table 7.6 Accidents to employees in forestry and primary wood processing[2], 2005-06 - 2009-10

Standard Industrial Classification (SIC)[1]	Major Accidents[3]		Total Reported	
	Number	Rate/ 1000 employees	Number	Rate/ 1000 employees
Forestry				
2005-06	31	3.4	85	9.4
2006-07	30	3.3	79	8.7
2007-08	28	2.6	113	10.6
2008-09	35	3.3	90	8.4
2009-10 provisional	31	3.3	88	9.5
Sawmilling				
2005-06	48	4.9	180	18.4
2006-07	36	3.8	155	16.1
2007-08	50	4.9	176	17.3
2008-09	27	3.0	133	14.9
2009-10 provisional	36	4.0	128	14.2
Panels				
2005-06	8	1.5	34	6.2
2006-07	12	2.4	44	9.0
2007-08	7	1.5	47	9.8
2008-09	7	1.5	27	5.9
2009-10 provisional	4	1.0	22	5.5
Pulp & Paper				
2005-06	41	2.8	217	14.9
2006-07	34	2.4	180	12.7
2007-08	42	3.4	195	15.6
2008-09	41	3.3	169	13.4
2009-10 provisional	35	2.7	149	11.5

Source: Health & Safety Executive (accidents), Office for National Statistics (employment).

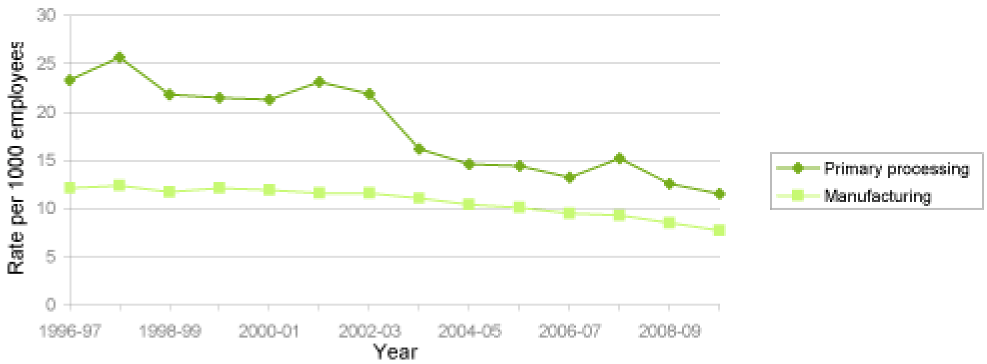
Notes:

1. Categories are based on the UK Standard Industrial Classification (SIC 2003) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

2. Excludes other wood-using industries.

3. Major accidents include fatal accidents, which averaged 1 or less per year in each sector.

Figure 7.1 Accidents to employees : Total reported accidents per 1000 employees



Source: Health & Safety Executive (accidents), Office for National Statistics (employment).

Notes:

1. Categories are based on the UK Standard Industrial Classification (SIC 2003) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

7.7 Establishments in the primary wood processing industries

Table 7.7 shows the number of primary wood processors, according to the sampling frames used for Forestry Commission surveys of establishments using UK timber.

The figures in Table 7.7 do not correspond with the VAT and PAYE registration information given in Table 7.8. The figures here count establishments (sites) rather than businesses and include those that do not need to register for VAT or PAYE. They also have a different basis for classification, so some businesses that are excluded from Table 7.8 because of their VAT/ PAYE classification are included in this table (typically businesses where primary wood processing is a small part of their total activity), and some businesses included in Table 7.8 are excluded here (usually because they do not use UK-grown timber).

Table 7.7 Number of establishments in the primary wood processing industries using UK-grown roundwood

Year	Sawmills	Pulp & paper mills	Woodbased panel mills	Round fencing manufacturers	Total[1]
2001	271	4	10	86	371
2002	249	4	10	74	337
2003	240	3	8	68	319
2004	224	3	8	69	304
2005	213	3	8	65	289
2006	213	2	8	69	292
2007	205	2	8	75	290
2008	197	2	8	67	274
2009	195	2	8	68	273
2010	189	2	7	65	263

Source: industry surveys, industry associations

Notes:

1. A single mill may be recorded twice, as a sawmill and a round fencing manufacturer.

7.8 VAT and/ or PAYE registered businesses

Table 7.8 shows the number of VAT and/ or PAYE registered businesses classified under forestry and primary wood processing. The headings shown potentially include businesses not traditionally regarded as forestry or primary wood processing, and some businesses that are traditionally included in forestry and primary wood processing are excluded as they are classified to other headings of the Standard Industrial Classification (SIC).

A total of 3,095 forestry businesses, 640 sawmilling businesses, 135 panels businesses and 255 pulp & paper businesses were registered for VAT and/ or PAYE purposes in the UK in 2010.

Table 7.8 Number[1] of VAT and/ or PAYE registered businesses by Standard Industrial Classification (SIC)[2], 2001-2010

Year	Forestry	Sawmilling	Panels	Pulp & paper
2001	3 055	940	150	365
2002	2 910	885	145	345
2003	2 870	855	130	305
2004	2 585	795	135	280
2005	2 580	760	140	280
2006	2 585	735	130	275
2007	2 645	700	115	260
2008	3 020	730	140	310
2009	3 100	685	130	270
2010	3 095	640	135	255

Source: UK Business: Activity, Size and Location (Office for National Statistics, 2011).

Notes:

1. *All figures are rounded by the Office for National Statistics (ONS) to the nearest multiple of 5.*

2. *Categories are based on the UK Standard Industrial Classification (SIC) categories. 2000-2002 data are based on SIC 1992; 2003-2008 data are based on SIC 2003; 2009-2010 data are based on SIC 2007. Given the changes in classifications, the time series may not be fully consistent. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.*

8 Finance & Prices

This section contains information about timber prices, financial returns from forestry, gross value added (GVA), Government expenditure on forestry and grants.

A copy of all Finance & Prices tables is available to download as an Excel spreadsheet.

8.1 Timber prices

The Forestry Commission has collected information for many years on the prices of conifers sold standing by the FC and publishes a Coniferous Standing Sales Price Index (CSSPI) every 6 months for overlapping 12 month periods. A softwood sawlog price index, providing information for 6-month periods on prices (delivered to roadside) of coniferous sawlogs produced by the Forestry Commission, is also published. Both series are published in Timber Price Indices on the Forestry Commission website. There is little other information on wood prices before primary processing and no price index is available for broadleaves. Prices for outputs of primary wood processing are collected by the Office for National Statistics (ONS) in the Producer Price Indices (PPIs), and these are available in the MM22 Business Monitor which gives detailed PPIs monthly.

The coniferous standing sales price index for Great Britain was 35% higher in real terms in the year to March 2011, compared with the previous year. The softwood sawlog price index was 0.1% higher in real terms in the 6 months to March 2011, compared with the corresponding period in the previous year.

Table 8.1 Coniferous standing sales and sawlog price indices for Great Britain, 2002-2011

Period ending March	Standing sales[2]		Sawlogs	
	Nominal terms[3]	Real terms[4]	Nominal terms[3]	Real terms[4]
				index (period to September 2006 = 100)
2002	105.4	118.8	106.2	120.0
2003	82.0	89.6	102.6	112.4
2004	79.5	84.5	99.0	105.8
2005	86.9	89.8	105.2	109.0
2006	100.0	101.5	100.5	102.4
2007	111.0	109.0	113.6	111.7
2008	173.8	166.0	133.0	127.2
2009	124.2	115.4	98.1	91.4
2010	131.0	119.6	121.2	110.5
2011	181.5	161.2	124.7	110.6

Source: Timber Price Indices (data to March 2011)

Notes:

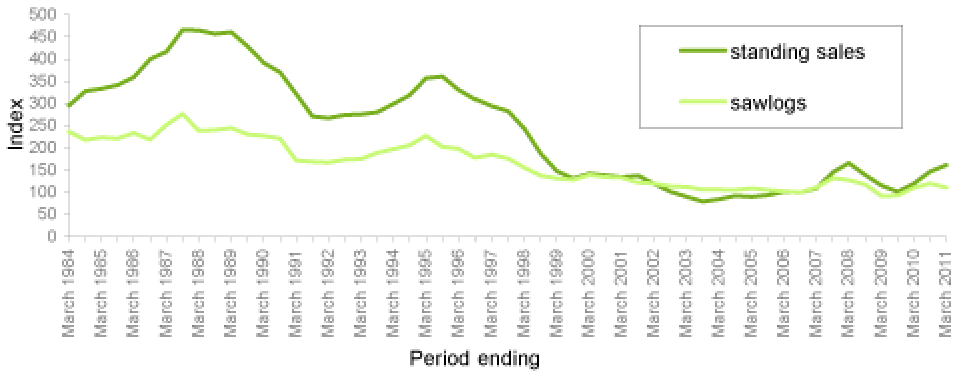
1. The price indices are constructed from information on Forestry Commission sales only.

2. Until November 2008 the Laspeyres method was used to calculate the standing sales index to take account of the size mix. Since then the Fisher method with 5 year chain linking has also been adopted and will eventually supercede the Laspeyres method after a period of transition. The figures shown here are from the Fisher chain-linked index.

3. Nominal prices are the actual prices at that point in time.

4. Real terms values are obtained by using the GDP deflator to convert to 'constant prices' (in this case prices in 2006). This allows trends in timber prices to be tracked without the influence of inflation.

Figure 8.1 Coniferous standing sales and sawlog price indices[1] in real terms[2], 1984-2011



Source: Timber Price Indices (data to March 2011)

Notes:

1. The price indices are constructed from information on Forestry Commission sales only.

2. Until November 2008 the Laspeyres method was used to calculate the standing sales index to take account of the size mix. Since then the Fisher method with 5 year chain linking has also been adopted and will eventually supercede the Laspeyres method after a period of transition. The figures shown here are from the Fisher chain-linked index.

3. Real terms values are obtained by using the GDP deflator to convert to 'constant prices' (in this case prices in 2006). This allows trends in timber prices to be tracked without the influence of inflation.

8.2 Financial return from forestry investment

Returns to investors in forestry are made up of sales of timber (standing or felled), sales of other goods and services, increases in the value of the woodland (from annual increment or market factors), and the net income from subsidies (e.g. planting grants) less taxes. The investors' costs are made up of employment costs and other purchases.

Estimates of the overall return from commercial forestry are produced annually in the Investment Property Databank (IPD) UK Forestry Index (not National Statistics). The index is calculated from a sample of 140 private sector coniferous plantations of predominantly Sitka spruce in mainland Britain.

The index shows a total return of 12.6% per annum for the three year period 2008 to 2010, and an annual return of 20.0% for 2010. This contrasts with the negative returns experienced earlier in the decade.

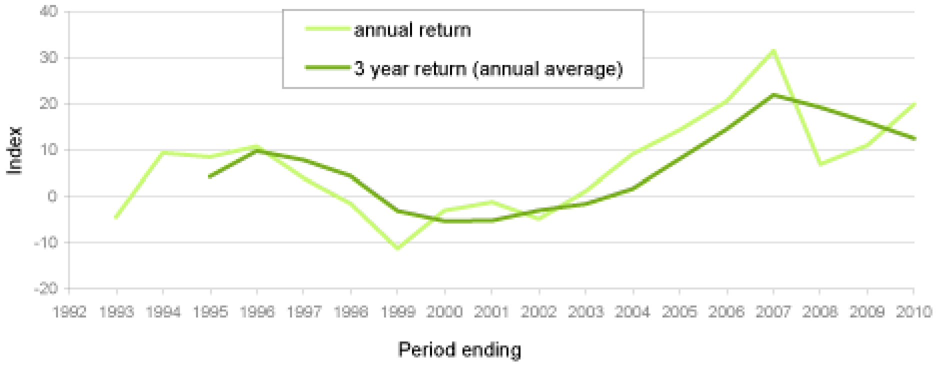
Table 8.2 IPD UK Forestry Index: Returns from forestry, 2001-2010

Period ending	Index (1992=100)	Annual % return	3 year return (annual average %)
2001	110.5	-1.1	-5.1
2002	105.3	-4.7	-2.9
2003	106.7	1.3	-1.5
2004	116.5	9.2	1.8
2005	133.3	14.4	8.2
2006	160.7	20.6	14.6
2007	211.4	31.6	22.0
2008	226.2	7.0	19.3
2009	251.4	11.1	16.1
2010	301.6	20.0	12.6

Not National Statistics

Source: IPD UK Forestry Index

Figure 8.2 IPD UK Forestry Index: Returns from forestry



Not National Statistics

Source: IPD UK Forestry Index

8.3 Gross value added

The Annual Business Survey (ABS), formerly the Annual Business Inquiry (ABI), carried out by the Office for National Statistics (ONS) includes statistics on gross value added broken down by UK Standard Industrial Classification (SIC 2003/2007). The ABI was extended to include forestry from 2000. Gross Value Added (GVA) is the difference between the value of outputs and the value of intermediate consumption, so mainly comprises employment costs and profits.

In 2009, GVA in primary wood processing (sawmilling, panels and pulp & paper) was reported to be £1.12 billion and GVA in forestry £0.38 billion.

Table 8.3 Gross value added in forestry and wood processing[2], 2005-2009

Standard Industrial Classification (SIC)[1]	2005	2006	2007	2008	2009
					£ million
Forestry	323	286	384	438	382
Wood products					
Sawmilling	424	441	498	443	299
Panels	255	298	344	254	166
Secondary products	2 273	1 975	2 382	2 114	1 595
Total	**2 952**	**2 714**	**3 224**	**2 811**	**2 059**
Pulp & paper					
Pulp & paper	762	612	825	734	658
Articles of paper & paperboard	2 377	2 074	2 146	2 026	2 030
Total	**3 139**	**2 686**	**2 971**	**2 760**	**2 688**
Total wood processing	**6 091**	**5 397**	**6 195**	**5 571**	**4 747**
Total primary wood processing	**1 441**	**1 351**	**1 667**	**1 431**	**1 123**

Source: Annual Business Survey/ Annual Business Inquiry (Office for National Statistics, June 2009 and June 2011)

Notes:

1. Categories are based on the UK Standard Industrial Classification (SIC) categories. 2005-2007 data are based on SIC 2003; data for 2008 on are based on SIC 2007. Given the change in classifications, figures for 2008 and 2009 may not be consistent with those for previous years. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

2. Excludes other wood-using industries.

8.4 Government expenditure on public forests

Net expenditure on public forests by the Forestry Commission in 2010-11 totalled £63 million. This comprised £34 million in Scotland, £19 million in England and £10 million in Wales.

Recreation, conservation & heritage accounted for £68 million of the total expenditure in 2010-11, harvesting & haulage for £44 million and other expenditure on public forests for £90 million.

Timber sales generated a total income of £92 million in 2010-11. Recreation, conservation & heritage accounted for a further £20 million and other income from public forests for £27 million.

Table 8.4 Funding public forests - net expenditure[1,2], 2006-07 - 2010-11

		2006-07	2007-08	2008-09	2009-10	2010-11
						£ million
GB						
Harvesting & haulage	Expenditure	39.3	39.5	38.8	41.2	43.6
Recreation, etc[3]	Expenditure	54.8	59.1	59.8	63.4	67.6
Other	Expenditure	73.8	80.0	81.8	76.9	89.9
Timber	Income	-65.8	-78.6	-74.3	-77.4	-91.6
Recreation, etc[3]	Income	-19.8	-20.8	-20.3	-17.6	-19.8
Other	Income	-18.4	-19.6	-24.3	-24.4	-27.1
Net expenditure		**64.0**	**59.6**	**61.5**	**62.1**	**62.6**
England						
Harvesting & haulage	Expenditure	11.1	11.9	12.0	12.3	11.7
Recreation, etc[3]	Expenditure	30.0	30.0	32.0	39.4	40.4
Other	Expenditure	26.2	29.6	29.3	20.9	24.3
Timber	Income	-20.3	-26.3	-25.0	-24.5	-29.5
Recreation, etc[3]	Income	-14.3	-14.7	-16.4	-14.2	-15.2
Other	Income	-9.6	-10.2	-9.4	-10.5	-12.9
Net expenditure		**23.1**	**20.3**	**22.6**	**23.3**	**18.9**
Wales						
Harvesting & haulage	Expenditure	6.4	6.3	6.5	7.0	11.0
Recreation, etc[3]	Expenditure	7.8	7.9	8.1	6.6	3.7
Other	Expenditure	12.5	11.4	11.6	12.8	13.5
Timber	Income	-8.7	-10.2	-12.1	-13.2	-14.1
Recreation, etc[3]	Income	-1.9	-1.6	-1.1	-1.1	-1.0

Other	Income	-1.6	-2.4	-1.8	-1.5	-3.4
Net expenditure		**14.4**	**11.5**	**11.2**	**10.6**	**9.8**
Scotland						
Harvesting & haulage	Expenditure	21.8	21.2	20.2	22.0	21.0
Recreation, etc[3]	Expenditure	17.0	21.2	19.8	17.4	23.5
Other	Expenditure	35.2	39.0	40.9	43.2	52.0
Timber	Income	-36.7	-42.1	-37.3	-39.7	-48.1
Recreation, etc[3]	Income	-3.6	-4.5	-2.8	-2.3	-3.6
Other	Income	-7.2	-7.0	-13.1	-12.4	-10.7
Net expenditure		**26.6**	**27.8**	**27.7**	**28.2**	**34.0**

Source: Forestry Commission

Notes:

1. Excludes notional cost of capital and any surplus/ deficit on sale of properties.

2. Excludes gain on revaluation of biological assets and value of timber felled, that were included for the first time in the 2009-10 Accounts.

3. Recreation, etc includes conservation and heritage.

8.5 Other government expenditure on forestry

In addition to expenditure on public forests, the Forestry Commission spent a total of £113 million on other activities in 2010-11. £65 million of this total was used by the national offices in each country for grants and partnership funding and a further £22 million for policy, regulation & administration. At a GB level, £33 million was used for international & GB support services and £16 million for research.

Table 8.5 Other government expenditure on forestry[1,2], 2006-07 - 2010-11

	2006-07	2007-08	2008-09	2009-10	2010-11
					£ million
GB					
Grants and partnership funding[3]	61.5	71.6	31.8	44.0	65.4
Policy, regulation & administration	29.2	32.9	32.8	30.3	21.8
Research - GB funded	15.1	15.5	16.7	15.0	16.4
International & GB support services	27.0	28.7	30.8	31.9	33.0
Less recovery of support service costs from countries	-20.2	-21.2	-22.5	-24.0	-24.1
Total	**112.7**	**127.5**	**89.6**	**97.2**	**112.5**
England					
Grants and partnership funding[3]	18.3	27.2	8.6	17.8	26.7
Policy, regulation & administration[4]	13.2	14.8	15.3	9.4	2.1
Total	**31.5**	**42.0**	**23.9**	**27.1**	**28.8**
Wales					
Grants and partnership funding[3]	9.2	11.3	4.6	4.9	4.5
Policy, regulation & administration[4]	7.6	8.5	7.8	11.2	9.6
Total	**16.8**	**19.8**	**12.4**	**16.1**	**14.1**
Scotland					
Grants and partnership funding[3]	34.0	33.1	18.6	21.3	34.2
Policy, regulation & administration[4]	8.4	9.7	9.7	9.8	10.2
Total	**42.4**	**42.8**	**28.3**	**31.0**	**44.3**

Source: Forestry Commission

Notes:

1. Forestry Commission expenditure only. Excludes expenditure incurred by other departments.

2. Excludes miscellaneous income.

3. EU co-financing not subtracted from grant expenditure. In Wales, includes "Objective 1" expenditure, starting in 2003. In addition, from 1 April 2008 the Forestry Commission ceased to hold delegated authority for the Rural Development Programme for England (RDPE) grant scheme. Authority for the RDPE grant scheme now rests with Defra.

4. Country costs for "policy, regulation & administration" include shares of GB support service costs.

8.6 Grant schemes

Non-FC woodland in Great Britain is supported by a range of grants for creating new woodland and managing existing woodland. The Woodland Grant Scheme (WGS) was introduced in 1988, at the same time as tax relief was phased out. In Scotland, WGS was replaced by the Scottish Forestry Grant Scheme (SFGS) in 2003 and, more recently, by Rural Development Contracts. The English Woodland Grant Scheme (EWGS) was launched in July 2005 and Better Woodlands for Wales (BWW) in December 2005.

Because of the differences between these schemes, it is increasingly difficult to provide comparable statistics across the three countries. The following tables provide useful information relating to planting and grants:

- Table 1.12 for total areas of new planting and restocking;
- Table 8.5 for expenditure by the Forestry Commission on grants and partnership funding;
- Table 8.6 for grant expenditure by the Forestry Commission (including grant expenditure managed by the Forestry Commission on behalf of Defra).

Table 8.6 Grant money paid in 2010-11, by type of grant

Type of grant	England[1]	Wales	Scotland[2]	GB
				£ million
New planting	16.6	0.4	12.8	29.8
Restocking	1.5	0.9	0.0	2.4
Management grants	10.1	2.2	6.2	18.5
Planning grants	0.4	0.3	0.0	0.7
Total	**28.7**	**3.8**	**18.9**	**51.4**

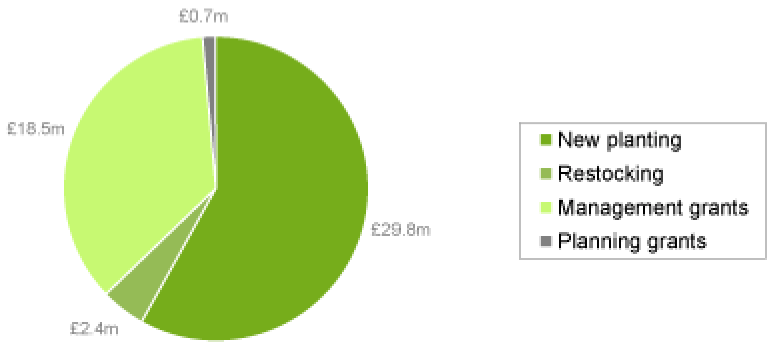
Source: Forestry Commission

Notes:

1. England includes grant scheme expenditure managed by the Forestry Commission on behalf of Defra.

2. Scotland includes grants paid under Rural Development Contracts and legacy schemes. Grants for restocking in Scotland are included within the figure for Management grants.

Figure 8.3 GB grant money paid in 2010-11 by type of grant



Source: Forestry Commission

9 International Forestry

This section contains international information about forestry, presenting global figures by region alongside data for the UK and the EU. Topics covered include woodland area, carbon stocks, wood removals, production and apparent consumption of wood products and world trade in forest products.

A copy of all International Forestry tables is available to download as an Excel spreadsheet.

9.1 Forest cover: international comparisons

The FAO Global Forest Resources Assessment (FRA) is a collation of forest data undertaken by the United Nations Food and Agriculture Organisation (FAO) at the global level.

At around 12% forest cover, the UK is one of the least densely forested countries in Europe. This compares with 37% for the EU as a whole and 31% worldwide.

Table 9.1 Forest cover: international comparisons, 2010

Country	Forest area (million ha)	Total land area (million ha)	Forest as % of land area	Forest area (ha) per 100 population
Europe				
United Kingdom	3	24	12	5
Finland	22	30	73	418
France	16	55	29	26
Germany	11	35	32	13
Italy	9	29	31	15
Spain	18	50	36	41
Sweden	28	41	69	306
Other EU	49	154	32	29
Total EU-27[1]	**157**	**419**	**37**	**32**
Russian Federation	809	1 638	49	572
Total Europe	**1 005**	**2 215**	**45**	**137**
Africa	674	2 974	23	68
Asia	593	3 091	19	15
North & Central America	705	2 135	33	132
Oceania	191	849	23	548
South America	864	1 746	49	225
World	**4 033**	**13 011**	**31**	**60**

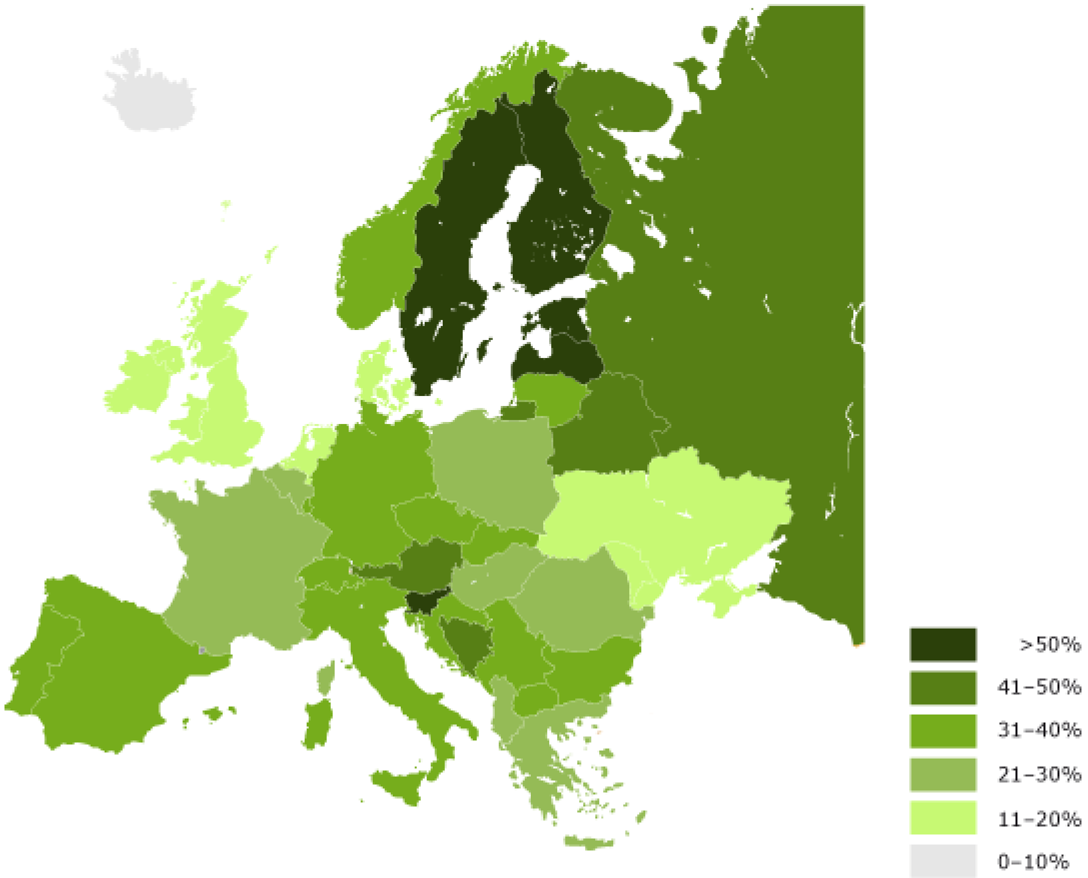
Not National Statistics.

Source: FAO Global Forest Resources Assessment 2010 .

Notes:

1. Cyprus is included in EU-27 total but is part of FAO's Asia region.

Figure 9.1 Forest cover: international comparisons, 2010



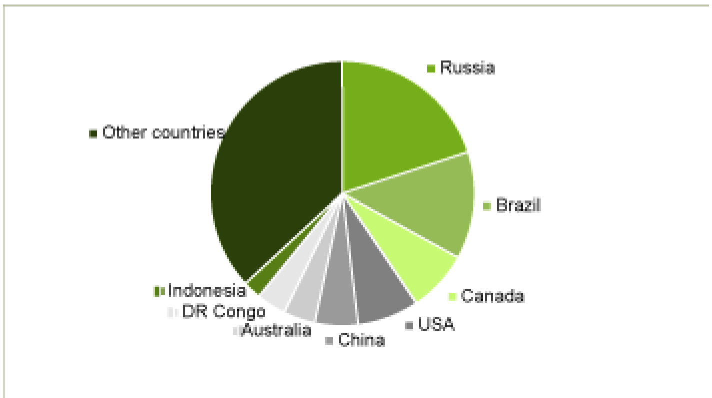
Not National Statistics.

Source: FAO.

9.2 Forest area by country

One fifth of the world's forest area is in the Russian Federation, with a further 13% in Brazil.

Figure 9.2 Forest area by country, 2010



Not National Statistics

Source: FAO Global Forest Resources Assessment 2010.

9.3 Annual changes in forest area

The global forest area reduced by around 8.3 million hectares (0.2%) per year between 1990 and 2000 and by around 5.2 million hectares (0.1%) per year between 2000 and 2010.

The forest area has reduced in most regions since 1990, except for Europe (where the area increased in both decades) and Asia (where the area reduced between 1990 and 2000 but has increased by more between 2000 and 2010).

Table 9.2 Annual changes in forest area by region, 1990-2010

Region	1990-2000		2000-2010	
	(thousand ha)	(%)	(thousand ha)	(%)
Europe				
UK	18	0.68	9	0.31
EU-27[1]	732	0.51	517	0.34
Total Europe	**877**	**0.09**	**676**	**0.07**
Africa	-4 067	-0.56	-3 414	-0.49
Asia	-595	-0.10	2 235	0.39
North and Central America	-289	-0.04	-10	0.00
Oceania	-36	-0.02	-700	-0.36
South America	-4 213	-0.45	-3 997	-0.45
World	**-8 323**	**-0.20**	**-5 211**	**-0.13**

Not National Statistics.

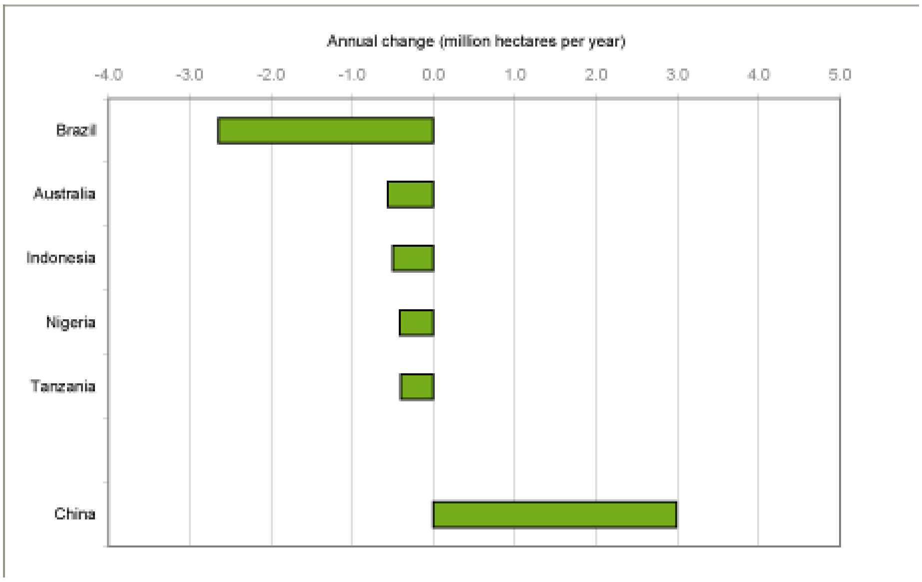
Source: FAO Global Forest Resources Assessment 2010.

Notes:

1. Cyprus is included in EU-27 total but is part of FAO's Asia region.

Between 2000 and 2010, the largest decrease in forest area was in Brazil (2.6 million hectares per year on average) and the largest increase was in China (3.0 million hectares per year on average).

Figure 9.3 Countries with largest changes in forest area, 2000-2010



Not National Statistics.

Source: FAO Global Forest Resources Assessment 2010.

Notes:

1. Countries with changes of at least 0.4 million hectares per year only.

9.4 Carbon stocks in forest biomass

From 1990 to 2010, carbon in forest living biomass decreased in South America and Africa, where forest areas decreased. Carbon stocks in biomass also declined slightly in Asia, where carbon sequestered in new plantations is not yet able to balance out carbon losses from areas of deforestation. Carbon stocks in biomass increased in Europe and North & Central America.

Table 9.3 Carbon stocks in forest living biomass by region, 1990-2010

Region	1990	2000	2005	2010
				giga tonnes of carbon
Europe	42.2	43.2	44.0	45.0
Africa	60.9	58.3	57.1	55.9
Asia	37.2	36.8	36.6	35.7
North and Central America	37.8	38.5	39.0	39.6
Oceania	10.9	10.8	10.7	10.5
South America	110.3	106.2	103.9	102.2
World	**299.2**	**293.8**	**291.3**	**288.8**

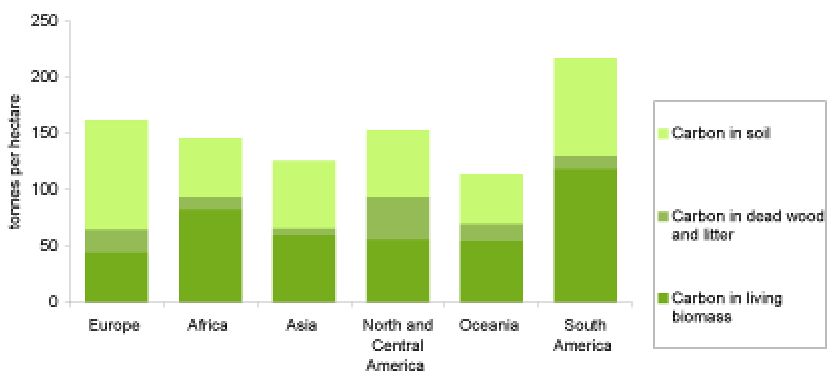
Not National Statistics.

Source: FAO Global Forest Resources Assessment 2010.

Notes:

1. A giga tonne is a thousand million tonnes (10^9 tonnes).

Figure 9.4 Carbon stock per hectare in forest biomass by region, 2010



Not National Statistics.

Source: FAO Global Forest Resources Assessment 2010.

9.5 Wood removals

A total of 3.3 billion m^3 underbark of wood was removed from global forests in 2009, of which over half (57%) was for use as woodfuel and the remaining 43% was industrial roundwood (for use by wood processors).

North and Central America and Europe accounted for almost two thirds of all industrial roundwood removals in 2009. Globally, removals of industrial roundwood decreased by 8% between 2008 and 2009. This decline was greatest in North and Central America (a 12% decrease) and in Europe (a 10% decrease).

Around three quarters of woodfuel removals took place in Asia and Africa. Globally, removals of woodfuel were at a similar level in 2009 to the figure in 2008.

Table 9.4 Wood removals by region, 1990-2009

Region	1990	1995	2000	2005	2008	2009
						million m^3 underbark
Industrial roundwood						
Europe						
UK	6	7	8	8	8	8
EU-27[1]	316	292	339	368	334	310
Total Europe	**515**	**405**	**479**	**540**	**506**	**455**
Africa	57	66	69	72	73	72
Asia	258	263	231	242	256	240
North and Central America	595	603	632	635	481	421
Oceania	33	41	47	50	54	50
South America	110	134	145	176	185	187
World	**1 567**	**1 512**	**1 604**	**1 714**	**1 554**	**1 424**
Woodfuel						
Europe						
UK	0	0	0	0	1	1
EU-27[1]	73	71	73	75	81	83
Total Europe	**143**	**112**	**138**	**139**	**145**	**141**
Africa	440	505	534	575	595	602
Asia	883	836	807	797	777	771
North and Central America	162	145	129	130	131	127
Oceania	9	11	13	11	11	11
South America	161	174	186	194	197	198

World	**1 799**	**1 782**	**1 807**	**1 846**	**1 855**	**1 851**
Total roundwood						
Europe						
UK	6	8	8	9	8	8
EU-27[1]	388	364	412	443	416	393
Total Europe	**659**	**517**	**617**	**679**	**652**	**596**
Africa	497	572	603	647	668	674
Asia	1 141	1 099	1 038	1 039	1 032	1 011
North and Central America	757	748	761	765	611	548
Oceania	42	52	60	61	65	61
South America	271	307	331	369	382	385
World	**3 366**	**3 294**	**3 410**	**3 560**	**3 410**	**3 275**

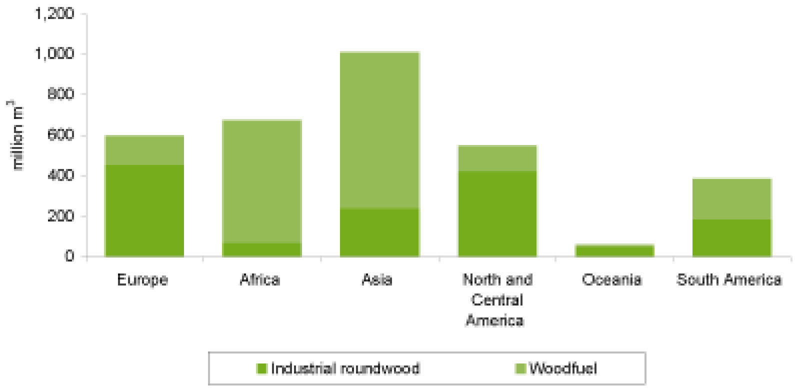
Not National Statistics.

Source: FAO.

Notes:

1. Cyprus is included in EU-27 total but is part of FAO's Asia region.

Figure 9.5 Wood removals by region, 2009



Not National Statistics.

Source: FAO.

9.6 Production of wood products

Global production of wood products in 2009 totalled 362 million m^3 of sawnwood, 260 million m^3 of woodbased panels and 377 million tonnes of paper & paperboard.

Europe produced around one third of all sawnwood in 2009 (mainly in EU countries), with a further 27% produced in North and Central America and around one quarter in Asia. Overall, sawnwood production decreased by 8% between 2008 and 2009, with most of this decline taking place in North and Central America (a decrease of 17%) and in Europe (a decrease of 8%).

Woodbased panels were more commonly produced in Asia (around one half of global production), with around one fifth produced in the EU and 16% in North and Central America. At a global level, woodbased panel production decreased by 1% between 2008 and 2009, with reductions in most regions more than offsetting an 11% increase in Asia.

Asia also accounted for around two fifths of paper and paperboard production, with around one quarter in North and Central America and a further quarter in the EU.

Table 9.5 Production of wood products by region, 1990-2009

Region	1990	1995	2000	2005	2008	2009
Sawnwood (million m^3)						
Europe						
UK	2	2	3	3	3	3
EU-27[1]	81	82	100	108	99	92
Total Europe	**149**	**118**	**130**	**142**	**132**	**122**
Africa	8	8	8	9	8	8
Asia	105	97	62	78	88	89
North and Central America	129	134	146	162	119	99
Oceania	6	7	8	9	10	9
South America	25	27	31	37	37	36
World	**422**	**391**	**385**	**437**	**395**	**362**
Woodbased panels (million m^3)						
Europe						
UK	2	3	3	3	3	3
EU-27[1]	36	40	53	63	62	57
Total Europe	**48**	**46**	**61**	**75**	**77**	**70**
Africa	2	2	2	2	3	3
Asia	27	44	49	94	116	128

North and Central America	44	47	61	63	48	41
Oceania	2	2	3	4	4	4
South America	4	6	9	13	15	15
World	**126**	**147**	**185**	**252**	**264**	**260**
Paper & paperboard (million tonnes)						
Europe						
UK	5	6	7	6	5	4
EU-27[1]	63	73	90	98	98	89
Total Europe	**73**	**82**	**100**	**111**	**111**	**102**
Africa	3	3	3	4	4	4
Asia	57	77	94	122	157	161
North and Central America	92	108	111	108	101	91
Oceania	3	3	4	4	4	4
South America	8	9	10	14	14	15
World	**235**	**282**	**323**	**363**	**392**	**377**

Not National Statistics.

Source: FAO.

Notes:

1. Cyprus is included in EU-27 total but is part of FAO's Asia region.

9.7 Apparent consumption of wood products

Apparent consumption (defined as production + imports - exports) of wood products in 2009 totalled 354 million m^3 sawnwood, 257 million m^3 woodbased panels and 374 million tonnes of paper and paperboard globally.

Around one third (31%) of all sawnwood was consumed in Asia and around one quarter each in North and Central America and in Europe. Reflecting the reduced production of sawnwood in 2009 (see table 9.5), apparent consumption of sawnwood fell in most regions between 2008 and 2009, and by 8% overall. The largest changes took place in North and Central America (an 18% decrease) and in Europe (a 10% decrease).

Asia consumed around one half of the world's woodbased panels, around one fifth was consumed in the EU and around one fifth in North and Central America. Apparent consumption of woodbased panels worldwide was almost unchanged between 2008 and 2009, with reductions in North and Central America (a 17% decrease) and in Europe (an 11% decrease) and an increase of 15% in Asia.

Almost one half of all paper and paperboard was consumed in Asia in 2009, around one quarter in North and Central America and one fifth in the EU. At a global level, apparent consumption of paper and paperboard decreased by 5% between 2008 and 2009, reflecting decreases in most areas.

Table 9.6 Apparent consumption of wood products by region, 1990-2009

Region	1990	1995	2000	2005	2008	2009
Sawnwood (million m^3)						
Europe						
UK	13	8	10	11	8	8
EU-27[1]	96	80	99	103	88	82
Total Europe	**157**	**109**	**121**	**119**	**104**	**93**
Africa	10	12	11	14	13	14
Asia	112	112	80	98	108	111
North and Central America	119	126	143	166	119	98
Oceania	6	7	8	8	9	7
South America	24	24	28	30	31	32
World	**429**	**390**	**390**	**435**	**384**	**354**
Woodbased panels (million m^3)						
Europe						
UK	5	5	6	6	6	5

EU-27[1]	40	41	53	59	61	57
Total Europe	**51**	**47**	**59**	**71**	**77**	**69**
Africa	1	2	2	3	3	3
Asia	25	46	54	94	109	126
North and Central America	44	46	64	72	54	45
Oceania	2	2	3	3	3	3
South America	3	4	6	8	11	11
World	**126**	**146**	**188**	**251**	**259**	**257**
Paper & paperboard (million tonnes)						
Europe						
UK	9	11	11	13	11	10
EU-27[1]	62	68	83	87	88	80
Total Europe	**71**	**73**	**90**	**98**	**101**	**92**
Africa	4	4	4	6	7	6
Asia	62	85	102	131	164	168
North and Central America	88	101	110	107	99	88
Oceania	3	4	5	5	5	5
South America	8	10	12	14	16	16
World	**235**	**277**	**323**	**362**	**392**	**374**

Not National Statistics.

Source: FAO.

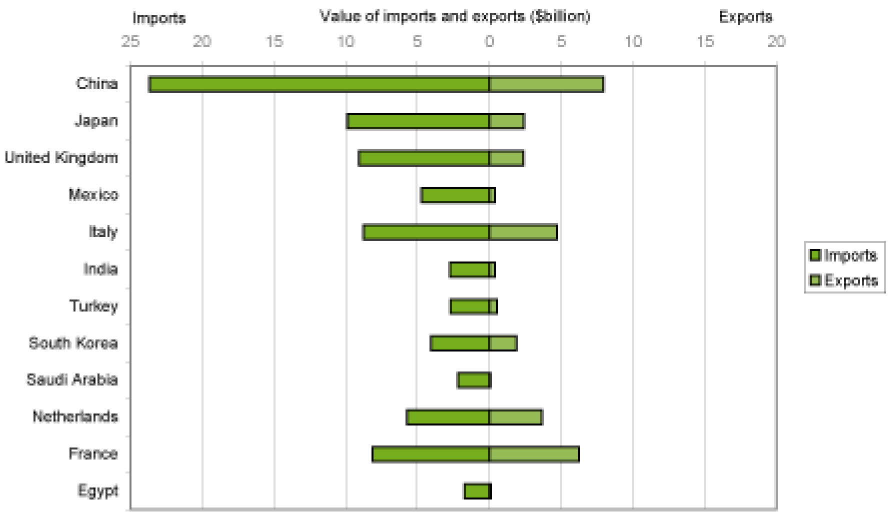
Notes:

1. Cyprus is included in EU-27 total but is part of FAO's Asia region.

9.8 World trade in forest products

The UK was the third largest net importer of forest products in 2009, behind China and Japan.

Figure 9.6 Largest net importers of forest products, 2009



Not National Statistics.

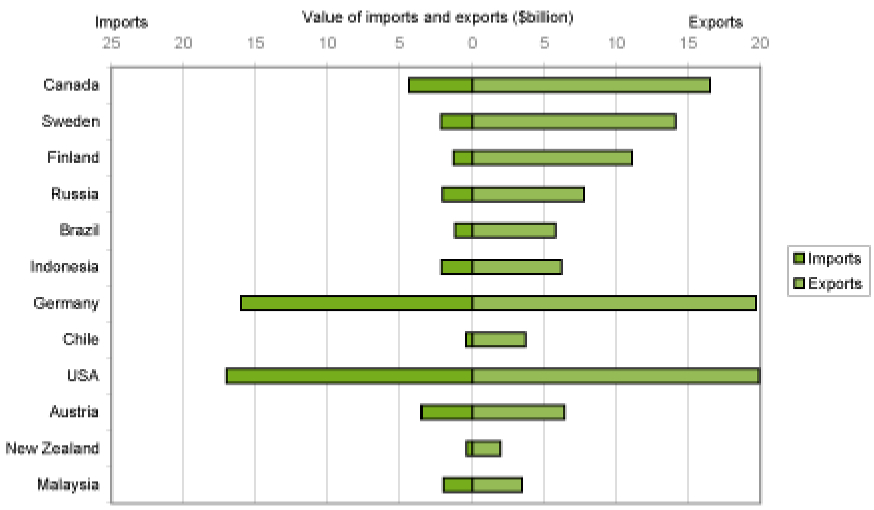
Source: FAO

Notes:

1. Excludes trade in secondary wood products.

The largest net exporters of forest products in 2009 were Canada, Sweden and Finland.

Figure 9.7 Largest net exporters of forest products, 2009



Not National Statistics.

Source: FAO

Notes:

1. Excludes trade in secondary wood products.

10 Glossary

bioenergy
Energy from any fuel that is derived from biomass.

biomass
Material that is derived from living, or recently living, biological organisms.

broadleaves
Trees that do not have needles or cones (a few, such as alder, have cone-like structures for their seeds which are not true cones).

cement bonded particleboard
Sheet material manufactured under pressure, based on wood and other vegetable particles bound with hydraulic cement and possibly containing additives.

chipboard
(see Particleboard).

conifers
Trees with needles and cones .

coppice
Trees that are cut near ground level (or sometimes higher in which case they are pollards), causing them to produce many small shoots. These shoots are harvested every few years at a relatively early age for products such as staves, fencing, fuel and charcoal. 'Coppice with standards' includes scattered trees that are left to grow as normal ('standards').

dead wood
Non-living woody biomass not contained in the litter, either standing or lying on the ground. For wood carbon reporting, the minimum was 15 cm diameter for standing and lying deadwood, and 7 cm dbh (diameter at breast height) for fallen trees.

Defra
Department for Environment, Food and Rural Affairs.

establishment
The first five to ten years or formative period that ends once young trees are of sufficient size that, given adequate protection, they are likely to survive at the required stocking.

EU
European Union. There are currently 27 member states: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK.

FAO

United Nations Food and Agriculture Organisation, responsible for the Forest Resources Assessment and for compiling international statistics on production and trade of wood products.

FC

Forestry Commission: the government department responsible for forestry matters in Great Britain. The responsibility for forestry is devolved to ministers in the Scottish Parliament and Welsh Assembly, but the executive functions are exercised throughout Great Britain by the FC.

fibreboard

Panel material with thickness equal to or greater than 1.5mm, manufactured from lignocellulosic fibres with application of heat and/or pressure. The bond is derived either from the felting of the fibres and their inherent adhesive properties or from a synthetic binder added to the fibres.

forest

In the United Kingdom, there is no formal definition of 'forest'; the term is often used for large areas (especially conifers) or for old Royal hunting preserves such as the New Forest or the Forest of Dean.

FS

Northern Ireland Forest Service (an agency of the Department of Agriculture and Rural Development).

FSC

Forest Stewardship Council.

GB

Great Britain: England, Wales and Scotland.

green tonne

Weight measurement of timber fresh felled before any natural or artificial drying has occurred.

gva

Gross value added - measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

ha

hectare (2.471 acres).

hardwood

The wood of broadleaved trees, a term sometimes used for the broadleaved trees themselves.

high forest

Trees capable of growing to be suitable for timber production (compare with coppice).

litter

Non-living biomass with a diameter less than the minimum for dead wood, lying dead in various states of decomposition above the soil.

MDF (medium-density fibreboard)

Wood fibreboard made by a dry process in which the primary bond is derived from a bonding agent, and having a density usually exceeding 600 kg per cubic metre.

native species

Species that have arrived and inhabited an area naturally, without deliberate assistance by man. For trees and shrubs in the United Kingdom usually taken to mean those present after post-glacial recolonisation and before historic times. Some species are only native in particular regions - hence locally native.

natural colonisation

Creation of new woodland by natural means, i.e. without sowing or planting.

natural regeneration

Regeneration of existing woodland by natural means, i.e. without sowing or planting.

new planting

Establishing woodland on ground that was not woodland in the recent past.

NI

Northern Ireland.

NIWT

National Inventory of Woodland and Trees.

odt

Oven dry tonnes - Measurement of quantity without moisture (i.e. 0% moisture content).

ONS

Office for National Statistics.

OSB (oriented strand board)

Multi-layered board made from strands of wood of a predetermined shape and thickness together with a binder. The strands in the external layers are aligned and parallel to the board length or width.

overbark

The volume of wood including the bark. Can be either standing volume or felled volume.

particleboard

Panel material manufactured under pressure and heat from particles of wood (wood (also chipboard) flakes, chips, shavings, sawdust) in particle form, with the addition of an adhesive.

plywood

Woodbased panel consisting of an assembly of layers bonded together with the direction of the grain in adjacent layers, usually at right angles. (Not made in the UK).

pulp

A fibrous material produced by mechanically or chemically reducing wood into their component parts from which pulp, paper and paperboard sheets are formed after proper slushing and treatment or used for dissolving purposes (dissolving pulp or chemical cellulose) to make rayon, plastics, and other synthetic products. Sometimes called wood pulp.

recovered

Either industrial process by-products (e.g. offcuts or fines from a board manufacturing mill, furniture factory, joinery or construction) or from post-consumer waste wood (e.g. pallets, construction waste) after the stage of recovery or reclamation for purposes of recycling.

restocking

The replanting of an area after trees are removed.

roundwood

Logs and small branches (small roundwood).

sawlogs

Material of at least 14 cm top diameter that is destined to be sawn into planks or boards.

sawmill products

Materials including wood chips, sawdust and bark which arise during the conversion of logs to sawn timber. Most are used as inputs to other wood processing industries, sold for bioenergy or sold for other uses. Formerly called sawmill residues or co-products.

sawnwood

Sawn timber - timber that has been cut into planks or boards from logs.

scrub

Area of poorly formed trees or bushes unsuitable for conversion to timber.

Scottish Government

Devolved government in Scotland. Previously the Scottish Executive.

semi-natural

Woodland with natural characteristics (predominantly native species of trees, ground plants and animals) where wood production is not a primary objective; this term is used rather than natural because the woodland may have originally been planted or have been managed for wood production in the past.

silviculture
The care and cultivation of forest trees.

softwood
The wood of coniferous trees or conifers themselves.

SRC
Short rotation coppice (either willow or poplar).

standing volume
Measurement of quantity before trees are felled. Usually expressed as cubic metres overbark standing.

thinning
A proportion of stems removed in order to give the best stems space and light to grow into a more valuable crop. This is usually carried out some time after canopy closure and may be repeated at intervals. It is a necessary operation in the production of quality timber. A temporary reduction in standing volume will result.

UK
United Kingdom: Great Britain and Northern Ireland.

UKFPA
United Kingdom Forest Products Association.

UN ECE
United Nations Economic Commission for Europe, responsible for compiling international statistics on production and trade of wood products for Europe, the Russian Federation and North America.

underbark
The volume of wood excluding the bark.

veneer
A thin layer of wood, produced by peeling or slicing, used for decorative purposes. Veneers are usually applied to less expensive or less attractive substitutes including solid timber, woodbased sheet materials, etc.

Welsh Government
Devolved government in Wales.

wood pellets
Sawdust or wood shavings compressed into uniform diameter pellets to be burned for

heat/ energy.

woodland

Land under stands of trees with a canopy cover of at least 20% (25% in Northern Ireland), or having the potential to achieve this, including integral open space, and including felled areas that are awaiting restocking.

WRME

Wood Raw Material Equivalent - the volume of trees required to produce a wood product. Can be measured underbark or overbark.

11 Sources

This section provides further information on the data sources used to provide figures for this publication. Where relevant, information is also provided on the data collected from these sources, the methodology used to estimate figures, revisions and the level of detail reported.

Further details on quality are provided in quality reports for selected topics and for individual surveys, available from our Quality web page.

11.1 Sources: Woodland area and planting

The definition of woodland in United Kingdom forestry statistics is land under stands of trees with a canopy cover of at least 20% (or having the potential to achieve this), including integral open space, and including felled areas that are awaiting restocking. There is no minimum height for trees to form a woodland at maturity, so the definition includes woodland scrub but not areas with only shrub species such as gorse or Rhododendron.

There is no minimum size for a woodland. In this report, statistics for 2011 (and revised 2010 data), based on the National Forest Inventory (NFI), refer to woods and forests of at least 0.5 hectares, as mapped through the NFI. Figures for previous years (including original 2010 data), based on the 1995-99 National Inventory of Woodland and Trees, include sample-based estimates for woods and forests between 0.1 hectares and 2.0 hectares in addition to mapped areas of 2.0 hectares or over.

This is a slightly different definition from that used internationally which is based on 10% canopy cover, a minimum height at maturity of 5m and minimum area of 0.5 hectares.

Woodland includes native and non-native trees; semi-natural and plantation areas. Woodland habitat types are not currently differentiated in these statistics.

Integral open space was defined differently in the data sources previously used in this publication for woodland owned or managed by the Forestry Commission (FC) and woodland owned by others (Table 1.3). FC data for 2010 (original) and earlier years came from a GIS where mappable open space is excluded from the total. Non-FC woodland in Great Britain (from the National Inventory of Woodland and Trees, NIWT) included open areas less than 1 hectare as integral open space. For 2011 (and revised 2010) statistics, both FC and non-FC woodland areas are derived from the National Forest Inventory where open space within woodlands of less than 0.5 hectares is included in the woodland area estimates.

Most public sector woodland is owned by or managed by the Forestry Commission (FC) or, in Northern Ireland, the Forest Service (FS). Woodland owned by local authorities, the Ministry of Defence, and other public sector bodies is included in 'non-FC/FS woodland'.

The following pages provide more detail on the data sources and methodology used to produce statistics on woodland area and planting. A quality report on Woodland Area, Planting and Restocking is available from our Quality web page.

11.1.1 Sources: Woodland area

Woodland Area

Background

Data on woodland area in the UK for 2011 (and revised figures for 2010) are derived from the following sources:

- Forestry Commission administrative records of FC land areas;
- Forest Service administrative records of FS woodland areas;
- National Forest Inventory (NFI) woodland map for 2010 (GB);
- Statistics on new planting in Great Britain and
- Forest Service estimates of non-FS woodland area in Northern Ireland.

For earlier years (including original 2010 figures), data on woodland area in the UK were derived from the following sources:

- Forestry Commission and Forest Service administrative records of FC/ FS woodland areas;
- National Inventory of Woodland and Trees (GB);
- Statistics on new planting of non-FC woodlands in Great Britain;
- Forestry Commission administrative records of disposals of woodland (GB) and
- Forest Service estimates of non-FS woodland area in Northern Ireland.

Data on certified woodland areas are obtained from the Forest Stewardship Council (FSC) and follow-up enquiries with certificate holders.

Data collected

Data are woodland areas in each country (England, Wales, Scotland, Northern Ireland) by ownership (FC/ FS, non-FC/ FS) and type of woodland (conifer, broadleaf).

For certified woodland areas, data collected from FSC are the areas that are certified for each certificate holder. Follow-up enquiries are made with larger certificate holders to check the certified areas and to provide a country breakdown.

Methodology for 2011 (and revised 2010) data

For woodlands in Great Britain, estimates of woodland areas were obtained from the 2010 National Forest Inventory (NFI) woodland map, published in Spring 2011. The 2010 figures were then rolled forward for each country by adding statistics for new planting to produce 2011 estimates. No account is taken of woodland converted to another land-use.

A breakdown between FC and non-FC woodlands was then estimated by overlaying geographic boundaries for all Forestry Commission land onto the NFI map. This also enabled FC 'other land' areas to be estimated (table 1.5).

Information on type of woodland (conifer/ broadleaf) is not yet available from the National Forest Inventory. The conifer/ broadleaf breakdown for each country (within GB) and ownership type in 2011 and 2010 (revised) is currently estimated by applying the breakdowns obtained using the previous data sources.

For FS woodlands, data were obtained from administrative systems. Forest Service also provide estimates of non-FS woodland.

For certified woodland area, as all FC/ FS woodlands are certified, the total woodland area (as derived above, from the NFI map and FC boundaries) is used, rather than the area provided on the certificates.

Previous Methodology

For FC/ FS woodlands, data were obtained annually from administrative systems. Forest Service also provided estimates of non-FS woodland on an annual basis.

For non-FC woodlands in Great Britain, annual estimates of woodland areas were based on the 1995-99 National Inventory of Woodland and Trees (NIWT). The figures obtained from NIWT were then rolled forward for each country by adding statistics for new planting of non-FC woodland and disposals of FC woodland. No account is taken of woodland converted to another land-use, nor for changes in composition at restocking, as there are no sufficiently reliable data sources for these topics.

For certified woodland area, as all FC/ FS woodlands are certified, the total woodland area (from administrative records) was used, rather than the area provided on the certificates.

Revisions

The statistics on woodland area may be revised between the provisional figures published in the First Release 'Woodland Area, Planting and Restocking' and the final data published in Forestry Facts & Figures and Forestry Statistics, to take account of revisions to administrative data. They are not normally revised after final figures are published except, when a new National Inventory is published, previous years may be revised.

For certified woodland area, the figures are not normally revised.

The release of initial results from the National Forest Inventory woodland area map has resulted in a discontinuity in the time series for woodland area and for certified woodland area. 2010 figures are therefore shown on both bases (revised figures based on initial results from the NFI and original figures based on the previous methodology), to enable comparisons over time.

Information on significant revisions to published statistics is provided in the quality report on Woodland Area, Planting and Restocking, available from our Quality web page.

Reporting

Statistics reported for each year are published at a country level (England, Wales, Scotland, Northern Ireland).

Time series data, providing figures on certified woodland area are available from the Woodland Area and Planting Statistics web page. The time series data feature breakdowns by country and by ownership (FC/ FS, non-FC/ FS).

Woodland loss

There are currently no complete estimates of woodland loss in the UK.

National Forest Inventory Woodland Area Statistics for Great Britain (Spring 2010) has reported:

- 0.5 thousand hectares of observed permanent woodland loss identified to date from work comparing the aerial photography associated with the National Inventory of Woodland and Trees (NIWT) woodland map to the NFI woodland map;
- Forestry Commission administrative based estimates from each country that sum to around 20-30 thousand hectares of woodland removal for open habitat creation or for windfarm developments across Great Britain over the past decade.

Work to improve these estimates is ongoing.

11.1.2 Sources: Woodland Inventories

Woodland Inventories

The current National Forest Inventory is the first continuous inventory of British woodlands and is being conducted on a five year cycle. Prior to the National Forest Inventory, a series of one-off woodland inventories took place in Great Britain every 15 years or so.

Most inventories used slightly different definitions of woodland, so some apparent changes in area over time are due to changing definitions. The principal differences for inventories since 1905 are:

- **1905** Felled areas and scrub were not included.
- **1924** Undertaken by questionnaire; woods smaller than 2 acres (0.8 hectares) were not included.
- **1947** Woodlands with an area of less than 5 acres (2 hectares) were not included.
- **1965** Woodlands with an area of less than 1 acre (0.4 hectares) were not included.
- **1980** Woodlands with an area of less than 0.25 hectares were not included.
- **1995-99** Woodlands with an area of 0.1-2 hectares were included on a sample basis; some woodland missing from earlier surveys was included.
- **2010 on** All woodlands with an area of 0.5 hectares or more have been included; all woodlands below 0.5 hectares have been excluded.

Estimates of woodland area prior to 1905 have been obtained from a variety of sources, including:

- Domesday Survey of England - for information in 1086;
- Scottish Woodland History (TC Smout ed, 1997) - for estimate for end Middle Ages in Scotland;
- Roy maps c1750 - for Scotland 17th Century estimate.

National Forest Inventory

In the latest inventory, a digital map based on aerial photography, satellite imagery and other data sources has been produced, from which estimates of total woodland areas have been derived. Data are currently being collected for one hectare squares, covering a wide variety of topics, including ownership type, species and age.

Initial results for 2010 were published for countries (Great Britain, England, Wales, Scotland) in Spring 2011. More detailed results and results for more detailed geographical breakdowns will be available at a later date.

Further details on the National Forest Inventory are available from www.forestry.gov.uk/inventory.

National Inventory of Woodland and Trees

In the 1995-99 inventory, data were collected for one hectare squares, covering a wide variety of topics, include ownership type, species and age. The results were uprated to total woodland areas from a digital map based on aerial photography.

Results have been published for countries (Great Britain, England, Wales, Scotland) and for more detailed geographical breakdowns (regions and counties).

Further details on the 1995-99 National Inventory of Woodland and Trees are available from www.forestry.gov.uk/inventory.

11.1.3 Sources: New planting & restocking

New planting & restocking

Background

New planting is the creation of new areas of woodland. Restocking is the replanting of areas of woodland that have been felled. New planting can use planting/seeding or natural colonisation. Restocking can also use planting/seeding or natural regeneration.

Information about Forestry Commission and Forest Service new planting and restocking comes from administrative systems. Information about other woodland has come principally from the Woodland Grant Scheme (WGS) and the successor grant schemes introduced in England, Wales and Scotland. For natural colonisation and regeneration, the areas are those for which the second instalment of grant has been paid. Areas receiving grant are allocated to years by date of payment. The coverage and level of grant support may differ across schemes, so that figures on grant-aided planting are not directly comparable between countries or over time. Further information on grant schemes is available on the Forestry Commission website.

Local estimates for areas of planting and restocking which are not FC and which are not grant-aided are included for England, Wales and Scotland. These estimates are relatively small (less than one thousand hectares annually), and it has been assumed that all of this area is broadleaves. It is assumed that there is no non-FS non-grant aided new planting and restocking in Northern Ireland.

Data collected

Data on planting (new planting, restocking) in each country (England, Wales, Scotland, Northern Ireland) are obtained by ownership (FC/ FS, non-FC/ FS) and type of woodland (conifer, broadleaf).

Revisions

The statistics on new planting and restocking may be revised between the provisional figures published in the First Release 'Woodland Area, Planting and Restocking' and the final data published in Forestry Facts & Figures and Forestry Statistics, to take account of revisions to administrative data. They are not normally revised after final figures are published.

Information on significant revisions to published statistics is provided in the quality report on Woodland Area, Planting and Restocking, available from our Quality web page.

Reporting

Statistics reported for each year are published at a country level (England, Wales, Scotland, Northern Ireland).

Longer time series, providing data on new planting and restocking are available from the Woodland Area and Planting Statistics web page. The time series data feature breakdowns by country, by ownership (FC/ FS, non-FC/ FS) and by type of woodland (conifers/ broadleaves).

11.2 Sources: Timber

Statistics on timber are obtained from a number of sources. For wood production (removals), data are compiled from:

- Forestry Commission (FC) and Forest Service (FS) administrative records of removals from FC/ FS woodlands;
- Private Sector Softwood Removals Survey for softwood removals from non-FC/ FS woodlands and
- deliveries of hardwood to wood processing industries (see below) for total hardwood removals.

There is no source of data for hardwood removals from non-FC/ FS woodlands, so these are estimated to be:

- deliveries of hardwood to wood processing industries (see below) less
- hardwood removals from FC/ FS woodlands.

Deliveries are estimated from the following sources:

- Sawmill Survey;
- UK Forest Products Association;
- Wood Panel Industries Federation;
- Survey of Round Fencing Manufacturers;
- Private Sector Softwood Removals Survey (for softwood deliveries to woodfuel);
- shavings manufacturers;
- companies believed to export roundwood and/ or chips and
- estimates provided by the Expert Group on Timber and Trade Statistics.

Provisional results (in summary format) are published in the First Release 'UK Wood Production and Trade (provisional figures)', with final figures issued in Forestry Facts and Figures and Forestry Statistics.

Figures are also provided in the Joint Forest Sector Questionnaire submitted to international organisations (provisional data in May and final data in September).

The quality report on UK Wood Production and Trade provides further information on timber statistics, including details of significant revisions to published statistics.

11.2.1 Sources: Wood production

Wood production

Background

Figures on UK wood production (or removals) are compiled from a variety of sources:

- Forestry Commission (FC)/ Forest Service (FS) administrative records - for all removals from FC/ FS woodlands;
- Private Sector Softwood Removals Survey - for softwood removals from non-FC/ FS woodlands and
- statistics on deliveries - for total hardwood removals.

The compilation of data on wood production was extended in 2004 to include Northern Ireland.

A new survey, collecting data on brash and stump removals, was introduced in 2009.

The software used to record Forestry Commission sales has included some sales of mixed softwood and hardwood as softwood in previous years.

Methodology

Figures for removals from FC/ FS woodlands are converted from cubic metres (m^3) to green tonnes using standard conversion factors. For total softwood figures, the results from the Private Sector Softwood Removals Survey are combined with the data for FC/ FS woodlands to produce total softwood removals.

For hardwood figures, the total hardwood removals are assumed to equal the total hardwood deliveries (obtained from industry surveys and industry associations). Hardwood removals from FC/ FS woodlands are then subtracted to give an estimate of the amount of hardwood removed from non-FC/ FS woodlands.

Revisions

Non-FC/ FS softwood removals are subject to revision annually (see note on the Private Sector Softwood Removals Survey). Removals from FC/ FS woodlands are not normally revised. Total hardwood removals (and consequently hardwood removals from non-FC/ FS woodlands) are subject to annual revisions (see notes on deliveries for further information).

Reporting

Figures are published as UK totals. Country breakdowns (England, Wales, Scotland, Northern Ireland) are also published for softwood in table 2.3 for non-FC/ FS removals and table 2.4 for

FC/ FS removals. Approximate country breakdowns are also estimated for hardwood removals.

Longer time series, presenting estimates of FC/ FS and non-FC/ FS removals by country and by softwood/ hardwood are available from the Timber Statistics web page.

11.2.2 Sources: Private Sector Softwood Removals Survey

Private Sector Softwood Removals Survey

Background

The Private Sector Softwood Removals Survey is an annual survey conducted by the Forestry Commission (in association with the Forest Service) of a sample of harvesting companies in the UK.

The survey, which previously covered harvesting companies in Great Britain only, was extended in 2004 to include harvesting companies in Northern Ireland. Figures for Northern Ireland in earlier years have therefore been estimated, based on responses to the 2004 survey.

Data collected

The questionnaire used for the Private Sector Softwood Removals Survey is issued to around 40 harvesting companies, to collect information on:

- the quantity of softwood roundwood harvested from non-FC/ FS woodlands in the UK in the current (latest) year and in the previous year;
- the quantity of softwood roundwood harvested from certified non-FC/ FS woodlands and
- (from the 2008 survey) the quantity sold to bioenergy (including wood pellet manufacture).

Response rates

In 2010, the questionnaire was issued to 40 harvesting companies, of which 30 responded, giving a response rate of 75%. These respondents are estimated to account for around 97% of all the softwood harvested by companies covered by the survey.

Private Sector Softwood Removals Survey Response Rates, 2001-2010

Year	Forms issued	Responses received	Response rate
2001	42	30	71%
2002	35	24	69%
2003	33	24	73%
2004	41	33	80%
2005	40	28	70%
2006	43	35	81%
2007	43	34	79%
2008	41	35	85%

2009	40	30	75%
2010	40	30	75%

Methodology - Estimation of non-FC/ FS softwood removals

The percentage change in non-FC/ FS softwood removals from the previous year to the current year is calculated for all respondents. This percentage change is then applied to the estimated total softwood removals from non-FC/ FS woodlands for the previous year, subject to any revisions (see below), to produce an estimated total for the current year.

Revisions

Results from the Private Sector Softwood Removals Survey may be revised between the provisional figures published in the First Release 'UK Wood Production and Trade (provisional figures)' and the final data published in Forestry Facts and Figures and Forestry Statistics to take account of late returns and the results of additional data quality checking procedures.

In order to use the most accurate information possible in estimating total non-FC/ FS softwood removals, figures for non respondents in earlier years are estimated wherever possible, using their responses in previous and in subsequent years. This may cause the estimates for all previous years to be revised when new data are received from a former non-respondent. This process reduces the potential over-inflation of estimated removals which can be caused by harvesting companies tending to respond when removals have increased but being less likely to do so when their removals have reduced.

Reporting

Figures are published as UK totals and by country (England, Wales, Scotland, Northern Ireland).

For further information, see the quality report on the Private Sector Softwood Removals Survey.

11.2.3 Sources: Sawmill Survey

Sawmill Survey

Background

The Sawmill Survey is an annual survey conducted by the Forestry Commission (in association with the Forest Service) of sawmills in the UK that are believed to use UK-grown logs. The survey comprises a short questionnaire (for smaller mills) and a detailed questionnaire (for larger mills).

The survey, which previously covered sawmills in Great Britain only, was extended in 2004 to include sawmills in Northern Ireland. Figures for Northern Ireland in earlier years have therefore been estimated, based on responses to the 2004 survey.

The detailed survey has changed over recent years, both in terms of coverage and periodicity. For 1996 and earlier, detailed questionnaires were issued triennially to mills producing at least 1,000 m^3 of sawnwood. From 1998 to 2004, the questionnaires were issued on a biennial basis to mills producing at least 5,000 m^3 of sawnwood. From 2005, the detailed questionnaires have been issued annually, to mills producing at least 10,000 m^3 of sawnwood.

Data collected

2 questionnaires are used for the Sawmill Survey:

- a detailed questionnaire goes to around 50 mills that have annual production of at least 10,000 m^3 of sawnwood, and
- a short questionnaire is sent to all other mills that are believed to take UK sawlogs (around 160 mills).

Both questionnaires collect information on:

- the consumption of UK and imported logs,
- the production of sawnwood,
- chain of custody certificates and certified timber,
- (from the 2006 survey) sales to bioenergy,
- (from the 2008 survey) sales as firewood and internal use for heat/ energy,
- (from the 2010 survey) other products and
- (from the 2008 survey) total employment.

In addition, the detailed questionnaire also collects information on:

- the source of UK logs (England, Wales, Scotland or Northern Ireland),
- sawnwood product markets,

- other products by type and destination and
- sawmill employment by type.

Response rates

In 2010, detailed questionnaires were issued to 52 mills, of which 40 responded, giving a response rate of 77%. For the short questionnaire, 53 responses were received from the 159 forms issued, corresponding to a 33% response rate. This gives an overall response rate of 44%.

Overall, the 93 sawmills responding to the sawmill survey in 2010 are estimated to account for around 85% of total UK sawnwood production.

Sawmill Survey Response Rates (all questionnaires), 2001-2010

Year	Forms issued	Responses received	Response rate
2001	260	172	66%
2002	288	150	52%
2003	260	143	55%
2004	262	147	56%
2005	257	143	56%
2006	264	161	61%
2007	243	149	61%
2008	227	133	59%
2009	219	122	56%
2010	211	93	44%

Methodology

Each year, figures for non respondents are estimated by rolling forward data from previous years for these mills. For larger mills, these estimates may be modified to take account of advice from the Expert Group on Timber & Trade Statistics.

Time series data for the detailed sawmill survey

From one year to another, some mills may have moved above or below the threshold for inclusion in the detailed sawmill survey. This may affect the trends over time in tables 2.17a to 2.20a.

The total volume of roundwood consumed and sawnwood and other products produced by sawmills covered by the detailed sawmill survey varies over time, so a change in the percentages shown in tables 2.17a to 2.19a does not necessarily reflect a change in volumes.

Revisions

Results from the Sawmill Survey may be revised between the provisional figures published in the First Release 'UK Wood Production and Trade (provisional figures)' and the final data published in Forestry Facts and Figures and Forestry Statistics to take account of late returns and the results of additional data quality checking procedures.

All the main results (number of mills, consumption, production) are subject to revision annually, as information becomes available about mills opening or closing, or new information becomes available for previous non-respondents. The most common revisions are relatively small downward changes, but this can vary from year to year as special exercises are run to validate the survey population. Information about new mills opening can on occasion cause much larger upward revisions to softwood volumes, as in British Timber Statistics 2003. Results from the survey of larger mills, which provides more detailed information, may be revised to take account of new information for previous non-respondents.

Reporting

Statistics reported for each year are limited to mills that are known to use UK roundwood, but also include any imported logs used by these mills.

Tables for softwood are broken down by country (England, Wales, Scotland, Northern Ireland) and by size of mill. Given the low number of sawmills using UK hardwood, tables for hardwood are presented at a total UK level only.

The number of active mills is presented in tables 2.9 to 2.11.

Longer time series, providing data on numbers of mills and on softwood consumption and production are available from the Timber Statistics web page. The time series data feature breakdowns by size of mill, by country and by region (in England).

For further information, see the quality report on the Sawmill Survey.

11.2.4 Sources: Pulp & paper

Pulp & paper

Background

Data on the pulp and paper sector are obtained from two sources:

- UK Forest Products Association (UKFPA) provides figures on inputs to the integrated pulp and paper mills and
- Confederation of Paper Industries (CPI) provides figures on total UK pulp and paper production.

Integrated pulp and paper mills are paper mills that use UK roundwood to produce pulp, which is an intermediate product in the production of paper. Inputs for other paper mills are not covered. The figures for production cover all UK paper mills.

Data collected

The data collected on inputs cover the type of input (roundwood, sawmill products) and the type of wood (softwood, hardwood).

Production data covers wood pulp (mechanical or semi-chemical), recovered fibre pulp and paper & paperboard. Paper & paperboard production are available for the following categories: graphic papers, sanitary & household papers, packaging materials and other paper & paperboard. Data are also collected on UK "production" of waste paper, which is the amount recovered from the UK for re-use in the UK or for export.

From 2008, total employment at integrated pulp and paper mills is also requested, to complement the data collected on this topic from other primary wood processors.

Methodology

The data on inputs to integrated pulp and paper mills are collected by the UK Forest Products Association (UKFPA) from all such mills in the UK. The number of integrated pulp and paper mills has fallen over recent years and currently stands at 2.

The Confederation of Paper Industries (CPI) collects production and raw material data from members and non-members, which accounts for the majority of UK production. The remainder is estimated by CPI using a variety of sources.

Revisions

The statistics on pulp and paper are not normally revised after publication. On occasion, a provisional figure or estimate may be published, and replaced by the actual figure in a subsequent publication.

Reporting

Statistics reported for each year on inputs are limited to integrated pulp and paper mills. Figures are available at a total UK level only.

11.2.5 Sources: Woodbased panels

Woodbased panels

Background

Data on the woodbased panel sector are obtained from the Wood Panel Industries Federation (WPIF) and cover all woodbased panel mills in the UK.

Data collected

Data are collected on inputs and on production.

The data collected on inputs covers the type of input (roundwood, sawmill products, imports, recycled wood fibre) and the type of wood (softwood, hardwood).

Production data covers all types of woodbased panels made in the UK, which currently comprises particleboard (including oriented strand board) and fibreboard (medium density fibreboard). Production of hardboard (another type of fibreboard) ended in 1999 and production of plywood ended in 2000.

From 2008, total employment is also requested, to complement the data being collected on this topic from other primary wood processors.

Methodology

The data on woodbased panels are collected by the Wood Panel Industries Federation (WPIF), which represents all UK wood panel manufacturers. Figures on wood consumption are collected annually. Production data (excluding waste and rejects) are derived from quarterly returns. Response rates in recent years have been 100%.

Revisions

The statistics on woodbased panels are not normally revised after publication. On occasion, a provisional figure or estimate may be published, and replaced by the actual figure in a subsequent publication.

Information on revisions to the 2009 inputs data is provided in the quality report on UK Wood Production and Trade.

Reporting

Statistics reported for each year are available at a UK level only.

11.2.6 Sources: Survey of Round Fencing Manufacturers

Survey of Round Fencing Manufacturers

Background

The Survey of Round Fencing Manufacturers is an annual survey conducted by the Forestry Commission (in association with the Forest Service) of round fencing manufacturers (or mills) in the UK that are believed to consume UK-grown roundwood.

The survey, which previously covered mills in Great Britain only, was extended in 2004 to include those in Northern Ireland. Figures for Northern Ireland in earlier years have therefore been estimated, based on responses to the 2004 survey.

Data collected

The questionnaire used for the Survey of Round Fencing Manufacturers is issued to around 80 mills, to collect information on the consumption of UK-grown and (from 2006) imported roundwood. In 2008, the survey was extended to cover woodfuel quantities (sales to bioenergy, sales as firewood and internal use for heat/ energy) and total employment. In 2010, the survey was further extended to request data on production of round fencing and other products. A breakdown of the country of origin (England, Wales, Scotland, Northern Ireland) for UK-grown roundwood is also requested.

Response rates

In 2010, the questionnaire was issued to 79 mills, of which 34 responded, giving a response rate of 43%. These respondents accounted for an estimated 46% of roundwood purchased by softwood round fencing manufacturers.

Survey of Round Fencing Manufacturers Response Rates, 2001-2010

Year	Forms issued	Responses received	Response rate
2001	127	84	66%
2002	109	68	62%
2003	104	52	50%
2004	107	67	63%
2005	103	60	58%
2006	109	61	56%
2007	103	67	65%
2008	87	55	63%
2009	82	42	51%

2010	79	34	43%

Methodology

Each year, figures for non respondents are estimated by rolling forward data from previous years for these mills.

Revisions

Results from the Survey of Round Fencing Manufacturers may be revised between the provisional figures published in the First Release 'UK Wood Production and Trade (provisional figures)' and the final data published in Forestry Facts and Figures and Forestry Statistics to take account of late returns and the results of additional data quality checking procedures.

All figures are subject to revision annually, as information becomes available about mills opening or closing, or new information becomes available for previous non-respondents. Such revisions are generally quite small.

Reporting

Figures are published as UK totals and by size of mill.

Longer time series, providing data on numbers of mills and on softwood consumption are available from the Timber Statistics web page. The time series data feature breakdowns by size of mill and by country.

For further information, see the quality report on the Survey of Round Fencing Manufacturers.

11.2.7 Sources: Other deliveries

Other deliveries

Background

Data on other deliveries comprise the following:

- shavings - mainly obtained from shavings manufacturers;
- woodfuel - private sector softwood removals survey, woodfuel suppliers and Expert Group on Timber & Trade Statistics estimates;
- hardwood round fencing - Expert Group on Timber & Trade Statistics estimates;
- other miscellaneous products - Expert Group on Timber & Trade Statistics estimates and
- exports of roundwood and chips - companies believed to export roundwood and/ or chips and Forest Service (for exports from Northern Ireland).

The figures, which previously covered Great Britain only, were extended in 2004 to include Northern Ireland. Figures for exports prior to 2004 relate to Great Britain only.

Data collected

The data collected on shavings, woodfuel and other miscellaneous products cover the quantity of roundwood only.

Data collected on exports covers industrial roundwood (excluding sawlogs), logs and chips. For 2004 and earlier years, these figures were provided by the UK Forest Products Association (UKFPA).

Methodology

For shavings, data are collected from the main companies known to produce shavings. In addition, a small estimate is made to cover other shavings manufacturers.

There are currently no reliable sources for data on hardwood round fencing and other miscellaneous products. As a result, estimates (that are rarely changed) are made by the Expert Group on Timber & Trade Statistics to attempt to take account of these other uses of UK roundwood.

The estimate for hardwood used for woodfuel was revised in 2005 to reflect a perceived increase in woodfuel, but this should not be interpreted as an increase in a single year. From 2007, an estimate of roundwood use for biomass energy was included in the woodfuel figures, based on data reported by suppliers and Expert Group on Timber & Trade Statistics estimates. In 2008, the private sector softwood removals survey was extended to ask how much of the removals reported were for woodfuel use. Estimates in recent years of softwood used for woodfuel are more reliable than those for earlier years.

For exports, data are requested from companies believed to have exported roundwood or chips in the last year. Forest Service provides data on behalf of companies exporting from Northern Ireland. If required, a small estimate is made for any non respondents or to cover other companies which may have exported roundwood during the year.

Revisions

Figures for deliveries of softwood for woodfuel may be revised whenever revisions are made to the Private Sector Softwood Removals Survey.

The statistics on other deliveries are not normally revised after publication. On occasion, an estimate may be revised in a subsequent publication, to take account of expert advice on perceived changes in the market for roundwood.

The quality report on UK Wood Production and Trade provides further information, including details of significant revisions to published statistics.

Reporting

Statistics reported for each year are available at a UK level only.

11.2.8 Sources: Comparison of removals and deliveries of UK softwood roundwood

Comparison of removals and deliveries of UK softwood roundwood

The table below provides a comparison between the figures for removals (obtained from Forestry Commission, Forest Service and Private Sector Removals Survey) and deliveries (obtained from industry surveys and trade associations) for UK softwood roundwood.

Comparison of removals and deliveries of UK softwood roundwood, 2001-2010

Year	FC/ FS removals	Non-FC/ FS removals	Total removals	Deliveries	Balance[1]
					thousand green tonnes
2001	4 604	2 891	7 494	7 463	32
2002	4 650	2 972	7 622	7 380	243
2003	4 817	3 491	8 308	7 718	589
2004	4 894	3 618	8 512	8 021	491
2005	4 579	3 894	8 473	8 143	330
2006	4 582	3 917	8 499	8 187	312
2007	4 653	4 369	9 022	8 790	232
2008	4 415	4 016	8 432	8 187	245
2009	5 126	3 434	8 560	8 304	256
2010	4 625	4 941	9 567	9 419	147

Source: Forestry Commission, Forest Service, industry surveys, industry associations

Notes:

1. The difference between reported removals and deliveries. This can be caused by variations in the level of stocks between harvesting and delivery to the wood processor, but a persistent difference indicates that statistics for removals and/ or deliveries may be unreliable.

11.2.9 Sources: Estimation of hardwood removals from non-FC/ FS woodlands

Estimation of hardwood removals from non-FC/ FS woodlands

Figures for hardwood removals from non-FC/ FS woodlands are derived from total hardwood deliveries (obtained from industry surveys and trade associations) less hardwood removals from FC/ FS woodlands.

Estimation of hardwood removals from non-FC/ FS woodlands, 2001-2010

Year	Deliveries	FC/ FS removals	Non-FC/ FS removals
			thousand green tonnes
2001	632	145	486
2002	620	118	502
2003	562	117	445
2004	513	113	399
2005	593	101	492
2006	438	45	392
2007	440	40	400
2008	431	43	388
2009	536	87	449
2010	535	70	465

Source: Forestry Commission, Forest Service, industry surveys, industry associations

11.2.10 Sources: Woodfuel and pellets

Woodfuel and pellets

Background

Data on woodfuel have been obtained from the following sources:

- Sawmill survey and survey of round fencing manufacturers;
- Private sector softwood removals survey and woodfuel suppliers;
- Expert Group on Timber & Trade Statistics estimates.

Estimates of the quantity of recycled wood used for woodfuel are produced by the Wood Recyclers' Association.

Data on UK pellet production are obtained from the survey of UK pellet and briquette production.

For further details on roundwood deliveries for woodfuel, see the Sources: other deliveries page.

Data collected

The sawmill survey and survey of round fencing manufacturers included questions asking for the quantity of woodfuel:

- sold to bioenergy,
- sold as firewood and
- used internally for heat/ energy.

All 3 questions have been included in the detailed sawmill survey (sent to sawmills believed to produce at least 10 thousand m^3 sawnwood annually) for some time. The sawmill survey (for smaller mills) was extended in the 2006 survey to cover quantities sold to bioenergy and again in the 2008 survey to cover firewood sales and use for heat/ energy. All three questions were included in the round fencing survey for the first time in 2008 .

The survey of UK pellet and briquette production was run for the first time for the collection of 2009 data. The questionnaire asks for data on the total quantity of pellets and briquettes produced, the source of fibres used, the origin of wood used and product markets.

Response rates

Response rates for the sawmill survey and survey of round fencing manufacturers are available on the relevant sources pages.

The 2010 survey of UK pellet and briquette production was sent to a total of 27 companies that were believed to manufacture pellets or briquettes. A total of 12 responded, giving a response rate of 44%. The respondents to the survey are estimated to account for around 95% of the total production of pellets and briquettes in the UK in 2010.

Methodology

Details of the methodology used for the sawmill survey and survey of round fencing manufacturers are available on the relevant sources pages.

For the survey of UK pellet and briquette production, estimates were made for non respondents using results from previous surveys (including the 2008 woodfuel suppliers survey) and expert advice.

Revisions

All figures are subject to revision annually, as new information becomes available.

Reporting

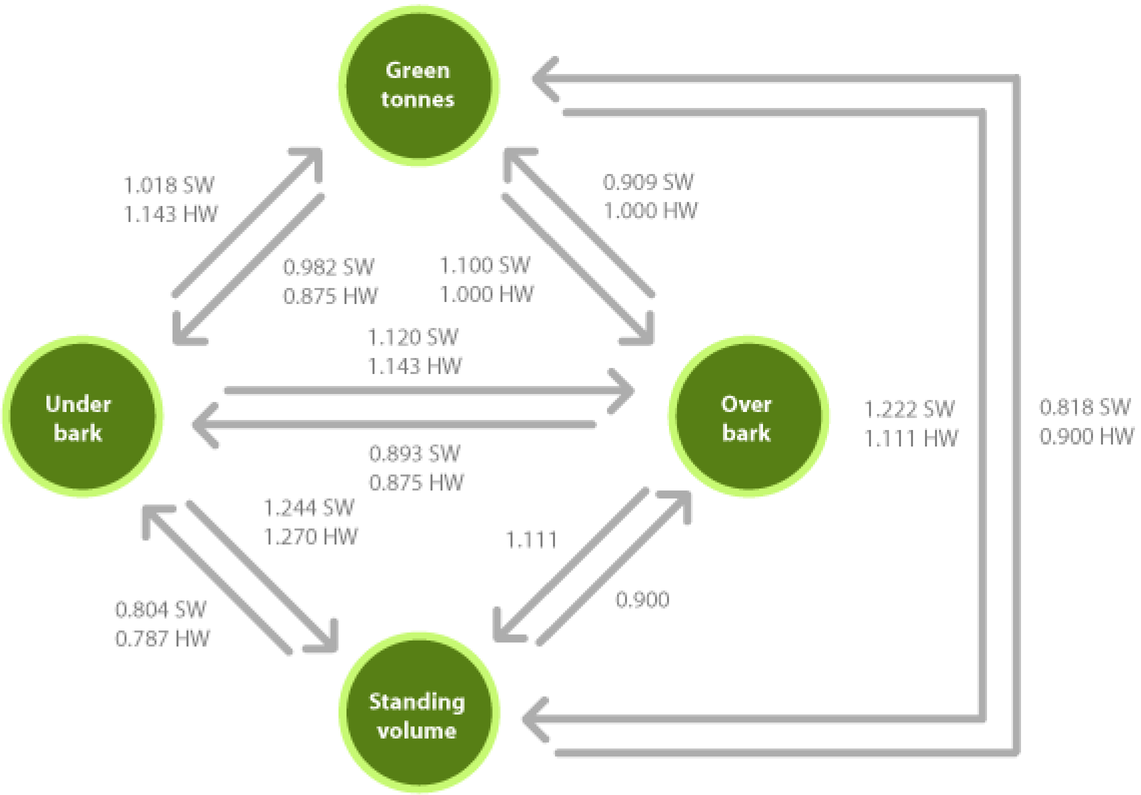
Figures are published as UK totals.

For further information, see the quality report on the survey of UK pellet & briquette production.

11.2.11 Sources: Conversion factors

Conversion factors between cubic metres and green tonnes

The following factors have been used in Chapter 2 (Timber) to convert between cubic metres (m^3) and green tonnes:



The following factors have been used in Chapter 3 (Trade) to convert between cubic metres (m^3) and metric tonnes:

Conversion factors between cubic metres and metric tonnes

Product	m^3 / tonne
Fuelwood, including wood for charcoal	1.38
Wood chips, sawdust, etc	1.48
Industrial roundwood (wood in the rough) - softwood	1.43
Industrial roundwood (wood in the rough) - hardwood	1.25
Sawnwood - softwood	1.82

Sawnwood - hardwood	1.43
Veneer sheets	1.33
Plywood, particleboard	1.54
Hardboard	1.053
MDF (medium density fibreboard)	1.667
Insulating board - density 0.35-0.5 g/cm^3	1.667
Insulating board - other	4.00

The following factors have been used in Chapter 3 (Trade) where required to convert to wood raw material equivalent, which indicates the volume of wood (in m^3 underbark) needed to produce one unit of a final product:

Conversion factors to Wood Raw Material Equivalent (wrme) underbark

Product	Measurement unit	Factor to wrme underbark
Fuelwood	tonnes	1.20
Wood charcoal	tonnes	6.00
Chips, sawdust, etc	tonnes	1.20
Industrial roundwood (rough, treated)	m^3	1.10
Industrial roundwood (in the rough)	m^3	1.00
Sleepers	m^3	1.58
Softwood sawnwood	m^3	2.00
Hardwood sawnwood	tonnes	2.50
Wastepaper	tonnes	2.80
Mechanical pulp	tonnes	2.50
Chemical dissolving pulp	tonnes	2.50
Sulphate pulp, unbleached	tonnes	6.00
Sulphate pulp, bleached	tonnes	4.50
Sulphite pulp	tonnes	5.00
Semi-chemical woodpulp	tonnes	2.75
Veneer (< 6mm)	tonnes	3.45
Other woodbased panels	tonnes	2.50
Woodwool, woodflour	tonnes	1.70
Packing cases, pallets	tonnes	2.00
Other manufactured wood	tonnes	2.50
Newsprint	tonnes	2.80
Writing & printing paper, uncoated	tonnes	3.50

Other paper & paperboard	tonnes	2.50

Notes:

1. A revised set of figures was produced in FC Technical Paper 19, Revised Forecasts of the Supply and Demand for Wood in the UK (Forestry Commission, 1996), but these have not been used in this publication.

11.3 Sources: Trade

Background

Data on imports and exports are based on figures obtained from overseas trade statistics on intra-EC trade and extra-EC trade produced by HM Revenue and Customs.

Data on apparent consumption is derived as UK production plus imports less exports.

Data collected

The data obtained from HM Revenue and Customs cover quantities (weights and volumes) and values of wood and wood products imported to and exported from the UK. Data are compiled for the following products:

- roundwood - woodfuel, industrial roundwood;
- wood charcoal;
- wood chips & particles;
- wood residues (including wood pellets);
- sawnwood;
- woodbased panels - veneer sheets, plywood, particleboard, fibreboard;
- pulp - wood pulp, other pulp;
- recovered paper and
- paper & paperboard - graphic papers (including newsprint), sanitary & household papers, packaging materials, other paper & paperboard.

For roundwood, sawnwood and woodbased panels, a softwood/ hardwood breakdown is available.

Data are also obtained by country of origin (for imports) and destination country (for exports).

Methodology

The data obtained from HM Revenue & Customs are converted to other units (if required) and checked against other sources and expert advice (including the Expert Group on Timber and Trade Statistics, Wood Panel Industries Federation and Confederation of Paper Industries). For consistency with timber deliveries data, roundwood and wood chip exports figures are replaced by those compiled from companies believed to export roundwood and/ or chips and (for Northern Ireland) Forest Service.

Revisions

The statistics on imports and exports are subject to revision after publication if revisions are made to the overseas trade statistics produced by HM Revenue & Customs. Figures may also be refined to take account of expert advice from the Expert Group on Timber & Trade Statistics and trade associations on the trade in specific products.

The quality report on UK Wood Production & Trade provides further information, including details of significant revisions to published statistics.

Reporting

Provisional results are published in the First Release 'UK Wood Production and Trade (provisional figures)' in May, with final figures issued in Forestry Facts and Figures and Forestry Statistics.

Figures are also provided in the Joint Forest Sector Questionnaire submitted to international organisations (provisional data in May and final data in September).

Statistics reported for each year are available at a UK level. Data are also available for country imported from (or exported to) and for more detailed product types.

11.4 Sources: UK Forests and Climate Change

Background

Forests can help address climate change by reducing the amount of greenhouse gases in the atmosphere. They do this by absorbing carbon dioxide, using the carbon to produce sugars for tree growth and releasing the oxygen back into the air. As trees grow, they store carbon in their leaves, twigs and trunk, and in the soil around them.

Globally, deforestation caused by the unsustainable harvesting of timber and the conversion of forests to other land uses accounts for almost 20 per cent of global carbon dioxide emissions. The amount of carbon stored can be increased by actions to reduce the amount of deforestation and to convert non-forested areas to forest.

Although they cover a small part of the global area, the forests and woodlands in Britain have a role to play too. They can be managed as a sustainable source of wood – an alternative energy source to fossil fuels, and a low-energy construction material.

Woodlands can also help society adapt to a changing climate. The right trees planted in the right places can reduce the risk of flooding, provide shade for wildlife, reduce soil erosion and help to cool down towns and cities.

Carbon cycle

The diagram showing the carbon cycle is adapted from Figure 3 of the Forestry Commission Information Note on Forests, Carbon and Climate Change: the UK Contribution (M Broadmeadow and R Matthews, 2003).

Forest carbon stock

Table 4.1 is updated from Table T8 in the final draft UK report for Global Forest Resources Assessment (FRA) 2010.

Units: This table is now shown in million tonnes carbon dioxide equivalent (MtCO_2e) rather than million tonnes carbon (MtC). To convert from CO_2e to C multiply by 12/44.

Timescales: Carbon stock is estimated for 1990, 2000, 2005 and 2010, as in FRA 2010.

Growing stock is taken from calculations for Table T7 of the FRA 2010. These estimations of growing stock are based on data from the 1995-99 National Inventory of Woodland and Trees and data for the FC estate.

Total biomass: These figures are updated from Table T7 of the FRA 2010, using a new 'biomass expansion factor' for conifers to account for branches, foliage and other above ground biomass (Levy et al (2004)). Average densities of 0.4 ODT/m^3 (oven-dry tonnes per cubic metre) for conifers and 0.5 ODT/m^3 for broadleaves are taken from Jenkins et al (2011). In addition, a new 'root to shoot ratio' (below ground biomass = 0.36 x above ground biomass) accounts for the below ground biomass (Levy et al (2004)).

Deadwood: Consistent with Table T8 of the FRA 2010 and Morison et al (in press), estimates of deadwood volume per hectare are taken from Gilbert (2007). These are rated up by woodland area estimates from FRA 2010 (for 1990 and 2000) and Forestry Statistics (2005 and 2010) and assuming a density of 0.45 ODT/m^3.

Litter: New estimates of the carbon content of the litter layer are available from Morison et al (in press). These are rated up by woodland area estimates from FRA 2010 (for 1990 and 2000) and Forestry Statistics (2005 and 2010).

Soil carbon: New estimates of the carbon content of soil 0-100 cm for England, Wales and Scotland are available from Morison et al (in press). An estimate of the carbon content of soil for Northern Ireland is taken from Bradley et al (2005) and rated downward to reflect the generally lower carbon content found in Morison et al (in press). These are rated up by woodland area estimates from FRA 2010 (for 1990 and 2000) and Forestry Statistics (2005 and 2010). This soil estimate does not take account of soil carbon accumulation. This was previously included from estimates made by the Centre for Ecology and Hydrology in 'Land Use, Land Use Change and Forestry' (LULUCF) modelling. It also assumes that the soil carbon content of afforested (and previously unwooded) land has the same soil carbon content as woodland soils, whereas in practice this may vary.

Comparison with other data sources: Figures in this updated table are now similar to the estimates made in Morison et al (in press) and MacKay (2003).

Future updates: This table will be updated once further information is available from the National Forest Inventory.

References

Bradley, RI, Milne, R, Bell, J, Lilly, A, Jordan, C, Higgins, A (2005) **A soil carbon and landuse database for the UK**, *Soil Use and Management 21 (363-369)*

Forestry Commission (2005) **Forestry Statistics 2005**, Forestry Commission, Edinburgh

Forestry Commission (2010) **Forestry Statistics 2010**, Forestry Commission, Edinburgh

Gilbert, J. (2007) **National Inventory of Woodland and Trees 1995-1999, Analysis of Management and Biodiversity Data,** Forestry Commission, Edinburgh

Jenkins, T.A.R., Mackie, E.D., Matthews, R.W., Miller, G., Randle, T.J., White, M.E., FC (2011)

Woodland Carbon Code: Carbon Assessment Protocol, Forest Research

Levy, P.E., Hale, S.E., Nicoll, B.C. (2004) **Biomass expansion factors and root: shoot ratios for coniferous tree species in Great Britain**, *Forestry, Vol 77, No 5*

McKay (2003) **Woodfuel resource in Britain**, *Final report B/W3/00787/Rep*

Morrison *et al* (in press) **Understanding the Carbon and GHG balance of UK Forests**, Forest Research

Food and Agriculture Organisation of the United Nations (2010) **Global Forest Resources Assessment 2010 – UK Report**, *FRA2010/221*, Forestry Department, UNFAO, Rome.

Carbon sequestration

The information in Table 4.2 is taken from inventory and projections of UK emissions by sources and removal by sinks due to land use, land use change and forestry, produced by CEH for input to 2009 final UK Greenhouse Gas Emissions (DECC, March 2011). They exclude the pool of carbon in timber products.

Figure 4.2 shows annual estimates of carbon accumulation by country, taken from the same source but shows carbon in living forest biomass only; it excludes carbon in litter, soils and forest products. Future predictions of carbon uptake assume that commercial conifer plantations will be replanted when felled, and that planting of new woodland will continue at the same rate as in 2009 (mid projection).

Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO_2). To convert from tonnes CO_2 to tonnes carbon multiply by 12/44.

11.5 Sources: Environment

Ancient and semi-natural woodland and protected areas

The information in Table 5.2 and most of Table 5.1 has been reproduced from Protected Forest Areas in the UK (S Pryor & G Peterken, 2001) (not National Statistics). It had been derived from a variety of sources, and is unlikely to give a wholly accurate inventory of protected areas in the United Kingdom.

The woodland categories used in Table 5.1 are:

- ASNW: (ancient semi-natural woodland) both ancient and semi-natural.
- PAWS: (plantation on an ancient woodland site) ancient in the sense of continuously wooded over a long period but not semi-natural.
- OSNW: (other semi-natural woodland) semi-natural but not ancient.

The types of statutory protection in Table 5.2 are:

- SAC: Special Area of Conservation;
- SPA: Special Protection Area;
- NNR: National Nature Reserve;
- SSSI: Site of Special Scientific Interest (ASSI in Northern Ireland).

Data about the small amount of ancient woodland in Northern Ireland was not available in 2001, but has been added using the report Back on the Map (Woodland Trust, 2007) (not National Statistics).

Revised estimates for Wales were compiled for Woodland for Wales progress report 2001-05 (2006) (not National Statistics). In this edition of Forestry Statistics, they have been used for Wales in place of the estimates from Pryor & Peterken (2001), and the UK totals have been revised accordingly.

The UK Indicators of Sustainable Forestry (indicator B1) published in 2002 used results from a different source: Pryor & Smith (2002). This was an updated estimate of ancient woodland area derived by overlaying the 1995-99 National Inventory of Woodland and Trees digital map onto ancient woodland inventories. This gave lower figures than those published in Pryor & Peterken (2001). At the time, Pryor & Smith (2002) was thought to give the best estimates of ancient woodland area. However, further investigation of the discrepancies between the 1995-99 National Inventory of Woodland and Trees and the ancient woodland inventories suggests that some discrepancies are due to differences in spatial registration of woods, and that some areas of ancient woodland are incorrectly omitted from the totals in Pryor & Smith (2002). In consequence, the estimates from Pryor & Peterken (2001) are now recommended for use, until better information becomes available.

The Ancient Woodland Inventory data sets for England and Wales are currently being revised. New estimates for Scotland will become available from the Native Woodland Survey of Scotland.

Populations of wild birds

Population indices for wild birds are a framework indicator for sustainable development. The data published here are based on those published in the Wild Bird Populations statistics release (Defra, January 2011), rescaled here to give year 2000 = 100 instead of year 1970 = 100. Further data and analysis about populations of wild birds are in Defra Wildlife KeyFacts.

The index for woodland specialists was recalculated in 2007 to include 4 additional species; this affected the indices for total woodland birds and (to a lesser extent) all birds.

Woodland vegetation

This indicator, which shows the overall condition and richness of flora in woodland, is derived from data collected by the Countryside Survey in 2007 (not National Statistics) and previous surveys in 1998 and 1990. Results were published in late 2008.

No similar samples were taken in the Northern Ireland Countryside Survey.

11.6 Sources: Public Opinion of Forestry

Background

The Forestry Commission has conducted similar biennial surveys of public attitudes to forestry and forestry-related issues since 1995. Three separate surveys were undertaken in 2011; in Scotland, Wales and across the UK as a whole. A survey for Northern Ireland was carried out in 2010.

Some questions were asked in all of the surveys conducted in 2011/2010 and in the surveys undertaken in earlier years, but an increasing number are survey specific. Questions are asked on a variety of topics including, public awareness of forestry, woodland-based recreation and community involvement, woodfuel and the relationship between forestry and climate change.

Methodology

The survey results were obtained by placing questions in omnibus surveys run by private market research companies. The four surveys undertaken in 2011/2010 achieved representative samples of around:

- 2,000 adults across the UK
- 1,000 adults across Scotland
- 1,000 adults across Wales
- 1,000 adults across Northern Ireland

All results are subject to the effects of chance in sampling, so a range of uncertainty (confidence interval) is associated with results from the surveys. The confidence intervals take into account the effect of clustering, weighting and stratification in the survey designs. For questions asked to the whole UK sample of 2,000, the range of uncertainty around any result should be no more than ±3.2%, while for questions asked to 1,000 respondents, the corresponding range of uncertainty should be no more than ± 4.6%.

Revisions

Results from the Public Opinion of Forestry Surveys are not normally revised.

Reporting

Reports for UK and England (using a subset of the UK data set), for Scotland and for Wales were published in July 2011, along with the full sets of data tables.

A summary report for Northern Ireland was published in March 2010, along with the full set of data tables.

Reports and data tables are available on the Forestry Commission website.

11.7 Sources: Recreation

Visitor Monitoring

There are two main approaches to visitor monitoring:

- General population surveys of individuals at their home. This approach is employed for the Scottish Recreation Survey, the Welsh Outdoor Recreation Survey, the Monitor of Engagement with the Natural Environment (England) and the Public Opinion of Forestry surveys (Tables 6.1 to 6.7).
- Surveying and counting of visitors to a specific area or woodland. On site surveying has been employed for the All Forest Monitoring and Quality of Experience surveys. In addition, the Northern Ireland Forest Service keep records of visitors who pay an admission charge to their sites.

There are advantages and disadvantages to each approach, related to factors such as representativeness, feasibility and cost; each approach provides different types of information.

In general, on-site studies provide information on visitor interaction with local or specific woodland areas and include all categories of visitors to a site, regardless of their country of residence and interests.

In contrast, general population studies are limited to residents of a certain country or area, are often carried out by market research companies at a national level, and include people who do not visit woodlands.

Household surveys

The information shown in Table 6.1 has been obtained from the following general population household surveys.

- UK Day Visits Surveys (1994, 1996, 1998)
- GB Day Visits Survey (2002/3)
- Scottish Recreation Survey (2003 onwards)
- England Leisure Visits Survey (2005)
- Welsh Outdoor Recreation Survey 2008
- Monitor of Engagement with the Natural Environment (England 2009/10 onwards)

It is notable from table 6.1 that different surveys have provided some quite different estimates of the aggregate number of visits to woodlands. It is likely that differences in survey design and methodology have contributed to a considerable proportion of the differences in results between these surveys. As the scope of the surveys has evolved over time, the figures in Table 6.1 should not be interpreted as time trends but instead as separate results from each survey.

For England and GB, the 2002/3 GBDVS showed a lower number of visits to woodlands than previous surveys. For England, ELVS 2005 showed an even lower total. It is likely that the use of different market research companies and varying approaches and practices (in-home or telephone interview, changed questionnaire structure, etc) are responsible for a substantial proportion of the differences identified in the table. The questionnaire wording for MENE, starting in 2009/10, was intended to prompt the reporting of more of the short local trips, and this has resulted in a substantial increase in the total woodland visits reported.

Table 6.1 also highlights large differences between UK/GBDVS and later surveys in the estimates for Scotland and Wales, although in contrast to the England and GB results, the Scottish and Welsh results are dramatically higher in recent years (and despite the Welsh figure being limited to trips with woodland as main destination). It is again likely that this variation is primarily connected with the change in survey scope, design and methodology (UK and GB Day Visit Surveys until 2002/3, Scottish Recreation Survey for 2004 onwards, Welsh Outdoor Recreation Survey 2008).

In common with all sample based surveys, the results from each survey are subject to the effects of chance, depending on the particular survey method used and the sample achieved, thus confidence limits apply to all results from these surveys. For example, the range of uncertainty around the estimated 62 million visits to woodland in Scotland (by Scottish residents) in 2008, should be within +/-14%, i.e. the true figure is likely to be between around 55 and 69 million.

In the Scottish Recreation Survey, the reports produced by TNS calculate the total number of visits for each month based on the average number of visits in a 4-week recall period, scaled up to the number of days in the month, applied to the Scottish adult population. These estimates are then allocated to trip locations using a data set of individual visit-weighted data. In reports produced by TNS and previous editions of Forestry Statistics, this allocation was done for each quarter using rounded percentages. From Forestry Statistics 2010 the calculation was changed to use annual unrounded weighted data; this should be more accurate and ensures that "main destination" results add across categories.

The Wales 2008 total is not shown explicitly in the initial reports for WORS 2008. It is calculated from the following figures in the tables: 36.028 million visits in 4 weeks x 13 x 14% to woodland (where the 14% is derived, unrounded, from 820/6045 in the weighted results).

For England, MENE 2009/10 and 2010/11, woodland visits were identified in the part of the questionnaire that collected details for one visit per respondent. Appropriate visit weights were applied to each record in this data set, and weighted tables were then produced selecting all visits that included woodland.

Comparison with on-site survey - Scotland

The aggregate visit number estimate for Forestry Commission Scotland woodland obtained from the on site All Forests Scotland survey (8.2 million, table 6.9) is substantially lower than the corresponding estimates derived from the Scottish Recreation Survey (around 30 million for 2006-2007, table 6.3).

Although it would be unreasonable to expect that two surveys which employ such differing methods would produce consistent estimates, the magnitude of the difference is notable.

Public Access to Woodland

Data on public access to woodland are derived from sources belonging to the Woodland Trust:

- The Woods for People project created an inventory of accessible woodland in 2004. Annual updates have been undertaken since and are included in table 6.13.
- The Space for People project analyses information from the Woodlands for People inventory to produce estimates on the proportion of the population who live close to woods. Full reports have been published for 2004 and 2009. Summary results are in table 6.14.

Facilities and Activities

Information on the numbers of facilities and activities present at Forestry Commission sites are taken from the recreation listings on the Forestry Commission website. A small number of facilities are double counted as they appear more than once on the database used for the website.

Revisions

Recreation statistics are not normally revised.

When originally published by Woodland Trust, Woods for People data for publicly accessible woodland in 2004 included some non-woodland areas. They were revised in 2007, before their first inclusion in Forestry Statistics, to include woodland areas only.

Results for the Scottish Recreation Survey for years up to 2007 (tables 6.1, 6.3 and 6.4) were amended in 2009 from previously published figures, to incorporate improved weighting procedures.

The calculation of woodland visit numbers from the Scottish Recreation Survey (table 6.3) was refined in 2010 to use annual unrounded weighted data rather than rounded percentages.

11.8 Sources: Employment and businesses

Statistics on employment are obtained from:

- Annual Business Survey, formerly Annual Business Inquiry, (Office for National Statistics) - an annual survey of UK businesses,
- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations (UK Forest Products Association, Wood Panel Industries Federation) - for employment in primary wood processing, and
- Forest Employment Survey - a Forestry Commission survey of forestry and primary wood processing businesses in Great Britain, last run in 1998/9.

Statistics for accidents to employees are obtained from Health & Safety Executive statistics for Great Britain.

Numbers of businesses are estimated from:

- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations (UK Forest Products Association, Wood Panel Industries Federation) - for businesses believed to be using UK-grown roundwood, and
- UK Business: Activity, Size and Location (Office for National Statistics) - for VAT and/ or PAYE registered businesses. This replaces the data on Business Start-ups and closures: VAT registrations and de-registrations (used in Forestry Statistics 2009 and earlier editions) that has been discontinued.

Standard Industrial Classification (SIC)

The Annual Business Survey/ Annual Business Inquiry and statistics on VAT and/ or PAYE registrations classify businesses by UK Standard Industrial Classification (SIC) code. Businesses are classified to SIC codes according to their main activity. The SIC codes are revised periodically to take account of changes in the global economy. The following codes from SIC 2003 (for 2007 data and earlier) and SIC 2007 (for 2008 data onwards) have been used in this edition of Forestry Statistics:

Standard Industrial Classification

Title	SIC 2003	SIC 2007
Forestry	02 (forestry, logging & related services)	02 (forestry and logging)
Wood products	20 (manufacture of wood and wood products)	16 (manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw ans plaiting materials)

Sawmilling	20.1 (sawmilling and planing of wood, impregnation of wood)	16.1 (sawmilling and planing of wood)
Panels	20.2 (manufacture of veneer sheets, manufacture of plywood, laminboard, particleboard and other panels and boards)	16.21 (manufacture of veneer sheets and woodbased panels);
Secondary products	Other SIC 20 (manufacture of builders' carpentry and joinery, wooden containers, and other products of wood, straw and plaiting materials)	Other SIC 16 (manufacture of assembled parquet floors, other builders' carpentry and joinery, wooden containers, and other products of wood, straw and plaiting materials)
Pulp, paper & paper products	21 (manufacture of pulp, paper and paperboard).	17 (manufacture of paper and paper products)
Pulp & paper	21.1 (manufacture of pulp, paper and paper products)	17.1 (manufacture of pulp, paper and paperboard)
Articles of paper & paperboard	21.2 (manufacture of articles of paper and paperboard)	17.2 (manufacture of articles of paper and paperboard)
Total wood processing	SIC 20 + SIC 21	SIC 16 + SIC 17
Total primary wood processing	SIC 20.1 + SIC 20.2 + SIC 21.1	SIC 16.1 + SIC 16.21 + SIC 17.1

In addition figure 7.1, covering accidents to employees, also uses the following SIC 2003 codes:

- Agriculture etc: 01 (agriculture, hunting) + 02 (forestry, logging & related services) + 05 (fishing, exc sea fishing);
- Manufacturing: 15-37 (all categories of manufacturing) .

Coherence

The forestry and wood processing businesses covered by the Annual Business Survey (table 7.1), accidents to employees (table 7.6) and VAT and/ or PAYE registered businesses (table 7.8) differ from those covered by the timber industry surveys and enquiries (chapter 2, table 7.2 and table 7.7), as follows:

- Businesses below VAT and PAYE thresholds are excluded from the SIC-based statistics;
- businesses whose main activity is not forestry or wood processing will be allocated to other SIC codes and therefore excluded from the relevant tables on the Annual Business Survey,

accidents and VAT and/ or PAYE businesses;

- businesses that do not use UK grown roundwood are excluded from the Forestry Commission's timber industry surveys and enquiries;
- businesses involved in secondary wood processing are excluded from the Forestry Commission's timber industry surveys and enquiries.

Revisions

Statistics on employment and businesses obtained from others are subject to revision whenever the source data are revised. Statistics from timber industry surveys and enquiries are subject to revision whenever the timber statistics are revised.

11.9 Sources: Finance & prices

Timber prices

The Coniferous Standing Sales Price Index measures the average price received per cubic metre of standing sales timber from Forestry Commission sales. The index is expressed in real terms (2006 prices), and is adjusted for timber size mix using the Fisher method with 5 yearly chain-linking. The index is constructed using data obtained from administrative records held by the Forestry Commission.

The Softwood Sawlog Price Index measures the average price received per cubic metre of sawlogs from Forestry Commission sales. The index is constructed using data obtained from administrative records held by the Forestry Commission.

The GDP market prices deflator (published quarterly by the Office for National Statistics) is used to convert the figures to real prices (September 2006 base).

The Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index are published twice yearly (in May and November) in the First Release 'Timber Price Indices', covering the year to 31 March and the year to 30 September for standing sales and the six month periods to 31 March and to 30 September for logs.

The methodology used to calculate the Coniferous Standing Sales Price Index was reviewed in 2008, with a new method introduced from the November 2008 'Timber Price Indices' publication. Further details on this change are available in the paper Methodology for the Coniferous Standing Sales Index.

Longer time series data, showing the underlying figures used in constructing the timber price indices, are available from the Timber Price Indices web page.

For further information, see the quality report on Timber Price Indices.

Financial returns

Estimates of financial returns from commercial Sitka spruce plantations are compiled and published by Investment Property Databank Limited (IPD). The returns include changes in the value of forestry estates, as well as timber price changes.

Gross Value Added

Statistics on gross value added (GVA) are obtained from the Annual Business Survey, formerly the Annual Business Inquiry, (Office for National Statistics), an annual survey of UK businesses. The Annual Business Survey uses the UK Standard Industrial Classification (SIC) to classify businesses to industries according to their main activity. For further information on the SIC codes used, see the previous page (Sources: Employment and businesses).

Government expenditure

Information about government expenditure on forestry is obtained from administrative records held by the Forestry Commission. More detailed financial data for the Forestry Commission are published annually in the Annual Report & Accounts produced by National Offices.

Data on grant expenditure are obtained from administrative records for woodland grant schemes across GB.

Revisions

Price indices in nominal terms are not normally revised, but price indices in real terms are subject to revision when the GDP deflator is revised by the Office for National Statistics.

Data on financial returns from forestry are not normally revised.

Data on Gross Value Added (GVA) are subject to revision whenever Annual Business Survey data are revised by the Office for National Statistics.

Data on Government expenditure are not normally revised, but may be subject to revision if revisions are made to the Forestry Commission's financial accounts. Figures for earlier years, shown in tables 8.4 and 8.5 have been revised from Forestry Statistics 2010 to include expenditure on restocking and forest roads in Scotland, that was incorrectly excluded from the figures previously published.

11.10 Sources: International Forestry

Background

International data on forest area and carbon stocks are obtained from the Global Forest Resources Assessment (FRA) 2010, compiled by the United Nations Food and Agriculture Organisation (FAO). The information in Table 9.1 uses forest area from FRA 2010, excluding 'other wooded land'; for the UK, this is very similar to the definition of 'woodland' used in other tables.

International data on production, imports and exports are obtained from the United Nations Food and Agriculture Organisation (FAO). Data are collected via the Joint Forest Sector Questionnaire for FAO and other international organisations and published in the online FAOSTAT database.

Data on apparent consumption is derived as production plus imports less exports.

Copies of the UK data provided to international organisations in the FRA and in the Joint Forest Sector Questionnaire are available from the international returns page on the Forestry Commission website.

Revisions

International statistics compiled from FRA are not subject to revision after publication.

International statistics compiled from FAOSTAT may be subject to revision after publication if revisions are made to the data produced by individual countries.

Reporting

Statistics reported for each year are available at a regional level. Further data (including data for individual countries) are also available from the original sources.