Forestry Commission

Forestry Statistics 2014

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

Contents

0 Introduction

Forestry Statistics is a compilation of statistics on 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 Natural Resources Wales and 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 some parts of the UK, and these tables are labelled accordingly.

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 "outside the scope of 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. The following tables and charts are not designated as National Statistics:

- Table 1.2: Woodland area in the UK (time series);
- Tables 1.6 to 1.11, figures 1.3 to 1.4b: National Forest Inventory;
- Table 1.15: Felling licences;
- Tables 1.16a and 1.16b: Statutory Plant Health Notices;
- Table 2.4a: Softwood availability forecasts;
  Table 2.4b: Hardwood availability forecasts;
- Tables 4.1 to 4.3b, Figures 4.2 to 4.4: UK forests and climate change;
- Table 5.2: Vegetation richness and condition scores;
- Figure 5.2: Tree health;
- Tables 5.3a and 5.3b: Woodland fires;
- Tables 6.1 to 6.12, Figure 6.1: Recreation;
- Table 8.2, figure 8.2: IPD UK Forestry Index;
- Tables 9.1 to 9.6, Figures 9.1 to 9.7: International forestry.

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 from the Tables for download page. 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 provided in "Forestry Facts and Figures 2014", available at www.forestry.gov.uk/forestry/infd-7aqf6j

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

A National Statistics publication

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

For more information about National Statistics and the UK Statistics Authority visit: www.statisticsauthority.gov.uk

Forestry Commission's statistical release practices

The Forestry Commission aims to release statistics as soon as they are available. All of our National Statistics and other Official Statistics publications are available on our website www.forestry.gov.uk/statistics. Release dates are published on our website for the year ahead. Publications are made available at 9.30 am on the day of release.

Forestry Commission's 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 at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf 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 at www.forestry.gov.uk/forestry/infd-7zhk85

Release date: 25 September 2014
Coverage: United Kingdom
Geographical breakdown: Country (where possible)

Issued by: Economics and Statistics, Forestry Commission, 231 Corstorphine Road, Edinburgh, EH12 7AT
Enquiries: Jackie Watson 0300 067 5238 statistics@forestry.gsi.gov.uk
Statistician: Sheila Ward 0300 067 5236
Website: www.forestry.gov.uk/statistics

1 Woodland Areas and Planting

Introduction

This chapter contains statistics on:

- UK woodland area;
- certified woodland area;
- areas of new planting and restocking; and
- felling.

Estimates for England, Wales, Scotland and Northern Ireland are included in addition to UK totals. International comparisons are provided in the International Forestry chapter. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Figures on woodland area and certified woodland area at March 2014 and on new planting and restocking for the period 2013-14 were previously published in "Woodland Area, Planting and Restocking: 2013 edition", released on 12 June 2014. Some figures for the latest year previous years have been revised from those previously published. For information on these revisions, see the Woodland Areas and Planting section of the Sources chapter.

A copy of all woodland area and planting tables is available to download as an Excel spreadsheet from the Tables for Download page. Longer time series are also available for some tables. These can be accessed from our Woodland Area and Planting Statistics web page at www.forestry.gov.uk/forestry/infd-7aqknx.

Key findings

The main findings are:

- The area of woodland in the UK at 31 March 2014 is estimated to be 3.1 million hectares. This represents 13% of the total land area in the UK, 10% in England, 15% in Wales, 18% in Scotland and 8% in Northern Ireland.
- Of the total UK woodland area, 0.9 million hectares is owned or managed by the Forestry Commission (in England and Scotland), Natural Resources Wales (in Wales) or the Forest Service (in Northern Ireland).
- The total certified woodland area in the UK at 31 March 2014 is 1.4 million hectares, including all Forestry Commission/Natural Resources Wales/Forest Service woodland. Overall, 44% of the UK woodland area is certified.
- Thirteen thousand hectares of new woodland were created in the UK in 2013-14, mostly with broadleaved species.
- Sixteen thousand hectares of woodland were restocked in the UK in 2013-14, mostly with conifers.
- A total of 575 sites were served with a Statutory Plant Health Notice in 2013-14, requiring a total of 4.8 thousand hectares of woodland to be felled.

1.1 Woodland Area

Woodland is defined in UK forestry statistics as land under stands of trees with a canopy cover of at least 20% (25% in Northern Ireland), or having the potential to achieve this. The definition relates to land use, rather than land cover, so integral open space and felled areas that are awaiting restocking are included as woodland. Further information, including how this UK definition compares with the international definition of woodland, is provided in the Sources chapter.

Statistics on woodland area are used to inform government policy and resource allocation, to provide context to UK forestry and land management issues and are reported to international organisations. They are also used in the compilation of natural capital accounts.

Increases in woodland area result from the creation of new woodland. This can be achieved through new planting or by natural colonisation of trees on land near existing woodland. Further information is available in the section on New Planting.

Decreases in woodland area result from the conversion of woodland to other land uses. Regulatory approval is usually required before trees can be felled. Felling approval will normally require the area to be restocked, but there are some cases in which trees may be permanently removed, generally for environmental reasons. The permanent removal of trees may also be authorised under planning regulations, to enable development.

Most public sector woodland is owned and managed by the Forestry Commission (FC) in England and Scotland, Natural Resources Wales (NRW) in Wales and the Forest Service (FS) in Northern Ireland. Other public sector woodland (e.g. owned by local authorities) are included with privately owned woodland as “private sector” in this release.

The Natural Resources Wales woodland areas and land areas shown in this release relate to areas previously owned or managed by Forestry Commission Wales. They exclude any areas previously owned or managed by other parts of Natural Resources Wales, such as the former Environment Agency Wales and the former Countryside Council for Wales.

1.1.1 Area of Woodland: 2014

The area of woodland in the UK at 31 March 2014 is 3.1 million hectares (Table 1.1). Of this total, 1.4 million hectares (45%) is in Scotland, 1.3 million hectares (41%) is in England, 0.3 million hectares (10%) is in Wales and 0.1 million hectares (4%) is in Northern Ireland.

Conifers account for around one half (51%) of the UK woodland area, although this proportion varies from around one quarter (26%) in England to around three quarters (74%) in Scotland.

Table 1.1 Area of woodland[1] by ownership & forest type at 31 March 2014

Forest type and ownership	England	Wales	Scotland	Northern Ireland[2]	UK
					thousand hectares
Conifers					
FC/NRW/FS woodland	151	98	438	56	742
Private sector woodland	188	53	614	11	866
Total	**339**	**151**	**1 051**	**66**	**1 608**
Broadleaves[3]					
FC/NRW/FS woodland	64	19	39	6	129
Private sector woodland	899	136	328	39	1 402
Total	**962**	**156**	**368**	**45**	**1 531**
Total					
FC/NRW/FS woodland	215	117	477	62	870
Private sector woodland	1 087	189	942	50	2 268
Total	**1 302**	**306**	**1 419**	**111**	**3 138**

Source: Forestry Commission, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:

1. Figures for England, Wales and Scotland are based on 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.

2. Figures for Northern Ireland are obtained from the Northern Ireland Woodland Register.

3. Broadleaves include coppice and coppice with standards.

1.1.2 Area of woodland: changes over time

The 3.1 million hectares of woodland in the UK in 2014 represents 13% of the total land area. This comprises 10% in England, 15% in Wales, 18% in Scotland and 8% in Northern Ireland (Table 1.2).

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
2014[3,4]	1 302	10.0	306	14.8	1 419	18.2	111	8.2	3 138	12.9

Source: Forestry Commission, Natural Resources Wales, Forest Service, Nationa Forest Inventory.

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 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.

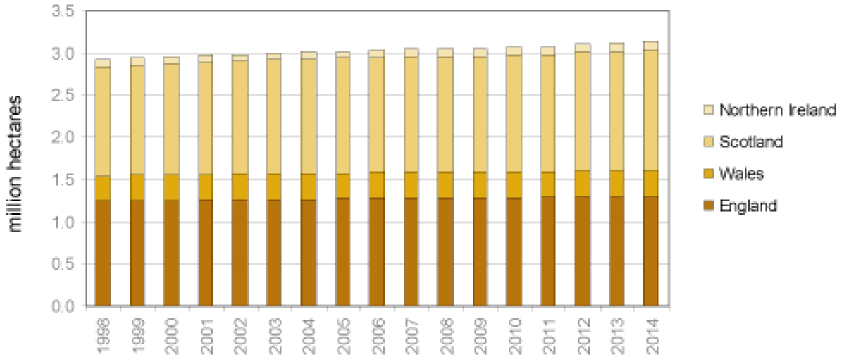
4. Figures for Northern Ireland are obtained from the Northern Ireland Woodland Register.

.. Denotes data not available.

These figures are outside the scope of National Statistics

Figure 1.1 shows woodland area by country since 1998. Figures for 1998 to 2009 for England, Wales and Scotland have been revised from those initially published, to produce results that are consistent with the National Forest Inventory and enable comparisons over time. The chart indicates that the UK woodland area has risen by around 220 thousand hectares since 1998, an increase of 7% over the period.

Figure 1.1 Area of woodland, 1998-2014



Source: Forestry Commission, Natural Resources Wales, Forest Service, National Forest Inventory.

These figures are outside the scope of National Statistics

1.1.3 Woodland area by ownership

The Forestry Commission, Natural Resources Wales and the Forest Service owned or managed 28% of the total woodland area in the UK in 2014 (Table 1.3). This proportion ranged from 16% of the woodland area in England to 55% in Northern Ireland.

Table 1.3 Area of woodland[1] in the UK by ownership, 2010-2014

Ownership	England	Wales	Scotland	Northern Ireland[2]	UK
					thousand hectares
FC / NRW / FS woodland					
2010	213	115	478	61	868
2011	213	115	479	61	869
2012	214	117	481	62	874
2013	214	117	481	62	874
2014	215	117	477	62	870
Private sector woodland					
2010	1 076	188	900	27	2 191
2011	1 079	189	904	27	2 199
2012	1 083	188	922	44	2 236
2013	1 084	188	930	49	2 252
2014	1 087	189	942	50	2 268
Total woodland					
2010	1 290	303	1 378	88	3 059
2011	1 292	304	1 383	88	3 067
2012	1 298	305	1 403	105	3 110
2013	1 298	305	1 411	111	3 125
2014	1 302	306	1 419	111	3 138

Source: Forestry Commission, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:
1. Figures for England, Wales and Scotland are based on 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.

2. Northern Ireland figures since 2012 are obtained from the Northern Ireland Woodland Register.

1.2 Certified woodland area

Certified woodland in the UK has been independently audited against the UK Woodland Assurance Standard. Forestry certification schemes are owned by international non-governmental organisations and exist to promote good forest practice. They offer product labels to demonstrate that wood or wood products come from well-managed forests.

Figures for certified woodland areas are often used as an indicator of sustainable forest management. However, it should be noted that woodland that is not certified may also be managed sustainably.

Most changes to the certified woodland area figures over time are a result of new areas being certified or certificates not being renewed upon expiry. Temporary changes can also occur if there is a time lag between expiry and renewal.

1.4 million hectares of woodland in the UK were certified in March 2014 (Table 1.4). This represented 44% of the total UK woodland area, 27% in England, 46% in Wales, 58% in Scotland and 58% in Northern Ireland.

Table 1.4 Woodland area certified[1,2], March 2014

Ownership	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
FC/NRW/FS woodland[3]	215	117	477	62	870
Private sector woodland	135	24	344	3	506
Total woodland area certified	**349**	**141**	**822**	**65**	**1 377**

Source: Forest Stewardship Council, Forestry Commission, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:

1. All certified woodland in 2014 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.

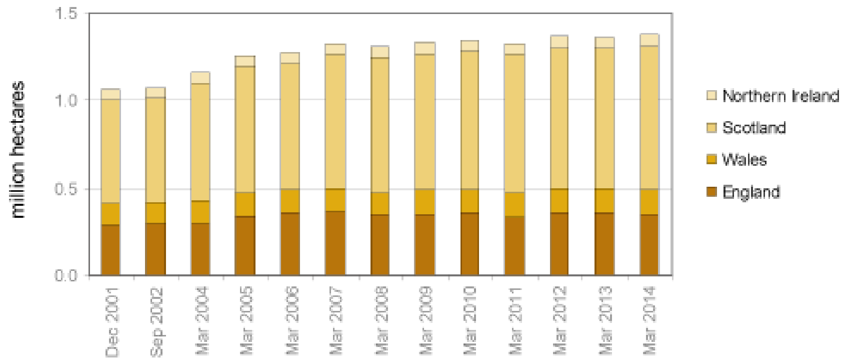
2. The estimates are based on UK data published by FSC, supplemented by data from individual certificates and other sources. Where possible, figures are for the woodland area certified, rather than the land area certified.

3. All FC/NRW/FS woodland is certified. The FC/NRW/FS areas are the latest areas, as shown in Table 1.1, rather than the areas shown on the certificates.

Data: Longer time series of the above table are available from the Woodland Statistics *web page.*

Figure 1.2 presents certified woodland area by country since December 2001, with figures for earlier years revised for consistency with results from the National Forest Inventory. This shows an increase in certified woodland area of over 300 thousand hectares (30%) since December 2001.

Figure 1.2 Area of certified woodland, 2001-2014



Source: Forest Stewardship Council, Forestry Commission, Natural Resources Wales, Forest Service.

Figures showing volumes of certified timber and Chain of Custody certificates are provided in tables 2.28 and 2.29.

1.3 Land use

Not all land that is owned or managed by the Forestry Commission, Natural Resources Wales or the Forest Service in Northern Ireland is woodland; other land uses include agricultural land and mountain areas and moorland.

The Natural Resources Wales woodland areas and land areas shown relate to areas previously owned or managed by Forestry Commission Wales. They exclude any areas previously owned or managed by other parts of Natural Resources Wales, such as the former Environment Agency Wales and the former Countryside Council for Wales.

Woodland accounted for 79% of all Forestry Commission/Natural Resources Wales/Forest Service land in the UK in 2014 (Table 1.5). This proportion was highest in Wales (94%) and lowest in Scotland (74%).

Table 1.5 Land use of the FC, NRW and FS, 2010-2014

Year (ending 31/3)	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
Woodland					
2010	213	115	478	61	868
2011	213	115	479	61	869
2012	214	117	481	62	874
2013	214	117	481	62	874
2014	215	117	477	62	870
Other land[1]					
2010	43	9	182	14	249
2011	40	9	175	14	239
2012	38	7	170	14	229
2013	38	7	171	14	230
2014	38	7	170	14	228
Total FC/NRW/FS land area					
2010	257	124	660	75	1 116
2011	254	124	654	75	1 108
2012	253	124	651	75	1 103
2013	253	124	652	75	1 104
2014	253	124	647	75	1 099

Source: Forestry Commission, Natural Resources Wales, Forest Service.

Notes:

1. *"Other land" includes agricultural land and areas of moorland and mountain.*

1.4 National Forest Inventory

This section contains interim results from the National Forest Inventory (NFI). The statistics are based on field survey data combined with information from the NFI woodland map, which is a spatial representation of woodland areas in Great Britain.

The first cycle of the NFI field survey began in 2010 and will be completed in 2015. Therefore full field survey results from the NFI are not yet available. The figures presented in this chapter are interim estimates at 31 March 2012, published in the NFI "50-year forecast of softwood timber availability" and "50-year forecast of hardwood timber availability" reports, released in April 2014. Both reports are available at www.forestry.gov.uk/inventory.

The figures presented in Tables 1.6 to 1.9 (and Figures 1.3, 1.4a and 1.4b) relate to stocked areas. These differ from the woodland areas presented in earlier tables, as stocked areas exclude felled areas and (for non-FC land) areas of integral open space.

The figures on growing stock presented in Tables 1.10 and 1.11 form the basis for the Forestry Commission's availability forecasts (see Tables 2.4a and 2.4b).

Further information on the National Forest Inventory is available at www.forestry.gov.uk/inventory

1.4.1 Woodland area by age: conifers

Table 1.6 presents the area of conifers, broken down by age class, ownership and country.

Sixty-one percent of the coniferous woodland area in Great Britain was occupied by stands of 40 years old or younger (Table 1.6). A further 9% of stands were aged over 60 years.

Table 1.6 Stocked woodland area in GB by ownership and age class: Conifers

Age class (years)	England	Wales	Scotland	GB
				thousand hectares
FC				
0-20	33	24	76	134
21-40	38	25	145	208
41-60	39	25	111	176
61-80	12	7	25	44
81-100	4	1	6	11
100+	1	0	3	4
All age classes	**128**	**82**	**367**	**576**
Private sector				
0-20	17	8	126	151
21-40	54	22	231	306
41-60	83	15	116	214
61-80	19	1	18	38
81-100	3	2	6	11
100+	3	1	9	12
All age classes	**179**	**47**	**505**	**732**
Total				
0-20	51	32	202	285
21-40	92	46	376	514
41-60	123	39	227	389
61-80	31	8	43	82
81-100	7	2	12	22
100+	3	1	12	16
All age classes	**307**	**129**	**872**	**1 308**

Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014).

Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

1.4.2 Woodland area by age: broadleaves

Table 1.7 presents the area of broadleaves, broken down by age class, ownership and country.

Around one half (53%) of the broadleaved area was occupied by stands of 40 years old or younger (Table 1.7). More than one quarter (28%) of stands were aged over 60 years.

Table 1.7 Stocked woodland area in GB by ownership and age class: Broadleaves

Age class (years)	England	Wales	Scotland	GB
				thousand hectares
FC				
0-20	8	7	11	25
21-40	6	2	5	13
41-60	13	2	4	19
61-80	13	2	4	19
81-100	4	1	2	7
100+	10	3	5	18
All age classes	**54**	**16**	**32**	**102**
Private sector				
0-20	217	30	84	332
21-40	227	33	84	344
41-60	145	22	58	225
61-80	117	15	22	154
81-100	92	11	9	112
100+	51	10	7	67
All age classes	**849**	**121**	**265**	**1 235**
Total				
0-20	225	37	95	357
21-40	232	36	90	357
41-60	157	24	63	244
61-80	130	17	26	173
81-100	97	12	11	119
100+	61	12	12	85
All age classes	**902**	**137**	**297**	**1 337**

Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014), (supporting data).

Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

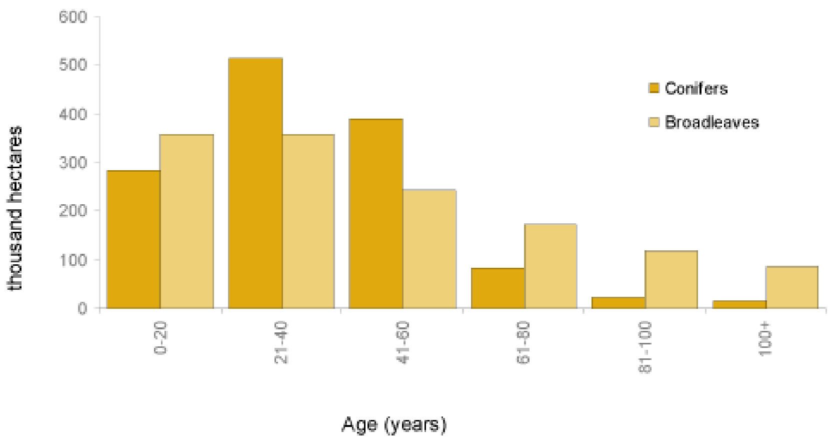
2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

1.4.3 Woodland area by age: Summary

Figure 1.3 presents the age profile of woodland in Great Britain for conifers and for broadleaves. It shows that broadleaves are more evenly distributed across the age classes than conifers.

Figure 1.3 Age profile of woodland in GB



Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014). National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014).

Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

1.4.4 Woodland area by species: conifers

Table 1.8 presents the area of conifers, broken down by principal species, ownership and country.

Sitka spruce accounts for around one half (51%) of the conifer area in Great Britain (Table 1.8), followed by Scots pine (17%) and Larches (10%). Sitka spruce is less dominant in England, accounting for just one quarter (26%) of the conifer area there.

Table 1.8 Stocked woodland area in GB by ownership and principal species: Conifers

Principal species	England	Wales	Scotland	GB
				thousand hectares
FC				
Sitka spruce	49	50	225	323
Scots pine	17	2	45	64
Corsican pine	27	2	2	30
Norway spruce	7	5	11	23
Larches	10	12	26	48
Douglas fir	10	5	5	20
Lodgepole pine	4	3	49	56
Other conifers	5	3	3	11
All conifers	**128**	**82**	**367**	**576**
Private sector				
Sitka spruce	32	27	282	341
Scots pine	45	1	109	154
Corsican pine	14	0	1	15
Norway spruce	21	3	15	38
Larches	30	8	39	78
Douglas fir	15	3	7	25
Lodgepole pine	3	1	39	44
Other conifers	19	2	8	29
All conifers	**179**	**47**	**505**	**732**
Total				
Sitka spruce	80	77	507	665
Scots pine	61	3	154	218
Corsican pine	40	2	3	46
Norway spruce	27	8	25	61
Larches	40	20	66	126
Douglas fir	25	9	12	46
Lodgepole pine	8	4	88	100
Other conifers	24	5	11	40
All conifers	**307**	**129**	**872**	**1 308**

Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014).

Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

1.4.5 Woodland area by species: broadleaves

Table 1.9 presents the area of broadleaves, broken down by principal species, ownership and country.

The most commonly occurring broadleaved species in Great Britain are Birch (accounting for 18% of broadleaf woodland), Oak (16%) and Ash (12%) (Table 1.9). Birch is more dominant in Scotland, accounting for 43% of the broadleaf area there.

Table 1.9 Stocked woodland area in GB by ownership and principal species: Broadleaves

Principal species	England	Wales	Scotland	GB
				thousand hectares
FC				
Oak	16	3	3	21
Beech	13	2	1	15
Sycamore	1	0	0	2
Ash	3	1	0	4
Birch	6	2	11	19
Sweet chestnut	1	0	0	1
Hazel	0	0	0	1
Hawthorn	0	0	0	0
Alder	1	0	1	1
Willow	0	0	0	0
Other broadleaves	14	9	15	38
All broadleaves	**54**	**16**	**32**	**102**
Private sector				
Oak	151	23	23	198
Beech	59	5	15	78
Sycamore	74	9	21	105
Ash	120	18	15	153
Birch	90	11	116	217
Sweet chestnut	28	0	0	28
Hazel	64	14	8	86
Hawthorn	57	8	8	73
Alder	30	10	16	56
Willow	41	11	13	65
Other broadleaves	133	12	29	174
All broadleaves	**849**	**121**	**265**	**1 235**
Total				
Oak	167	26	26	219
Beech	72	6	15	94
Sycamore	75	9	22	106
Ash	123	19	16	157
Birch	96	12	128	236
Sweet chestnut	28	0	0	29
Hazel	65	14	8	87
Hawthorn	57	8	8	73

Alder	31	10	17	58
Willow	41	11	13	65
Other broadleaves	146	21	44	212
All broadleaves	**902**	**137**	**297**	**1 337**

Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014).

Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

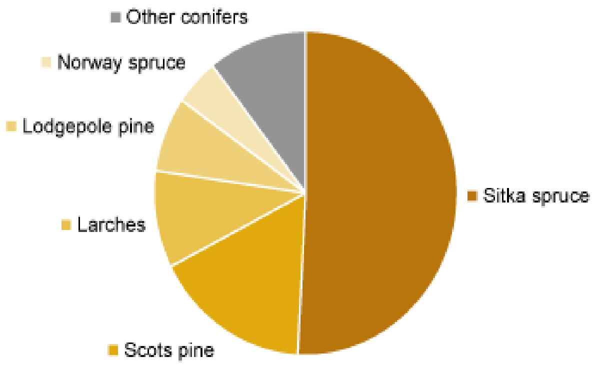
2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

1.4.6 Woodland area by species: summary

Figures 1.4a and 1.4b show that, whilst the conifer area is dominated by a small number of species (Sitka spruce and Scots pine together account for around two thirds of the conifer area), broadleaves are more varied.

Figure 1.4a Principal tree species in GB by stocked area: Conifers



Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014).

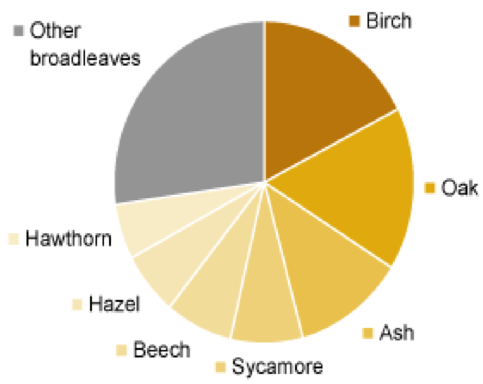
Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

Figure 1.4b Principal tree species in GB by stocked area: Broadleaves



Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014).

Notes:

1. Stocked area only: excludes felled areas and (for private sector land) open space.

2. Areas at 31 March 2012.

These figures are outside the scope of National Statistics

1.4.7 Growing stock by species: conifers

Growing stock is the volume of timber in living trees. It is also often referred to as the standing volume.

Table 1.10 presents the volume of coniferous growing stock, broken down by principal species, ownership and country.

The total volume of coniferous growing stock in Great Britain was 355 million m^3 overbark standing (Table 1.10).

Sitka spruce accounts for around one half (51%) of the conifer growing stock, followed by Scots pine (15%) and Larches (10%). This largely reflects the distribution of species by area (see Table 1.8).

Table 1.10 Growing stock in GB by ownership and principal species: Conifers

Principal species	England	Wales	Scotland	GB
				million cubic metres overbark standing
FC				
Sitka spruce	8.9	11.1	52.1	72.0
Scots pine	4.0	0.5	8.8	13.3
Corsican pine	5.5	0.6	0.4	6.4
Norway spruce	1.7	1.5	3.5	6.7
Larches	1.7	2.7	4.8	9.2
Douglas fir	2.7	1.3	1.4	5.4
Lodgepole pine	0.8	0.6	8.2	9.6
Other conifers	1.5	1.1	1.0	3.6
All conifers	**26.8**	**19.4**	**80.2**	**126.4**
Private sector				
Sitka spruce	11.4	9.5	88.0	108.9
Scots pine	14.7	0.3	24.5	39.4
Corsican pine	4.7	0.2	0.3	5.3
Norway spruce	7.1	1.3	5.9	14.4
Larches	10.7	3.3	12.3	26.3
Douglas fir	6.4	1.6	3.5	11.5
Lodgepole pine	1.0	0.3	7.4	8.7
Other conifers	7.6	1.1	3.0	11.7
All conifers	**63.7**	**17.9**	**146.7**	**228.4**
Total				
Sitka spruce	20.3	20.6	140.0	180.9
Scots pine	18.6	0.8	33.3	52.7
Corsican pine	10.2	0.8	0.7	11.7
Norway spruce	8.8	2.8	9.4	21.1
Larches	12.4	6.0	17.1	35.6
Douglas fir	9.1	2.9	4.9	16.9
Lodgepole pine	1.8	0.9	15.5	18.3
Other conifers	9.1	2.2	4.1	15.4
All conifers	**90.5**	**37.4**	**226.9**	**354.7**

Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014).

Notes:

1. *Areas at 31 March 2012.*

These figures are outside the scope of National Statistics

1.4.8 Growing stock by species: broadleaves

Table 1.11 presents the volume of broadleaved growing stock, broken down by principal species, ownership and country.

The total volume of broadleaved growing stock in Great Britain is 245 million m^3 overbark standing (Table 1.11).

Oak (28%), Ash (16%) and Beech (12%) accounted for the majority of the broadleaved volume. To some extent, this reflects the distribution of species by area (see Table 1.9).

Table 1.11 Growing stock in GB by ownership and principal species: Broadleaves

Principal species	England	Wales	Scotland	GB
				miilion cubic metres overbark standing
FC				
Oak	3.3	0.5	0.6	4.4
Beech	2.8	0.4	0.1	3.4
Sycamore	0.1	0.0	0.0	0.2
Ash	0.4	0.1	0.0	0.5
Birch	0.5	0.1	1.7	2.3
Sweet chestnut	0.1	0.0	0.0	0.1
Hazel	0.0	0.0	0.0	0.1
Hawthorn	0.0	0.0	0.0	0.0
Alder	0.1	0.0	0.1	0.2
Willow	0.0	0.0	0.0	0.0
Other broadleaves	1.3	0.8	1.2	3.3
All broadleaves	**8.7**	**1.9**	**3.9**	**14.5**
Private sector				
Oak	51.7	7.7	5.6	65.0
Beech	19.8	1.6	5.2	26.6
Sycamore	16.2	2.4	4.8	23.4
Ash	30.1	6.9	2.8	39.8
Birch	11.3	1.2	8.5	20.9
Sweet chestnut	7.7	0.2	0.0	7.9
Hazel	5.0	0.9	0.4	6.4
Hawthorn	2.8	0.4	0.3	3.4
Alder	6.8	2.1	1.9	10.8
Willow	4.9	0.8	0.9	6.5
Other broadleaves	16.0	1.1	2.6	19.6
All broadleaves	**172.3**	**25.4**	**32.9**	**230.6**
Total				
Oak	55.0	8.1	6.3	69.4
Beech	22.6	2.0	5.3	29.9
Sycamore	16.4	2.4	4.9	23.6
Ash	30.5	7.0	2.8	40.3
Birch	11.8	1.3	10.1	23.2
Sweet chestnut	7.8	0.2	0.0	8.0

Hazel	5.1	0.9	0.5	6.5
Hawthorn	2.8	0.4	0.3	3.4
Alder	6.9	2.2	1.9	11.0
Willow	4.9	0.8	0.9	6.5
Other broadleaves	17.2	1.8	3.8	22.9
All broadleaves	**181.0**	**27.3**	**36.8**	**245.1**

Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014).

Notes:

1. *Areas at 31 March 2012.*

These figures are outside the scope of National Statistics

1.5 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. Table 1.12 below shows the area of woodland on farms.

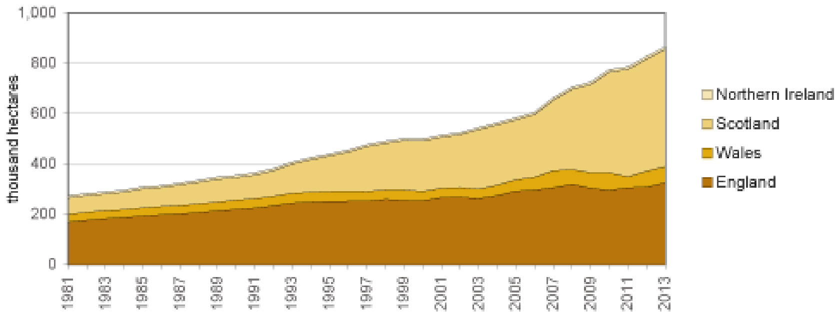
The area of farm woodland in the UK has increased from 563 thousand hectares in 2004 to 865 thousand hectares in 2013 (Table 1.12). Around one half (54%) of all farm woodland is in Scotland, with a further 38% in England, 7% in Wales and the remaining 1% in Northern Ireland.

Table 1.12 Area of farm woodland, 2004-2013

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
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	399.8	10.2	774.4
2011	304.9	44.2	426.1	10.8	785.9
2012	308.4	62.6	445.4	11.0	827.5
2013	324.9	63.4	466.8	10.3	865.4

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

Figure 1.5 Area of farm woodland, 1981-2013



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

1.6 New planting and restocking

New planting

New planting is the creation of new areas of woodland by planting trees on land that was not previously woodland. The statistics presented here also include new woodland that is created by natural colonisation of trees on land near existing woodland. Statistics on new planting are used to inform government policy and resource allocation, and are used in producing annual estimates of woodland area.

There are a number of factors that can affect the level of new planting in the UK. These include:

- choices by landowners reflecting their own motivation and needs;
- the costs and availability of land for conversion to woodland;
- the availability of grants for new planting, the level of grant payments available and the awareness of grants among potential recipients;
- the tax benefits available from owning woodland;
- expected future markets for wood products such as timber and woodfuel;
- income from payments for ecosystem services, particularly carbon storage;
- national and local initiatives, for example on biodiversity, green infrastructure and water management.

Restocking

Restocking is the replanting of existing areas of woodland that have been felled. The statistics presented here also include felled areas that have been restocked by natural regeneration.

As restocking takes place on woodland that has been previously harvested and it is a condition of most felling licences that the area is restocked, restocking rates are mainly driven by harvesting levels (with a time lag, usually of around 2 years, between harvesting and restocking). Figures for timber harvesting (wood production) are available in the UK-Grown Timber chapter.

Economic factors, including grant rates, may have some effect on the species choice at restocking. In addition, the precise timing of restocking may be affected by weather conditions.

Changes to grant support for restocking of conifers has changed with the introduction of Rural Development Contracts in Scotland in 2008. As a result, grant aid is no longer available for restocking with Sitka spruce in many cases. No estimates have been included for restocking of Sitka spruce in Scotland that is no longer supported by grants. It is therefore likely that conifer restocking in Scotland in recent years is under-reported in this release and other statistics.

1.6.1 New planting and restocking by forest type

The total area of new planting and restocking in the UK was around 29 thousand hectares in 2013-14 (Table 1.13). Restocking accounted for over one half (55%) of this total. Broadleaved species accounted for around four fifths (83%) of the new planting area but just one quarter (27%) of the restocking area in 2013-14.

Table 1.13 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									
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
2011-12	0.0	2.6	2.6	2.0	1.6	3.6	2.1	4.2	6.2
2012-13	0.0	2.6	2.6	2.2	1.8	4.0	2.2	4.4	6.6
2013-14	0.0	3.3	3.3	2.6	1.9	4.5	2.6	5.2	7.8
Wales									
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
2011-12	0.1	0.6	0.8	1.4	0.6	2.0	1.5	1.2	2.7
2012-13	0.1	0.8	0.9	1.4	0.6	2.0	1.5	1.4	2.9
2013-14	0.1	0.8	0.9	1.4	0.8	2.3	1.6	1.6	3.2
Scotland									
2009-10	0.5	2.2	2.7	8.0	1.5	9.5	8.6	3.7	12.3
2010-11	1.8	4.2	6.0	5.6	1.3	6.9	7.4	5.5	12.9
2011-12	3.3	5.7	9.0	4.6	1.1	5.7	7.9	6.8	14.7
2012-13	1.7	5.3	7.0	5.1	0.9	6.0	6.8	6.3	13.1
2013-14	2.0	6.3	8.3	6.5	1.4	7.9	8.5	7.7	16.2
Northern Ireland									
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
2011-12	0.0	0.3	0.3	0.9	0.1	1.0	0.9	0.4	1.3
2012-13	0.0	0.2	0.3	1.1	0.1	1.2	1.1	0.4	1.4
2013-14	0.0	0.3	0.3	1.0	0.1	1.2	1.1	0.4	1.5
UK									
2009-10	0.5	4.9	5.4	11.5	3.6	15.1	12.0	8.5	20.5
2010-11	1.8	7.3	9.1	10.3	3.8	14.0	12.1	11.0	23.1
2011-12	3.5	9.2	12.7	9.0	3.3	12.3	12.4	12.6	25.0
2012-13	1.9	8.9	10.8	9.7	3.4	13.1	11.6	12.3	23.9
2013-14	2.2	10.7	12.9	11.6	4.2	15.8	13.8	14.9	28.7

Source: Forestry Commission, Natural Resources Wales, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on areas for which grants were paid during the year. Estimate of areas planted without grant aid are also included (where possible), although non grant aided planting may be under-represented in the figures. 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 Statistics *web page.*

1.6.2 New planting and restocking by ownership

In 2013-14 most new planting (95%) took place on private sector land (Table 1.14). In contrast, more than two-thirds of restocking (69%) took place on FC/NRW/FS land.

Table 1.14 New planting & restocking by ownership

Year (ending 31/3)	New Planting			Restocking			Total		
									thousand hectares
	FC/NRW/ FS	Private sector	Total	FC/NRW/ FS	Private sector	Total	FC/NRW/ FS	Private sector	Total
England									
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
2011-12	0.0	2.6	2.6	2.2	1.5	3.6	2.2	4.1	6.2
2012-13	0.0	2.6	2.6	2.2	1.7	4.0	2.2	4.3	6.6
2013-14	0.0	3.3	3.3	2.1	2.4	4.5	2.1	5.8	7.8
Wales									
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
2011-12	0.0	0.8	0.8	1.2	0.8	2.0	1.2	1.5	2.7
2012-13	0.0	0.9	0.9	1.3	0.6	2.0	1.3	1.6	2.9
2013-14	0.0	0.9	0.9	1.6	0.7	2.3	1.6	1.6	3.2
Scotland									
2009-10	0.7	2.0	2.7	3.6	6.0	9.5	4.3	7.9	12.3
2010-11	0.8	5.2	6.0	5.3	1.7	6.9	6.1	6.8	12.9
2011-12	1.3	7.7	9.0	4.7	1.0	5.7	6.0	8.7	14.7
2012-13	0.8	6.2	7.0	4.7	1.3	6.0	5.6	7.5	13.1
2013-14	0.6	7.7	8.3	6.2	1.7	7.9	6.8	9.4	16.2
Northern Ireland									
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
2011-12	0.0	0.3	0.3	0.9	0.1	1.0	0.9	0.4	1.3
2012-13	0.0	0.3	0.3	1.1	0.1	1.2	1.1	0.4	1.4
2013-14	0.0	0.3	0.3	1.1	0.1	1.2	1.1	0.4	1.5
UK									
2009-10	0.7	4.7	5.4	7.1	8.0	15.1	7.9	12.7	20.5
2010-11	0.8	8.3	9.1	10.0	4.1	14.0	10.8	12.3	23.1
2011-12	1.3	11.4	12.7	8.9	3.3	12.3	10.3	14.7	25.0
2012-13	0.9	9.9	10.8	9.3	3.8	13.1	10.2	13.8	23.9
2013-14	0.6	12.3	12.9	10.9	4.9	15.8	11.5	17.2	28.7

Source: Forestry Commission, Natural Resources Wales, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on areas for which grants were paid during the year. Estimate of areas planted without grant aid are also included (where possible), although non grant aided planting may be under-represented in the figures. 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.*

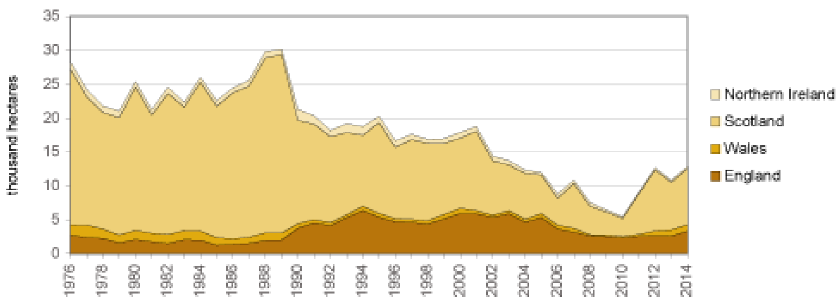
3. *Includes natural colonisation and natural regeneration.*

Data: Longer time series of the above table are available from the Woodland Statistics *web page.*

1.6.3 New planting and restocking: time series

Figure 1.6 shows areas of new planting by country since the year ending March 1976. UK new planting rates have fallen from the late 1980's, decreasing by 82% between 1988-89 and 2009-10. This followed changes to the tax benefits from owning forestry in the UK, introduced in the 1988 Finance Act (www.legislation.gov.uk/ukpga/1988/39/contents). However, the area of new planting in the UK has more than doubled since 2009-10, largely driven by increases in Scotland following the introduction of Rural Development Contracts. For further information, see the New Planting and Restocking section of the Sources chapter.

Figure 1.6 New planting in the UK, 1976-2014



Source: Forestry Commission, Natural Resources Wales, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on areas for which grants were paid during the year. Estimate of areas planted without grant aid are also included (where possible), although non grant aided planting may be under-represented in the figures. 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.

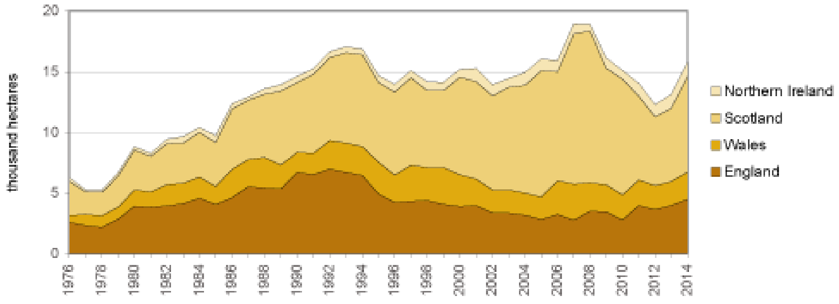
3. Includes natural colonisation.

Figure 1.7 shows areas of restocking by country since the year ending March 1976. It indicates an increase in restocking rates over most of the period. Over the same period, there has been a general increase in UK wood production (see UK-Grown Timber chapter).

The area of restocking fell by around one third between the peak of 19 thousand hectares in 2006-07 and 2011-12. There has since been some recovery, with the area of restocking increasing by 29% between 2011-12 and 2013-14.

The decline in restocking levels from 2006-07 follows changes to grant support for restocking in Scotland, that may have resulted in some non-grant aided Sitka spruce restocking being excluded from the estimates. Reliable estimates of the amount of Sitka spruce restocking undertaken without grant aid in Scotland are not available. However, results from the Forestry Commission's Nursery Survey (an annual survey of forest nurseries in Great Britain) indicate that, despite a dip in the 2009/10 planting year, sales of Sitka spruce plants to Scotland have been relatively stable in recent years. For further information, see the New Planting and Restocking section of the Sources chapter.

Figure 1.7 Restocking in the UK, 1976-2014



Source: Forestry Commission, Natural Resources Wales, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on areas for which grants were paid during the year. Estimate of areas planted without grant aid are also included (where possible), although non grant aided planting may be under-represented in the figures. 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.

1.7 Felling

Felling

Approval for the felling (cutting down) of trees in the UK is granted through felling licences issued by the Forestry Commission, Natural Resources Wales or the Forest Service.

Felling licences may be conditional (where felling approval is granted subject to restocking) or unconditional (where tree felling is approved without the requirement to replant). Unconditional licences are routinely issued for silvicultural thinning operations and in these cases no woodland loss takes place. However, an unconditional felling licence may be issued if there are overriding environmental considerations, for example to enable the restoration of important habitats.

The permanent removal of trees might also be authorised through a Statutory Plant Health Notice (SPHN). A SPHN requires the felling of infected trees, and is issued by the Forestry Commission, Natural Resources Wales or the Forest Service to prevent the spread of pests and diseases and may include woodland owned or managed by these organisations. They are currently being issued to attempt to halt the spread of Phytophthora ramorum, first found in Japanese larch in the UK in 2009. There is no legal requirement for woodland to be restocked after felling under a Statutory Plant Health Notice.

The removal of trees may also be authorised under planning regulations, to enable development (including for windfarms). In this case, a felling licence is not required.

Further information on felling and Statutory Plant Health Notices is provided in the Sources chapter.

Woodland loss

Information on unconditional felling licences that do not relate to thinnning may be seen as an indication of the level of woodland loss on land that is not owned or managed by the Forestry Commission, Natural Resources Wales or the Forest Service. However, the data relates only to felling licences issued, so does not provide information on whether the felling actually took place (or the timing of the felling). In addition, felling licences do not cover woodland loss that is authorised under planning regulations.

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.

More recently, an assessment of woodland loss in Scotland has estimated that 19 thousand hectares of woodland were removed in Scotland in the 10 year period to March 2011, of which just over one half (54%) was on private sector land.

1.7.1 Felling licences

Table 1.15 shows the area covered by unconditional felling licences issued by the Forestry Commission in England and Scotland over the last six years. The figures do not include unconditional felling licences issued to permit thinning of woodlands. The table covers woodland in England and Scotland that is not owned or managed by the Forestry Commission only; it does not cover felling that is exempt from felling licence approval (such as authorisations for felling under planning regulations, felling required under a Statutory Plant Health Notice or felling that is approved on condition that the area is restocked).

A total of 0.4 thousand hectares of woodland in England and 0.1 thousand hectares of woodland in Scotland was covered by unconditional felling licences (with no requirement to restock) in the year to March 2014.

Table 1.15 Areas of Private sector woodland covered by unconditional felling licences[1], 2007-08 to 2013-14

Year	England	Scotland
		thousand hectares
2007-08	0.4	0.1
2008-09	0.4	0.2
2009-10	0.5	0.2
2010-11	0.5	0.1
2011-12	0.6	0.1
2012-13	0.3	0.2
2013-14	0.4	0.1

Source: Forestry Commission

Notes:

1. Felling licences issued in the period. Excludes areas exempt from felling licence approval or under Forestry Commission grant, and licences issued for thinning.

These figures are outside the scope of National Statistics

1.7.2 Statutory Plant Health Notices

Statutory Plant Health Notices, requiring the felling of infected trees, are issued by the Forestry Commission, Natural Resources Wales or the Forest Service to prevent the spread of pests and diseases. They are currently being issued to attempt to halt the spread of Phytophthora ramorum, first found in Japanese larch in the UK in 2009. Unlike the majority of felling licences, which are granted on condition that the area to be felled is restocked, there is no legal requirement for woodland to be restocked after felling under a Statutory Plant Health Notice.

Table 1.16a shows the number of sites where a Statutory Plant Health Notice has been served in the UK over the last 4 years and Table 1.16b shows the area required to be felled under these Notices. The tables cover all woodland, including sites owned or managed by the Forestry Commission, Natural Resources Wales or the Forest Service.

A total of 575 sites were served with Statutory Plant Health Notices between April 2013 and March 2014.

Table 1.16a Number of sites where a Statutory Plant Health Notice has been served[1], 2010-11 to 2013-14

Year	England	Wales	Scotland	Northern Ireland	UK
2010-11	114	24	1	10	149
2011-12	131	129	14	16	290
2012-13	166	90	123	15	394
2013-14	223	253	76	23	575

Source: Forestry Commission, Natural Resources Wales, Forest Service

Note:

1. The number of sites where infection by Phytophthora ramorum has been confirmed, or where there is sufficient suspicion of infection, and a Statutory Plant Health Notice has been served on the landowner.

These figures are outside the scope of National Statistics

Areas requiring felling under Statutory Plant Health Notices totalled 4.8 thousand hectares in 2013-14, more than double the 2012-13 total of 2.3 thousand hectares. Around two thirds of the area to be felled in 2013-14 was in Wales (67%), 16% was in England, 10% was in Northern Ireland and the remaining 6% was in Scotland.

Table 1.16b Felling areas under Statutory Plant Health Notices[1], 2010-11 to 2013-14

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand hectares
2010-11	1.2	0.9	0.0	0.3	2.3
2011-12	0.5	0.5	0.1	0.1	1.2
2012-13	0.5	1.3	0.4	0.2	2.3
2013-14	0.8	3.3	0.3	0.5	4.8

Source: Forestry Commission, Natural Resources Wales, Forest Service

Note:

1. The area that is required to be felled within the Statutory Plant Health Notice.

These figures are outside the scope of National Statistics.

Estimates of the volume of softwood removed in 2013 under a movement license, as required by a Statutory Plant Health Notice, can be found in the Wood Production Summary section of Chapter 2 by following the link below.

2 UK-Grown Timber

Introduction

This chapter covers the production of timber from woodland and the primary processing of harvested wood to give basic wood products, for the calendar year 2013.

Estimates for England, Wales, Scotland and Northern Ireland are included, in addition to UK totals, where possible. International comparisons of timber production are available in the International Forestry chapter. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Timber originating from conifers is known as softwood and that from broadleaves is known as hardwood. Please refer to the Glossary for a definition of other terms used in this chapter.

Figures for 2013 were previously published in "UK Wood Production and Trade: 2013 Provisional Figures", released on 15 May 2014. Some figures for the latest year and previous years have been revised from those previously published. For further details on revisions, see the Timber section of the Sources chapter.

A copy of all timber tables is available to download as an Excel spreadsheet from the Tables for Download page. Longer time series are also available for some tables. These can be accessed from our Timber Statistics web page at www.forestry.gov.uk/forestry/infd-7aql5b.

Key findings

The main findings for 2013 are (with percentage changes from 2012):

Removals (harvesting) of UK roundwood:

- 11.0 million green tonnes of softwood (+8%);
- 0.5 million green tonnes of hardwood (-1%).

Deliveries of UK roundwood to wood processors and others:

- Total: 11.1 million green tonnes of roundwood (softwood and hardwood) (+7%), of which:
- Sawmills: 6.5 million green tonnes (+5%);
- Wood-based panels: 1.3 million green tonnes (-1%);
- Integrated pulp and paper mills: 0.5 million green tonnes (+1%);
- Other uses, including round fencing, woodfuel, shavings and exports of roundwood: 2.9 million green tonnes (+16%).

Production of wood products in the UK included:

- 3.6 million cubic metres of sawnwood (+5%);
- 3.0 million cubic metres of wood-based panels (+1%);
- 4.6 million tonnes of paper and paperboard (+2%).

2.1 Wood production

Wood production (also referred to as removals) refers to the harvesting of roundwood (trunk and branch wood) from coniferous (softwood) and non-coniferous (hardwood) trees. Figures are generally expressed here in green tonnes (weight when freshly felled).

Removals should not be confused with deliveries, which are the quantities of UK-grown roundwood that is delivered to processors (mills) or for other uses (such as woodfuel and exports). Deliveries statistics are presented in Tables 2.5 and 2.6. A comparison of removals and deliveries of UK softwood roundwood is provided in the Sources chapter.

The figures on removals of UK roundwood are used to monitor trends in the UK forest sector. The data is also used alongside figures for standing volume (the volume of standing trees) and increment (the growth rate of standing trees) to compile natural capital accounts for inclusion in the UK Environmental Accounts.

The data are derived from a number of sources:

- FC/NRW/FS figures are obtained from Forestry Commission, Natural Resources Wales and Forest Service administrative systems;
- Private sector 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.

2.1.1 Summary: wood production

It is estimated that a total of 11.5 million green tonnes of roundwood was removed from UK woodlands in 2013. This represented an 8% increase from the 2012 figure of 10.6 million green tonnes.

Softwood accounted for most (95%) removals from UK woodland and totalled 10.9 million green tonnes in 2013 (Table 2.1). This represented an 8% increase on the previous year's figure. Hardwood removals totalled 0.5 million green tonnes in 2013, a 1% decrease from 2012.

FC/NRW/FS woodlands accounted for 46% of softwood production but only 15% of hardwood production.

Table 2.1 Wood production, 2004-2013

Year	Softwood			Hardwood[3]		
	FC/NRW/FS[1] woodland	Private sector[2] woodland	Total softwood	FC/NRW/FS[1] woodland	Private sector[2] woodland	Total hardwood
						thousand green tonnes
2004	4 894	3 246	8 141	113	399	513
2005	4 579	3 499	8 077	101	492	593
2006	4 582	3 661	8 243	45	392	438
2007	4 653	4 083	8 736	40	400	440
2008	4 415	3 823	8 238	43	388	431
2009	5 126	3 266	8 392	87	449	536
2010	4 625	4 633	9 258	70	465	535
2011	4 870	5 186	10 056	75	465	541
2012	4 836	5 259	10 095	55	478	532
2013	5 084	5 856	10 940	79	451	529

Source: Forestry Commission, Natural Resources Wales, Forest Service, industry surveys, industry associations.

Notes:

1. FC: Forestry Commission (England, Scotland, and until March 2013, Wales), NRW: Natural Resources Wales (from April 2013), FS: Forest Service (Northern Ireland).

2. Private sector: removals from all other woodland (including some publicly owned woodland).

3. Most hardwood production in the UK comes from private sector 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/Wales/Scotland/Northern Ireland) are available from the Timber Statistics web page.

Within the 11.5 million green tonnes of softwood removed from UK woodlands in 2013, approximately 350 thousand green tonnes were removed under a movement license, as required by a Statutory Plant Health Notice. This comprised around 250 thousand green tonnes from FC/NRW/FS woodland and around 100 thousand green tonnes from private sector woodland.

Softwood removals under a movement license are expected to consist mainly of Japanese larch that is suspected of being infected by Phytophthora ramorum. However a small volume of species other than larch is likely to be included in these figures.

While movement licenses have been issued for several years, 2013 is the first year for which the associated removals data has been collected and published.

Statistics on the number of sites where a Statutory Plant Health Notice has been served in the UK over the last 4 years, and the area required to be felled under these Notices, can be found in the Statutory Plant Health Notices section of Chapter 1 by following the link below.

2.1.2 Origin of private sector softwood removals

It is estimated that 72% of all softwood removals from private sector woodlands were harvested in Scotland, 16% in England, 12% in Wales and the remainder in Northern Ireland in 2013 (Table 2.2).

Over the past ten years, Wales and England have shown the biggest percentage increase, with private sector removals in 2013 more than double the levels in 2004. Removals from Scotland have increased by 70% over the same period, whilst removals from Northern Ireland have fallen.

Table 2.2 Private sector softwood removals by country, 2004-2013

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
2004	446	289	2 481	30	3 246
2005	534	266	2 659	40	3 499
2006	586	326	2 729	21	3 661
2007	612	382	3 059	29	4 083
2008	638	333	2 827	25	3 823
2009	533	321	2 388	24	3 266
2010	668	429	3 479	57	4 633
2011	738	501	3 894	53	5 186
2012	847	611	3 761	40	5 259
2013	927	695	4 211	23	5 856

Source: Private Sector Softwood Removals Survey

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

2.1.3 Origin of FC/NRW/FS removals

Information on removals from Forestry Commission (FC), Natural Resources Wales (NRW) and Forest Service (FS) woodlands is extracted from administrative systems.

A total of 5.1 million green tonnes of softwood was removed from FC/NRW/FS woodlands in 2013, a 5% increase from the 2012 figure (Table 2.3). Over one half (55%) of FC/NRW/FS softwood removals in 2013 occurred in Scotland, 23% in England, 14% in Wales and 8% in Northern Ireland.

Table 2.3 FC/NRW/FS softwood removals by country, 2004-2013

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
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
2011	1 185	689	2 566	430	4 870
2012	1 154	663	2 627	392	4 836
2013	1 188	693	2 819	384	5 084

Source: Forestry Commission, Natural Resources Wales, Forest Service.

Data: Longer time series of the above table, including estimates for hardwood removals and for removals from private sector woodlands are available from the Timber Statistics web page.

2.1.4 Softwood availability forecast

The National Forest Inventory "50-year forecast of softwood availability" and "50-year forecast of hardwood availability" were published in April 2014. They are forecasts of potential availability rather than production, as they do not take account of management objectives, financial factors or the state of markets, all of which will affect the level of and timing of harvesting.

More information on the forecasts and detailed breakdowns are available on the National Forest Inventory web pages at www.forestry.gov.uk/inventory.

The forecasts are outside the scope of National Statistics, but are provided here to give more context to the data on wood production.

The key assumptions underpinning the headline softwood forecast scenario include:

- Private woodland is managed in a way that maximises total production.
- The estate of the Forestry Commission and Natural Resources Wales is managed according to current management plans; note both Forestry Commission Scotland and Natural Resources Wales intend to cap production below the level set out in Table 2.4a.

Under the above scenario, softwood availability for Great Britain averages 15.2 million cubic metres a year over the 50-year period 2013 to 2061 (Table 2.4a). The majority (66%) of this softwood is projected to come from private sector woodland.

Table 2.4a Softwood availability forecasts

Annual average in the period	England	Wales	Scotland	GB
				thousand cubic metres overbark standing
FC / NRW				
2013 - 2016	1 632	1 082	4 220	6 933
2017 - 2021	1 330	991	3 658	5 980
2022 - 2026	1 211	895	3 516	5 622
2027 - 2031	1 159	778	3 789	5 726
2032 - 2036	1 066	934	3 215	5 216
2037 - 2041	1 013	794	2 936	4 744
2042 - 2046	1 055	531	2 730	4 316
2047 - 2051	1 014	585	3 280	4 879
2052 - 2056	828	495	2 886	4 209
2057 - 2061	1 250	679	2 339	4 269
Private sector				
2013 - 2016	2 945	901	5 708	9 554
2017 - 2021	3 225	949	6 997	11 171
2022 - 2026	2 903	1 087	7 830	11 820
2027 - 2031	2 986	775	8 910	12 671
2032 - 2036	2 850	736	8 847	12 433
2037 - 2041	2 224	679	8 133	11 035
2042 - 2046	1 848	490	6 527	8 865
2047 - 2051	1 523	521	4 986	7 030

2052 - 2056	1 431	734	5 679	7 845
2057 - 2061	1 603	694	5 627	7 924
Total softwood				
2013 - 2016	4 577	1 983	9 928	16 487
2017 - 2021	4 555	1 940	10 656	17 151
2022 - 2026	4 113	1 982	11 346	17 442
2027 - 2031	4 145	1 553	12 700	18 398
2032 - 2036	3 916	1 670	12 062	17 649
2037 - 2041	3 237	1 473	11 069	15 779
2042 - 2046	2 903	1 021	9 257	13 181
2047 - 2051	2 537	1 106	8 266	11 909
2052 - 2056	2 259	1 229	8 566	12 054
2057 - 2061	2 853	1 373	7 966	12 193

Source: National Forest Inventory: 50-year forecast of softwood availability (Forestry Commission, April 2014)

These figures are outside the scope of National Statistics

2.1.5 Hardwood availability forecast

The key assumptions underpinning the headline hardwood forecast scenario include:

- In private woodland, harvesting is limited to areas with evidence of recent thinning activity.
- The estate of the Forestry Commission and Natural Resources Wales is managed according to current management plans.

Under the above scenario, hardwood availability for Great Britain averages 1.6 million cubic metres a year over the 50-year period (Table 2.4b). The majority (89%) of this softwood is projected to come from private sector woodland. If these woodlands were managed to maximise total production, the forecast would be much higher, as illustrated in the full National Forest Inventory report available at www.forestry.gov.uk/inventory.

Table 2.4b Hardwood availability forecasts

Annual average in the period	England	Wales	Scotland	GB
				thousand cubic metres overbark standing
FC / NRW				
2013 - 2016	126	12	9	147
2017 - 2021	92	11	9	111
2022 - 2026	110	17	10	137
2027 - 2031	86	12	10	108
2032 - 2036	99	14	15	128
2037 - 2041	129	19	24	172
2042 - 2046	189	56	31	276
2047 - 2051	116	19	40	175
2052 - 2056	134	28	45	208
2057 - 2061	146	28	64	237
Private sector				
2013 - 2016	122	20	83	225
2017 - 2021	333	46	139	519
2022 - 2026	538	77	193	808
2027 - 2031	720	100	233	1 054
2032 - 2036	825	115	262	1 202
2037 - 2041	1 047	153	367	1 567
2042 - 2046	1 915	243	586	2 743
2047 - 2051	1 678	227	675	2 580
2052 - 2056	1 254	198	554	2 006
2057 - 2061	645	139	343	1 127
Total softwood				
2013 - 2016	249	32	92	373
2017 - 2021	425	58	148	631
2022 - 2026	648	94	203	945
2027 - 2031	806	112	244	1 162
2032 - 2036	923	130	277	1 330
2037 - 2041	1 176	171	391	1 738

2042 - 2046	2 104	299	616	3 019
2047 - 2051	1 795	246	715	2 755
2052 - 2056	1 388	227	599	2 214
2057 - 2061	791	167	406	1 364

Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, April 2014)

These figures are outside the scope of National Statistics

2.2 Deliveries of UK-grown roundwood

Figures for deliveries relate to the quantity of UK-grown roundwood that is delivered to processors (mills) or for other uses (such as woodfuel and exports). They are expressed in green tonnes (weight when freshly felled). Statistics on roundwood deliveries are used to monitor trends in the supply of, and demand for, UK-grown wood.

Deliveries should not be confused with removals, which are the quantities of roundwood that is harvested from UK woodland. Removals statistics are presented in Tables 2.1 to 2.3. A comparison of removals and deliveries of UK softwood roundwood is provided in the Sources chapter.

The data are derived from a number of sources, including surveys of the UK-grown timber industry, trade associations and expert estimates.

2.2.1 Softwood deliveries

In 2013, deliveries of UK roundwood (softwood and hardwood) totalled 11.1 million green tonnes, a 7% increase from the previous year (Tables 2.5 and 2.6).

Most UK roundwood deliveries (95%) were softwood and totalled 10.5 million green tonnes in 2013 (Table 2.5). 6.4 million green tonnes (61% of UK softwood deliveries) were used by sawmills, a 5% increase from the previous year. A further 1.3 million green tonnes were used to produce wood-based panels (unchanged from previous year), 0.5 million green tonnes by integrated pulp and paper mills (1% increase), and 2.4 million green tonnes for other uses (19% increase), including round fencing, woodfuel, shavings and exports of roundwood.

The increase in softwood deliveries for woodfuel in recent years reflects an increase in wood use for heating and energy production in the UK (see the Sources chapter for further information).

Table 2.5 Deliveries of UK-grown softwood, 2004-2013

Year	Sawmills	Pulp mills	Wood-based panels	Fencing	Woodfuel[1]	Other[2]	Exports	Total
								thousand green tonnes
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	900	135	467	9 269
2011	5 859	453	1 417	363	900	145	585	9 722
2012	6 073	461	1 269	338	1 000	154	535	9 831
2013	6 407	465	1 263	332	1 250	191	640	10 548

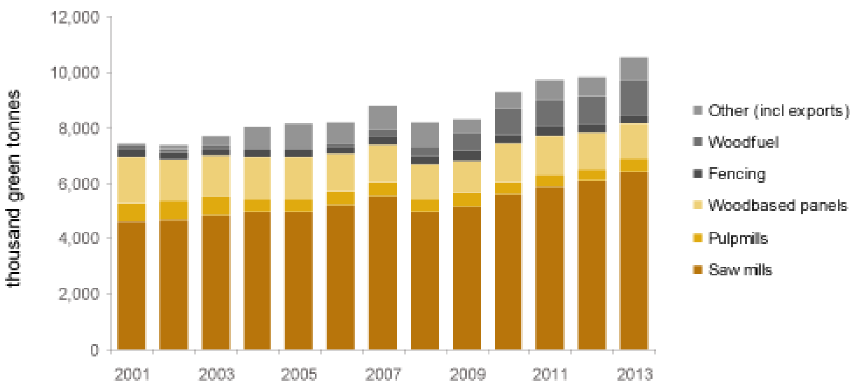
Source: industry surveys, industry associations.

Notes:

1. Woodfuel reported here is derived from stemwood, and from 2007 includes estimated roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and from 2008 made use of woodfuel data reported in the Private Sector Softwood Removals Survey.

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

Figure 2.1 Deliveries of UK-grown softwood



Source: industry surveys, industry associations.

2.2.2 Hardwood deliveries

There was a total of 0.5 million green tonnes of UK hardwood deliveries in 2013 (Table 2.6). The majority of UK hardwood deliveries (76% in 2013) were used for woodfuel.

Table 2.6 Deliveries of UK-grown hardwood, 2004-2013

Year	Sawmills	Pulp mills	Wood-based panels	Woodfuel[1]	Other[2]	Total
						thousand green tonnes
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
2011	81	0	1	400	59	541
2012	75	0	2	400	55	532
2013	74	0	0	400	55	529

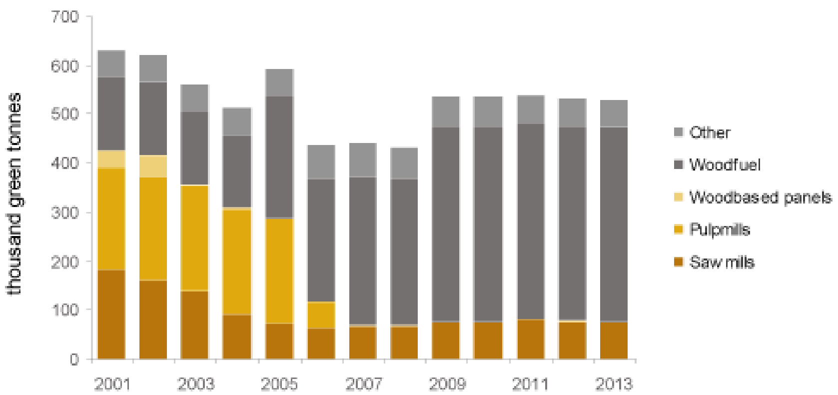
Source: industry surveys, industry associations.

Notes:

1. Woodfuel reported here is derived from stemwood, and from 2007 includes 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 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 below to access data and sources on sawmills.

2.3.1 Summary: consumption & production

In 2013, sawmills in the UK consumed a total of 6.5 million green tonnes of softwood, a 5% increase from 2012 (Table 2.7). A further 0.1 million green tonnes of hardwood were consumed by UK sawmills in 2013. Most of the logs, 6.4 million green tonnes softwood and 0.1 million green tonnes hardwood, were UK grown.

A total of 3.6 million cubic metres of sawnwood was produced in the UK in 2013, a 5% increase from 2012.

For softwood, there was a significant drop in roundwood consumption and sawnwood production between 2007 and 2008, following the start of the financial crisis. Sawnwood imports also decreased at this time (see table 3.4). Since then the levels of softwood consumption and sawn softwood production in the UK have recovered and, since 2011, exceed the previous peak in 2007 (although imports remain at a lower level).

In addition to producing sawnwood, sawmills also generate other products. Further information on other products produced by larger mills are provided in Tables 2.18 and 2.18a.

Table 2.7 Consumption and production by UK sawmills, 2004-2013

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	
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
2011	5 859	125	5 984	3 227	81	20	100	52
2012	6 073	124	6 198	3 361	75	17	93	48
2013	6 407	126	6 532	3 536	74	13	88	46

Source: Sawmill Survey

2.3.2 Number of sawmills by size

A total of 177 sawmills processed UK roundwood in 2013 (Table 2.8). Around three quarters (72%) of sawmills produced less than 10 thousand m^3 sawnwood (softwood and hardwood) during the year.

Over the past ten years, there has been a reduction in the number of mills producing less than 25 thousand m^3 sawnwood, while the number of larger mills has increased.

Table 2.8 Number of sawmills by size of mill, 2004-2013

Year	Size of mill (total production)[1]						Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 +	
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
2011	70	51	13	23	9	19	185
2012	69	49	14	19	11	19	181
2013	68	46	14	17	13	19	177

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

Around one half (52%) of the 177 active sawmills in 2013 (92) were in England, around one third (61) were in Scotland, 8% (15) in Wales and 5% (9) in Northern Ireland (Table 2.9).

Table 2.9 Number of sawmills by country, 2004-2013

Year	England	Wales	Scotland	Northern Ireland	UK
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
2011	96	16	64	9	185
2012	95	15	62	9	181
2013	92	15	61	9	177

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

Around two thirds (67%) of the 177 active sawmills in 2013 processed softwood only (Table 2.10). A further 27% processed both softwood and hardwood, and the remaining 6% processed only hardwood.

Table 2.10 Number of sawmills by type of wood sawn, 2004-2013

Year	Softwood only	Hardwood only	Both	Total
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
2011	120	10	55	185
2012	118	11	52	181
2013	118	11	48	177

Source: Sawmill Survey

2.3.5 Consumption of softwood by size of mill

Despite accounting for only around one quarter of all sawmills (see Table 2.8), those with total annual sawnwood production of 10 thousand cubic metres or more accounted for 94% of the total softwood consumed by sawmills in 2013 (Table 2.11).

Table 2.11 Consumption of softwood by size of mill, 2004-2013

Year	Size of mill (total production)[1]						Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 +	
							thousand green tonnes
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
2011	32	180	156	685	615	4 316	5 984
2012	33	176	184	539	738	4 528	6 198
2013	36	177	177	476	804	4 862	6 532

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 around one half (52%) of the 6.5 million green tonnes of softwood delivered to UK sawmills in 2013 (Table 2.12). A further 29% was consumed by mills in England, 11% in Wales and 8% in Northern Ireland.

Table 2.12 Consumption of softwood by country, 2004-2013

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
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
2011	1 726	634	3 082	543	5 984
2012	1 821	654	3 195	528	6 198
2013	1 879	702	3 420	532	6 532

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 3.5 million cubic metres of sawn softwood in 2012, a 5% increase from the 2012 figure (Table 2.13).

Sawmills with total annual sawnwood production of 10 thousand cubic metres or more accounted for 94% of the total sawn softwood produced by sawmills in 2013.

Table 2.13 Production of sawn softwood by size of mill, 2004-2013

Year	Size of mill (total production)[1]						Total
	< 1	1 - < 5	5 - < 10	10 - < 25	25 - < 50	50 +	
							thousand cubic metres
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
2011	18	105	86	374	335	2 309	3 227
2012	18	103	95	314	393	2 438	3 361
2013	20	103	93	287	429	2 605	3 536

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

1.9 million cubic metres (53%) of sawn softwood was produced by sawmills in Scotland in 2013 (Table 2.14). A further 29% was produced by mills in England, 10% in Wales and the remaining 8% in Northern Ireland.

Whilst production of sawn softwood by mills in Scotland and England had recovered following the financial crisis to exceeded their 2007 peak levels by 2010, production by mills in Wales and Northern Ireland continues to remain lower.

Table 2.14 Production of sawn softwood by country, 2004-2013

Year	England	Wales	Scotland	Northern Ireland	UK
					thousand cubic metres
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
2011	954	316	1 666	291	3 227
2012	1 001	326	1 747	288	3 361
2013	1 026	349	1 873	289	3 536

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 annually) only. These mills are estimated to account for 94% of all sawn softwood produced in 2013 (see Table 2.13).

The tables cover the following topics:

- Source of softwood logs;
- Sawn softwood product markets;
- Other softwood products; and
- Sawmill employment.

2.4.1 Softwood consumption and production

Additional information for 2013 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 6.1 million green tonnes in 2013 (Table 2.15). Sawn softwood production was 3.3 million m^3 and other softwood products (chips, bark, sawdust, etc) amounted to 3.2 million tonnes.

Sawmills in Scotland accounted for around one half (53%) of all softwood consumption by larger mills. A further 28% was consumed by mills in England, 11% in Wales and the remaining 8% in Northern Ireland.

Table 2.15 Larger mills[1], 2013: softwood consumption and production

	England	Wales	Scotland	Northern Ireland	UK
Number of mills	17	5	24	3	49
Consumption (thousand green tonnes)	1 702	661	3 267	513	6 143
Sawnwood production (thousand m^3)	924	329	1 787	280	3 320
Other products (thousand tonnes)	782	376	1 735	278	3 170

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 2013, 58% came from Scotland, 22% from England, 13% from Wales and 5% from Northern Ireland (Tables 2.16 and 2.16a). The remaining 2% were imported from other countries. This was similar to the breakdown by source in previous years.

94% of softwood sawlogs used by Scottish mills in 2013 came from Scotland. The corresponding proportions of mills' log use coming from within the same country were 67% for England, 79% for Wales and 61% for Northern Ireland.

Table 2.16 Larger mills[1], 2013: source of softwood logs

Source	England	Wales	Scotland	Northern Ireland	UK
					thousand green tonnes
England	1 143	42	177	0	1 361
Wales	276	520	5	0	801
Scotland	282	99	3 085	73	3 539
Northern Ireland	0	0	0	315	315
Total UK logs	**1 702**	**661**	**3 267**	**387**	**6 017**
Other countries	0	0	0	126	126
Total log consumption	**1 702**	**661**	**3 267**	**513**	**6 143**

Source: Sawmill Survey (detailed)

Notes:

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

Table 2.16a Larger mills[1], 2009-2013: source of softwood logs

Year	Source					Total
	England	Wales	Scotland	Northern Ireland	Other countries	
						per cent of total consumption
2009	22	12	57	7	3	100
2010	19	13	60	6	2	100
2011	21	13	59	5	2	100
2012	22	13	57	5	2	100
2013	22	13	58	5	2	100

Source: Sawmill Survey (detailed)

Notes:

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

2.4.3 Sawn softwood product markets

In 2013, 34% of sawn softwood produced by larger sawmills was used for fencing, 32% for packaging and pallets, 29% for construction, and the remaining 5% went to all other markets (Tables 2.17 and 2.17a).

Table 2.17 Larger mills[1], 2013: sawn softwood product markets

Product market	England	Wales	Scotland	Northern Ireland	UK
					per cent of total product markets
Construction	15	22	36	41	29
Fencing	51	27	26	39	34
Packaging/ pallets	28	48	33	20	32
Other	6	3	5	0	5
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 2.17a Larger mills[1], 2009-2013: sawn softwood product markets

Year	Product market				Total
	Construction	Fencing	Packaging / pallets	Other	
					per cent of total product markets
2009	30	35	35	1	100
2010	31	36	32	2	100
2011	28	36	33	3	100
2012	29	34	32	4	100
2013	29	34	32	5	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

Sawmills were asked to estimate the quantity of other products (excluding sawnwood) that they generated from softwood and sold to different industries. The figures presented below are based on these estimates.

Other softwood products amounted to 3.2 million tonnes in 2013 (Table 2.15). Almost one half (46%) of other softwood products were sold to wood processing industries in the form of chips and 14% were sold to these industries in other formats (Table 2.18). A further 21% of other products were sold to bio-energy (including pellet manufacturers) and 17% were sold to others.

Table 2.18 Larger mills[1], 2013: 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	62	46	0	46
Bark	0	0	0	0	0
Sawdust & other	14	16	17	0	14
Total	**70**	**78**	**63**	**0**	**61**
Sold to bio-energy (incl pellet manufacturers)					
Wood chips	10	3	16	49	16
Bark	0	0	0	5	1
Sawdust & other	1	2	3	20	4
Total	**11**	**5**	**20**	**73**	**21**
Other sales					
Wood chips	3	0	2	15	3
Bark	8	5	9	6	8
Sawdust & other	7	4	6	6	6
Total	**18**	**10**	**16**	**27**	**17**

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 disposed of as waste, which together accounted for around 2% of other softwood products.

The proportions of other products that were sold to different industries have changed little over the last five years (Table 2.18a).

Table 2.18a Larger mills[1], 2009-2013: 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
2009	63	18	18	1	100
2010	57	20	21	2	100

2011	60	20	19	1	100
2012	59	21	18	1	100
2013	61	21	17	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 2013 (Table 2.19). This represented a 2% decrease on the total for 2012.

Table 2.19 Larger mills[1], 2013: sawmill employment

Employment type	England	Wales	Scotland	Northern Ireland	UK
					full-time equivalents
Direct					
Line & production workers	873	240	1 208	231	2 552
Managerial & administrative staff	155	30	159	69	413
Haulage of logs to the mill	29	1	19	4	53
Total direct employment	**1 057**	**271**	**1 386**	**304**	**3 018**
Others[2]					
Line & production workers	38	6	63	1	108
Managerial & administrative staff	1	0	1	0	2
Total contract employment	**39**	**6**	**64**	**1**	**110**

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 2.19a Larger mills[1], 2009-2013: sawmill employment

Employment	Line & production workers	Managerial & administrative staff	Haulage of logs to the mill	Total employment
				full-time equivalents
Direct				
2009	2 189	419	56	2 664
2010	2 441	447	69	2 957
2011	2 486	435	71	2 992
2012	2 573	426	67	3 065
2013	2 552	413	53	3 018
Others[2]				
2009	65	10	..	75
2010	122	4	..	126
2011	86	3	..	89
2012	69	1	..	70
2013	108	2	..	110

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, not just from mills using UK roundwood.

2.5.1 Inputs for the integrated pulp & paper mills

The integrated pulp & paper mills in the UK consumed a total of 0.5 million tonnes of material (all softwood) in 2013, a 1% increase from the 2012 total (Table 2.20).

UK roundwood represented 85% of the inputs for the integrated pulp & paper mills in 2013, with the remaining 15% coming from sawmill products.

Table 2.20 Inputs for the integrated pulp & paper mills[1], 2004-2013

Year	UK roundwood[2]		Sawmill products		Total	
						thousand green tonnes
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
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
2011	453	0	99	0	552	0
2012	461	0	79	0	540	0
2013	465	0	83	0	548	0

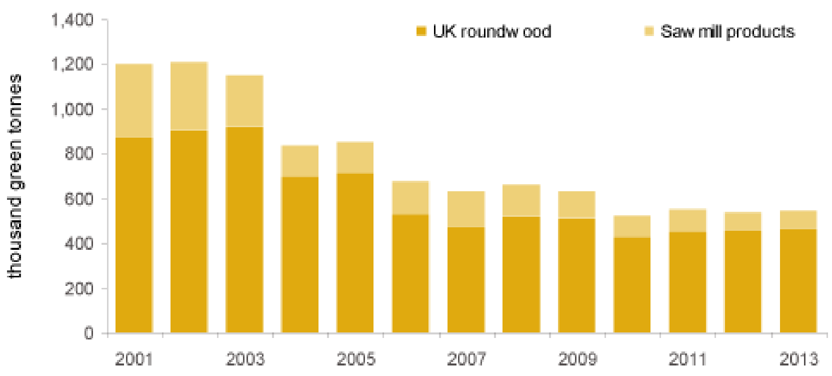
Source: UK Forest Products Association

Notes:

1. Excludes inputs of recycled paper and cardboard.

2. UK roundwood derived from stemwood.

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 (Table 2.21) are provided by the Confederation of Paper Industries. They cover all paper production from UK mills, not just those using UK roundwood. Most UK paper production uses recovered waste paper or imported pulp.

A total of 4.6 million tonnes of paper and paperboard was produced in the UK in 2013, an increase of 2% from the previous year. Packaging materials accounted for 41% of the total UK paper production in 2013, graphic papers (including newsprint) for 36%, and sanitary and household papers for 18%.

Table 2.21 Production of paper and paperboard, 2004-2013

Year	Graphic papers (incl newsprint)	Sanitary & household papers	Packaging materials	Other	Total paper & paperboard
					thousand tonnes
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
2011	1 669	766	1 600	307	4 342
2012	1 616	795	1 798	271	4 480
2013	1 636	802	1 851	272	4 561

Source: Confederation of Paper Industries

2.6 Wood-based panels

Wood-based panels include 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 wood-based panels are provided by the Wood Panel Industries Federation (WPIF).

2.6.1 Inputs for wood-based panel products

Table 2.22 and Figure 2.4 show the inputs to mills that produce wood-based panels in the UK. The mills used a total of 3.8 million tonnes of material in 2013, a 5% decrease from 2012. The inputs in 2013 comprised 1.3 million tonnes of roundwood (33%), 1.7 million tonnes of sawmill products (45%) and 0.9 million tonnes of recycled wood fibre (22%).

Table 2.22 Inputs to wood-based panel mills, 2004-2013

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
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
2011	1 417	1	1 779	0	0	0	3 196	1	952
2012	1 269	2	1 851	0	0	0	3 120	2	909
2013	1 263	0	1 709	0	0	0	2 972	0	853

Source: Wood Panel Industries Federation

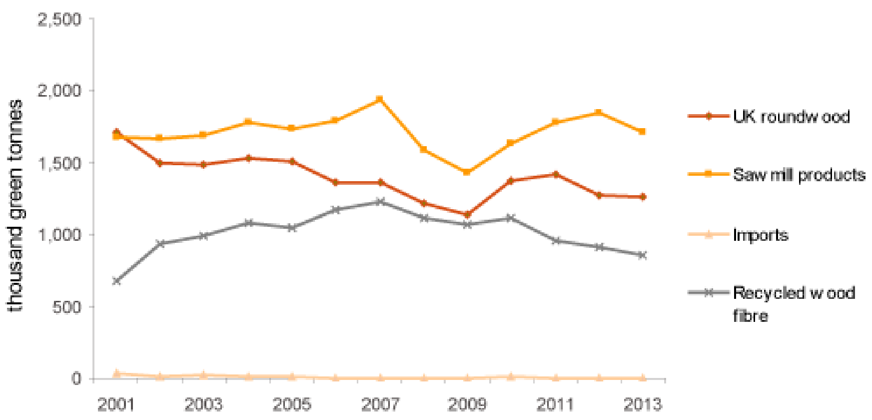
Notes:

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 wood-based panel mills



Source: Wood Panel Industries Federation

2.6.2 Production of wood-based panel products

Total production of wood-based panels in 2013 was 3.0 million cubic metres, a 1% increase from 2012 (Table 2.23). Three quarters (75%) of wood-based panel products produced in the UK in 2013 were particleboard (including oriented strand board (OSB)).

Table 2.23 Wood-based panel production, 2004-2013

Year	Particleboard[1]	Fibreboard[2]	Total
			thousand cubic metres
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
2011	2 625	759	3 384
2012	2 215	788	3 003
2013	2 276	756	3 032

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 1.25 million green tonnes of UK softwood were estimated to have been used directly for woodfuel (including biomass energy) in 2013, an increase of 25% from the previous year (Table 2.24). A further 332 thousand green tonnes of UK softwood were consumed by round fencing manufacturers and 191 thousand green tonnes for other uses in 2013.

Table 2.24 Miscellaneous uses of UK softwood roundwood, 2004-2013

Year	Fencing	Woodfuel[1]	Other[2]	Total
				thousand green tonnes
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	900	135	1 384
2011	363	900	145	1 408
2012	338	1 000	154	1 492
2013	332	1 250	191	1 773

Source: Survey of Round Fencing Manufacturers, industry associations.

Notes:

1. Woodfuel reported here is derived from stemwood, and from 2007 includes estimated roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and from 2008 made use of woodfuel data reported in the Private Sector Softwood Removals Survey.

2. Includes shavings, poles and woodwool.

Hardwood

An estimated 400 thousand green tonnes of UK hardwood were used for woodfuel (including biomass energy) in 2013. A further 30 thousand green tonnes were estimated to have been consumed by round fencing manufacturers and 25 thousand green tonnes for other uses, including exports.

2.7.1 Softwood round fencing manufacturers

There were 61 active round fencing manufacturers in 2013 (Table 2.25).

Over two thirds of round fencing manufacturers (70%) consumed less than 5 thousand green tonnes of softwood annually.

Table 2.25 Number of softwood round fencing manufacturers, 2004-2013

Year	Size category (consumption)[1]				Total
	< 1	1 - < 5	5 - < 10	10 +	
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
2011	22	24	10	8	64
2012	22	21	11	7	61
2013	21	22	11	7	61

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/Wales/Scotland/Northern Ireland) are available from the Timber Statistics web page.

2.7.2 Roundwood purchased by softwood round fencing manufacturers

A total of 347 thousand green tonnes of softwood (UK grown and imported) was purchased by softwood fencing manufacturers in 2013 (Table 2.26). This represents a decrease of 4% from the 2012 total of 360 thousand green tonnes.

Table 2.26 Roundwood purchased by softwood round fencing manufacturers, 2004-2013

Year	Size category (consumption)[1]				Total
	< 1	1 - < 5	5 - < 10	10 +	
					thousand green tonnes
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
2011	8	65	60	250	383
2012	8	57	69	226	360
2013	7	57	79	204	347

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 2.24 relates to UK grown softwood only.*

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

2.8 Exports

UK softwood exports in 2013 consisted of 379 thousand green tonnes of industrial roundwood (excluding sawlogs) and 260 thousand green tonnes of logs, giving a total of 640 thousand green tonnes of roundwood (Table 2.27). This corresponded to a 19% increase in the quantity of softwood roundwood exports since 2012, although it remains lower than the level in the period 2005 to 2008. The increase was driven by a doubling in softwood log exports between 2012 and 2013.

The UK also exported 126 thousand tonnes of softwood chips in 2013, an 11% decrease from the previous year.

Table 2.27 Summary of softwood exports[1], 2004-2013

Year	Roundwood			Chips
	Industrial roundwood	Logs	Total	
				thousand green tonnes
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
2011	415	171	585	158
2012	405	130	535	142
2013	379	260	640	126

Source: industry associations

Notes:

1. *Includes all roundwood other than sawlogs.*

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.

The following tables provide information on the level of certified wood produced in the UK (Table 2.28) and the number of sawmills and round fencing manufacturers holding Chain of Custody certificates (Table 2.29).

2.9.1 Volume certified

Respondents to Forestry Commission surveys were asked to report on volumes certified. 78% of private sector softwood removals in 2013 were from certified sources, the highest percentage to date (Table 2.28). The percentage of private sector softwood removals that are certified has fluctuated over recent years, reflecting a general reduction in the level of certification amongst smaller estates and an increase in production from larger estates.

As nearly all removals from Forestry Commission, Natural Resources Wales and Forest Service woodland are certified, this equates to around 88% of all softwood removals in 2013 from certified sources.

83% of sawmills' roundwood consumption in 2013 was certified. For round fencing manufacturers, 55% of total softwood consumption was certified.

Table 2.28 Per cent of volume certified, 2004-2013

Year	Removals[1]		Sawmills	Round fencing manufacturers
	Softwood from Private sector woodland	Total softwood removals	Consumption (softwood and hardwood)	Consumption (softwood)
				per cent certified volume
2004	73	89	80	58
2005	69	87	76	53
2006	67	86	81	46
2007	74	88	78	54
2008	65	84	82	62
2009	68	87	83	51
2010	73	87	83	62
2011	72	85	80	61
2012	70	84	82	60
2013	78	88	83	55

Source: industry surveys

Notes:

1. For nearly all removals from FC/NRW/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. 64% of sawmills for which the certification status was known held a Chain of Custody certificate in 2013 (Table 2.29). This proportion varied with size of mill, from 27% for mills producing less than 5 thousand m^3 sawnwood to 100% for those producing 25 thousand m^3 sawnwood or more. The majority (54%) of round fencing manufacturers for which the certification status was known held a Chain of Custody certificate.

Table 2.29 Chain of custody certificates, 2013

	Mills holding certificate	Mills without certificate	Certification status not known	Total[1]
Sawmills[2] (size of mill[3])				
< 5	10	27	77	114
5 - < 25	16	5	10	31
25 +	30	0	2	32
All sawmills	**56**	**32**	**89**	**177**
Round fencing manufacturers	13	11	37	61

Source: industry surveys

Notes:

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

2. For large sawmills (those producing at least 10 thousand m^3) that did not report whether or not they held a certificate or did not respond to the 2013 survey, the certification status was obtained from the FSC database, where possible.

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

2.10 Woodfuel and pellets

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

In addition, estimates of roundwood used directly for woodfuel are provided in tables 2.5 and 2.6.

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

Recycled wood used for woodfuel

Estimates of recycled wood used for woodfuel are produced annually by the Wood Recyclers' Association. In 2013, it is estimated that 825 thousand tonnes of recycled wood were used for woodfuel, an increase of 9% from the 2012 estimate of 759 thousand tonnes. Over the past six years, the quantity of recycled wood used for woodfuel has more than trebled.

Wood pellet production

Results from the survey of UK Pellet and Briquette Production are provided in Table 2.31.

2.10.1 Woodfuel supply by sawmills and round fencing manufacturers

An estimated 614 thousand green tonnes (mainly softwood) of woodfuel were supplied by sawmills in 2013 and a further 66 thousand green tonnes were supplied by round fencing manufacturers (Table 2.30). 89% of the total woodfuel supplied was sold to bioenergy.

Table 2.30 Woodfuel supply[1] by sawmills and round fencing manufacturers, 2009-2013

	Sales to bioenergy	Sales as firewood	Used internally for heat/energy	Total
				thousand green tonnes
Sawmills				
2009	346	14	21	381
2010	416	12	49	478
2011	491	14	26	531
2012	540	14	43	597
2013	542	17	55	614
Round fencing manufacturers				
2009	45	12	1	58
2010	53	5	0	58
2011	56	5	1	61
2012	71	4	1	76
2013	60	5	0	66

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.*

2.10.2 Wood pellet production

Wood pellets and briquettes are processed wood products that can be made from roundwood, sawmill products and/or recycled wood. Some of the wood used to make wood pellets and briquettes will be accounted for elsewhere in this release (e.g. in Table 2.30). Wood pellets and briquettes are often used for woodfuel, but pellets may also be used for other purposes (such as horse bedding or cat litter).

A total of 301 thousand tonnes of wood pellets and briquettes are estimated to have been produced in the UK in 2013. This represents an increase of 8% from the 2012 estimate of 278 thousand tonnes and continues the upward trend since 2009.

Table 2.31 Wood pellet production, 2009 - 2013

Year	Total
	thousand tonnes
2009	118
2010	197
2011	244
2012	278
2013	301

Source: Survey of UK Pellet and Briquette Production

3 Trade

Introduction

This chapter 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.

Information on imports and exports mainly comes from the Overseas Trade Statistics compiled by HM Revenue & Customs. Estimates are provided at a UK level only. International comparisons of apparent consumption are provided in the International Forestry chapter. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Figures for 2013 were previously published in "UK Wood Production and Trade: 2013 Provisional Figures", released on 15 May 2014. Some figures for 2013 have been revised from those previously published. For further details on revisions, see the Trade section of the Sources chapter.

A copy of all trade tables is available to download as an Excel spreadsheet from the Tables for Download page.

Key findings

The main findings are:

UK imports:

- 5.5 million cubic metres of sawnwood in 2013, a 6% increase from the 2012 figure;
- 3.0 million cubic metres of wood-based panels in 2013, a 12% increase from 2012;
- 5.0 million cubic metres of wood pellets in 2013, a 128% increase from 2012;
- 5.9 million tonnes of paper in 2013, a 3% decrease from 2012.
- The total value of wood product imports in 2013 was £6.7 billion, of which £4.2 billion was pulp and paper.
- Sawn softwood, particleboard, fibreboard, and paper and paperboard were overwhelmingly imported from EU countries in 2013.
- Sawn hardwood and wood pulp imports originated from a range of both EU and non-EU countries in 2013.
- The vast majority of UK imports of plywood in 2013 came from countries outwith the EU.

UK exports:

- The total value of wood product exports in 2013 was £1.7 billion, of which £1.5 billion was pulp and paper.

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 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 10.8 million m^3 WRME underbark in 2013 (Table 3.1). A further 42.2 million m^3 WRME underbark of wood and wood products were imported to the UK and 6.2 million m^3 WRME underbark were exported, giving apparent consumption of 46.8 million m^3 WRME underbark. This represented an 8% 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 80% of all wood (production + imports) in the UK in 2013.

Table 3.1 Apparent consumption of wood[1] in the UK, 2004-2013

Year	UK production[2]	Imports	Exports	Apparent Consumption
				million m^3 WRME underbark
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	9.6	41.6	5.5	45.8
2011	10.0	40.6	5.2	45.5
2012	10.1	39.6	6.5	43.2
2013	10.8	42.2	6.2	46.8

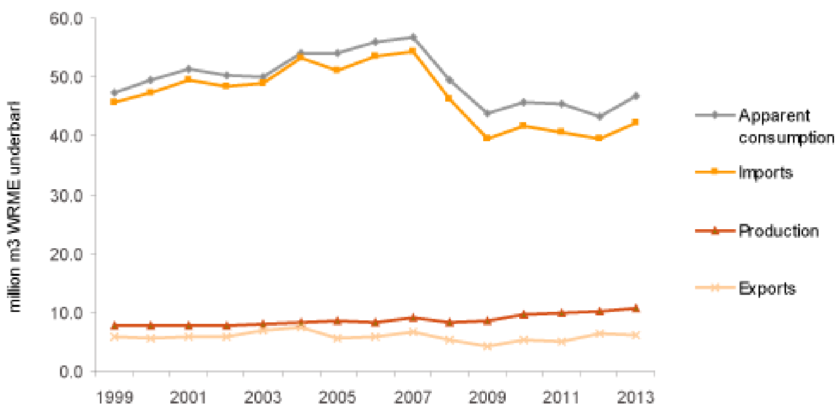
Source: industry surveys, industry associations, UK overseas trade statistics (HM Revenue & Customs) and conversion factors to Wood Raw Material Equivalent (WRME).

Notes:

1. *Excludes recovered paper.*

2. *UK production of roundwood is estimated from deliveries to wood processing industries and others, as in tables 2.5 and 2.6.*

Figure 3.1 Apparent consumption of wood[1] in the UK, 1999-2013



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 2.5 and 2.6.*

3.2 Apparent consumption of wood products in the UK

UK production accounted for 40% of the UK sawnwood market, 55% of the UK wood-based panel market and 49% of the UK paper market in 2013 (Table 3.2).

Table 3.2 Apparent consumption of wood products[1,2] in the UK, 2013

Product	UK production	Imports	Exports	Apparent consumption
Sawnwood (thousand m^3)				
Coniferous	3 536	5 101	146	8 491
Non-coniferous	46	393	19	420
Total	3 581	5 494	164	8 911
Wood-based panels (thousand m^3)				
Veneer sheets	0	24	2	22
Plywood	0	1 374	58	1 316
Particleboard	2 276	790	229	2 837
Fibreboard	756	774	143	1 388
Total	3 032	2 963	432	5 563
Paper & paperboard (thousand tonnes)				
Newsprint	1 233	510	333	1 410
Other graphic papers	403	2 874	199	3 078
Sanitary & household papers	802	370	13	1 159
Packaging materials	1 851	2 043	452	3 442
Other paper & paperboard	272	124	123	273
Total	4 561	5 921	1 120	9 362

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 7.9 million tonnes in 2013 (Table 3.3). The amount of recovered paper which is exported rose from around 3.1 million tonnes in 2004 to 4.9 million tonnes in 2008, before decreasing to 4.2 million tonnes in 2013. Exports accounted for over one half (54%) of recovered paper produced in the UK in 2013.

Table 3.3 Flow of recovered paper, 2004-2013

Year	UK production	Imports	Exports	Apparent consumption[1]
				thousand tonnes
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
2011	8 036	177	4 479	3 733
2012	8 099	160	4 447	3 812
2013	7 869	184	4 248	3 805

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 2013 comprised 5.5 million cubic metres of sawnwood (6% increase from the previous year), 3.0 million cubic metres of wood-based panels (12% increase) and 5.0 million cubic metres of wood pellets (128% increase) (Table 3.4).

A total of 5.9 million tonnes of paper was imported into the UK in 2013, representing a 3% decrease from the 2012 figure of 6.1 million tonnes.

Table 3.4 UK import quantities, 2004-2013

Year	Wood (thousand m^3)				Pulp and paper (thousand tonnes)			
	Sawnwood	Wood-based panels	Wood pellets[2]	Other wood[3]	Paper	Pulp	Recovered paper	Total pulp & paper
2004	8 583	4 114	..	1 048	7 528	1 636	87	9 251
2005	8 341	3 939	..	1 325	7 663	1 694	78	9 434
2006	7 963	3 959	..	1 133	7 741	1 452	140	9 332
2007	8 469	3 858	..	1 621	7 890	1 427	88	9 405
2008	5 886	3 389	..	1 921	7 403	1 344	74	8 821
2009	5 240	2 500	66	821	7 018	940	94	8 052
2010	5 699	2 701	816	1 071	7 254	1 094	115	8 462
2011	4 936	2 827	1 502	985	6 887	1 009	177	8 073
2012	5 179	2 650	2 201	965	6 119	1 021	160	7 300
2013	5 494	2 963	5 015	1 234	5 921	1 100	184	7 205

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

Notes:

1. *There are reliability concerns for some of these figures, particularly for individual products (see Sources chapter).*
2. *Included in 'Other wood' before 2009.*
3. *Includes roundwood, wood charcoal, chips, particles and residues. Excludes wood pellets from 2009.*

.. Denotes data not available.

3.5 UK export quantities by product

A total of 5.4 million tonnes of pulp and paper (including recovered paper) was exported from the UK in 2013 (table 3.5). This represented a 4% decrease from the previous year.

Table 3.5 UK export quantities, 2004-2013

Year	Wood (thousand m^3)				Pulp and paper (thousand tonnes)			
	Sawnwood	Wood-based panels	Wood pellets[2]	Other wood[3]	Paper	Pulp	Recovered paper	Total pulp & paper
2004	312	519	..	1 294	1 557	29	3 127	4 714
2005	358	520	..	1 186	1 164	25	3 329	4 518
2006	415	510	..	1 214	1 002	24	3 996	5 022
2007	346	599	..	1 353	971	24	4 749	5 743
2008	222	520	..	1 289	1 031	10	4 891	5 932
2009	203	451	18	657	896	22	4 444	5 361
2010	195	509	89	1 029	926	35	4 388	5 349
2011	162	546	56	1 430	974	32	4 479	5 485
2012	141	597	79	1 778	1 143	36	4 447	5 626
2013	164	432	157	1 279	1 120	23	4 248	5 391

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

Notes:

1. *There are reliability concerns for some of these figures, particularly for individual products (see Sources chapter).*
2. *Included in 'Other wood' before 2009.*
3. *Includes roundwood, wood charcoal, chips, particles and residues. Excludes wood pellets from 2009.*

.. Denotes data not available.

3.6 UK import values by product

Wood product imports in 2013 were valued at a total of £6.7 billion, a 5% increase from the level in 2012 (Table 3.6).

Pulp and paper (including recovered paper) comprised around three fifths of the total value of wood product imports in 2013, 18% was sawnwood, 13% wood-based panels and 6% wood pellets.

Table 3.6 UK import values, 2004-2013

Year	Wood				Pulp and paper				Total
	Sawnwood	Wood-based panels	Wood pellets[2]	Other wood[3]	Paper	Pulp	Recovered paper	Total pulp & paper	
									£ million
2004	1 190	961	..	95	3 520	476	7	4 003	6 248
2005	1 120	918	..	114	3 432	517	5	3 954	6 106
2006	1 144	926	..	112	3 599	548	9	4 156	6 338
2007	1 516	914	..	128	3 741	526	7	4 275	6 833
2008	1 085	873	..	158	3 655	608	10	4 273	6 389
2009	953	677	7	104	3 635	425	11	4 071	5 811
2010	1 199	781	69	110	3 997	593	17	4 607	6 765
2011	1 080	838	129	79	4 049	613	34	4 696	6 822
2012	1 084	791	185	75	3 727	519	21	4 266	6 402
2013	1 179	874	412	87	3 644	500	21	4 165	6 717

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

Notes:

1. *There are reliability concerns for some of these figures, particularly for individual products (see Sources chapter).*
2. *Included in 'Other wood' before 2009.*
3. *Includes roundwood, wood charcoal, chips, particles and residues. Excludes wood pellets from 2009.*

.. Denotes data not available.

3.7 UK export values by product

Wood product exports from the UK were valued at a total of £1.7 billion in 2013, a decrease of 5% from the 2012 total (Table 3.7). Total exports of wood products in 2013 comprised 89% pulp and paper (mainly paper), 6% wood-based panels, 2% sawnwood and 3% other wood.

Table 3.7 UK export values, 2004-2013

Year	Wood				Pulp and paper				Total
	Sawnwood	Wood-based panels	Wood pellets[2]	Other wood[3]	Paper	Pulp	Recovered paper	Total pulp & paper	
									£ million
2004	50	95	..	34	992	7	235	1 234	1 412
2005	52	102	..	35	1 002	6	278	1 286	1 475
2006	61	128	..	37	947	8	329	1 284	1 510
2007	70	107	..	40	1 013	7	407	1 427	1 645
2008	50	104	..	48	1 114	3	472	1 590	1 792
2009	41	104	2	20	1 010	10	342	1 362	1 530
2010	47	113	7	35	1 068	18	524	1 610	1 812
2011	41	128	3	50	1 044	11	595	1 650	1 872
2012	34	130	4	51	1 048	10	531	1 589	1 807
2013	36	109	5	46	1 017	8	494	1 519	1 717

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

Notes:

1. *There are reliability concerns for some of these figures, particularly for individual products (see Sources chapter).*
2. *Included in 'Other wood' before 2009.*
3. *Includes roundwood, wood charcoal, chips, particles and residues. Excludes wood pellets from 2009.*

.. Denotes data not available.

3.8 Origin of wood imports

Table 3.8 presents data on the source of selected wood products that have been imported into the UK in 2013.

The source of imports for these products has remained stable between 2012 and 2013, with the exception of wood pulp (the 2012 figures can be found in Forestry Statistics 2013).

Sawn softwood, particleboard, fibreboard, and paper and paperboard were overwhelmingly imported from EU countries in 2013 (Table 3.8):

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

Sawn hardwood and wood pulp imports originated from a range of both EU and non-EU countries in 2013:

- The USA (22%) were the largest single source of sawn hardwood imports to the UK.
- Sweden (27%) and Brazil (26%) provided the majority of wood pulp imports to the UK. Sweden increased its share by 11 percentage points between 2013 and 2012, while the USA's share decreased from 17% to 7%.

The vast majority of UK imports of plywood in 2013 came from countries outwith the EU, such as China (42%) and Brazil (15%), while Finland (12%) accounted for the majority of EU trade.

Table 3.8 Country of origin of wood imports to the UK, 2013

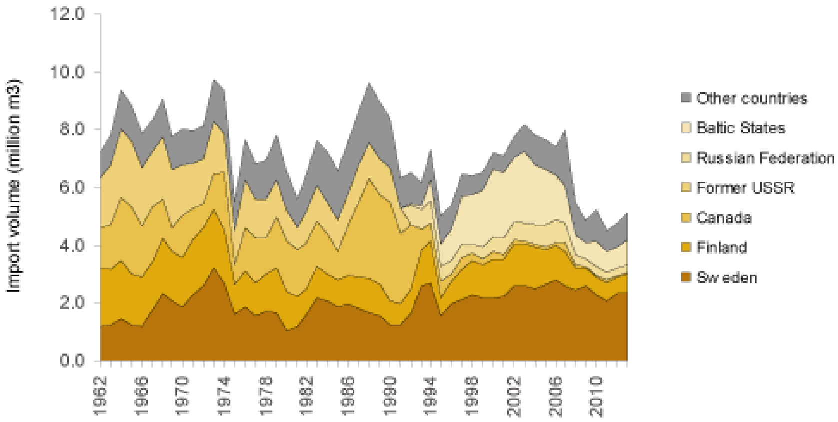
Source	Sawn softwood	Sawn hardwood	Plywood	Particle-board	Fibre-board	Wood pulp	Paper and paperboard
							per cent of total UK imports (volume) in each category
Sweden	46	0	0	0	0	27	17
Finland	13	1	12	0	2	7	15
Germany	5	7	0	25	24	1	19
France	0	9	1	22	1	0	8
Italy	0	10	1	1	0	1	4
Netherlands	0	2	1	0	0	6	4
Ireland	8	2	1	15	34	0	1
Belgium	1	3	0	10	8	0	2
Spain	0	0	1	3	11	3	2
Latvia	14	6	2	8	4	0	0
Poland	0	3	0	0	7	0	2
Portugal	0	0	0	10	1	4	2
Estonia	2	8	0	0	1	0	0
Other EU-27	2	3	2	4	3	4	5
Total EU-27	**92**	**54**	**21**	**99**	**96**	**53**	**81**
China	0	1	42	0	3	0	3
USA	0	22	0	0	0	7	4
Brazil	0	0	15	0	0	26	2
Russia	5	1	5	0	0	0	0
Malaysia	0	5	9	0	0	0	0

Cameroon	0	9	0	0	0	0	0
Other non-EU-27	2	10	8	1	1	14	11
Total non-EU-27	**8**	**46**	**79**	**1**	**4**	**47**	**19**

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

Figure 3.2 shows the main sources of imports of sawn softwood to the UK since 1962. The total level of sawn softwood imports has fluctuated over the period, between around 5 million m3 and 10 million m3. Imports from Canada have reduced since the early 1990s; those from the Baltic States have increased between 1994 and 2003, but have reduced since then. Sweden has consistently been the principal country of origin for UK sawn softwood imports over the past 20 years.

Figure 3.2 Country of origin of sawn softwood imports to the UK, 1962-2013



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

4 UK Forests and Climate Change

Introduction

This chapter contains information on:

- carbon in forests;
- the Woodland Carbon Code; and
- public attitudes to forestry and climate change.

Estimates for England, Wales, Scotland and Northern Ireland are included, where possible, in addition to UK totals. International comparisons of carbon stocks are provided in the International Forestry chapter. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

For information on revisions, see the UK Forests and Climate Change section of the Sources chapter.

A copy of all UK Forests and Climate Change tables is available to download as an Excel spreadsheet from the Tables for Download page.

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 and available at www.forestry.gov.uk/forestry/INFD-6umkar.

Key findings

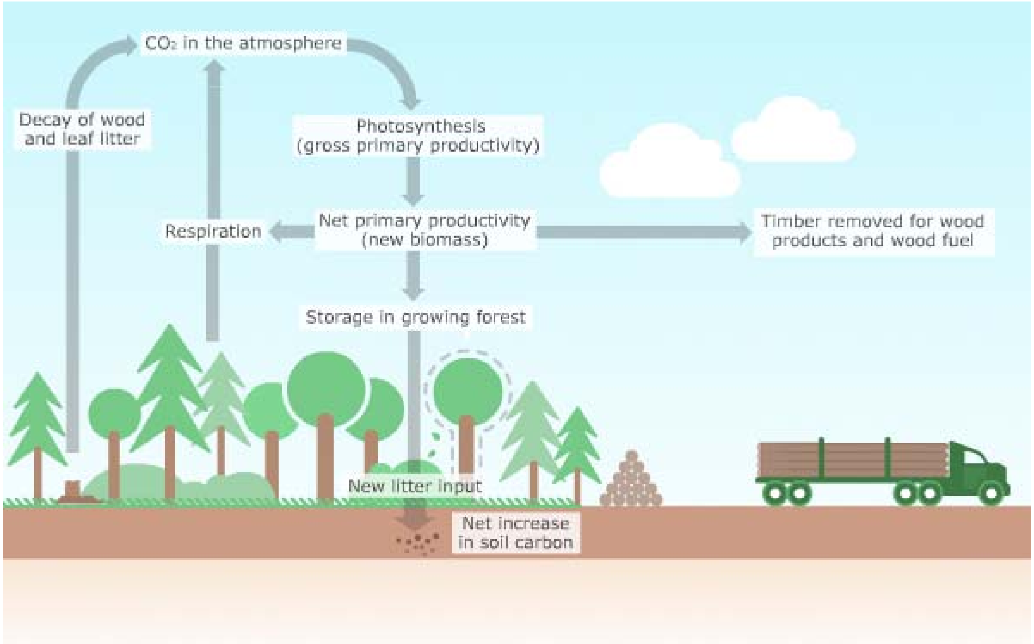
The main findings are:

- The total carbon stock in UK forests has increased from 1990 to 2010 and is projected to increase further by 2015.
- The annual rate of accumulation of carbon in UK forests is forecast to peak around 2030 and is expected to fall steadily afterwards.
- A total of 201 projects were registered under the Woodland Carbon Code at 30 June 2014, covering an area of 15.4 thousand hectares of woodland and projected to sequester 5.7 million tonnes of carbon dioxide.
- 80% of the UK public agrees with the statement "trees are good because they remove carbon dioxide from the atmosphere and store it in wood".

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 and is projected to increase further by 2015 (Table 4.1). The carbon in forest soils accounts for most (around 75%) of total forest carbon.

Table 4.1 Forest carbon stock

	1990	2000	2005	2010	2015
					million tonnes of carbon dioxide equivalent
Carbon in above-ground biomass	360	471	527	583	639
Carbon in below-ground biomass	129	170	190	210	230
Carbon in dead wood	9	10	10	10	10
Carbon in litter	165	175	179	182	187
Soil carbon [1]	2 366	2 533	2 594	2 629	2 715
Total forest carbon	**3 029**	**3 359**	**3 500**	**3 614**	**3 781**

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.*

These figures are outside the scope of National Statistics

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 projected to peak around 2030 at 20 million tonnes CO_2 in total, of which 13 million tonnes CO_2 is projected to accumulate in living biomass (Table 4.2, Figure 4.2). The rate of accumulation is expected to fall steadily after 2030.

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	9.0	16.0	0.0	-0.2
1995	7.8	15.6	0.4	-0.2
2000	9.5	17.1	1.0	-0.8
2005	11.0	18.7	1.7	-1.1
2010	10.3	17.8	2.6	-1.0
2015	10.7	17.3	3.5	-1.3
2020	11.6	18.3	4.4	-1.0

Source: Inventory and projections of UK emissions by sources and removal by sinks due to land use, land use change and forestry, produced by the Centre for Ecology and Hydrology for input to 2012 final UK Greenhouse Gas Emissions (Department of Energy & Climate Change, March 2014).

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.

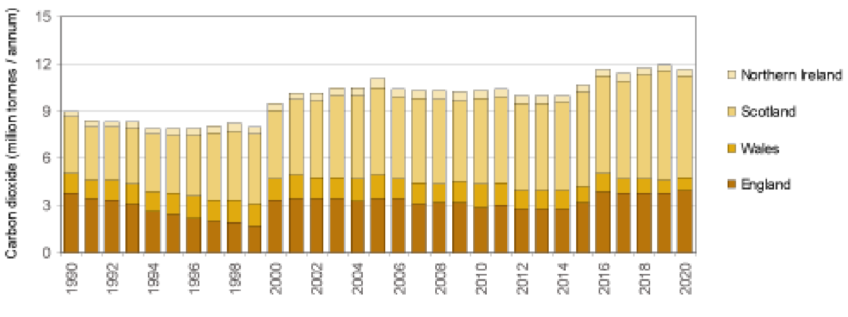
2. Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO_2). To convert from tonnes CO_2 to tonnes carbon multiply by 12/44.

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 2012 (mid projection).

4. The figures shown above differ significantly from those published in Forestry Statistics 2013, due to changes in the data and model used by the Centre for Ecology and Hydrology. For more information, please see the Sources chapter.

These figures are outside the scope of National Statistics

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



Source: Inventory and projections of UK emissions by sources and removal by sinks due to land use, land use change and forestry, produced by the Centre for Ecology and Hydrology for input to 2012 UK Greenhouse Gas emissions final figures (Department of Energy & Climate Change, March 2014).

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 2012 (mid projection).

4. The figures shown above differ significantly from those published in Forestry Statistics 2013, due to changes in the data and model used by the Centre for Ecology and Hydrology. For more information, please see the Sources chapter.

These figures are outside the scope of National Statistics

4.4 Woodland Carbon Code

The Woodland Carbon Code is a voluntary standard, initiated in July 2011, for woodland creation projects that make claims about the carbon they sequester (take out of the atmosphere).

All projects must be placed on the UK Woodland Carbon Registry. Their claims about potential carbon sequestration are validated by an independent certification body. Validated projects are then verified on a regular basis to confirm the progress of carbon sequestration.

Further information on Woodland Carbon Code projects is provided in the Sources chapter and at www.forestry.gov.uk/carboncode

Table 4.3a provides biannual data on projects registered under the Woodland Carbon Code since September 2011. The table provides information on the number of projects, area of woodland covered by the projects and the total projected carbon sequestration over the lifetime (up to 100 years) of the projects.

A total of 201 projects were registered under the Woodland Carbon Code at 30 June 2014, covering an area of 15.4 thousand hectares of woodland and projected to sequester 5.7 million tonnes of carbon dioxide.

87 projects had been validated by end June 2014, covering an area of 3.1 thousand hectares and projected to sequester 1.5 million tonnes of carbon dioxide.

Table 4.3a Woodland Carbon Code projects in the UK

	Validated	Awaiting validation	Total
Number of projects			
December 2011	3	36	39
June 2012	17	41	58
December 2012	22	67	89
June 2013	42	91	133
December 2013	63	129	192
June 2014	87	114	201
Area of woodland (hectares)			
December 2011	319	1 887	2 206
June 2012	1 098	1 684	2 782
December 2012	1 134	1 877	3 011
June 2013	2 063	12 105	14 168
December 2013	2 503	12 679	15 183
June 2014	3 135	12 255	15 390
Projected carbon sequestration[1] (thousand tonnes of carbon dioxide equivalent)			
December 2011	137	791	928
June 2012	474	824	1 298
December 2012	500	895	1 395
June 2013	951	4 204	5 154
December 2013	1 156	4 460	5 617
June 2014	1 496	4 181	5 676

Source: Forestry Commission

Notes:

1. Figures for carbon sequestration indicate the total projected sequestration of the projects over their lifetime of up to 100 years, and include the amount claimable by a project plus the amount allocated to a shared "buffer" in case of unanticipated losses.

These figures are outside the scope of National Statistics

Most of the projects registered under the Woodland Carbon Code at 30 June 2014 were in England (112), 81 were in Scotland, seven in Wales and one in Northern Ireland (Table 4.3b).

Table 4.3b Woodland Carbon Code projects at 30 June 2014

	England	Wales	Scotland	Northern Ireland	UK
Number of projects					
Validated	38	3	46	0	87
Awaiting validation	74	4	35	1	114
Total	112	7	81	1	201
Area of woodland (hectares)					
Validated	861	52	2 222	0	3 135
Awaiting validation	1 210	179	10 858	9	12 255
Total	2 071	231	13 080	9	15 390
Projected carbon sequestration[1] (thousand tonnes of carbon dioxide equivalent)					
Validated	481	33	982	0	1 496
Awaiting validation	801	84	3 292	3	4 181
Total	1 283	116	4 274	3	5 676

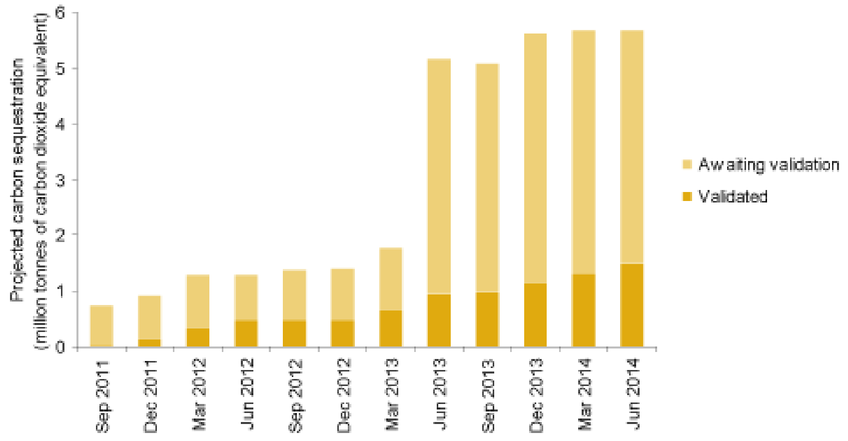
Source: Forestry Commission

Notes:

1. Figures for carbon sequestration indicate the total projected sequestration of the projects over their lifetime of up to 100 years, and include the amount claimable by a project plus the amount allocated to a shared "buffer" in case of unanticipated losses.

These figures are outside the scope of National Statistics

Figure 4.3 Projected carbon sequestration of Woodland Carbon Code projects in the UK[1]



Source: Forestry Commission

Notes:

1. Figures for carbon sequestration indicate the total projected sequestration of the projects over their lifetime of up to 100 years, and include the amount claimable by a project plus the amount allocated to a shared "buffer" in case of unanticipated losses.

These figures are outside the scope of National Statistics

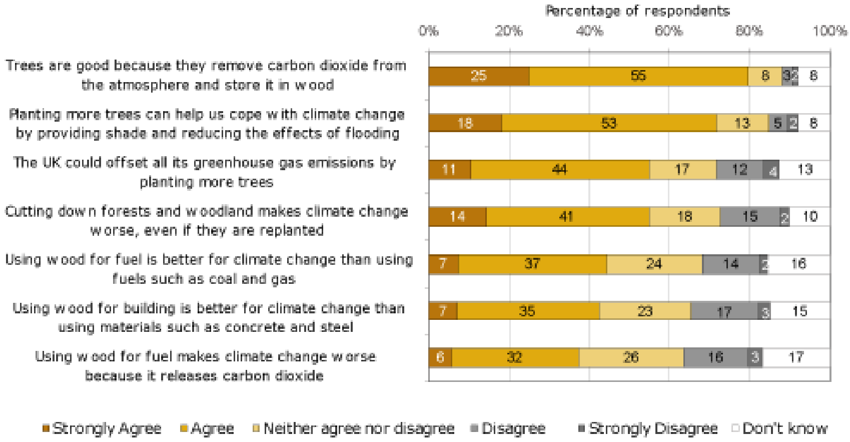
4.5 Public Opinion of Forestry - climate change

The Forestry Commission has conducted similar surveys of public attitudes to forestry and forestry-related issues every two years since 1995. The most recent set of separate surveys was conducted in 2013 (in Scotland, Wales, and across the UK as a whole) and 2014 (in Northern Ireland). The full results are available on our website at www.forestry.gov.uk/forestry/infd-5zyl9w.

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 80% of the UK public agreeing (agree or strongly agree) (Figure 4.4). This compares with only 37% agreeing with the statement "using wood for fuel makes climate change worse because it releases carbon dioxide".

Figure 4.4 Public opinion on ways in which forests and woodlands can impact on climate change



Source: UK Public Opinion of Forestry Survey 2013.

Base: 2,000 UK respondents.

These figures are outside the scope of National Statistics

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

Introduction

This chapter presents a range of information about the woodland environment, mostly using sources that are outside the scope of National Statistics. They are included to provide additional context to the topic.

Estimates for England, Wales, Scotland and Northern Ireland are included, where possible, in addition to UK or GB totals. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Most of the statistics presented in this chapter have been previously released.

Statistics on woodland fires are included for the first time in this release.

The statistics on the populations of wild birds (Table 5.1 and Figure 5.1) have been revised since "Forestry Statistics 2013". For further details on revisions, see the Environment section of the Sources chapter.

A copy of all environment tables is available to download as an Excel spreadsheet from the Tables for Download page.

Key findings

The main findings are:

- 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.
- 80% of the UK public agrees with the statement "action should be taken by authorities and woodland managers to protect trees from damaging pests and diseases".
- There were around 2,400 woodland fires in 2012-13, burning around 400 hectares of woodland.

5.1 Populations of wild birds

Indices of wild bird populations in the UK are produced annually by the Department for Environment, Food and Rural Affairs (Defra) in conjunction with the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Joint Nature Conservation Committee (JNCC), and cover a range of species that are native to the UK.

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 5.1, Figure 5.1).

Causes for the decline in woodland birds may include a lack of diversity in habitats and food sources, loss of habitats and food sources through damage caused by increasing deer populations, and a reduction in some migratory species following pressures in other parts of the world.

Table 5.1 UK populations of wild birds

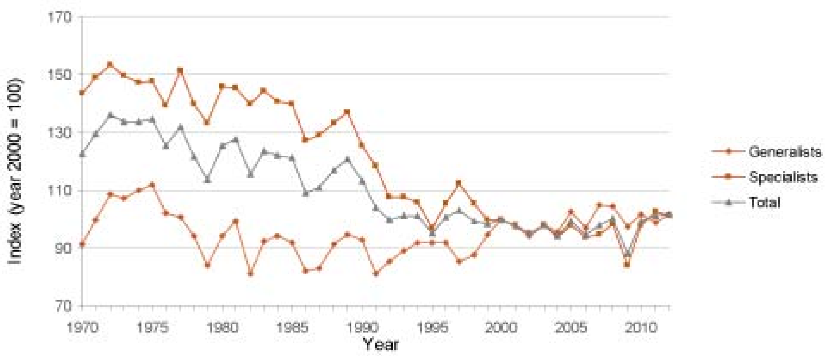
Year	Total breeding birds	Farmland birds	Seabirds	Woodland birds	Woodland generalists	Woodland specialists
						index (year 2000 = 100)
2003	98.3	99.1	98.0	97.9	97.8	97.8
2004	97.2	98.1	92.2	94.4	95.8	93.5
2005	99.1	96.9	94.9	99.4	102.4	97.8
2006	99.8	96.0	96.6	94.8	97.0	93.7
2007	98.1	89.8	95.2	97.8	104.8	94.5
2008	99.8	91.8	90.0	100.2	104.5	98.3
2009	94.7	89.2	93.2	88.2	97.4	84.1
2010	97.5	86.5	93.7	99.3	101.4	98.1
2011	95.5	86.1	87.9	101.3	98.7	102.4
2012	95.4	86.6	85.7	101.6	101.8	101.3

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 in the UK statistical release (Defra, October 2013).

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 in the UK statistical release (Defra, October 2013).

5.2 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 (Table 5.2). 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.

Please refer to the Countryside Survey website (see Sources) for an explanation of the vegetation richness and condition scores.

Table 5.2 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

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

Notes:

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

These figures are outside the scope of National Statistics

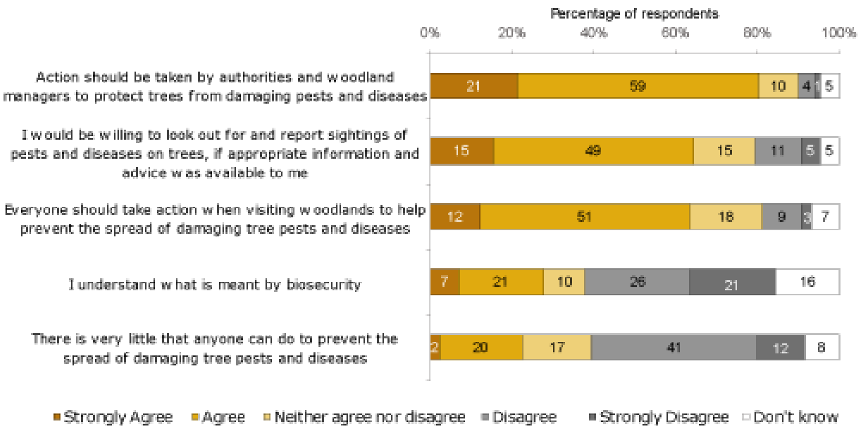
5.3 Public Opinion of Forestry - tree health

The Forestry Commission has conducted similar surveys of public attitudes to forestry and forestry-related issues every two years since 1995. The most recent surveys were conducted in 2013 (with separate surveys in Scotland, Wales, and across the UK as a whole) and in 2014 (in Northern Ireland). The full results are available within the 2013 and 2014 Public Opinion of Forestry reports available on our website at www.forestry.gov.uk/forestry/infd-5zyl9w.

Questions were asked in the 2013 and 2014 surveys, for the first time, to gauge the public's views on tree health issues.

The highest level of agreement was seen with the statement "action should be taken by authorities and woodland managers to protect trees from damaging pests and diseases", with 80% of UK respondents in 2013 agreeing (agree or strongly agree) (Figure 5.2). This compares with only 22% agreeing with the statement "there is very little that anyone can do to prevent the spread of damaging tree pests and diseases".

Figure 5.2 Public opinion on tree health



Source: UK Public Opinion of Forestry Survey 2013.

Base: 2,000 UK respondents.

These figures are outside the scope of National Statistics

5.4 Woodland Fires

The Department for Communities and Local Government produces estimates of the number and area of wildfires each year, using data recorded by Fire and Rescue Services using the Incident Reporting System. By analysing the wildfire data with the National Forest Inventory woodland map, it has been possible to produce estimates of fires that occur within woodlands in Great Britain.

Table 5.3a shows the number of woodland fires in 2010-11 to 2012-13. There has been some fluctuation in the number of woodland fires in Great Britain over this period, with a high of almost 9 thousand fires in 2011-12 and a low of around 2,400 in 2012-13. Most fires occurred in England.

The total number of woodland fires in Great Britain in 2012-13 (around 2,400) represents 2% of the total of around 119,700 outdoor fires in Great Britain in 2012-13 (Fire Statistics: Great Britain April 2012 to March 2013, Department for Communities and Local Government, May 2014).

Table 5.3a Number of woodland fires

Financial year	England	Wales	Scotland	GB
2010-11	5 993	612	1 166	7 771
2011-12	7 332	610	1 050	8 992
2012-13	1 786	174	479	2 439

Source: Incident Recording System (Department for Communities and Local Government), National Forest Inventory

Table 5.3b shows the area covered by woodland fires between 2010-11 and 2012-13. There was a peak of over 8,800 hectares burnt in 2011-12, with the vast majority of this area occurring in Scotland.

Around 400 hectares of woodland in Great Britain were burnt in 2012-13.

Table 5.3b Area of woodland fires

Financial year	England	Wales	Scotland	GB
				hectares
2010-11	980	166	127	1 274
2011-12	464	417	7 966	8 847
2012-13	47	107	268	422

Source: Incident Recording System (Department for Communities and Local Government), National Forest Inventory

6 Recreation

Introduction

This chapter contains statistics on:

- the number and profile of visits to all woodlands from household surveys;
- the number and profile of visits to Forestry Commission/ Natural Resources Wales/ Forest Service woodlands from on-site surveys and administrative sources; and
- public access to woodland.

Geographical coverage for recreation statistics varies. Estimates are presented at country level and, where possible, UK or GB totals are included. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Most of the statistics presented in this chapter have been previously released by other organisations. The latest year figures for day visitors to Forest Service sites in Northern Ireland and for Woods for People are published for the first time in this release. Figures for earlier years have not been revised from those previously published. For further details on revisions, see the Recreation section of the Sources chapter.

Further information on the advantages and disadvantages of household surveys and of on-site surveys is provided in the Recreation section of the Sources chapter.

A copy of all recreation tables is available to download as an Excel spreadsheet from the Tables for Download page.

Key findings

The main findings are:

- There were an estimated 357 million visits to woodland in England in 2012-13. Walking with a dog was the most commonly reported activity, undertaken on around two thirds of visits in England. (Monitor of Engagement with the Natural Environment 2012-13)
- There were an estimated 90 milllion visits to woodland in Scotland in 2013. 63% of the Scottish population had visited woodland in the previous 12 months. (Scotland's People and Nature Survey 2013)
- There were an estimated 86 million visits to woodland in Wales in 2011. Walking was the main activity undertaken on around two thirds of visits in Wales. (Welsh Outdoor Recreation Survey 2011)
- Around two thirds of the UK population have visited woodland in the last few years. (UK Public Opinion of Forestry Survey 2013).
- Around 4.3 million visits are made annually to Welsh Government woodlands in Wales and around 9.1 million visits are made annually to Forestry Commission Scotland woodlands. (All Forests Surveys)
- Around 364 thousand people visited Forest Service sites where a charge is made in Northern Ireland in 2013-14.
- Around one half (50%) of the UK woodland area was estimated to be publicly accessible in 2013. (Woods for People)

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 to 2012)
- England Leisure Visits Survey (2005)
- Welsh Outdoor Recreation Survey (2008, 2011)
- Monitor of Engagement with the Natural Environment (England, 2009-10 onwards)
- Scotland's People and Nature Survey (2013)

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. Further information on the differences between surveys is provided in the Recreation section of the Sources chapter.

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.

Results from the Monitor of Engagement with the Natural Environment 2012-13 estimate a total of 357 million visits to woodlands in England (Table 6.1). This is not significantly different from the 2011-12 figure.

The Welsh Outdoor Recreation Survey 2011 estimates a total of 86 million visits to woodlands in Wales. This is a statistically significant increase from the estimated total of 64 million in 2008.

Scotland's People and Nature Survey 2013 reports an estimated total of 90 million visits to woodlands in Scotland. This is a statistically significant increase from the 2012 estimate of 62 million visits from the Scottish Recreation Survey. This increase is partly the result of applying a new population estimate in the calculation of total visits for 2013.

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	..
2011	358	86	65	..
2012	357	..	62	..
2013	..	..	90	..

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;

Wales 2008, 2011: Welsh Outdoor Recreation Survey carried out by IPSOS-MORI (2008) and by TNS (2011);

Scotland 2004 - 2012: Scottish Recreation Survey (ScRS), carried out by TNS;

Scotland 2013: Scotland's People and Nature Survey (SPANs), carried out by TNS.

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 totals shown are for trips with woodland as the main destination.

4. The Scottish Recreation Survey ran from July 2003 until December 2012. It was replaced by Scotland's People and Nature Survey that ran from March 2013 to February 2014. Both surveys covered 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.

These figures are outside the scope of National Statistics

6.1.1 England

Household surveys in 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 now expected to run for 6 years. Further information on the survey, including copies of annual reports and online data viewers to access more detailed results, is available from the Natural England website at www.naturalengland.org.uk/ourwork/research/mene.aspx

Table 6.2 shows the main characteristics of visits to woodlands. Around two thirds of visits to woodland involved walking with a dog and around one fifth involved other walking. Walking was the main mode of transport for around two thirds of visits to woodland. Around three fifths of visits to woodland were within 2 miles.

Table 6.2 Woodland visit characteristics[1] - England 2009-10 to 2012-13

	2009-10	2010-11	2011-12	2012-13
				per cent
Activities on trip (multi response)				
Walking with a dog	66	68	70	67
Other walking	21	21	21	21
Wildlife watching	6	5	5	5
Playing with children	6	5	5	4
Eat/ drink out	4	4	4	3
Visiting an attraction	3	3	2	2
Off road cycling or mountain biking	2	2	2	2
Road cycling	2	2	2	2
Main mode of transport				
On foot	61	62	65	65
Car/ van	35	34	32	31
Bicycle	2	2	2	3
Distance travelled (one way)				
Less than 1 mile	38	36	30	31
1 to 2 miles	25	27	32	29
3 to 5 miles	19	19	22	23
6 to 10 miles	7	8	7	8
Over 10 miles	11	10	9	9
Duration of visit (round trip)				
Up to 1 hour	26	23	28	..
1 - less than 2 hours	42	44	41	..
2 - less than 3 hours	15	16	15	..
3 hours or more	17	17	16	..

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

Notes:

1. All trips that included a visit to woodland.

.. Denotes data not available.

These figures are outside the scope of National Statistics

6.1.2 Scotland

Household surveys in Scotland

Scotland's People and Nature Survey (SPANS), which measures and collects details about the Scottish adult population's participation in outdoor recreation in Scotland, ran from March 2013 until February 2014, with 1,000 adults interviewed in their home each month. The survey, which replaced the previous Scottish Recreation Survey (ScRS), is expected to run every 3 years.

Further information on SPANS and the ScRS, including copies of annual reports and online data viewers to access more detailed results, is available from the Scottish Natural Heritage website at www.snh.gov.uk/land-and-sea/managing-recreation-and-access/increasing-participation/measuring-participation/

Table 6.3 shows the frequency of visits to woodland by the Scottish adult population in the previous 12 months.

63% of respondents had visited woodland at least once in the previous year. This compares with results from the Scotland Public Opinion of Forestry Survey (table 6.5), showing that 76% of respondents to the 2013 survey had visited woodland in the last few years.

Around one third (34%) of respondents had visited woodland at least once a month in the previous 12 months.

Table 6.3 Frequency of visits to woodland[1] - Scotland

Frequency	2013-14
	per cent of respondents
At least once a week	18
Once or twice a month	16
Once every 2-3 months	13
Once or twice	16
Never	37
Total	**100**

Source: Scotland's People and Nature Survey, carried out by TNS, for Scottish Natural Heritage, Forestry Commission Scotland, National Park authorities and Greenspace Scotland.

Base: 6,042 respondents.

Note:

1. All trips that include a visit to woodland.

These figures are outside the scope of National Statistics

6.1.3 Wales

Household surveys in Wales

Countryside Council for Wales (CCW) and Forestry Commission Wales (FCW) [both part of Natural Resources Wales from 1 April 2013] commissioned a Welsh Outdoor Recreation Survey (WORS) in 2008 and 2011. The survey provides data on Welsh residents' participation in informal outdoor activities and visits to the outdoors, including woodland. Further information on the survey, including copies of reports and data tables, is available at www.forestry.gov.uk/forestry/infd-8WAKt3

Table 6.4 shows the main charateristics of recreation visits where the main destination of visit was woodland, from the Welsh Outdoor Recreation Surveys for 2008 and 2011. Walking was reported as the main activity in around two thirds of visits to woodland. Car or van was the main mode of transport for around three fifths of visits to woodland. Around one half of visits to woodland were within 1 mile and around two fifths were for less than two hours. Respondents were accompanied by a dog in around one half of visits to woodland in 2011.

Table 6.4 Woodland visit characteristics[1]- Wales, 2008, 2011

Woodland visit characteristics	2008	2011
		per cent
Main activity during visit		
Walking	68	68
Off road cycling, mountain biking	8	7
Horse riding	4	4
Running	4	7
Sightseeing or visiting an attraction	4	3
Main transport		
Car/ van	47	57
On foot	43	37
Bicycle/ mountain bike	7	1
Distance travelled (one way)		
0 distance, up to 1 mile	44	48
Over 1 mile, up to 5 miles	26	30
Over 5 miles, up to 20 miles	18	14
Over 20 miles	12	8
Duration of visit (round trip)		
Up to 1 hour	10	8
Over 1 hour, up to 2 hours	29	34
Over 2 hours, up to 3 hours	25	21
3 hours or more	36	37
Accompanied by a dog	60	53

Source: Welsh Outdoor Recreation Survey 2008, carried out by Ipsos-MORI, and Welsh Outdoor Recreation Survey 2011, carried out by TNS, for Countryside Council for Wales (CCW) and Forestry Commission Wales.

Notes:

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

These figures are outside the scope of National Statistics

6.1.4 Public Opinion of Forestry Survey - woodland visitors

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. Copies of reports and detailed data tables are available at www.forestry.gov.uk/forestry/infd-5zyl9w

The results shown in Tables 6.5 and 6.6 and Figure 6.1 have been taken from the UK and country reports on the latest surveys in 2013 and 2014, and from surveys in 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 2013 survey, around two thirds (66%) of respondents said that they had visited woodland in the last few years for walks, picnics or other recreation (Table 6.5).

Table 6.5 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
2013	65	64	76	..	66
2014	..	..	..	75	..

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, 2013); Scotland and Wales = 1,000 respondents each; Northern Ireland = 120 respondents (2003), 1,000 respondents (2005, 2007, 2010, 2014).

Notes:

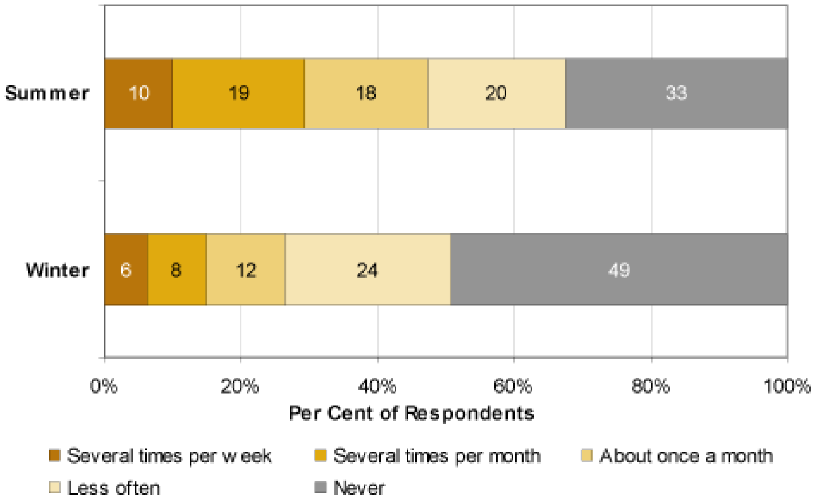
1. Those stating that they had visited woodland in the last few years.

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

These figures are outside the scope of National Statistics

Survey respondents were asked how frequently they had visited during the previous summer and winter. Figure 6.1, which presents aggregated UK results for the 2009 to 2013 surveys, shows that respondents visited much more often during the summer, with around one half of respondents (47%) visiting at least once a month in the summer compared to around one quarter (27%) in the winter.

Figure 6.1 Frequency of visits to woodlands



Source: UK Public Opinion of Forestry Surveys, 2009 to 2013.

Base: Average visit frequencies from last three UK surveys: 2,000 respondents per survey.

These figures are outside the scope of National Statistics

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

Public Opinion of Forestry surveys - woodland visitors by age group

In the UK 2013 Public Opinion of Forestry survey, around three quarters (75%) of respondents aged 35 to 54 said that they had visited woodland in the last few years for walks, picnics or other recreation (Table 6.6). This compares with around three fifths (62%) of respondents aged 16 to 34 and three fifths (60%) of respondents aged 55 or over.

Table 6.6 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
2013	62	75	60	66

Source: UK and GB Public Opinion of Forestry Surveys, 1999 to 2013.

Base: 2,000 respondents (1999, 2001, 2009, 2011, 2013); 4,000 respondents (2003, 2005, 2007).

Notes:

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

These figures are outside the scope of National Statistics

6.2 Visits to woodland - on-site surveys

The previous section provided information on visits to all woodlands (regardless of ownership), based on data from household surveys. This section provides information on visits to Forestry Commission/ Natural Resources Wales/ Forest Service woodland only, based on data from on-site surveys and administrative sources.

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, while continuing to gather information on the profile of visitors. Further information, including reports, on the All Forests Monitoring Surveys is available at www.forestry.gov.uk/forestry/infd-5wcmr4

In addition, an 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. Copies of reports from the Quality of Experience surveys undertaken are available at www.forestry.gov.uk/forestry/infd-5wwjpt

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 Wales All Forests Survey

On-site surveys - Wales All Forests survey

The Wales All Forests Survey was undertaken over a one year period. 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 conducted. The study estimated that around 4.3 million visits are made annually to Welsh Government (WG) woodland in Wales.

At a national level, the surveyed sites 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 one fifth of each district's forests were included in the survey.

Table 6.7 provides a summary of the key results obtained from the Wales All Forests survey. Around four fifths of visitors to Welsh Government woodland were on a day trip from home. Walking (with or without a dog) was the main activity undertaken by around three quarters of visitors. Around four fifths travelled to the site by car or van and around one third travelled more than 15 miles to get to the site. Most visitors were on short trips, with over one half spending one hour or less in the forest. Over one half of respondents visited the site at least monthly. Around one quarter considered the forest and its facilities to be the only reason for visiting the area and a further two fifths reported that it was very important in their decision to visit. Over one third of respondents visited the site alone.

Table 6.7 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

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

These figures are outside the scope of National Statistics

6.2.2 Scotland All Forests Survey

On site surveys - Scotland All Forests surveys

All Forests surveying in Scotland has been undertaken on two occasions. The first All Forests Survey in Scotland was carried out 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. The study estimated that around 8.2 million visits are made annually to Forestry Commission Scotland (FCS) woodland. An estimated 150-200 thousand visits to events in forests and around 300 thousand visits during the hours of darkness (when fieldwork was not undertaken) were also made, giving an overall total of around 8.7 million visits per year.

The second All Forests Survey was carried out from November 2012 to October 2013. The survey made greater use of data from automatic counters, but also achieved over 400 days of fieldwork and 1,970 face-to-face interviews.

The 2012-13 survey estimated an annual total of 9.1 million visits (including visits to events and in the hours of darkness) to Forestry Commission Scotland (FCS) woodland. This represents a 5% increase on the estimated overall total of 8.7 million visits from the 2004-2007 survey.

Table 6.8 provides a summary of the key characteristics and results obtained from the Scotland All Forests surveys and appears to show some change in visit characteristics over time, with a general trend towards longer, more distant and less frequent visits. From the 2012-13 survey, around two thirds of visitors to Forestry Commission Scotland woodlands were on a day trip from home. Walking (with or without a dog) was the main activity undertaken by around three quarters of visitors. Over four fifths travelled to the site by car or van and around one third travelled more than 15 miles to get to the site. Around one third of visitors were on short trips, spending one hour or less in the forest. Around one half of respondents visited the site at least monthly.

Table 6.8 Woodland visit characteristics - Scotland All Forests Survey

Woodland visit characteristics	2004-2007	2012-13
		per cent of respondents
Type of trip		
Day trip	82	67
Overnight trip	18	33
Main activity during visit		
Dog walking	50	43
Other walking	29	29
Cycling	11	8
Main transport		
Car / van	78	85
Walked	18	11
Cycled	2	2
Distance travelled (one way)		
Less than 6 miles	58	43
6 to 15 miles	19	25
16 to 25 miles	10	12
Over 25 miles	12	20
Duration of visit (time spent in forest)		
Up to 1 hour	59	35
Over 1 hour, up to 2 hours	24	36
Over 2 hours, up to 3 hours	10	16

Over 3 hours	7	13
Frequency of visit to site of interview		
More than once a day	7	3
Once a day	13	9
1 to 3 times per week	25	22
1 to 3 times per month	17	14
1 to 3 times per year	17	18
Less often	5	7
First ever visit	16	27

Source: Scotland All Forests Survey 2004-2007 and All Forests Survey 2, carried out by TNS.

These figures are outside the scope of National Statistics

6.2.3 Quality of Experience

On-site surveys - Quality of Experience

An 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 up to 20 surveys carried out between 2010 and 2012. The current programme, running from 2013 to 2015, is covering 7 sites in England and 7 sites in Wales each year. Reports from these surveys are published on the Forestry Commission website at www.forestry.gov.uk/forestry/infd-5wwjpt 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 these aspects. Respondents 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 to 2013 surveys, all visitors were surveyed on site.

Table 6.9 lists the sites where Quality of Experience surveys have taken place.

Table 6.9 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
2011	Bedgebury, Delamere, Fineshade Top Lodge, High Lodge Thetford, Wyre	Cwmcarn, Nant yr arian, Alwen, Brechfa, Clocaenog, Crychan, Dyfnant.
2012	Dalby, Haldon, Kielder, Rosliston and Hicks Lodge	Abergynolwyn, Craig y Dinas, Cwm Rhaeadr, Fforest Fawr, Gwaun Hepste, Hafod, Llangwyfan, Nercwys, Tan y Coed, The Arch, Warren
2013	Alice Holt, Cannock Chase, Cardinham Woods, Grizedale, Sherwood Pines, Wendover Woods, Westonbirt	Afan, Brechfa, Cwmcarn Forest Drive[1], Gwydyr, Hafren, Moel Famau, Newborough, Whitestone

Source: Forestry Commission/ Natural Resources Wales Quality of Experience surveys. 2003-2009 carried out by TNS Travel & Tourism, 2010-2012 carried out by BMG Research, 2013 carried out by Beaufort Research.

Notes:

1. *The survey at Cwmcarn Forest Drive was carried out in addition to the main programme of 14 sites in 2013.*

These figures are outside the scope of National Statistics

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.

In 2011, 3 surveys of residents were undertaken in the areas surrounding three low usage sites, to obtain information on how greater usage of the sites could be encouraged.

6.2.4 Northern Ireland Forest Service day visitors

Day visitors to Northern Ireland Forest Service sites

Information on visitors to Forest Service sites in Northern Ireland is provided by the Forest Service and relates only to sites where an admission charge is made.

In Northern Ireland in 2013-14, 364 thousand people visited those Forest Service sites where an admission charge was made (Table 6.10). This represented a 7% increase from the previous year, but remains below the level of earlier years.

Table 6.10 Day visitors to Northern Ireland Forest Service sites [1]

Year	Visitors to Forest Service sites
	thousands
2004-05	508
2005-06	433
2006-07	410
2007-08	518
2008-09	451
2009-10	473
2010-11	468
2011-12	430
2012-13	340
2013-14	364

Source: Forest Service

Notes:

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

These figures are outside the scope of National Statistics

6.3 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.

Further information on the Woodland Trust is available at www.woodlandtrust.org.uk

6.3.1 Woods for People

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 6.11 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 2013) 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. More recently, the exclusion of areas where access is constrained in England has led to a decrease in accessible woodland in 2011.

Around one half (50%) of the UK woodland area was identified as being publicly accessible in 2013 (Table 6.11).

Table 6.11 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	59	64	**50**
2011	35	42	58	65	**48**
2012	36	43	58	66	**49**
2013	38	43	58	66	**50**

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 for 2004 to 2011.

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 2013 are from versions 3 to 10 of the Woods for People dataset, based on woodland areas.

These figures are outside the scope of National Statistics

6.3.2 Space for People

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; these are available at www.woodlandtrust.org.uk.

The most recent data suggests that around one sixth of the UK population live within 500 metres of a wood of 2 hectares or more and that almost two thirds live within 4 kilometres of a larger wood (of 20 hectares or more) (Table 6.12).

Table 6.12 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

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

These figures are outside the scope of National Statistics

7 Employment & Businesses

Introduction

This chapter contains information on:

- employment in forestry and wood processing;
- health & safety; and
- numbers of businesses.

All of the statistics presented in this chapter relate to UK totals. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Most of the statistics presented in this chapter have been previously released. Some of the figures on employment (Tables 7.1 and 7.2), on health and safety (Table 7.3 and Figure 7.1) and on establishments in primary wood processing industries (Table 7.4) have been revised since Forestry Statistics 2013. For further details on revisions, see the Employment section of the Sources chapter.

A copy of all Employment & Businesses tables is available to download from the Tables for Download page.

Key findings

The main findings are:

- The Annual Business Survey reported average employment in 2012 of 15 thousand in forestry and 26 thousand in primary wood processing.
- There was estimated to be a total of 7.3 thousand full time equivalent staff employed by primary wood processors in the UK in 2013, a 1% increase on the total for 2012.
- Accident rates in forestry and wood products have tended to decline in recent years, but are still higher than the averages in agriculture and manufacturing respectively.
- There were 247 establishments in the primary wood processing industries in the UK using UK-grown roundwood in 2013.

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 2007). In wood processing, SIC 16 (wood products) and SIC 17 (pulp, paper and paper products) have a much wider scope than the data on employment in primary wood processing (Table 7.2), as they include primary processing of imported material and also some secondary processing.

The Annual Business Survey recorded average employment in 2012 of 15 thousand in forestry and 26 thousand in primary wood processing (sawmilling, panels and pulp & paper) (Table 7.1).

Table 7.1 Employment in forestry and wood processing[2], 2008-2012

Standard Industrial Classification (SIC)[1]	2008	2009	2010	2011	2012
					thousands
Forestry	12	14	14	14	15
Wood products					
Sawmilling	11	9	9	8	8
Panels	5	4	5	4	5
Secondary products	63	50	62	46	53
Total	**79**	**63**	**76**	**58**	**66**
Pulp, paper & paper products					
Pulp & paper	13	13	13	13	13
Articles of paper & paperboard	51	51	41	45	45
Total	**64**	**64**	**54**	**58**	**58**
Total wood processing	**143**	**127**	**130**	**116**	**124**
Total primary wood processing	**29**	**26**	**27**	**25**	**26**

Source: Annual Business Survey - average employment in year (Office for National Statistics, June 2014)

Notes:

1. Categories are based on the UK Standard Industrial Classification (SIC 2007) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

2. Excludes other wood-using industries.

3. All pulp and paper figures for 2009 and the breakdowns for 2010 to 2012 have been suppressed in the figures released by ONS. The figures shown here are estimated from 2008 figures.

7.2 Employment in primary wood processing

Information on employment in primary wood processing is obtained annually via the sources used to collect data on UK-grown timber (presented in Chapter 2).

There was estimated to be a total of 7.3 thousand full time equivalent staff employed by primary wood processors in the UK in 2013 (Table 7.2). This represents a 1% increase from the total for 2012, but remains lower than in 2010 and 2011.

Over one half (56%) of the total employment in 2013 worked in sawmills and over one quarter (29%) worked in wood-based panel mills.

Table 7.2 Employment in primary wood processing, 2009-2013

Year	Sawmills	Pulp & paper	Wood-based panels	Fencing	Total
					full-time equivalents
2009	3 806	820	2 225	405	7 256
2010	4 108	745	2 343	396	7 592
2011	4 095	725	2 376	397	7 593
2012	4 136	716	2 076	370	7 298
2013	4 140	716	2 111	381	7 349

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 Health & safety

From April 2012, accidents involving absence from work of at least seven days are required to be reported to the Health & Safety Executive (HSE). Prior to this time, reporting was required for absences of at least three days.

Accident rates in forestry and in wood products have tended to decline in recent years, but are still higher than the averages in agriculture and manufacturing respectively (Table 7.3 and Figure 7.1).

Table 7.3 Accidents to employees in forestry and wood processing[2], 2008-09 - 2012-13

Standard Industrial Classification (SIC)[1]	Major Accidents[3]		Total Reported	
	Number	Rate/ 1000 employees	Number	Rate/ 1000 employees
Forestry				
2008-09	47	3.5	140	10.5
2009-10	48	4.5	137	12.9
2010-11	43	3.3	110	8.3
2011-12	48	5.0	153	16.0
2012-13 provisional	49	4.6	120	11.2
Wood products				
2008-09	196	3.0	750	11.6
2009-10	187	3.2	688	11.7
2010-11	178	3.3	600	11.2
2011-12	161	3.1	654	12.5
2012-13 provisional	141	2.6	490	8.9
Pulp, paper & paper products				
2008-09	111	1.5	522	7.0
2009-10	103	1.7	464	7.6
2010-11	85	1.3	369	5.7
2011-12	90	1.6	393	7.0
2012-13 provisional	75	1.4	321	5.9

Source: Health & Safety Executive.

Notes:

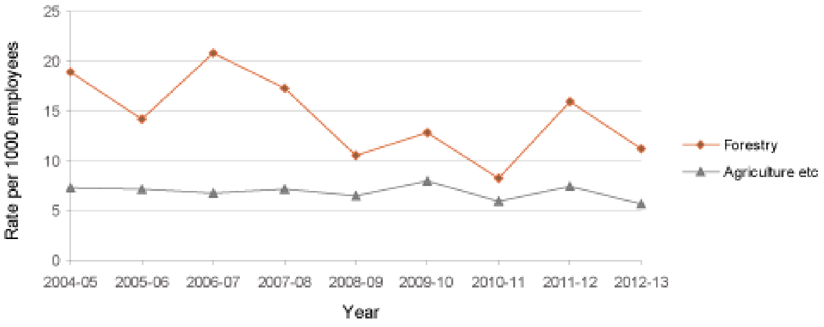
1. Categories are based on the UK Standard Industrial Classification (SIC 2007) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

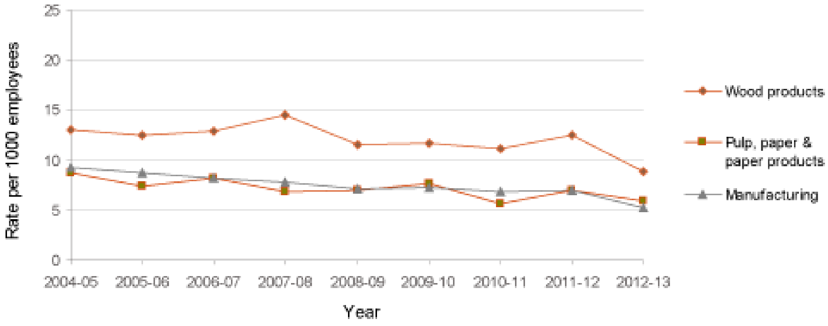
2. Excludes other wood-using industries.

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

4. As a result of a change in reporting requirements, data for 2012-13 is not directly comparable with previous years.

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





Source: Health & Safety Executive.

Notes:

1. Categories are based on the UK Standard Industrial Classification *(SIC 2007) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.*

2. As a result of a change in reporting requirements, data for 2012-13 is not directly comparable with previous years.

7.4 Establishments in the primary wood processing industries

Table 7.4 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 7.4 do not correspond with the VAT and PAYE registration information given in Table 7.5. 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 7.5 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 7.5 are excluded here (usually because they do not use UK-grown timber).

The number of establishments in the primary wood processing industries using UK-grown roundwood has reduced from 304 in 2004 to 247 in 2013, a 19% decrease.

Table 7.4 Number of establishments in the primary wood processing industries using UK-grown roundwood

Year	Sawmills	Pulp & paper mills	Wood-based panel mills	Round fencing manufacturers	Total[1]
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
2011	185	2	7	64	258
2012	181	2	7	61	251
2013	177	2	7	61	247

Source: industry surveys, industry associations

Notes:

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

7.5 VAT and/or PAYE registered businesses

Table 7.5 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 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 3,505 forestry businesses, 560 sawmilling businesses, 130 wood-based panel businesses and 240 pulp & paper businesses were registered for VAT and/or PAYE purposes in the UK in 2013.

Table 7.5 Number[1] of VAT and/or PAYE registered businesses by Standard Industrial Classification (SIC)[2], 2004-2013

Year	Forestry	Sawmilling	Panels	Pulp & paper
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
2011	3 170	605	135	250
2012	3 375	585	135	255
2013	3 505	560	130	240

Source: UK Business: Activity, Size and Location (Office for National Statistics, October 2013).

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. 2004-2008 data are based on SIC 2003; 2009-2013 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

Introduction

This chapter contains statistics on:

- timber prices;
- financial returns from forestry investment;
- gross value added (GVA);
- Government expenditure on forestry; and
- grant schemes.

Estimates for England, Wales, Scotland and Northern Ireland are included, where possible, in addition to UK or GB totals. Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

Most of the statistics presented in this chapter have been previously released. Some of the figures on prices (Tables 8.1 and 8.2, Figures 8.1 and 8.2), on gross value added (Table 8.3), on funding public forests (Table 8.4) and on grant money paid (Table 8.6, Figure 8.3) have been revised since Forestry Statistics 2013. For further details on revisions, see the Finance & Prices section of the Sources chapter.

A copy of all Finance & Prices tables is available to download as an Excel spreadsheet from the Tables for Download page.

Key findings

The main findings are:

- The Coniferous Standing Sales Price Index for Great Britain was 13.5% higher in real terms in the year to March 2014, compared with the previous year.
- The Softwood Sawlog Price Index was 16.0% higher in real terms in the 6 months to March 2014, compared with the corresponding period of the previous year.
- The Investment Property Databank (IPD) UK Forestry Index shows a total return of 22.2% per annum for the three year period 2011 to 2013, and an annual return of 15.8% for 2013.
- Gross value added (GVA) in primary wood processing (sawmilling, panels and pulp & paper) was £1.63 billion in the UK in 2012. GVA in forestry was £0.31 billion.
- Net expenditure on public forests by the Forestry Commission totalled £40 million in 2013-14. A further £126 million was spent by the Forestry Commission on other activities.
- A total of £73.5 million was paid in grants by the Forestry Commission and Natural Resources Wales in 2013-14.

8.1 Timber prices

Timber Price Indices are based on sales of softwood (conifers) by the Forestry Commission and Natural Resources Wales and are released every 6 months. They cover:

- Sales in England and Scotland by the Forestry Commission; and
- Sales in Wales by the Forestry Commission to 31 March 2013 and by Natural Resources Wales from 1 April 2013.

The Coniferous Standing Sales Price Index monitors changes in the average price received per cubic metre for timber that the Forestry Commission/ Natural Resources Wales sold standing, where the purchaser is responsible for harvesting.

The Softwood Sawlog Price Index monitors changes in the average price received per cubic metre of sawlogs (roundwood with a top diameter of 14 cm or more, destined to be sawn into planks or boards) sold at roadside by the Forestry Commission/ Natural Resources Wales.

Standing timber and sawlogs are distinct markets, and may show different price movements. The data are averages for historic periods, so may be slow to show any turning points.

These indices are used to monitor trends in timber prices and to provide information on the state of the UK timber industry. They are also used by the UK timber industry, alongside other economic indicators, in contract reviews.

There is little other information currently available 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.

Table 8.1 presents the coniferous standing sales and sawlog price indices for Great Britain to March 2014.

The coniferous standing sales price index for Great Britain was 13.5% higher in real terms in the year to March 2014, compared with the previous year (Table 8.1). The softwood sawlog price index was 16.0% higher in real terms in the 6 months to March 2014, compared with the corresponding period in the previous year.

Table 8.1 Coniferous standing sales and sawlog price indices[1] for Great Britain, 2005-2014

Period ending March	Standing sales[2]		Sawlogs	
	Nominal terms[3]	Real terms[4]	Nominal terms[3]	Real terms[4]
				index (period to September 2011 = 100)
2005	44.8	52.8	72.3	85.2
2006	51.6	59.7	69.1	80.0
2007	57.2	64.4	78.1	87.7
2008	89.6	98.4	91.5	100.3
2009	64.0	68.3	67.5	72.0
2010	67.5	70.2	83.3	86.2
2011	93.5	94.7	85.7	86.8
2012	97.5	96.6	91.7	91.0
2013	91.3	89.4	93.7	91.3
2014	105.5	101.5	110.3	105.9

Source: Timber Price Indices: data to March 2014

Notes:

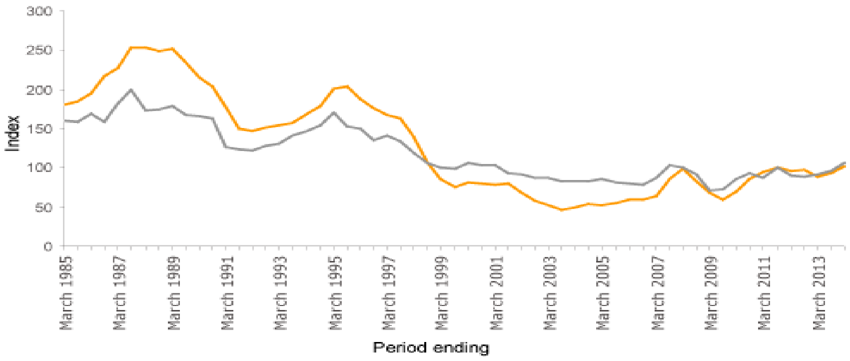
1. The price indices are constructed from information on sales by the Forestry Commission/ Natural Resources Wales only.

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 been adopted and has superseded the Laspeyres method, following 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 2011). This allows trends in timber prices to be tracked without the influence of inflation.

Figure 8.1 Coniferous standing sales and sawlog price indices[1,2] in real terms[3], 1985-2014



Source: Timber Price Indices: data to March 2014

Notes:

1. The price indices are constructed from information on sales by the Forestry Commission/ Natural Resources Wales 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 been adopted and has superseded the Laspeyres method, following 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 2011). 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, available at www.ipd.com/OurProducts/Indices/UnitedKingdom/UKForestry/tabid/1012/Default.aspx. The index is calculated from a sample of around 150 private sector coniferous plantations of predominantly Sitka spruce in mainland Britain. The IPD UK Forestry Index is outside the scope of National Statistics.

The index shows a total return of 22.2% per annum for the three year period 2011 to 2013, and an annual return of 15.8% for 2013 (Table 8.2).

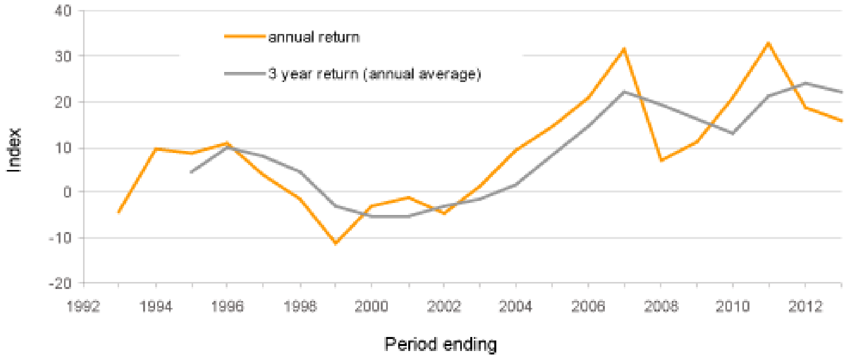
Table 8.2 IPD UK Forestry Index: Returns from forestry, 2004-2013

Period ending	Index (1992=100)	Annual % return	3 year return (annual average %)
2004	116.5	9.2	1.8
2005	133.3	14.4	8.2
2006	160.8	20.7	14.7
2007	211.5	31.6	22.0
2008	226.5	7.1	19.3
2009	251.9	11.2	16.1
2010	304.2	20.8	12.9
2011	404.3	32.9	21.3
2012	479.6	18.6	24.0
2013	555.5	15.8	22.2

Source: IPD UK Forestry Index

These figures are outside the scope of National Statistics

Figure 8.2 IPD UK Forestry Index: Returns from forestry



Source: IPD UK Forestry Index

Note:

1. Data collected for the IPD UK Forestry Index started in 1992

These figures are outside the scope of National Statistics

8.3 Gross value added

Gross value added (GVA) measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom. It is the difference between the value of outputs and the value of intermediate consumption, so mainly comprises employment costs and profits.

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 for different industries, classified using the UK Standard Industrial Classification (SIC 2007). The ABI was extended to include forestry from 2000. Further information on the ABS (and ABI) is available from the ONS website at www.ons.gov.uk/ons/guide-method/method-quality/specific/business-and-energy/annual-business-survey/index.html

Table 8.3 shows that, in 2012, GVA in primary wood processing (sawmilling, panels and pulp & paper) was reported to be £1.63 billion and GVA in forestry was £0.31 billion.

Table 8.3 Gross value added in forestry and wood processing[3], 2008-2012

Standard Industrial Classification (SIC)[1]	2008	2009	2010	2011	2012
					£ million
Forestry	438	382	329	416	310
Wood products					
Sawmilling	443	299	415	435	586
Panels[2]	254	169	327	197	226
Secondary products	2 114	1 590	1 630	1 822	1 886
Total	**2 811**	**2 058**	**2 372**	**2 454**	**2 698**
Pulp, paper & paper products					
Pulp & paper	734	658	628	888	779
Articles of paper & paperboard	2 026	2 309	2 912	3 160	3 064
Total	**2 760**	**2 968**	**3 541**	**4 049**	**3 843**
Total wood processing	**5 571**	**5 026**	**5 913**	**6 503**	**6 541**
Total primary wood processing	**1 431**	**1 126**	**1 370**	**1 515**	**1 626**

Source: Annual Business Survey (Office for National Statistics, June 2014)

Notes:

1. Categories are based on the UK Standard Industrial Classification (SIC 2007) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

2. The 2010 and 2011 figures for panels have been suppressed in the figures released by ONS, so the figures here cover both panels and the manufacture of assembled parquet floors (SIC 16.22) in 2010 and 2011. Panels accounted for 99% of the total of SIC codes 16.21 (panels) and 16.22 in 2008 and in 2009, and 98% in 2012.

3. Excludes other wood-using industries.

8.4 Government expenditure on public forests

Table 8.4 provides information on net expenditure on public forests by the Forestry Commission in Great Britain. This covers expenditure less income for land that is owned or managed by the Forestry Commission. Other expenditure by the Forestry Commission is covered in Table 8.5.

The Forestry Commission's functions in Wales transferred to a new organisation, Natural Resources Wales (NRW), on 1 April 2013. Figures for Wales in Tables 8.4 and 8.5 relate to expenditure to 31 March 2013 that was incurred by Forestry Commission Wales. Expenditure in Wales from 1 April 2013 is excluded from the tables.

Net expenditure on public forests by the Forestry Commission in 2013-14 totalled £40 million. This comprised £26 million in Scotland and £15 million in England.

Recreation, conservation & heritage accounted for £63 million of the total expenditure in 2013-14, harvesting & haulage for £35 million and other expenditure on public forests for £90 million.

Timber sales generated a total income of £101 million in 2013-14. Recreation, conservation & heritage accounted for a further £21 million and other income from public forests for £26 million.

Table 8.4 Funding public forests - net expenditure[1,2,3], 2009-10 - 2013-14

		2009-10	2010-11	2011-12	2012- 13	2013-14
						£ million
GB						
Harvesting & haulage	Expenditure	41.2	43.6	43.8	43.5	35.1
Recreation, etc[4]	Expenditure	63.4	67.6	72.6	66.4	63.3
Other	Expenditure	76.9	89.9	92.3	97.9	89.7
Timber	Income	-77.4	-91.6	-105.7	-101.9	-100.7
Recreation, etc[4]	Income	-17.6	-19.8	-21.8	-20.0	-21.3
Other	Income	-24.4	-27.1	-25.2	-29.9	-25.8
Net expenditure		**62.1**	**62.6**	**56.0**	**56.0**	**40.3**
England						
Harvesting & haulage	Expenditure	12.3	11.7	12.0	10.4	10.9
Recreation, etc[4]	Expenditure	39.4	40.4	42.1	37.9	39.0
Other	Expenditure	20.9	24.3	25.7	23.3	29.1
Timber	Income	-24.5	-29.5	-33.4	-31.3	-35.5
Recreation, etc[4]	Income	-14.2	-15.2	-15.0	-14.9	-15.8
Other	Income	-10.5	-12.9	-12.2	-11.1	-12.9
Net expenditure		**23.3**	**18.9**	**19.2**	**14.3**	**14.8**
Wales						
Harvesting & haulage	Expenditure	7.0	11.0	9.5	9.9	..
Recreation, etc[4]	Expenditure	6.6	3.7	3.7	4.0	..
Other	Expenditure	12.8	13.5	12.5	12.1	..
Timber	Income	-13.2	-14.1	-13.4	-13.5	..
Recreation, etc[4]	Income	-1.1	-1.0	-2.0	-0.9	..
Other	Income	-1.5	-3.4	-3.4	-8.1	..
Net expenditure		**10.6**	**9.8**	**6.9**	**3.5**	**..**
Scotland						

Harvesting & haulage	Expenditure	22.0	21.0	22.3	23.2	24.2
Recreation, etc[4]	Expenditure	17.4	23.5	26.8	24.5	24.3
Other	Expenditure	43.2	52.0	54.1	62.5	60.6
Timber	Income	-39.7	-48.1	-58.9	-57.1	-65.2
Recreation, etc[4]	Income	-2.3	-3.6	-4.8	-4.2	-5.5
Other	Income	-12.4	-10.7	-9.6	-10.7	-12.9
Net expenditure		**28.2**	**34.0**	**29.9**	**38.2**	**25.5**

Source: Forestry Commission

Notes:

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

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

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

4. Recreation, etc includes conservation and heritage.

.. Denotes data not available; responsibility for forestry in Wales transferred to Natural Resources Wales on 1 April 2013.

8.5 Other government expenditure on forestry

Table 8.5 provides information on other expenditure (excluding public forests) by the Forestry Commission, it includes expenditure by National Offices in England, Wales (until 2012-13) and Scotland as well as expenditure on GB level functions. Expenditure on land that is owned or managed by the Forestry Commission is covered in Table 8.4.

In addition to expenditure on public forests, the Forestry Commission spent a total of £126 million on other activities in 2013-14.

£87 million was used by the national offices in England and Scotland for grants and partnership funding and a further £12 million for policy, regulation & administration. At a GB level, £36 million was used for international & GB support services and £13 million for research.

Table 8.5 Other government expenditure on forestry[1,2], 2009-10 - 2013-14

	2009-10	2010-11	2011-12	2012- 13	2013-14
					£ million
GB					
Grants and partnership funding[3]	44.0	65.4	82.3	83.3	87.2
Policy, regulation & administration	30.3	21.8	25.7	26.6	11.5
Research - GB funded	15.0	16.4	15.2	12.7	13.3
International & GB support services	31.9	33.0	33.6	34.3	36.0
Less recovery of support service costs from countries	-24.0	-24.1	-23.9	-22.0	-22.4
Total	**97.2**	**112.5**	**132.9**	**134.9**	**125.6**
England					
Grants and partnership funding[3]	17.8	26.7	32.6	35.8	40.2
Policy, regulation & administration[4]	9.4	2.1	1.9	2.4	2.2
Total	**27.1**	**28.8**	**34.5**	**38.2**	**42.4**
Wales					
Grants and partnership funding[3]	4.9	4.5	4.9	5.5	..
Policy, regulation & administration[4]	11.2	9.6	14.7	15.4	..
Total	**16.1**	**14.1**	**19.6**	**20.9**	**..**
Scotland					
Grants and partnership funding[3]	21.3	34.2	44.8	42.0	47.0
Policy, regulation & administration[4]	9.8	10.2	9.1	8.8	9.3
Total	**31.0**	**44.3**	**53.9**	**50.8**	**56.3**

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.

.. Denotes data not available; responsibility for forestry in Wales transferred to Natural Resources Wales on 1 April 2013.

8.6 Grant schemes

Private sector 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, Better Woodlands for Wales (BWW) was launched in December 2005 and has now been replaced by Glastir.

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 1.14 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 (below) for grant expenditure by the Forestry Commission (including grant expenditure managed by the Forestry Commission on behalf of Defra) and by Natural Resources Wales.

Table 8.6 presents information on grant money paid in 2004-05 to 2013-14. A total of £73.5 million was paid in grants in 2013-14, a 5% increase from the total for the previous year.

Table 8.6 Grant money paid, 2004-05 to 2013-14

Type of grant	England[1]	Wales	Scotland[2]	GB
				£ million
2004-05	16.8	2.5	9.2	28.6
2005-06	17.1	2.8	19.7	39.6
2006-07	15.9	3.1	32.6	51.6
2007-08	41.7	2.6	26.9	71.1
2008-09	24.1	3.7	10.9	38.7
2009-10	24.4	2.9	5.7	33.0
2010-11	28.7	3.8	18.9	51.4
2011-12	32.5	5.4	34.2	72.1
2012-13	32.8	5.0	32.3	70.1
2013-14	33.9	4.1	35.5	73.5

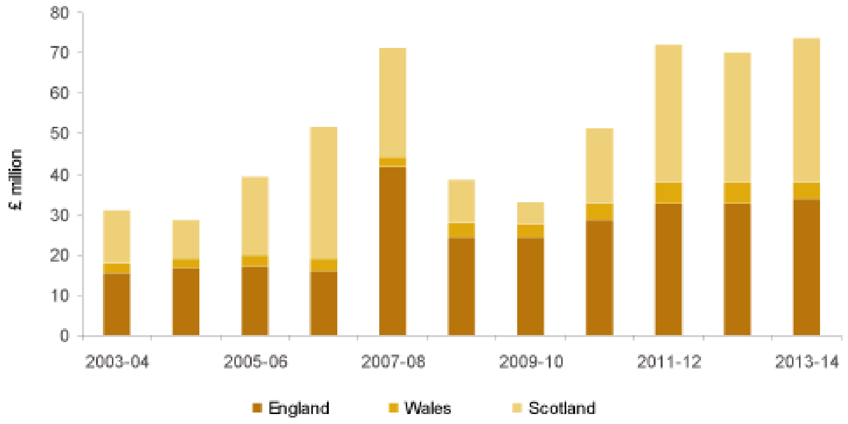
Source: Forestry Commission, Natural Resources Wales

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.*

The total grant money paid in Great Britain has fluctuated over the last 10 years, with levels often dipping around the times that new grant schemes are introduced, followed by a sharp recovery.

Figure 8.3 Grant money paid, 2003-04 to 2013-14



Source: Forestry Commission, Natural Resources Wales

9 International Forestry

Introduction

This chapter contains information about world 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 international trade in forest products.

The data are produced by the United Nations Food and Agriculture Organisation (FAO). Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

All of the statistics presented in this chapter have been previously released by the FAO. For further details on revisions, see the International Forestry section of the Sources chapter.

A copy of all International Forestry tables is available to download from the Tables for Download page.

Key findings

The main findings are:

- At around 12% forest cover in 2010 (now estimated to be 13%, see Table 1.2), 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.
- 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.
- Carbon stocks in forest living biomass in Europe have increased in both Europe and North & Central America between 2000 and 2010, but have decreased at a global level.
- A total of 3.5 billion m^3 underbark of wood was removed from global forests in 2012, of which over half (52%) was for use as woodfuel and the remaining 48% was industrial roundwood (for use by wood processors).
- Global production of wood products in 2012 totalled 400 million m^3 of sawnwood, 301 million m^3 of wood-based panels and 399 million tonnes of paper & paperboard.
- Europe consumed around one quarter (26%) of all sawnwood, around one quarter (24%) of the world's wood-based panels and around one quarter (23%) of all paper and paperboard in 2012.
- The UK was the third largest net importer (imports less exports) of forest products in 2012, behind China and Japan.

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 every five years.

At around 12% forest cover in 2010 (now estimated to be 13%, see Table 1.2), the UK is one of the least densely forested countries in Europe (Table 9.1, Figure 9.1). 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**

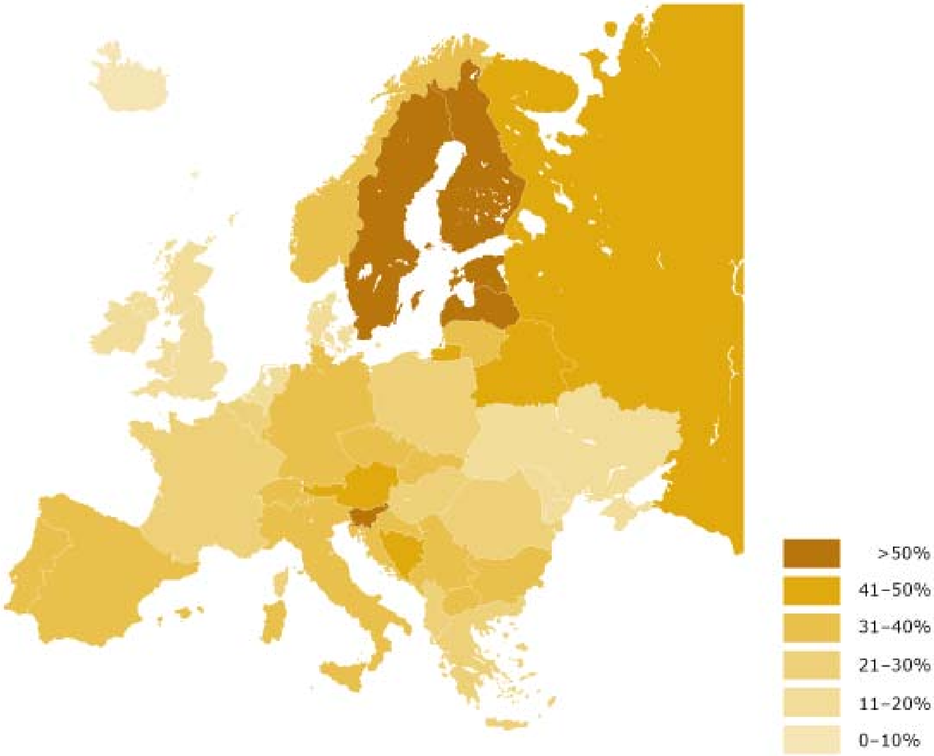
Source: FAO Global Forest Resources Assessment 2010.

Notes:

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

These figures are outside the scope of National Statistics

Figure 9.1 Forest cover: international comparisons, 2010



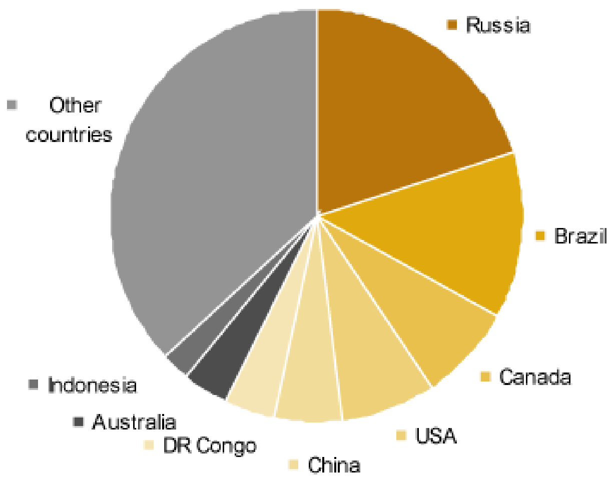
Source: FAO.

These figures are outside the scope of National Statistics

9.2 Forest area by country

One fifth of the world's forest area is located in the Russian Federation, with a further 13% in Brazil (Figure 9.2).

Figure 9.2 Forest area by country, 2010



Source: FAO Global Forest Resources Assessment 2010.

These figures are outside the scope of National Statistics

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 (Table 9.2).

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**

Source: FAO Global Forest Resources Assessment 2010.

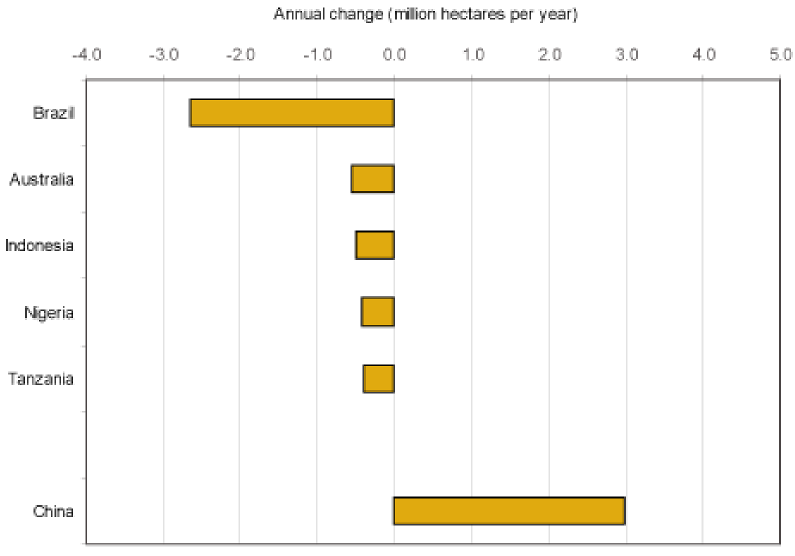
Notes:

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

These figures are outside the scope of National Statistics

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).

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



Source: FAO Global Forest Resources Assessment 2010.

Notes:

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

These figures are outside the scope of National Statistics

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 (Table 9.3, Figure 9.4). 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**

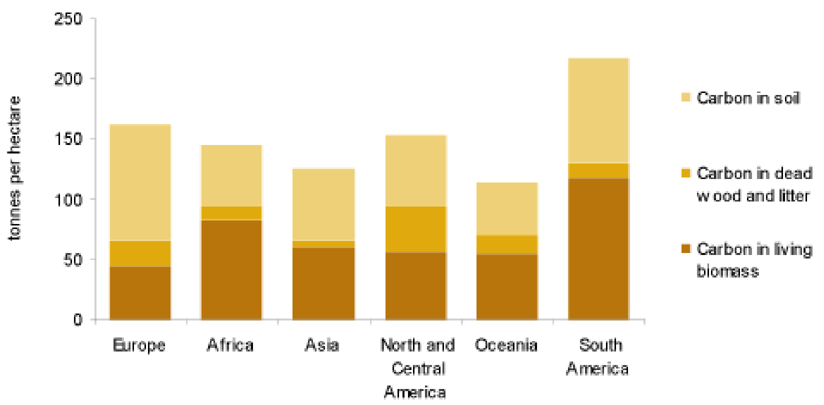
Source: FAO Global Forest Resources Assessment 2010.

Notes:

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

These figures are outside the scope of National Statistics

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



Source: FAO Global Forest Resources Assessment 2010.

These figures are outside the scope of National Statistics

9.5 Wood removals

A total of 3.5 billion m^3 underbark of wood was removed from global forests in 2012, of which over half (52%) was for use as woodfuel and the remaining 48% was industrial roundwood (for use by wood processors) (Table 9.4).

North & Central America and Europe together accounted for around three fifths (59%) of all industrial roundwood removals in 2012. Globally, removals of industrial roundwood increased by 5% between 2010 and 2012, resulting in part from a 7% increase in Europe.

Around three quarters (74%) of woodfuel removals in 2012 took place in Asia and Africa. Globally, removals of woodfuel decreased by 1% between 2010 and 2012.

Table 9.4 Wood removals by region, 1990-2012

Region	1990	1995	2000	2005	2010	2012
						million m^3 underbark
Industrial roundwood						
Europe						
UK	6	7	8	8	8	9
EU-27[1]	316	292	339	368	335	325
Total Europe	**515**	**405**	**479**	**540**	**506**	**541**
Africa	61	67	70	74	71	68
Asia	268	276	269	292	341	355
North and Central America	595	603	632	635	432	450
Oceania	33	41	47	50	54	56
South America	110	135	147	176	197	219
World	**1 582**	**1 527**	**1 645**	**1 766**	**1 602**	**1 689**
Woodfuel						
Europe						
UK	0	0	0	0	1	1
EU-27[1]	67	66	69	75	88	92
Total Europe	**138**	**107**	**133**	**139**	**152**	**139**
Africa	445	513	542	589	630	626
Asia	897	849	808	792	766	750
North and Central America	162	145	129	130	129	130
Oceania	9	11	13	11	11	11
South America	162	173	185	193	198	203
World	**1 814**	**1 798**	**1 810**	**1 855**	**1 886**	**1 859**
Total roundwood						
Europe						
UK	6	8	8	9	10	10
EU-27[1]	383	358	408	443	423	417
Total Europe	**653**	**512**	**612**	**679**	**658**	**680**
Africa	506	580	613	663	701	695
Asia	1 166	1 125	1 076	1 084	1 108	1 105
North and Central America	757	748	761	765	561	580
Oceania	42	52	60	61	65	67

South America	272	308	332	369	395	421
World	**3 396**	**3 325**	**3 455**	**3 622**	**3 488**	**3 548**

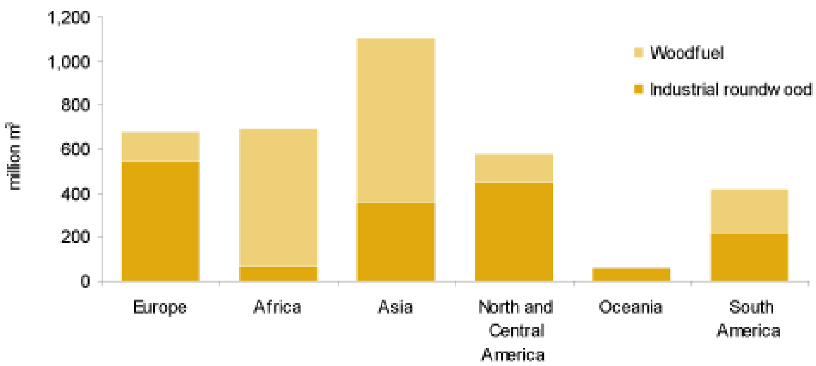
Source: FAO.

Notes:

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

These figures are outside the scope of National Statistics

Figure 9.5 Wood removals by region, 2012



Source: FAO.

These figures are outside the scope of National Statistics

9.6 Production of wood products

Global production of wood products in 2012 totalled 400 million m^3 of sawnwood, 301 million m^3 of woodbased panels and 399 million tonnes of paper & paperboard (Table 9.5).

Europe produced around one third (35%) of all sawnwood in 2012 (mainly in EU countries), with around one quarter (27%) produced in North & Central America and a further quarter (26%) in Asia. Overall, sawnwood production increased by 6% between 2010 and 2012.

Wood-based panels were more commonly produced in Asia, accounting for around one half (53%) of global production in 2012. Around one quarter (25%) were produced in Europe (mainly EU countries) and 15% in North & Central America. At a global level, wood-based panel production increased by 7% between 2010 and 2012.

Asia also accounted for over two fifths (45%) of paper and paperboard production in 2012, with around one quarter (26%) in Europe and a further quarter (23%) in North & Central America.

Table 9.5 Production of wood products by region, 1990-2012

Region	1990	1995	2000	2005	2010	2012
Sawnwood (million m^3)						
Europe						
UK	2	2	3	3	3	3
EU-27[1]	81	82	100	108	100	97
Total Europe	**149**	**118**	**129**	**144**	**139**	**139**
Africa	8	8	8	8	9	9
Asia	105	96	61	78	87	105
North and Central America	129	134	146	162	102	109
Oceania	6	7	8	9	9	9
South America	22	27	32	37	30	29
World	**419**	**391**	**385**	**438**	**376**	**400**
Wood-based panels (million m^3)						
Europe						
UK	2	3	3	3	3	3
EU-27[1]	36	40	53	63	58	57
Total Europe	**48**	**46**	**61**	**75**	**73**	**75**
Africa	2	2	2	2	3	3
Asia	27	44	49	92	143	160
North and Central America	44	47	62	64	44	44
Oceania	2	2	3	4	4	4
South America	4	6	9	13	16	17
World	**126**	**147**	**186**	**251**	**281**	**301**
Paper & paperboard (million tonnes)						
Europe						
UK	5	6	7	6	4	4
EU-27[1]	63	74	90	98	95	93
Total Europe	**73**	**82**	**100**	**111**	**106**	**105**
Africa	3	3	4	4	4	4
Asia	57	77	95	124	170	181

North and Central America	92	108	111	108	96	90
Oceania	3	3	4	4	4	4
South America	8	9	11	13	15	15
World	**235**	**282**	**325**	**365**	**395**	**399**

Source: FAO.

Notes:

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

These figures are outside the scope of National Statistics

9.7 Apparent consumption of wood products

Apparent consumption (defined as production + imports - exports) of wood products around the world totalled 394 million m^3 sawnwood, 299 million m^3 wood-based panels and 397 million tonnes of paper and paperboard in 2012 (Table 9.6).

Almost two fifths (37%) of all sawnwood in 2012 was consumed in Asia and around one quarter each in Europe (26%) and in North & Central America (25%). Reflecting the increased production of sawnwood in recent years (see Table 9.5), apparent consumption of sawnwood increased by 6% overall between 2010 and 2012. This was driven by a 24% increase in apparent consumption in Asia; there was a decline over the same period in Europe and in South America.

Asia consumed around one half (53%) of the world's wood-based panels in 2012, around one quarter (24%) was consumed in Europe and 17% in North & Central America. Apparent consumption of wood-based panels worldwide increased by 7% between 2010 and 2012.

Almost one half (48%) of all paper and paperboard in 2012 was consumed in Asia, around one quarter (23%) in Europe and a further one fifth (22%) in North & Central America. At a global level, apparent consumption of paper and paperboard increased by 1% between 2010 and 2012.

Table 9.6 Apparent consumption of wood products by region, 1990-2012

Region	1990	1995	2000	2005	2010	2012
Sawnwood (million m^3)						
Europe						
UK	13	8	10	11	9	8
EU-27[1]	96	80	99	103	90	83
Total Europe	**157**	**109**	**121**	**121**	**109**	**103**
Africa	10	12	10	13	16	16
Asia	112	112	77	97	117	145
North and Central America	119	126	143	166	95	98
Oceania	6	7	8	8	8	7
South America	20	24	28	31	27	25
World	**426**	**390**	**387**	**436**	**372**	**394**
Wood-based panels (million m^3)						
Europe						
UK	5	5	6	6	6	5
EU-27[1]	40	41	53	59	56	53
Total Europe	**51**	**47**	**59**	**71**	**70**	**71**
Africa	1	2	2	3	4	4
Asia	25	46	54	92	139	157
North and Central America	44	47	65	73	50	50
Oceania	2	2	3	3	3	3
South America	3	4	6	8	13	14
World	**126**	**147**	**189**	**250**	**279**	**299**
Paper & paperboard (million tonnes)						
Europe						
UK	9	11	12	13	11	9
EU-27[1]	62	68	83	87	84	80

Total Europe	**71**	**73**	**90**	**98**	**94**	**92**
Africa	4	4	5	6	7	7
Asia	62	85	103	134	179	190
North and Central America	88	101	110	107	92	86
Oceania	3	4	5	5	5	4
South America	8	10	12	14	16	17
World	**235**	**277**	**325**	**364**	**393**	**397**

Source: FAO.

Notes:

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

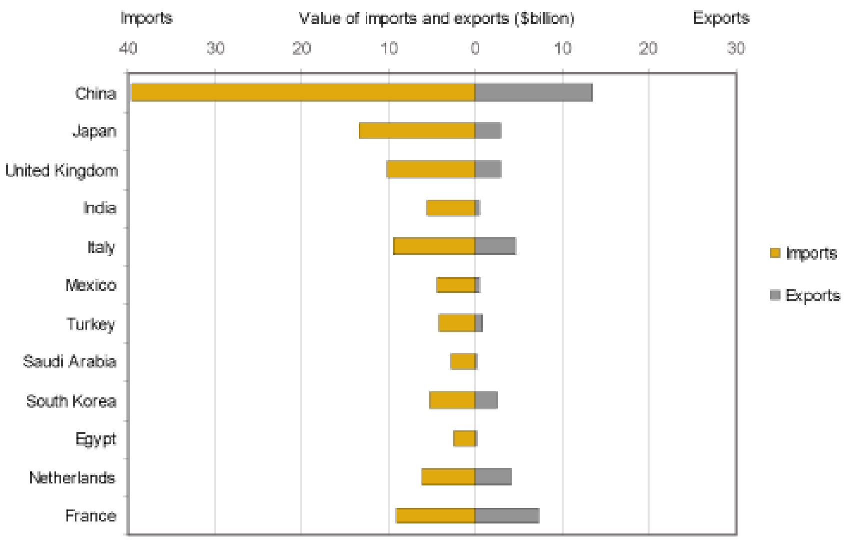
These figures are outside the scope of National Statistics

9.8 World trade in forest products

Figures 9.6 and 9.7 show the largest net importers and exporters (by value) of forest products in 2012. This covers trade in roundwood, sawnwood, wood-based panels, wood pulp and paper and paperboard. Values are expressed in US dollars.

The UK was the third largest net importer (imports less exports) of forest products in 2012, with net imports of $7.3 billion (Figure 9.6). The largest net importers in 2012 were China ($26.1 billion) and Japan ($10.4 billion).

Figure 9.6 Largest net importers of forest products, 2012



Source: FAO

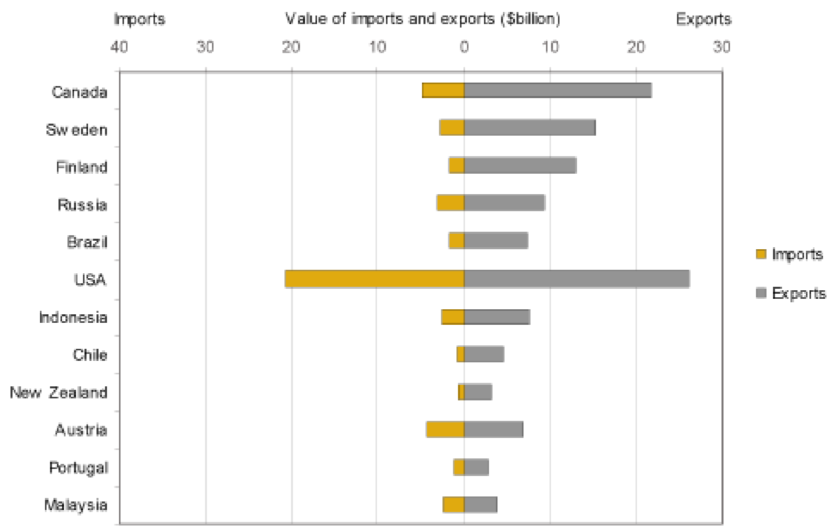
Notes:

1. Excludes trade in secondary wood products.

These figures are outside the scope of National Statistics

The largest net exporters (exports less imports) of forest products in 2012 were Canada (with net exports valued at $16.8 billion), Sweden ($12.5 billion) and Finland ($11.4 billion) (Figure 9.7).

Figure 9.7 Largest net exporters of forest products, 2012



Source: FAO

Notes:

1. Excludes trade in secondary wood products.

These figures are outside the scope of National Statistics

10 Glossary

Ancient woodland

Woodland which has been in continuous existence since 1600 (1750 in Scotland).

Bioenergy

Energy from any fuel that is derived from biomass.

Biomass

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

Biosecurity

A set of precautions that aim to prevent the introduction and spread of harmful organisms. These may be pests, pathogens or invasive species.

Brash

Branch wood and leaf material that is generally too small in diameter to be considered part of the timber product from a harvesting site.

Briquettes

Similar to wood pellets (see below) but larger, briquettes are made from compressed wood fibres and used for heating.

Broadleaves

Trees that do not have needles or cones, such as oak, birch and beech. 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).

Clearfell areas

Sites where all trees have been felled at once. In non-clearfell areas, only some trees are felled at any one time.

Clustering

A sampling technique where the entire population is divided into groups, or clusters, and a random sample of these clusters are selected. All (or a selection of) observations in the selected clusters are included in the sample. Cluster sampling is often used when a random sample would produce a list of subjects so widely scattered that surveying them would prove to be far too expensive.

Confidence interval

An estimated range of values that is likely to include an unknown population parameter (i.e. a fixed value for the population as a whole). The confidence interval around an estimate is derived from the sample data, and is used to indicate the reliability of the estimate.

Conifers

Trees with needles and cones, such as spruce, pine and larch.

Conversion factor

Numerical factor by which a quantity that is expressed in one set of units must be multiplied in order to convert it into another set of units.

Coppice

Trees that are cut near ground level (or sometimes higher, in which case they are called 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.

Deliveries

The quantities of UK-grown roundwood that are delivered to processors (mills) or for other uses (such as woodfuel and exports). Note that for sawmills and round fencing mills, the deliveries figure reported is actually the quantity of roundwood consumed by the mill, which may differ from the true deliveries figure if the levels of input stocks vary.

Direct production

Timber that is sold after the trees have been felled by the woodland owner or their contractors.

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. It currently comprises 28 member states: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK.

Eurostat

The statistical office of the European Union, situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions.

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.

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 woodland areas (especially conifers) or for old Royal hunting preserves such as the New Forest or the Forest of Dean.

Forest Service (FS)

The agency of the Northern Ireland Department of Agriculture and Rural Development responsible for forestry matters in Northern Ireland.

Forestry Commission (FC)

The government department responsible for forestry matters in England, Scotland and (until March 2013) Wales. The Forestry Commission's functions in Wales transferred to a new organisation, Natural Resources Wales, on 1 April 2013. The responsibility for forestry is devolved.

FSC

Forest Stewardship Council.

GDP deflator

Gross Domestic Product at market prices deflator. Gross Domestic Product (GDP) is a measure of the total economic activity. Growth in GDP reflects both growth in the economy and price change (inflation). Applying a GDP deflator to time series of prices or price indices removes the effects of inflation to enable a comparison of changes in price that are not caused by inflation.

Great Britain (GB)

England, Wales and Scotland.

Green tonne

The weight measurement of timber freshly felled before any natural or artificial drying has occurred.

Gross Value Added (GVA)

A measure of the contribution to the economy of each individual producer, industry or sector in the United Kingdom.

Growing stock

The volume of timber in living trees. It is also often referred to as the standing volume.

Hardwood

The wood of broadleaved trees, such as oak, birch and beech; a term sometimes used for the broadleaved trees themselves.

HM Revenue & Customs (HMRC)

The United Kingdom's tax authority.

Hectare (ha)

Unit of area defined as 10,000 square metres (100 m by 100 m), approximately equivalent to 2.47 acres.

High forest

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

Increment

The growth rate of standing trees.

Kyoto Protocol

A protocol to the United Nations Framework Convention on Climate Change (UNFCCC) that set binding obligations on the industrialised countries to reduce their emissions of greenhouse gases.

Litter

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

Long term contracts (LTC)

Sales of roundwood, felled or standing, to customers over a period of more than one year. The second and subsequent years of a long term contract are negotiated after the sale of the first year's volume.

Medium-density fibreboard (MDF)

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.

Movement Licence

Any movement of Phytophthora-affected wood from a forest site (or subsequent move of affected material from a mill or processing site) requires a Movement Licence to be issued by the Forestry Commission.

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

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

Natural regeneration

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

Natural Resources Wales (NRW)

The organisation responsible for advising the Welsh Government on the environment, created on 1 April 2013. NRW is responsible for the functions previously carried out by the Environment Agency in Wales, the Countryside Council for Wales and Forestry Commission Wales.

New planting

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

NFI

National Forest Inventory.

NI

Northern Ireland.

NIWT

1995-99 National Inventory of Woodland and Trees.

Nominal terms

Refers to prices at the time of sale. See also "real terms".

ONS

Office for National Statistics.

Oriented strand board (OSB)

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.

Oven dry tonnes (ODT)

Measurement of quantity without moisture (i.e. 0% moisture content).

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 and chipboard flakes, chips, shavings, sawdust), with the addition of an adhesive.

PAYE

Pay-as-you-earn tax.

Photosynthesis

Chemical process carried out by green plants in the presence of light, which combines carbon dioxide from the atmosphere with hydrogen from water in the soil to form sugars as food for the growing plant. Oxygen is a by-product of the reaction.

Phytophthora ramorum

Fungus-like pathogen of plants that causes extensive damage and mortality to trees (including Japanese larch) and other plants.

Plywood

Wood-based panel consisting of an assembly of layers bonded together with the direction of the grain in adjacent layers, usually at right angles (not currently made in the UK).

Price index

A measure of the proportionate, or percentage, changes in a set of prices over time. Commonly used indices include the Laspeyres index, Paasche index and Fisher index.

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.

Quota sampling

A method of sampling where interviewers are each given a fixed number of subjects of specified type to interview.

Real terms

Refers to prices at a common date. Prices in real terms are derived by applying a deflator to remove the effects of general inflation to enable a comparison of changes over time that have not resulted from inflation. See also "nominal terms".

Recovered wood

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.

Roadside sales

Sales of timber after harvesting. The owner is responsible for getting the trees felled and extracting them to the side of the road, ready to take away.

Roundwood

Trunk or branch wood, generally with a top diameter of 7 cm or more. Can be in the form of logs (14 cm top diameter or more) or small roundwood (7 to 14 cm).

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.

Scottish Government (SG)

The executive branch of the devolved government of Scotland. Previously known as the Scottish Executive.

Scrub

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

Semi-natural woodland

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.

Short rotation coppice (SRC)
An energy crop, usually consisting of densely planted, high yielding varieties of willow or poplar.

Silviculture
The care and cultivation of forest trees.

Softwood
The wood of coniferous trees, such as spruce, pine and larch; a term sometimes used for the coniferous trees themselves.

Stand
A relatively uniform collection of trees (from either planting or natural regeneration) composed, for example, of a single species or a single age class.

Standing sales
Sales of timber while the trees are still standing. The buyer is responsible for getting the trees felled and removed from the site.

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

Statistical significance
A statistical assessment of whether observations reflect an actual pattern rather than just chance.

Statutory Plant Health Notice (SPHN)
Statutory Plant Health Notices, requiring the felling of infected trees, are issued by the Forestry Commission/ Natural Resources Wales/ Forest Service to prevent the spread of pests and diseases. They are currently being issued to control the movement of material infected with Phytophthora ramorum.

Stemwood
Wood from the stem and main branches of a tree, excluding the stump and small branches.

Stocked area
Area stocked with living trees. This differs from the woodland area (see below) in that felled areas awaiting restocking and areas of integral open space are generally excluded from the stocked area.

Stratification
A sampling technique where the entire population is divided into groups, or strata, and a random sample is selected within each group. Stratified sampling is often used to ensure that sufficient numbers from each group are included in the overall sample, particularly where results are required for each group.

Stump
The above-ground base part of a tree that would usually remain after felling.

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.

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.

United Kingdom (UK)

Great Britain and Northern Ireland.

VAT

Value Added Tax.

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, wood-based sheet materials, etc.

Weighting

A set of factors assigned to survey responses to ensure that the resulting weighted results are representative of the population as a whole.

Welsh Government

The executive branch of the devolved government of Wales.

Wood pellets

Sawdust or wood shavings compressed into uniform diameter pellets. They are often burned for heat or energy, but may also be used for other purposes (such as horse bedding or cat litter).

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.

Wood Raw Material Equivalent (WRME)

The volume of trees required to produce a wood product. Can be measured underbark or overbark.

11 Sources

This chapter provides background information on the statistics presented in this release. It covers the data sources and methodology used to produce the statistics, information on quality measures and on any revisions to historic data and links to further information.

Further details on quality are provided in quality reports for selected topics and for individual surveys, available from our Quality web page at www.forestry.gov.uk/forestry/infd-7zhk85

11.1 Sources: Woodland area and planting

Introduction

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 based on the National Forest Inventory (NFI), refer to woods and forests of at least 0.5 hectares, as mapped through the NFI. Previously, figures based on the 1995-99 National Inventory of Woodland and Trees included 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. The latest estimate of the effect of the difference in minimum canopy cover threshold, based on the 1995-99 National Inventory of Woodland and Trees, is that there are around 50 thousand hectares of land with 10-20% canopy cover in the UK (or around 2% of the total UK woodland area).

Integral open space is included in woodland area figures derived from the National Forest Inventory if the areas of open space are less than 0.5 hectares; larger areas are mapped out and excluded from the woodland area figures. This differs slightly from the approach used for the National Inventory of Woodland and Trees, where areas of open space of up to 1.0 hectare were included as woodland.

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

Most public sector woodland is owned by or managed by the Forestry Commission (FC) in England and Scotland, Natural Resources Wales (NRW) in Wales, or the Forest Service (FS) in Northern Ireland. Woodland owned by local authorities, the Ministry of Defence, and other public sector bodies is included in "private sector woodland".

The Natural Resources Wales woodland areas and land areas shown in this release relate to areas previously owned or managed by Forestry Commission Wales. They exclude any areas previously owned or managed by other parts of Natural Resources Wales, such as the former Environment Agency in Wales and the former Countryside Council for Wales.

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

Data Sources and Methodology

Woodland Area

Data on woodland area in the UK presented in this release are derived from the following sources:

- Forestry Commission and Natural Resources Wales administrative records of FC/NRW land areas;
- National Forest Inventory (NFI) woodland map (GB);
- Statistics on new planting in Great Britain;
- Northern Ireland Woodland Register;
- Forest Service administrative records of FS woodland areas and
- Forest Service estimates of non-FS woodland area in Northern Ireland.

For Great Britain, the woodland areas at March 2014 provided in this release are based on the NFI woodland area map of Great Britain at March 2013. The map is overlaid with a map of Forestry Commission and Natural Resources Wales (ex Forestry Commission Wales only) land, to enable a breakdown by ownership type to be estimated. This also enables FC/NRW "other land" areas to be derived (Table 1.5). The woodland area figures estimated from these maps are then updated to March 2014 by adding areas of new planting in 2013-14. Initial estimates of conifer stocked area and broadleaved stocked area at March 2012, derived from NFI interim field survey results, were used to estimate the breakdown by type of woodland.

The methodology has been refined since Forestry Statistics 2011 to take account of revisions to the NFI woodland area map and the availability of initial results on stocked areas from the NFI field survey. Details of the changes and their potential impact on the figures are available in the "Methodology Note: Annual Woodland Area Estimates", available at: www.forestry.gov.uk/pdf/mnwoodarea.pdf/$FILE/mnwoodarea.pdf

Further information on the methodology used by the National Forest Inventory and comparisons of results from the NFI and previous woodland area estimates is available at www.forestry.gov.uk/inventory.

Figures for Northern Ireland (Forest Service and non-Forest Service woodland) are provided by the Forest Service (www.dardni.gov.uk/forestry). Woodland areas from 2012 to 2014 provided in this release have been obtained from the NI woodland register.

The NI woodland register is based on a combined dataset derived from fourteen individual datasets from statutory bodies including Forest Service, Land and Property Services, and the Northern Ireland Environment Agency, and non statutory bodies which include Woodland Trust and National Trust. The minimum area of woodland that has been included in the register is 0.1 hectares.

The use of the NI woodland register has resulted in a step change in the non-Forest Service woodland areas reported for Northern Ireland. This should be interpreted as an improvement in the data reported, rather than an actual increase in woodland area.

Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5

Certified woodland area

Data on certified woodland areas are obtained from the Forest Stewardship Council (FSC), and contact with individual land owners and managers. Some of the certified woodland has dual certification, i.e. it is certified under both the FSC scheme and the Programme for the Endorsement of Forest Certification (PEFC) scheme.

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

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

Quality

The statistics on woodland area presented here refer to woodland as a land use rather than a land cover, so felled areas and newly planted areas are included within the definition of woodland. Some statistics on woodland area as a land cover are available from other sources (e.g. Countryside Survey 2007, www.countrysidesurvey.org.uk, and associated Land Cover Map).

Detailed information on the quality of the woodland area statistics presented in this publication is available in the "Quality Report: Woodland Area, Planting and Restocking" at: www.forestry.gov.uk/pdf/qrwapr.pdf/$FILE/qrwapr.pdf

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85

Revisions

Figures at March 2014 are final; provisional figures were previously released in "Woodland Area, Planting and Restocking: 2014 Edition".

The detailed woodland area breakdowns (by both ownership and forest type) have been refined since the publication of "Woodland Area, Planting and restocking: 2014 Edition".

As a result, in Table 1.1 (area of woodland by ownership & forest type):

- FC/NRW/FS broadleaves woodland area in the UK has been revised from 128 to 129 thousand hectares;
- Private sector broadleaves woodland area has been revised from 137 to 136 thousand hectares in Wales, from 330 to 328 thousand hectares in Scotland, and from 1404 to 1402 thousand hectares in the UK;
- Private sector conifers woodland area has been revised from 612 to 614 thousand hectares in Scotland and from 864 to 866 thousand hectares in the UK.

Information on revisions made since "Forestry Statistics 2013" are provided in "Woodland Area, Planting and Restocking: 2014 Edition".

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 at www.forestry.gov.uk/forestry/infd-7zhk85.

The Forestry Commission's revisions policy sets out how revisions and errors are dealt with and can be found at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Accompanying tables to this release, available at www.forestry.gov.uk/forestry/infd-7aqknx, provide longer time series data by country for certified woodland.

Figures for woodland area in the UK are provided to international organisations; the Food and Agriculture Organisation of the United Nations (FAO) for the 5-yearly "Global Forest Resources Assessment" (www.fao.org/forestry/fra/en), and Forest Europe for the 4-yearly "State of Europe's Forests" (www.foresteurope.org/reporting_SFM). Latest UK figures in international reports, submitted in May 2009 (for the Global Forest Resources Assessment 2010) and in August 2010 (for the State of Europe's Forests 2011), are based on data from the 1995-99 National Inventory of Woodland and Trees (NIWT). The UK woodland area figures presented in the International Forestry chapter are based on these earlier, NIWT-based, estimates.

Figures for woodland area are also used to compile the UK's Greenhouse Gas Inventory for the Land Use, Land

Use Change and Forestry (LULUCF) sector, submitted to the United Nations Framework Convention on Climate Change (UNFCCC, http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php). Summary factsheets, produced by the Department of Energy and Climate Change (DECC), are available at www.gov.uk/government/publications/uk-greenhouse-gas-inventory-summary-factsheets.

Release schedule

Provisional figures for woodland area and certified woodland area at March 2015 will be published on 11 June 2015 in "Woodland Area, Planting and Restocking: 2015 Edition".

Final results for woodland area and certified woodland area at March 2015 will be published on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

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 sample 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. Interim results, based on field survey data combined with information from the NFI map, have since been published on the National Forest Inventory web pages at 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.

Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5

11.1.3 Sources: New planting & restocking

New planting & restocking

Introduction

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.

Data sources and methodology

Information about Forestry Commission, Natural Resources Wales and Forest Service new planting and restocking comes from administrative systems. Information about other woodland has come principally from grant schemes, including the English Woodland Grant Scheme (EWGS), Glastir in Wales, Better Woodlands for Wales (BWW), Rural Development Contracts in Scotland, Scottish Forestry Grant Scheme (SFGS) and Woodland Grant Scheme (WGS).

Areas receiving grant are allocated to years by date of payment. For natural colonisation and regeneration, the areas are generally those for which the second instalment of grant has been paid during the year. The second instalment is approved when woodland reaches a certain stage and density of growth, so this information corresponds approximately to the amount of new and restocked woodland created.

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. Grant support for restocking of conifers has changed with the introduction of Rural Development Contracts in Scotland in 2008. As a result, grant aid is no longer available for restocking with Sitka spruce in many cases. This is likely to have led to a reduction in areas of grant-aided restocking in Scotland.

Further information on current and closed grant schemes in Great Britain is available at www.forestry.gov.uk/planting.

Local estimates for private sector areas of planting and restocking which are not grant-aided are included for England, Wales and Scotland, where possible, but no estimates have been included for restocking of Sitka spruce in Scotland that is no longer supported by grants. Estimates of non-grant-aided planting and restocking 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.

The use of natural regeneration in non-clearfell systems is increasing substantially - particularly for broadleaves in England. These systems are not satisfactorily represented by measuring restocking area within any given year, and so broadleaf planting is likely to be under-reported in this release and other statistics.

Figures for Northern Ireland (Forest Service and private sector woodland) are provided by the Forest Service (www.dardni.gov.uk/forestry).

Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5

Revisions

Figures for 2013-14 are final; provisional figures were previously released in "Woodland Area, Planting and Restocking: 2014 Edition".

Figures have not been revised from those provided in "Woodland Area, Planting and Restocking: 2014 Edition". Information on revisions made since "Forestry Statistics 2013" are provided in "Woodland Area, Planting and Restocking: 2014 Edition".

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 at www.forestry.gov.uk/forestry/infd-7zhk85.

The Forestry Commission's revisions policy sets out how revisions and errors are dealt with and can be found at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Accompanying tables to this release, available at www.forestry.gov.uk/forestry/infd-7aqknx, provide longer time series data by country for new planting and restocking.

Figures for new planting are also used to compile the UK's Greenhouse Gas Inventory for the Land Use, Land Use Change and Forestry (LULUCF) sector, submitted to the United Nations Framework Convention on Climate Change (UNFCCC, http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php). Summary factsheets, produced by the Department of Energy and Climate Change (DECC), are available at www.gov.uk/government/publications/uk-greenhouse-gas-inventory-summary-factsheets.

Release schedule

Provisional figures for new planting and restocking in 2014-15 will be published on 11 June 2015 in "Woodland Area, Planting and Restocking: 2015 Edition".

Final results for new planting and restocking in 2014-15 will be published on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.1.4 Sources: Felling

Felling

Introduction

Under the Forestry Act 1967, it is illegal to fell trees in Great Britain without prior approval, although there are a few exceptions (for trees below a specified size, dangerous trees, and very small scale felling operations). There is a presumption against removal of woodland and loss of forest cover in the UK, so felling licences issued under the Forestry Act will normally be conditional (where felling approval is granted subject to restocking). However, the permanent removal of trees may be granted (through an unconditional felling licence) for thinning woodland (a standard woodland management practice) or if there are overriding environmental considerations, for example to enable the restoration of important habitats (and consent may be required under the relevant Environmental Impact Assessment Regulations).

The removal of trees may also be authorised under planning regulations, to enable development (including for windfarms). In this case, a felling licence is not required.

The Forestry Commission, Natural Resources Wales and the Forest Service may also require trees to be felled to prevent the spread of pests and diseases, by serving a Statutory Plant Health Notice (SPHN) on the affected site.

Data sources and methodology

Information about felling licences and Statutory Plant Health Notices comes from Forestry Commission, Natural Resources Wales and Forest Service administrative systems.

Data on felling licences relates to felling licences that have been issued. It does not indicate whether the felling has taken place (and if so, when).

Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5

Quality

All of the statistics in this chapter are outside the scope of National Statistics.

Revisions

Figures on felling licences and Statutory Plant Health Notices for 2013-14 are released for this first time in this publication.

Figures on Statutory Plant Health Notices in 2010-11 and 2012-13 have been revised from those released in Forestry Statistics 2013.

In Table 1.16a, the number of sites where a Statutory Plant Health Notice has been served has been revised:

- In 2010-11: from 119 to 114 in England, from 9 to 10 in Northern Ireland;
- In 2012-13: from 163 to 166 in England, from 121 to 123 in Scotland, from 14 to 15 in Northern Ireland.

In Table 1.16b, the felling areas under Statutory Plant Health Notices have been revised:

- In 2010-11: from 1.1 to 1.2 thousand hectares in England;
- In 2012-13: from 0.3 to 0.4 thousand hectares in Scotland.

The Forestry Commission's revisions policy sets out how revisions and errors are dealt with and can be found at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Some related figures for England on felling licences and Statutory Plant Health Notices have been released. Data on the total area covered by felling licences (conditional and unconditional) and quarterly figures on the area of woodland to be felled under Statutory Plant Health Notices were released on 22 May 2014 in "Forestry Commission England Corporate Plan Performance Indicators and Woodland Indicators 2014". Figures on area of woodland to be felled under Statutory Plant Health Notices are also released in the quarterly "Forestry Commission England Headline Performance Reports".

Further information on felling licences (including details of exemptions) is available at:

- England - www.forestry.gov.uk/forestry/infd-6dfk86
- Wales - http://naturalresourceswales.gov.uk/apply-and-buy/apply-for-a-tree-felling-licence/?lang=en
- Scotland - http://scotland.forestry.gov.uk/supporting/grants-and-regulations/felling-licences

A new Case Management System was introduced in Scotland in January 2012. This will centralise the data collected on felling licences and provide more information about restocking proposals (including cases where the applicant has agreed to plant an alternative area, does not intend to restock or where open ground is being created) than has previously been gathered.

Further information on tree pests and diseases is available at www.forestry.gov.uk/forestry/infd-6abl5v

Release schedule

Figures on felling licences and Statutory Plant Health Notices in 2014-15 will be published on 24 September 2015 in "Forestry Statistics 2015".

11.2 Sources: Timber

Introduction

This page provides high level information on the sources of the timber statistics presented in Chapter 2; more detailed information is provided on the following pages.

The chapter covers wood production (removals) from UK woodland, and consumption and production by primary wood processors in the UK. The timber statistics presented cover both softwood (wood from coniferous trees such as spruce, pine and larch) and hardwood (wood from non-coniferous trees such as oak, birch and beech). Please refer to the Glossary for an explanation of the terms used.

Quantities of wood can be expressed in different units. Conversion factors can be used to convert between units.

Data sources and methodology

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

- Forestry Commission (FC), Natural Resources Wales (NRW) and Forest Service (FS) administrative records of removals from FC/NRW/FS woodlands;
- the Private Sector Softwood Removals Survey for softwood removals from private sector 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 private sector woodlands, so these are estimated to be:

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

Timber availability forecasts are obtained from the "50 year forecast of softwood availability" and the "50 year forecast of hardwood availability", released in April 2014 and available at www.forestry.gov.uk/inventory.

Deliveries are estimated from the following sources:

- the Sawmill Survey;
- the Wood Panel Industries Federation (for wood-based panels);
- the UK Forest Products Association (for integrated pulp and paper mills);
- the Confederation of Paper Industries (for paper production);
- the Survey of Round Fencing Manufacturers;
- the Private Sector Softwood Removals Survey (for softwood deliveries to woodfuel);
- shavings manufacturers;
- companies believed to export roundwood and/or chips.

Estimates are also provided by the Expert Group on Timber and Trade Statistics: www.forestry.gov.uk/forestry/infd-5rabj3

The Methodology note: UK wood production sets out the data analysis methods used to produce annual estimates of UK wood production.

Quality

Detailed information on the quality of the statistics presented in this publication is available in the "Quality Report: UK Wood Production and Trade" at: www.forestry.gov.uk/pdf/ukwptqrpt.pdf/$FILE/ukwptqrpt.pdf

Further quality information on FC Official Statistics, including separate reports for each of the industry surveys used in this release, is available at:
www.forestry.gov.uk/forestry/infd-7zhk85

Revisions

Figures for 2013 and earlier years have been previously published. They are however subject to revisions from those published in "UK Wood Production and Trade: 2013 provisional figures" and previous publications, to reflect late updates to administrative or survey data. Further details on any revisions made are provided in the following pages.

Information on significant revisions to published statistics is provided in the quality report on UK Wood Production and Trade, available from our Quality web page at www.forestry.gov.uk/forestry/infd-7zhk85.

The Forestry Commission's revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at: www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf.

Further information

Most of these statistics are used to compile data that are sent to international organisations in the Joint Forest Sector Questionnaires (JQ1 and JQ2), in some cases giving more detail than in this release. These returns are published as Official Statistics on the FC website; provisional figures in May and final figures in September. The statistics are used by Eurostat Forestry Statistics, UNECE Timber Bulletins, and UN/FAO Forest Product Statistics and are published on the FAOSTAT database (http://faostat.fao.org/). Summary results from the FAOSTAT database are provided in the International Forestry chapter.

The definitions used in this publication are consistent with the international definitions, as given in Eurostat's "Forestry in the EU and the World 2011":
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-31-11-137/EN/KS-31-11-137-EN.PDF

The Department of Energy and Climate Change publishes an annual Digest of UK Energy Statistics (www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes). Chapter 7 of this digest covers renewable sources of energy including wood. Figures for wood use in renewable energy statistics take into account wood from all sources (including processed wood, recycled wood and imports), not just UK-grown roundwood.

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.2.1 Sources: Wood production

Wood production

Sources

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

- Forestry Commission (FC), Natural Resources Wales (NRW) and Forest Service (FS) administrative records - for all removals from FC/NRW/FS woodlands;
- the Private Sector Softwood Removals Survey - for softwood removals from private sector woodlands and
- statistics on deliveries - for total hardwood removals.

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

These sources cover removals of roundwood (trunk and branch wood) only. A new survey was introduced in 2009 to collect data on removals of brash (branch wood and leaf material) and stumps (above-ground base part of trees). The collection of stump removals was discontinued in 2012.

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

Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5

Methodology

Figures for removals from FC/NRW/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/NRW/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; see subsequent pages for further information on these sources). Hardwood removals from FC/NRW/FS woodlands are then subtracted to give an estimate of the amount of hardwood removed from private sector woodlands.

Softwood removals methodology change

The methodology used to estimate the quantity of UK softwood removals from private sector woodland was revised for the release of provisional 2011 estimates in "UK Wood Production and Trade: 2011 provisional figures". Details of the change in methodology and its impact on the figures are available in the "Methodology Review of Softwood Removals from Non-FC/FS Woodland" paper, available at www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/$FILE/rem_methodology_rev2011-12.pdf

Revisions

Private sector softwood removals are subject to revision annually (see following page, on the Private Sector Softwood Removals Survey). Removals from FC/NRW/FS woodlands are not normally revised. Total hardwood removals (and consequently hardwood removals from private sector woodlands) are subject to annual revisions (see notes on deliveries for further information).

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures". Figures for 2013 and earlier years have not been revised from those provided in "UK Wood Production and Trade: 2013 provisional figures".

Information on revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade:

2013 provisional figures".

Further information

Figures are published as UK totals. Country breakdowns (England, Wales, Scotland, Northern Ireland) are also published for softwood in table 2.2 for private sector removals and table 2.3 for FC/NRW/FS removals. Approximate country breakdowns are also estimated for hardwood removals.

Longer time series, presenting estimates of FC/NRW/FS and private sector removals by country and by softwood/hardwood are available from the Timber Statistics web page at www.forestry.gov.uk/forestry/infd-7aql5b.

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.2.2 Sources: Private Sector Softwood Removals Survey

Private Sector Softwood Removals Survey

Introduction

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.

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

Data collected

The questionnaire used for the Private Sector Softwood Removals Survey (available at www.forestry.gov.uk/forestry/infd-94ujw2) is issued annually to around 30-40 harvesting companies, to collect information on:

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

Response rates

In 2013, the questionnaire was issued to 40 harvesting companies, of which 28 responded, giving a response rate of 70%. These respondents are estimated to account for around 96% of all the softwood harvested by companies covered by the survey.

Private Sector Softwood Removals Survey Response Rates, 2004-2013

Year	Forms issued	Responses received	Response rate[1]	Weighted response rate[2]
2004	41	33	80%	..
2005	40	28	70%	..
2006	43	35	81%	..
2007	43	34	79%	..
2008	41	35	85%	100%
2009	40	30	75%	92%
2010	40	30	75%	97%
2011	37	26	70%	96%
2012	37	27	73%	95%
2013	40	28	70%	96%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates have been calculated from the 2008 survey onwards. They are an estimate of the proportion of the softwood harvested by companies covered by the survey that is accounted for by respondents.

.. Denotes data not available.

Methodology

A review of the methodology used to estimate total private sector softwood removals (including businesses not covered by the survey) was undertaken in 2011-2012.

The "Methodology Review of Softwood Removals from Non-FC/FS Woodland" paper presents the results from this review and the implications of the change in methodology. It can be found at www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/$FILE/rem_methodology_rev2011-12.pdf

In the new methodology, businesses not covered by the survey are assumed to represent 15% of the total softwood removals from private sector woodland. This fixed percentage is applied from 2006 onwards. The previous methodology is used for 2001 and earlier years, and a smooth transition is applied to the years 2002 to 2005 inclusive.

Quality

Detailed information on the survey quality is available in the "Quality Report: Private Sector Softwood Removals Survey" at www.forestry.gov.uk/pdf/qrremovsur.pdf/$FILE/qrremovsur.pdf

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85

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 & 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 private sector 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.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures".

Figures for 2013 and earlier years have not been revised from those in "UK Wood Production and Trade: 2013 provisional figures".

Some figures for 2010, 2011 and 2012 have been revised from those published in "Forestry Statistics 2013":

- In Table 2.28, the percentage of total softwood removals volume that is certified has been revised from 86% to 87% in 2010, 86% to 85% in 2011 and 85% to 84% in 2012.
- In Table 2.30, the woodfuel supplied by sawmills to bioenergy in 2012 has been revised from 545 to 540 thousand green tonnes.

Information on other revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade: 2013 provisional figures".

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts &

Figures 2015".

11.2.3 Sources: Sawmill Survey

Sawmill Survey

Introduction

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 the 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 every two years 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.

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 (those that produced sawnwood in the reporting year) 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 at www.forestry.gov.uk/forestry/infd-7aql5b. The time series data feature breakdowns by size of mill, by country and by region (in England).

Data collected

Two 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 use 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.

More information on the Sawmill Survey, including copies of the questionnaires sent to businesses in recent years, can be found at www.forestry.gov.uk/forestry/infd-94pgy5.

Response rates

In 2013, detailed questionnaires were issued to 50 mills, of which 34 responded, giving a response rate of 68%. For the short questionnaire, 49 responses were received from the 141 forms issued, corresponding to a 35% response rate. This gives an overall response rate of 43%.

Overall, the 83 sawmills responding to the sawmill survey in 2013 are estimated to account for around 80% of total UK sawnwood production.

Sawmill Survey Response Rates (all questionnaires), 2004-2013

Year	Forms issued	Responses received	Response rate[1]	Weighted response rate[2]
2004	262	147	56%	..
2005	257	143	56%	..
2006	264	161	61%	..
2007	243	149	61%	..
2008	227	133	59%	90%
2009	219	122	56%	87%
2010	211	93	44%	85%
2011	200	84	42%	82%
2012	196	86	44%	84%
2013	191	83	43%	80%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates have been calculated from the 2008 survey onwards. They are an estimate of the proportion of total UK sawnwood production that is accounted for by respondents.

.. Denotes data not available.

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.

Quality

Detailed information on the survey quality is available in the "Quality Report: Sawmill Survey" at www.forestry.gov.uk/pdf/qrsawsur.pdf/$FILE/qrsawsur.pdf

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85

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 & 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. 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.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures". Revisions are as follows:

- Softwood deliveries to sawmills in 2013 have been revised upwards from 6,371 to 6,407 thousand green tonnes (Tables 2.5 and 2.7).
- Softwood production in 2013 has been revised upwards from 3,525 to 3,536 thousand cubic metres (Table 2.7).

Some figures for earlier years have been revised from those published in "Forestry Statistics 2013":

- In Table 2.19a, direct employment in 2012 by larger sawmills of line & production workers has been revised from 2,557 to 2,573 full-time equivalents, of managerial & administrative staff from 423 to 426 FTEs, and of haulage of logs to the mill from 66 to 67 FTEs.
- In Table 7.2, total employment by all sawmills has been revised from 3,819 to 3,806 in 2009, from 4,146 to 4,108 in 2010, from 4,133 to 4,095 in 2011, and from 4,174 to 4,136 in 2012.

Information on other revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade: 2013 provisional figures".

Further information

Figures for UK production and trade of sawn softwood are used alongside data from other sources to assess consumption of sawn softwood in the main end-user markets in the UK. Reports are available at www.forestry.gov.uk/forestry/infd-7fgkh4.

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.2.4 Sources: Pulp & paper

Pulp & paper

Introduction

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

- The UK Forest Products Association (UKFPA, www.ukfpa.co.uk) provides figures on inputs to the integrated pulp and paper mills and
- the Confederation of Paper Industries (CPI, www.paper.org.uk) provides figures on total UK pulp and paper production.

Integrated pulp and paper mills are paper mills that use UK roundwood to produce pulp (an intermediate product in the production of paper). Inputs for other paper mills are not covered in the input statistics reported. The figures for production cover all UK paper mills.

Figures are available at a total UK level only.

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 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 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.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures".

Figures for 2013 and earlier years have not been revised from those in "UK Wood Production and Trade: 2013 provisional figures". Information on revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade: 2013 provisional figures".

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.2.5 Sources: Wood-based panels

Wood-based panels

Introduction

Data on the wood-based panel sector are obtained from the Wood Panel Industries Federation (WPIF, www.wpif.org.uk) and cover all wood-based panel mills in the UK.

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

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 wood-based panels made in the UK, which currently comprises particleboard (including oriented strand board) and fibreboard (medium density fibreboard). UK production of hardboard (another type of fibreboard) ended in the UK 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 wood-based panels are collected by the 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 wood-based 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.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures".

Figures for 2013 and earlier years have not been revised from those in "Forestry Statistics 2013".

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.2.6 Sources: Survey of Round Fencing Manufacturers

Survey of Round Fencing Manufacturers

Introduction

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.

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 at www.forestry.gov.uk/forestry/infd-7aql5b. The time series data feature breakdowns by size of mill and by country.

Data collected

The questionnaire used for the Survey of Round Fencing Manufacturers is issued to around 70 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.

More information on the Survey of Round Fencing Manufacturers, including copies of the questionnaires sent to businesses in recent years, can be found at www.forestry.gov.uk/forestry/infd-94uk7h.

Response rates

In 2013, the questionnaire was issued to 67 mills, of which 27 responded, giving a response rate of 40%. These respondents accounted for an estimated 51% of roundwood purchased by softwood round fencing manufacturers.

Survey of Round Fencing Manufacturers Response Rates, 2004-2013

Year	Forms issued	Responses received	Response rate[1]	Weighed response rate[2]
2004	107	67	63%	..
2005	103	60	58%	..
2006	109	61	56%	..
2007	103	67	65%	..
2008	87	55	63%	88%
2009	82	42	51%	56%
2010	79	34	43%	46%
2011	72	26	36%	58%
2012	68	26	38%	53%
2013	67	27	40%	51%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates have been calculated from the 2008 survey onwards. They are an estimate of the proportion of total roundwood purchased by softwood round fencing manufacturers that is accounted for by respondents.

.. Denotes data not available.

Methodology

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

Quality

Detailed information on the survey quality is available in the "Quality Report: Private Survey of Round Fencing Manufacturers" at www.forestry.gov.uk/pdf/qrfensur.pdf/$FILE/qrfensur.pdf.

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85

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 & 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.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures".

Figures for 2013 and earlier years have not been revised from those in "UK Wood Production and Trade: 2013 provisional figures".

In Table 7.2, total employment by fencing mills has been revised from 369 to 405 full-time equivalents in 2009, from 360 to 396 FTEs in 2010, from 361 to 397 FTEs in 2011, and from 334 to 370 FTEs in 2012, from the figures published in "Forestry Statistics 2013".

Information on other revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade: 2013 provisional figures".

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

11.2.7 Sources: Other deliveries

Other deliveries

Introduction

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.

Statistics reported for each year are available at a UK level 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, www.ukfpa.co.uk).

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 believed to be for woodfuel use. Estimates of softwood used for woodfuel for recent years are therefore considered to be 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 that 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 and is available at www.forestry.gov.uk/forestry/infd-7zhk85.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures".

Figures for 2013 earlier years have not been revised from those in "UK Wood Production and Trade: 2013 provisional figures".

Information on revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade: 2013 provisional figures".

Release schedule

Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

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, Natural Resources Wales, Forest Service and Private Sector Removals Survey) and deliveries (obtained from industry surveys and trade associations) of UK softwood roundwood.

Comparison of removals and deliveries of UK softwood roundwood, 2004-2013

Year	FC/NRW/FS removals	Private sector removals	Total removals	Deliveries	Balance[1]
					thousand green tonnes
2004	4 894	3 246	8 141	8 021	119
2005	4 579	3 499	8 077	8 143	-66
2006	4 582	3 661	8 243	8 187	56
2007	4 653	4 083	8 736	8 790	-54
2008	4 415	3 823	8 238	8 187	51
2009	5 126	3 266	8 392	8 304	88
2010	4 625	4 633	9 258	9 269	-11
2011	4 870	5 186	10 056	9 722	334
2012	4 836	5 259	10 095	9 831	265
2013	5 084	5 856	10 940	10 548	393

Source: Forestry Commission, Natural Resources Wales, Forest Service, industry surveys, industry associations

Notes:

1. The difference between reported removals and deliveries can be caused by variations in the level of stocks between harvesting and delivery to the wood processor, and/or by the differences in data sources and methodologies used to compile removals and deliveries statistics.

The methodology used to estimate the quantity of UK softwood removals from private woodland was revised for the release of provisional 2011 estimates in "UK Wood Production and Trade: 2011 provisional figures". Details of the change in methodology and its impact on the figures are available in the "Methodology Review of Softwood Removals from Non-FC/FS Woodland" paper, available at: www.forestry.gov.uk/pdf/rem_methodology_rev2011-12.pdf/$FILE/rem_methodology_rev2011-12.pdf

11.2.9 Sources: Estimation of hardwood removals from private sector woodlands

Estimation of hardwood removals from private sector woodlands

Figures for hardwood removals from private sector woodlands are derived from total hardwood deliveries (obtained from industry surveys and trade associations) less hardwood removals from FC/NRW/FS woodlands. The table below provides figures for the last 10 years.

Estimation of hardwood removals from private sector woodlands, 2004-2013

Year	Deliveries	FC/NRW/FS removals	Private sector removals
			thousand green tonnes
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
2011	541	75	465
2012	532	55	478
2013	529	79	451

Source: Forestry Commission, Natural Resources Wales, Forest Service, industry surveys, industry associations

11.2.10 Sources: Woodfuel and pellets

Woodfuel and pellets

Introduction

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 (www.woodrecyclers.org).

Data on UK pellet production are obtained from the survey of UK pellet and briquette production.

For details on roundwood deliveries for woodfuel, see the Sources: other deliveries page.

Figures are published as UK totals.

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.

More information on the survey of UK pellet and briquette production, including copies of the questionnaires sent to businesses in recent years, can be found at www.forestry.gov.uk/forestry/infd-94ukb2.

Response rates

Response rates for the sawmill survey and survey of round fencing manufacturers are available on the relevant sources pages.

The 2013 survey of UK pellet and briquette production was sent to a total of 18 companies that were believed to manufacture pellets or briquettes. A total of 8 responded, giving a response rate of 44%. The respondents to the survey are estimated to account for around 91% of the total production of pellets and briquettes in the UK in 2013.

Whilst the low response rates to this survey are of some concern, it is believed that many of the non-respondents are not (currently) producing pellets or briquettes. This is reflected in the much higher weighted response rates and the figures produced are believed to give a reasonable estimate of the true level of UK pellet production.

Survey of UK Pellet & Briquette Production Response Rates, 2009-2013

Year	Forms issued	Response received	Response rate[1]	Weighted Response rate[2]
2009	33	17	52%	89%
2010	27	12	44%	95%
2011	22	10	45%	92%
2012	21	5	24%	75%
2013	18	8	44%	91%

Notes:

1. Response rates are calculated as the number of responses received divided by the number of forms issued.

2. Weighted response rates are an estimate of the proportion of total UK pellet and briquette production that is accounted for by respondents.

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.

Quality

Detailed information on the pellet survey quality is available in the "Quality Report: Survey of UK Pellet & Briquette Production" at www.forestry.gov.uk/pdf/ukpelletqrpt.pdf/$FILE/ukpelletqrpt.pdf.

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85

Revisions

All figures are subject to revision annually, as new information becomes available.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures".

Figures for 2013 and earlier years have not been revised from those provided in "UK Wood Production and Trade: 2013 provisional figures".

Further information

Figures for Woodfuel Demand and Usage in Scotland, covering actual and potential use of woodfuel in the commercial, industrial and electrical energy sectors, are produced annually by Forestry Commission Scotland and available at http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/climate-change-renewable-energy/woodfuel-and-bio-energy.

The Department of Energy and Climate Change publishes an annual Digest of UK Energy Statistics (www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes). Chapter 7 of this digest covers renewable sources of energy including wood. Figures for wood use in renewable energy statistics take into account wood from all sources (including processed wood, recycled wood and imports), not just UK-grown roundwood.

Release schedule

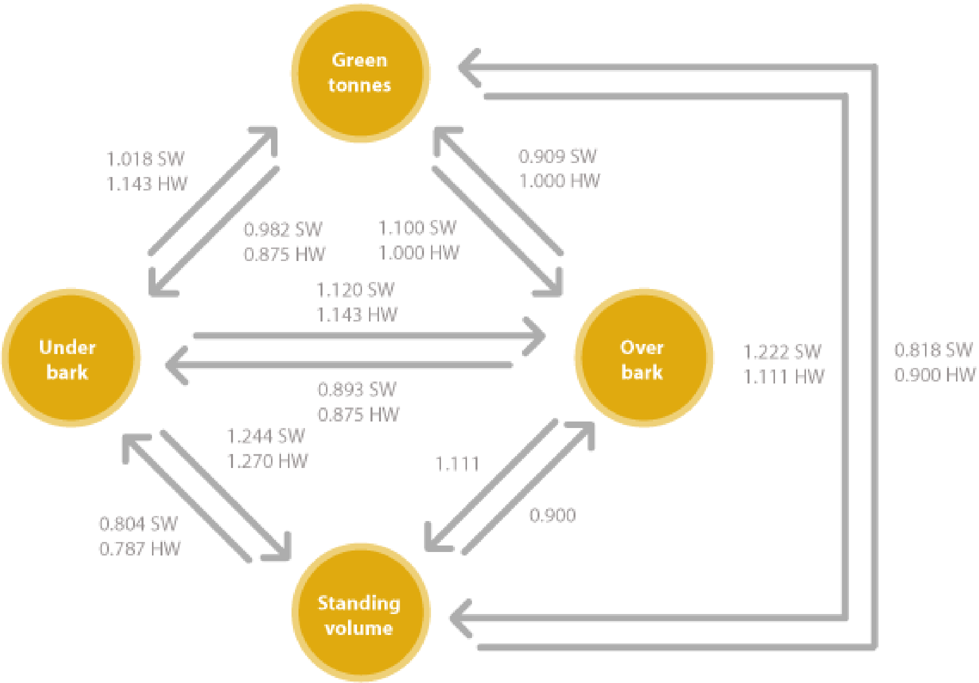
Provisional figures for 2014 will be released on 14 May 2015 in "UK Wood Production and Trade: 2014 provisional figures".

Final figures for 2014 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".

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 wood-based 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

Introduction

Statistics on imports and exports are based on the published overseas trade statistics for intra-EU trade and extra-EU trade produced by HM Revenue & Customs (HMRC) and available at www.uktradeinfo.com

Data on apparent consumption is derived as UK production plus imports less exports.

Data Sources and Methodology

The data obtained from HMRC 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 pellets;
- wood chips, particles and residues;
- sawnwood;
- wood-based panels - veneer sheets, plywood, particleboard, fibreboard;
- pulp - wood pulp, other pulp;
- recovered paper;
- paper & paperboard - graphic papers (including newsprint), sanitary & household papers, packaging materials, other paper & paperboard.

For roundwood, sawnwood and wood-based panels, a softwood/hardwood breakdown is available.

Data are also obtained by country of origin (for imports) and destination country (for exports).

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. For Northern Ireland, figures are provided by the Forest Service.

Where the HMRC reporting units for quantity differ from those shown in this publication, figures are adjusted using standard FAO/ECE conversion factors, which are listed in the Timber section of the Sources chapter.

The figures may also be adjusted where an apparent inconsistency in the UK trade figures cannot be resolved before the international return is required.

Historically, HMRC wood trade figures have often necessitated adjustments, following liaison with practitioners in the trade (including the Expert Group on Timber and Trade Statistics, Wood Panel Industries Federation (www.wpif.org.uk) and Confederation of Paper Industries (www.paper.org.uk)). This is partly because detailed intra-EU wood trade data is obtained through a survey of businesses that trade above a particular value threshold. Businesses that trade below this threshold are only required to report the total value of their imports and exports. Therefore the trade data reported in this publication for individual products is based on a potentially biased survey. More information on HMRC statistics can be found at www.uktradeinfo.com/Statistics/Pages/Statistics.aspx

The Methodology note: UK wood imports and exports sets out the data analysis methods used to produce annual estimates of UK wood imports and exports.

Quality

Detailed information on the quality of the trade statistics presented in this publication is available in the "Quality Report: UK Wood Production and Trade" at www.forestry.gov.uk/pdf/ukwptqrpt.pdf/$FILE/ukwptqrpt.pdf

Further quality information on FC Official Statistics is available at: www.forestry.gov.uk/forestry/infd-7zhk85

Revisions

Statistics on imports and exports are subject to revision after publication if revisions are made to the overseas trade statistics produced by HMRC. 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.

Figures for 2013 are final; provisional figures were previously released in "UK Wood Production and Trade: 2013 provisional figures", available at: www.forestry.gov.uk/pdf/ukwpt14.pdf/$FILE/ukwpt14.pdf

Revisions have been made to some of the 2013 figures:

- UK import quantities of sawnwood have been revised from 5,500 to 5,494 thousand m3, and of wood-based panels from 2,962 to 2,963 thousand m3 (Table 3.4).
- UK export quantities of sawnwood have been revised from 167 to 164 thousand m3 (Table 3.5).
- UK import values of sawnwood have been revised from £1,181 to £1,179 million, of wood-based panels from £876 to £874 million, of other wood from £85 to £87 million (Table 3.6).

Information on revisions made since "Forestry Statistics 2013" are provided in "UK Wood Production and Trade: 2013 provisional figures".

Information on significant revisions to published statistics is available in the "Quality Report: UK Wood Production and Trade" at:
www.forestry.gov.uk/pdf/ukwptqrpt.pdf/$FILE/ukwptqrpt.pdf

The Forestry Commission's revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at:
www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Most of these statistics are used to compile data that are sent to international organisations in the Joint Forest Sector Questionnaires (JQ1 and JQ2), in some cases giving more detail than in this release. These returns are published as Official Statistics on the FC website; provisional figures in May and final figures in September. The statistics are used by Eurostat Forestry Statistics, UNECE Timber Bulletins, and UN/FAO Forest Product Statistics and are published on the FAOSTAT database (http://faostat.fao.org).

A summary of the international statistics available from the FAOSTAT website are presented in the chapter on International Forestry. For more information, please refer to the International Forestry section of the Sources chapter.

The definitions used in this publication are consistent with the international definitions, as given in Eurostat's "Forestry in the EU and the World 2011":
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-31-11-137/EN/KS-31-11-137-EN.PDF

Figures for UK production and trade of sawn softwood are used alongside data from other sources to assess consumption of sawn softwood in the main end-user markets in the UK. Reports are available at www.forestry.gov.uk/forestry/infd-7fgkh4.

Release schedule

Provisional trade figures for 2014 will be released in "UK Wood Production and Trade: 2014 provisional figures" on 14 May 2015.

Final trade figures for 2014 will be released in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015" on 24 September 2015.

11.4 Sources: UK Forests and Climate Change

Introduction

Forests can help mitigate 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. Forests 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, by reducing the risk of flooding, providing shade for wildlife, reducing soil erosion and helping to cool down towns and cities.

Data sources and methodology

Carbon cycle

The diagram showing the carbon cycle is adapted from Figure 3 of Broadmeadow and Matthews (2003).

Forest carbon stock

Table 4.1 is adapted from Table 3e in the final UK report submitted in August 2014 to FAO for the Global Forest Resources Assessment (FRA) 2015 (www.fao.org/forestry/fra/76871/en).

Units: This table is 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, 2010 and 2015.

Living biomass: Carbon in living biomass is based on data from "NFI report: Carbon in live woodland trees in Britain" (Forestry Commission, May 2014), uprated from GB to UK estimates based on estimated volumes of growing stock. A "root to shoot ratio" (below ground biomass = 0.36 x above ground biomass) is used to estimate the breakdown between above- and below- ground biomass (Levy et al, 2004).

Deadwood: Consistent with Morison et al (2012), estimates of deadwood volume per hectare are taken from Gilbert (2007). These are rated up by woodland area estimates for FRA 2015, assuming a density of 0.45 ODT/m^3, and an average carbon content of 50% is applied.

Litter: Estimates of the carbon content of the litter layer are available from Morison et al (2012). These are rated up by woodland area estimates for FRA 2015 to provide a consistent time series.

Soil carbon: Estimates of the carbon content of soil 0-100 cm for England, Wales and Scotland are available from Morison et al (2012). 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 (2012). The soil carbon estimates are then rated up by woodland area estimates for FRA 2015 to provide a consistent time series. 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 broadly similar to the estimates made in Morison et al (2012).

Future updates: This table will be updated once further information is available from the National Forest Inventory.

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 2012 UK Greenhouse Gas emissions final figures (DECC, March 2014) and the National Atmospheric Emissions Inventory (NAEI, http://naei.defra.gov.uk) which incorporates all air pollutants including greenhouse gases. 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 2012 (mid projection).

The carbon sequestration estimates presented in Table 4.2 and Figure 4.2 differ significantly from those published in "Forestry Statistics 2013", due to changes in the data and model used by CEH. For more information, please refer to the CEH "UK Greenhouse Gas Inventory, 1990 to 2012: Annual Report for submission under the Framework Convention on Climate Change" (http://naei.defra.gov.uk/reports/reports?report_id=789) and "Projections of emissions and removals from the LULUCF sector to 2050" (http://naei.defra.gov.uk/reports/reports?report_id=798).

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.

Woodland Carbon Code

The Woodland Carbon Code is a voluntary standard, initiated in July 2011, for woodland creation projects that make claims about the carbon they sequester (take out of the atmosphere). All projects must be placed on the UK Woodland Carbon Registry. Their claims about potential carbon sequestration are validated by an independent certification body. Validated projects are then verified on a regular basis to confirm the progress of carbon sequestration.

Information about Woodland Carbon Code projects comes from the UK Woodland Carbon Registry, housed on the Markit Environmental Registry (www.markit.com/product/registry). The register is a live database and summary data are extracted on a quarterly basis.

Further information on the Woodland Carbon Code is available at: www.forestry.gov.uk/carboncode

Further information on administrative sources can be found at: www.forestry.gov.uk/forestry/infd-832ey5

Public opinion on climate change

Public Opinion of Forestry Surveys have been run every 2 years by the Forestry Commission. The surveys cover public attitudes to forestry and forestry-related issues. The surveys included 2 questions on climate change: one asking about ways in which forests and woodlands can impact on climate change (Figure 4.4) and one asking about how UK forests should be managed in response to the threat of climate change. Further information on the surveys is available in the Sources: Public Opinion of Forestry page.

References

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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, DOI: 10.1093/forestry/77.5.421* (forestry.oxfordjournals.org/content/77/5/421.abstract)

Morison, J. *et al* (2012) "Understanding the Carbon and GHG balance of UK Forests", Forest Research (www.forestry.gov.uk/pdf/FCRP018.pdf/$FILE/FCRP018.pdf)

Quality

All of the statistics in this chapter are outside the scope of National Statistics, but are included here to give a broad indication of the role of UK forests in climate change.

Revisions

Statistics on UK forests and climate change obtained from others are subject to revision whenever the source data are revised.

The Forestry Commission’s revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at: www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf.

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

"Woodland Carbon Code Statistics: data to September 2014" will be released on 9 October 2014.

"Woodland Carbon Code Statistics: data to December 2014" will be released on 15 January 2015.

"Woodland Carbon Code Statistics: data to March 2015" will be released on 9 April 2015.

"Woodland Carbon Code Statistics: data to June 2015" will be released on 14 July 2015.

"Forestry Statistics 2015" and "Forestry Facts & Figures 2015" will be released on 24 September 2015.

UK data for the Global Forest Resources Assessment 2015 will be released on 30 October 2014.

The next Public Opinion of Forestry Survey is expected to run in early 2015, with results available in summer 2015.

11.5 Sources: Environment

Introduction

The statistics presented in the Environment chapter of this release cover:

- populations of wild birds;
- woodland vegetation;
- public opinion on tree health; and
- woodland fires.

Woodland fires

Wildfires, including woodland fires, are uncontrolled vegetation fires. Although they can start naturally, the majority are caused by people, either accidentally or deliberately.

Wildfires can impact on transport network and power lines; damage property and businesses; affect tourism and recreation; and threaten people's lives. They also damage the natural and historic environment and release carbon dioxide stored in vegetation and soils which contributes to climate change.

Despite woodland wildfires making up a relatively small proportion of all wildfire incidents in the UK, their impacts can be disproportionately large and costly to society. Destructive wildfire events are predicted to increase in frequency in the UK due to increased land-use pressure and climate change.

Data sources and methodology

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 in the UK, 1970-2012 statistical release (Defra, October 2013), rescaled here to give year 2000 = 100 instead of year 1970 = 100.

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

Figures showing the overall condition and richness of flora in woodland are derived from data collected by the Countryside Survey in 2007 and previous surveys in 1998 and 1990. Results were published in late 2008 (www.countrysidesurvey.org.uk).

Please refer to the Countryside Survey website for an explanation of the vegetation richness and condition scores.

No similar samples were taken in the Northern Ireland Countryside Survey.

Public opinion on tree health

Public Opinion of Forestry Surveys have been run every 2 years by the Forestry Commission. The surveys cover public attitudes to forestry and forestry-related issues. A question asking about tree health was included for the first time in the 2013 surveys (Figure 5.2). Further information on the surveys is available in the Sources: Public Opinion of Forestry page.

Woodland fires

Information about wildfires comes from the Incident Recording System (IRS), reported by Fire and Rescue Services and submitted to the Department for Communities and Local Government, Scottish Government and

Welsh Government.

Information on woodland areas has been obtained from the National Forest Inventory woodland map. Further details on the definition of woodland and the coverage of the National Forest Inventory are provided in the Woodland Area and Planting section of the Sources chapter.

A spatial (GIS) analysis has been undertaken to identify fires that occurred in woodlands, as defined by the National Forest Inventory.

References

Department for Environment, Food and Rural Affairs (2013) "Wild bird populations in the UK, 1970-2012", National Statistics Release (www.gov.uk/government/publications/wild-bird-populations-in-the-uk).

Department for Communities and Local Government (2014) "Fire Statistics Great Britain 2012 to 2013", National Statistics Release (www.gov.uk/government/collections/fire-statistics-great-britain)

Quality

Limited data are currently available on the environmental aspects of woodlands. Other than Wild Bird Populations, all of the statistics in this chapter are outside the scope of National Statistics, but are included here to give a broad indication of the woodland environment.

Previous editions of Forestry Statistics included data on ancient and semi-natural woodland and protected areas. However, as estimates have not been updated for some time, these tables have been dropped from this edition.

Revisions

Statistics on the environment obtained from others are subject to revision whenever the source data are revised.

The Forestry Commission’s revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at: www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

The next Public Opinion of Forestry survey is expected to run in early 2015, with results available in summer 2015.

"Forestry Statistics 2015" and "Forestry Facts & Figures 2015" will be released on 24 September 2015.

11.6 Sources: Public Opinion of Forestry

Introduction

The Forestry Commission has conducted similar surveys of public attitudes to forestry and forestry-related issues every two years since 1995. Three separate surveys were undertaken in 2013; in Scotland, Wales and across the UK as a whole. A survey for Northern Ireland was most recently carried out in 2014.

Some questions were asked in all of the surveys conducted in 2013/2014 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. A new topic, tree health, was introduced in the 2013/2014 surveys.

Data Sources and Methodology

The survey results were obtained by placing questions in omnibus surveys run by private market research companies. The four surveys undertaken in 2013/2014 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 of the surveys use quota sampling to ensure that the sample selected is representative of the population, and results are weighted to produce estimates for the population as a whole.

Further information on the methodologies used for each survey are provided in the individual survey reports, available at http://www.forestry.gov.uk/forestry/infd-5zyl9w

Quality

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 in 2013 of around 2,000, the range of uncertainty around any result should be no more than ±3.3%, while for questions asked to around 1,000 respondents, the corresponding range of uncertainty should be no more than ± 4.6%.

Revisions

Results from the Public Opinion of Forestry (POF) Surveys were previously released in the separate POF reports for each country. The statistics are not normally revised.

The Forestry Commission's revisions policy sets out how revisions and errors are dealt with and can be found at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Reports for UK and England (using a subset of the UK data set), for Scotland and for Wales were published on 25 July 2013, along with the full sets of data tables.

A report for Northern Ireland was published on 28 August 2014, along with the full set of data tables.

Reports and data tables (including results for previous surveys) are available at www.forestry.gov.uk/forestry/infd-5zyl9w

Release schedule

The next Public Opinion of Forestry surveys are expected to run in early 2015, with results available in summer 2015.

11.7 Sources: Recreation

Introduction

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, Scotland's People and Nature 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 6.6).
- 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. (Tables 6.7 to 6.10).

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.

Data Sources and Methodology

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 (2004 to 2012)
- England Leisure Visits Survey (2005)
- Welsh Outdoor Recreation Survey (2008, 2011)
- Monitor of Engagement with the Natural Environment (England 2009/10 onwards)
- Scotland's People and Nature Survey (2013)

The Monitor of Engagement with the Natural Environment has also been used to provide information on visitor characteristics in table 6.2. For further information on this survey, see www.naturalengland.org.uk/ourwork/research/mene.aspx

Estimates of frequency of visits to woodlands in Scotland (Table 6.3) has been produced from Scotland's People and Nature Survey, a new survey that ran for the first time from March 2013 to February 2014 and is expected to run every 3 years. Scotland's People and Nature Survey replaces the Scottish Recreation Survey. Further information on both surveys are available at www.snh.gov.uk/land-and-sea/managing-recreation-and-access/increasing-participation/measuring-participation/.

The Welsh Outdoor Recreation Survey also provides statistics on visitor characteristics (Table 6.4). Further information on this survey is available at http://naturalresourceswales.gov.uk/policy-and-guidance/health-and-recreation-policy/welsh-outdoor-recreation-survey/?lang=en

Public Opinion of Forestry Surveys have been run every 2 years by the Forestry Commission. The surveys cover public attitudes to forestry and forestry-related issues, including visits to woodland (Tables 6.5 to 6.6 and Figure 6.1). Further information is available on the previous page.

On-site surveys

All Forests Surveys were run at a sample of Forestry Commission sites in Wales in 2004 (Table 6.7) and in Scotland from 2004 to 2007 and in 2012-13 (Table 6.8), to provide estimates of the numbers of visits to Forestry Commission woodland in Wales and in Scotland. Further information is available at www.forestry.gov.uk/forestry/infd-5wcmr4.

Quality of experience surveys have been run at selected Forestry Commission sites in England and Wales. Copies of the reports for each survey are available at www.forestry.gov.uk/forestry/infd-5wwjpt

Statistics on the day visitors to Forest Service sites in Northern Ireland where an admission charge is made is provided by the Forest Service. Further information on the Forest Service is available at www.dardni.gov.uk/forestry

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 6.11.
- The Space for People project analyses information from the Woods 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 6.12.

Further information is available at www.woodlandtrust.org.uk/

Quality

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, with results for both countries 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 to 2012, Welsh Outdoor Recreation Survey 2008 and 2011).

A further inconsistency may have occurred between the Scottish Recreation Survey and Scotland's People and Nature Survey, resulting in an apparently large increase in the number of woodland visits between 2012 and 2013. The 2013 estimate uses a new population estimate to gross up the survey results to an estimate of the total number of visits by the population as a whole, and this change has contributed to at least some of the apparent increase.

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 earlier 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 to 2012/13, 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.

Technical reports, providing further information on MENE, ScRS and WORS, are available from relevant websites (see above).

Comparison between household and on-site surveys in Scotland

The aggregate visit number estimates for Forestry Commission Scotland woodland obtained from the on-site All Forests Scotland surveys (9.1 million in 2012-13, Table 6.8) is substantially lower than the estimates derived from the Scottish Recreation Survey (around 27 million for 2012, see Forestry Statistics 2013, 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.

The methodology used in the All Forests Surveys is believed to produce a more reliable estimate of the total number of visits annually to Forestry Commission Scotland woodland. It is likely that the estimates derived from the Scottish Recreation Survey may include visits to woodlands owned by others (with respondents reporting "Forestry Commission" as the owner, as this is an organisation that they recognise).

Revisions

Most of the statistics in the Recreation chapter have been previously released in other publications, usually by other organisations. The latest year figures for day visitors to Forest Service sites in Northern Ireland and for Woods for People are published for the first time in this release. Figures for earlier years have not been revised from those published in Forestry Statistics 2013.

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 (Table 6.1) were amended in 2009 from previously published figures, to incorporate improved weighting procedures.

The Forestry Commission's revisions policy sets out how revisions and errors are dealt with and can be found at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Further information on recreation statistics and access to individual survey reports is available from www.forestry.gov.uk/forestry/ahen-5gcdvl.

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

The next Public Opinion of Forestry survey is expected to run in early 2015, with results available in summer 2015.

"Forestry Statistics 2015" and "Forestry Facts & Figures 2015" will be released on 24 September 2015.

11.8 Sources: Employment and businesses

Introduction

Data sources and methodology

Statistics on employment are obtained from:

- the Annual Business Survey (www.ons.gov.uk/ons/rel/abs/annual-business-survey/index.html), formerly the Annual Business Inquiry, (Office for National Statistics (www.ons.gov.uk)), an annual survey of UK businesses, and
- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations (UK Forest Products Association (www.ukfpa.co.uk), Wood Panel Industries Federation (www.wpif.org.uk)) - for employment in primary wood processing.

Statistics for accidents to employees are obtained from Health & Safety Executive statistics for Great Britain, available at www.hse.gov.uk/statistics.

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 (www.ons.gov.uk/ons/rel/bus-register/uk-business/index.html).

Standard Industrial Classification (SIC)

The Annual Business Survey (Annual Business Inquiry prior to 2009), statistics on health and safety and statistics on VAT and/or PAYE registrations classify businesses by UK Standard Industrial Classification (SIC) code. Detailed information on the SIC is available at www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html. 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 and SIC 2007 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 wood-based 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)
	21.1 (manufacture of pulp, paper and	17.1 (manufacture of pulp, paper and

Pulp & paper	paper products)	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 2003/2007 codes:

- Agriculture etc: 01/01 (agriculture, hunting) + 02/02 (forestry, logging & related services) + 05/03 (fishing, exc sea fishing);
- Manufacturing: 15-37/10-33 (all categories of manufacturing) .

Quality

The forestry and wood processing businesses covered by the Annual Business Survey (Table 7.1), accidents to employees (Table 7.3) and VAT and/or PAYE registered businesses (Table 7.5) differ from those covered by the timber industry surveys and enquiries (Chapter 2, Tables 7.2 and 7.4), 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.

Reporting requirements for accidents have changed, with absences of at least 3 days to be reported until March 2012 and absences of at least 7 days to be reported from April 2012. As a result, accident data for 2012-13 are not fully consistent with figures for earlier years.

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 (see relevant pages within the Sources chapter for further information on revisions to industry surveys and enquiries).

The Forestry Commission's revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at: www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf.

Further information

For further information, please refer to our Employment statistics page at www.forestry.gov.uk/forestry/infd-7avhb2.

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

"Forestry Statistics 2015" and "Forestry Facts & Figures 2015" will be released on 24 September 2015.

11.9 Sources: Finance & prices

Introduction

The statistics presented in the Finance and Prices chapter of this release cover:

- timber prices;
- financial returns from forestry investment;
- gross value added (GVA);
- government expenditure on forestry; and
- grant schemes.

Figures on financial returns from forestry are produced by another organisation; they are not designated as National Statistics, but are provided to give additional context.

Data Sources and Methodology

Timber Price Indices: Data sources

The Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index are both based on sales of softwood (conifers) by the Forestry Commission and Natural Resources Wales; they do not include any private sector data. They only cover roundwood from woodland; they do not cover sawmill products or other end products.

The Coniferous Standing Sales Price Index (CSSPI) is based on administrative data for standing sales of conifers (softwood) by the Forestry Commission/ Natural Resources Wales. Around half of Forestry Commission/ Natural Resources Wales softwood is sold standing, with the purchaser responsible for harvesting. The standing sales cover a full range of sizes, as they include thinning and removal of trees for environmental reasons, as well as harvesting of mature trees. The data used to compile the index covers volumes sold and values by average tree size.

The Softwood Sawlog Price Index (SSPI) is based on administrative data for sales of softwood sawlogs by the Forestry Commission/ Natural Resources Wales. The data used to compile the index covers volumes and values. Direct production by the Forestry Commission/ Natural Resources Wales (where the softwood is sold after harvesting) also covers a range of sizes, but the price statistics reported are limited to sales of logs (over 14 cm diameter).

Both the Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index include sales by long term contract, where the volume of roundwood covered by the contract is sold over a period of more than one year. To take account of changes in price over the term of the contract, price adjustments are made periodically, as part of the contract. The Coniferous Standing Sales Price Index and Softwood Sawlog Price Index include roundwood sales by long term contract but, at present, price adjustments are not included in the indices.

Further information on the administrative data is provided in the Statement of Administrative Sources on the FC Sales Recording Package, available at www.forestry.gov.uk/forestry/infd-832ey5

Methodology for Coniferous Standing Sales Price Index

The Coniferous Standing Sales Price Index (CSSPI) is an index of the average prices per cubic metre overbark standing achieved for standing sales of conifers by the Forestry Commission/ Natural Resources Wales . It covers all conifer standing sales (open market and negotiated) by the Forestry Commission/ Natural Resources Wales over the twelve month period. All thinning and clearfell data is combined within the index. It includes all species, tree sizes, working practices and conditions. It does not include any private sector data.

The Coniferous Standing Sales Price Index (CSSPI) is calculated using a Fisher index with 5-yearly chain linking. By using a Fisher index to produce the index, distortions in the average price caused by variations in the average tree size over time are corrected. Applying chain linking at regular intervals (in this case, every 5 years) ensures that the index remains relevant over time. Other factors that may affect price (e.g. working conditions, timber quality or species) are not taken into account when constructing the index.

The methodology used to calculate the Coniferous Standing Sales Price Index was reviewed in 2008, with the Fisher index with 5-yearly chain linking introduced from the November 2008 publication of "Timber Price Indices". Further information on the methodology used to calculate the Coniferous Standing Sales Price Index is provided in the paper "Methodology for the Coniferous Standing Sales Price Index", available from the Statistical Methodology and Reviews page of the Forestry Commission website at www.forestry.gov.uk/forestry/ahen-589ddl.

The average prices and the index are expressed in nominal terms (i.e. the actual prices at the time of sale) and in real terms (i.e. the prices converted to 2011). The GDP (Gross Domestic Product at market prices) deflator, produced by the Office for National Statistics (ONS), is applied to the nominal figures to derive real average prices and the index in real terms. The GDP deflator data can be downloaded from the ONS Quarterly National Accounts dataset at www.ons.gov.uk/ons/datasets-and-tables/data-selector.html?dataset=qna, by selecting Table A1: National Accounts Aggregates and Series: YBGB.

Methodology for Softwood Sawlog Price Index

The Softwood Sawlog Price Index is calculated from data covering separate 6-month periods to September and March. This means that the changes reported are not covering the same periods as the Coniferous Standing Sales Price Index.

The index measures the average price per cubic metre overbark of sawlog sales, with no adjustment for any change in size mix, as it covers a more limited range of sizes than the Coniferous Standing Sales Price Index.

The index is expressed in nominal terms (i.e. based on the actual prices at the time of sale) and in real terms (i.e. based on the prices converted to 2011 prices, by removing the effects of general inflation). As for the Coniferous Standing Sales Price Index, the GDP (Gross Domestic Product at market prices) deflator is used to convert from nominal to real terms.

For consistency with the Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index is rebased every 5 years; in this release, the period to September 2011 = 100.

Financial returns

Estimates of financial returns from commercial Sitka spruce plantations are compiled and published by Investment Property Databank Limited (IPD), www.ipd.com/OurProducts/Indices/UnitedKingdom/UKForestry/tabid/1012/Default.aspx. The returns include changes in the value of forestry estates, as well as timber price changes.

Gross Value Added

Gross value added (GVA) measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom. A more detailed definition of GVA is available at www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/gva/index.html

Statistics on gross value added are obtained from the Annual Business Survey, formerly the Annual Business Inquiry, (Office for National Statistics), an annual survey of UK businesses. Further information on the Annual Business Survey is available at www.ons.gov.uk/ons/guide-method/method-quality/specific/business-and-energy/annual-business-survey/index.html

The Annual Business Survey uses the UK Standard Industrial Classification (SIC) to classify businesses to industries according to their main activity. Detailed information on the SIC is available at www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html. For further information on the SIC codes used in this release, 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. Expenditure by Natural Resources Wales, Defra and other government departments/ Devolved Administrations is excluded.

Further information is available in the Statement of Administrative Sources on FC financial accounts, available at www.forestry.gov.uk/forestry/infd-832ey5. 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. Further information is available in the Statement of Administrative Sources on FC grant schemes data, available at www.forestry.gov.uk/forestry/infd-832ey5.

Quality

The Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index are the only official statistics published for roundwood prices in the UK. So, although they are limited to sales by the Forestry Commission and Natural Resources Wales, they are sometimes used as indicators of price trends for other UK softwood. In recent years, softwood has accounted for more than 90% of all timber harvested in Great Britain, and the Forestry Commission/ Natural Resources Wales has accounted for around 45% to 50% of all softwood sold.

For the Coniferous Standing Sales Price Index, data cover a 12 month period (i.e. data for the year to March and data for the year to September). As these periods overlap, comparisons of values should be made with the same period a year earlier.

Unlike the Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index covers 6 month periods (i.e. data for the period October to March and data for the period April to September), so there is no overlapping.

Detailed information on the quality of the statistics presented in this publication is available in the "Quality Report: Timber Price Indices" at www.forestry.gov.uk/pdf/tpiqrpt.pdf/$FILE/tpiqrpt.pdf

Revisions

Most of the statistics presented in the Finance & Prices chapter have been previously released. The latest year figures for Government expenditure on forestry are published in this format for the first time in this release.

Timber price indices are unchanged from the figures provided in "Timber Price Indices: data to March 2014"

Data on financial returns from forestry are not normally revised. Figures for earlier years have been revised from the figures included in "Forestry Statistics 2013" to reflect changes to the historic data released by IPD.

Data on Gross Value Added (GVA) are subject to revision whenever Annual Business Survey data are revised by the Office for National Statistics. Figures for 2011 have been revised from those shown in "Forestry Statistics 2013" to reflect revisions made to ABS results by ONS.

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 funding public forests in 2012-13 by FC Scotland (Table 8.4) have been revised, resulting in an overall increase in net expenditure of £0.1 million from the figure shown in Forestry Statistics 2013.

The Forestry Commission's revisions policy sets out how revisions and errors are dealt with and can be found at www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Tables providing longer time series of the Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index and the underlying data used to produce them, are available at www.forestry.gov.uk/forestry/infd-7m2djr

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

Timber Price Indices are published every six months, in May for data to end March and in November for data to end September. The next editions will be released on the following dates:
"Timber Price Indices: Data to September 2014" will be released on 6 November 2014;
"Timber Price Indices: Data to March 2015" will be released on 14 May 2015.

"Forestry Statistics 2015" and "Forestry Facts & Figures 2015" will be released on 24 September 2015.

11.10 Sources: International Forestry

Introduction

The statistics presented in the International Forestry chapter of this release cover:

- woodland area;
- carbon stocks;
- wood removals;
- production and apparent consumption of wood products; and
- trade in forest products.

Data sources and methodology

International data on forest area and carbon stocks are obtained from the Global Forest Resources Assessment (FRA) 2010 (www.fao.org/forestry/fra/fra2010/en/), 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 FAO. Data are collected via the Joint Forest Sector Questionnaire for FAO and other international organisations and published on the FAOSTAT database (http://faostat.fao.org/).

Data on apparent consumption is derived as production plus imports less exports.

Quality

The UK data on forest area and carbon stocks are as submitted by the Forestry Commission to FAO in May 2009. More recent estimates of UK woodland area are provided in the Chapter on Woodland Area and Planting. A copy of the full UK return for the Forest Resources Assessment is available at www.forestry.gov.uk/forestry/infd-7z8k3k

The UK data on production, imports and exports are as submitted by the Forestry Commission to Eurostat in September 2013. More recent UK estimates are provided in the Chapters on UK-grown Timber and Trade. Copies of all UK returns for the Joint Forest Sector Questionnaire are available at www.forestry.gov.uk/forestry/infd-7aqhzh

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.

Revisions to historical data have been made in the FAOSTAT database since the publication of "Forestry Statistics 2013" (Tables 9.4 to 9.6). The largest revision resulted in an increase in industrial roundwood removals in the Asia region across all years shown in Table 9.4.

The Forestry Commission’s revisions policy sets out how revisions and errors to these statistics are dealt with, and can be found at: www.forestry.gov.uk/pdf/FCrevisions.pdf/$FILE/FCrevisions.pdf

Further information

Statistics on international forestry are reported here at a regional level. Further data (including figures for individual countries) are also available from the original sources (see above).

Information on the Global Forest Resources Assessment 2015 is available on the FAO website at www.fao.org/forestry/fra/76871/en/

The United Nations Economic Commission for Europe (UNECE) Committee on Forests and the Forest Industry (previously the UNECE Timber Committee) also collects, on an annual basis, estimates for the current year and projections for the following year of wood production, imports and exports. Results are available on the UNECE website (www.unece.org/forests/fpm/timbercommittee.html). Copies of UK returns for the UNECE Timber Forecast Questionnaire are available at www.forestry.gov.uk/forestry/infd-7aqjql

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

UK data for the Global Forest Resources Assessment 2015 will be released on 30 October 2014.

International data on wood production and trade in 2013 will be released on 24 September 2015 in "Forestry Statistics 2015" and "Forestry Facts & Figures 2015".