

Forestry Statistics 2022

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

Release date:

29 September 2022

Coverage:

United Kingdom

Issued by: Forest Research, Northern Research Station,
Roslin, Midlothian, EH25 9SY

Contact: Francisco Gonzalez, 0300 067 5238

Enquiries: statistics@forestresearch.gov.uk

Statistician: Simon Maxwell, 0300 067 5997

Website: www.forestresearch.gov.uk/statistics/



The Research Agency of the
Forestry Commission

Forest Research is the Research Agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research.

The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, technical support and consultancy services.

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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. However, there are some topics for which data are currently only available for some parts of the UK, and these tables are labelled accordingly.

The tables within each chapter (including data for charts), along with longer time series (for some topics) are available to download in spreadsheet format from the [Statistics Data Downloads](#) page on the Forest Research website. Further information on data sources and methodology are provided in the Sources chapter.

Selected statistics from this publication are provided in "Forestry Facts and Figures 2022", available from the [Forestry Statistics and Forestry Facts & Figures](#) page on the Forest Research website.

We also publish a range of other Official Statistics, available on the [Statistics pages](#) of the Forest Research website.

Statistical release practices

We aim to release statistics as soon as they are available. All of our National Statistics and other Official Statistics publications are available on our [website](#). Release dates are published on our website for the year ahead. Publications are made available at 9.30 am on the day of release.

Statistical revisions policy

Revisions to statistics can occur when further data become available or errors are corrected. We 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 Forest Research 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 on our [Quality of Official Statistics web page](#).

Quality

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

National Statistics Status

National Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards.

The continued designation of these statistics (Forestry Statistics and Forestry Facts & Figures) as National Statistics was confirmed in March 2012 following an assessment by the UK Statistics Authority (now the Office for Statistics Regulation) against the Code of Practice for Statistics.

Since the latest assessment of these statistics in 2012, we have made improvements including:

- Expansion of content to cover data on additional topics, including woodland types and habitats, felling and public opinion on tree health.
- The addition of key findings at the start of each chapter, to provide users with a brief overview of the statistics.
- Provision of more detailed information on the methodology used, particularly in relation to the estimation of woodland area.

Forestry Statistics 2022

Chapter 1: Woodland Area & Planting

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

Introduction

This chapter contains information 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 31 March 2022 and on new planting and restocking for the period 2021/22 were previously published in Provisional Woodland Statistics 2022, released on 16 June 2022. For further details on revisions, see the Woodland Areas and Planting section of the Sources chapter.

A copy of all woodland area and planting tables, along with longer time series (where available) can be accessed in spreadsheet format from our [Data Downloads](#) page.

Key findings

The main findings are:

- The area of woodland in the UK at 31 March 2022 is estimated to be 3.24 million hectares. This represents 13% of the total land area in the UK, 19% in Scotland, 15% in Wales, 10% in England, and 9% in Northern Ireland.
- Of the total UK woodland area, 0.86 million hectares is owned or managed by Forestry England, Forestry and Land Scotland, Natural Resources Wales or the Forest Service (in Northern Ireland).
- The total certified woodland area in the UK at 31 March 2022 is 1.42 million hectares, including all Forestry England/Forestry and Land Scotland/Welsh Government Woodland Estate/Forest Service woodland. Overall, 44% of the UK woodland area is certified.
- Around 14 thousand hectares of newly created woodland were reported in the UK in 2021/22.

1.1 Woodland Area

Woodland is defined in UK forestry statistics as land under stands of trees with a minimum area of 0.5 hectares and a canopy cover of at least 20%, 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. 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 managed by Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW) and the Forest Service (FS) in Northern Ireland. Other public sector woodland (e.g., owned by local authorities) is included with privately owned woodland as “private sector” in this release.

The Natural Resources Wales woodland areas relate to the Welsh Government Woodland Estate. There is approximately 900 hectares of woodland on National

Nature Reserves and other land managed by Natural Resources Wales that is not included in the Natural Resources Wales figures.

1.1.1 Area of Woodland

The area of woodland in the UK at 31 March 2022 is estimated to be 3.24 million hectares (Table 1.1). Of this total, 1.49 million hectares (46%) is in Scotland, 1.32 million hectares (41%) is in England, 0.31 million hectares (10%) is in Wales and 0.12 million hectares (4%) is in Northern Ireland.

0.86 million hectares of woodland in the UK (27%) is owned or managed by Forestry England, Forestry and Land Scotland, Natural Resources Wales or the Forest Service (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 (73%) in Scotland.

Table 1.1 Area of woodland by ownership & forest type, UK, at 31 March 2022

thousand hectares

Forest type & ownership ^{1,2}	England ³	Wales ³	Scotland ³	Northern Ireland ⁴	UK
Conifers					
FE/FLS/NRW/FS	151	96	426	55	728
Private sector woodland	192	56	666	9	922
Total	343	152	1,092	64	1,650
Broadleaves⁵					
FE/FLS/NRW/FS	62	19	42	7	130
Private sector woodland	918	140	353	47	1,457
Total	980	159	395	54	1,587
Total					
FE/FLS/NRW/FS	214	115	467	62	858
Private sector woodland	1,109	196	1,019	55	2,379
Total	1,323	310	1,486	118	3,237

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Figures for England, Wales and Scotland are based on data obtained from the National Forest Inventory and adjusted for new planting, but at present no adjustment is made for woodland recently converted to another land use. Further information on how the figures have been estimated is available in the Annex.
4. Figures for Northern Ireland are obtained from the Northern Ireland Woodland Register.
5. Broadleaves include coppice and coppice with standards.

1.1.2 Area of Woodland: changes over time

The 3.24 million hectares of woodland in the UK in 2022 (Table 1.1) represents 13% of the total land area. This comprises 19% in Scotland, 15% in Wales, 10% in England and 9% in Northern Ireland (Table 1.2).

Table 1.2 Woodland area, UK, 1086 to 2022

Year	percent of land area ¹				
	England	Wales	Scotland	Northern Ireland	UK
1086 ²	~15	[x]	[x]	[x]	[x]
ca. 1350 ²	~10	[x]	~4	[x]	[x]
17 th Century ^{2,3}	~8	[x]	~4	~1.5	[x]
1905 ³	5.2	4.2	4.5	1.1	4.7
1924	5.1	5.0	5.6	1.0	5.0
1947 ³	5.8	6.2	6.6	1.7	5.9
1965	6.8	9.7	8.4	3.1	7.4
1980	7.3	11.6	11.8	4.9	9.0
1995-99	8.4	13.8	16.4	6.0	11.3
1998 ⁴	9.5	14.4	16.7	6.0	12.0
2022 ^{5,6}	10.2	15.0	19.1	8.5	13.3

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:

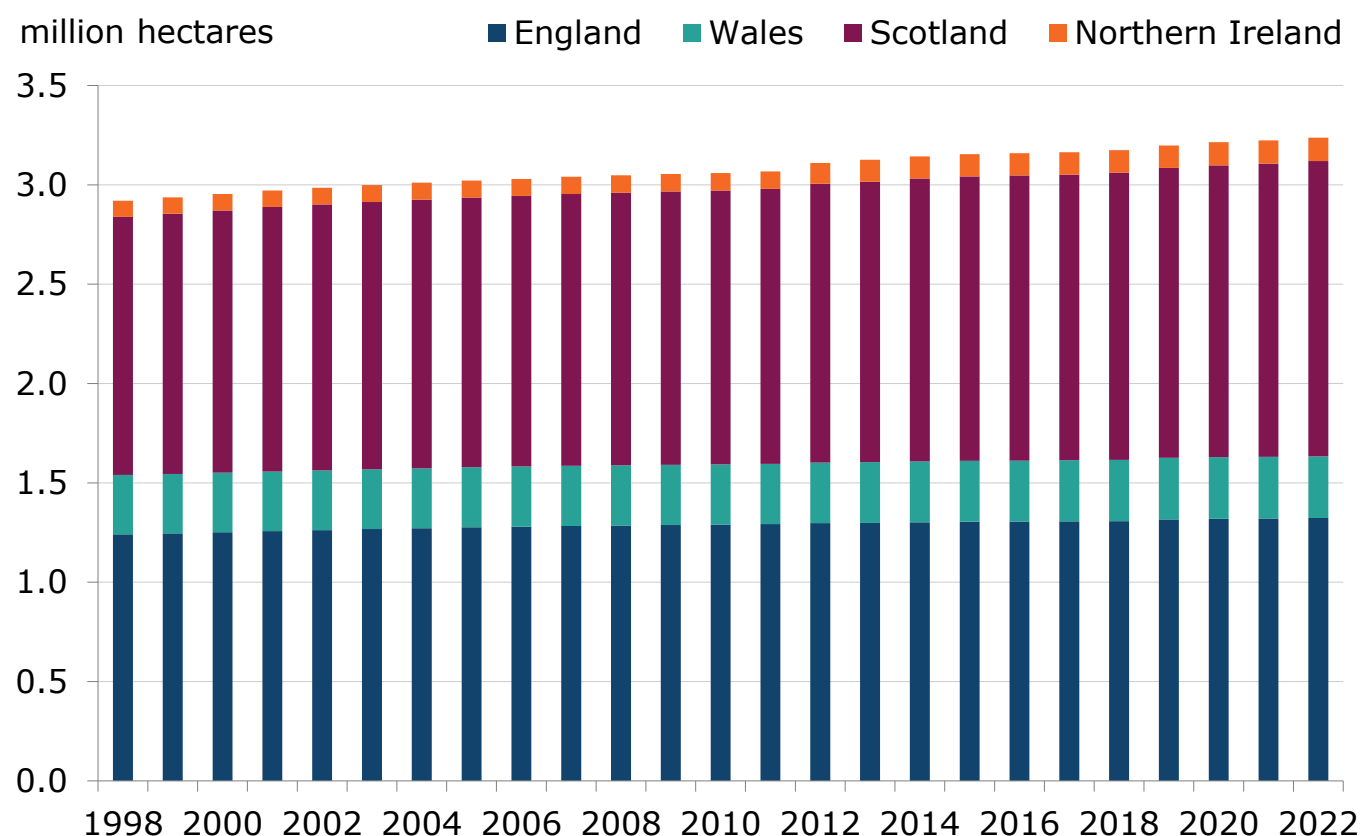
1. Percentage of the total surface area excluding inland water. The total surface areas, excluding inland water, are taken from the UK Standard Area Measurements (published by the Office for National Statistics).
2. Estimates for England and Scotland before 1905 come from a variety of sources, including the Domesday Survey of England, *Scottish Woodland History* (Smout, 1997) and Roy Military Survey of Scotland, 1747-1755.
3. For Northern Ireland, 17th Century figure is estimate for all Ireland, 1905 figure is estimate for the Province of Ulster, 1908 and 1947 figure assumes no change from 1939-40 census.
4. 1998 figures shown for England, Wales and Scotland have been revised from those originally published to produce estimates that are consistent with subsequent data from the National Forest Inventory.

5. 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. Further information on how the figures have been estimated is available in the Sources chapter.
6. Figures for Northern Ireland are obtained from the Northern Ireland Woodland Register.
7. [x] = data not available.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 1.1 shows woodland area by country since 1998. Woodland area in the UK has risen by over 300 thousand hectares since 1998, an increase of 11% over the period.

Figure 1.1 Area of woodland, UK, 1998 to 2022



Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:

1. Woodland areas for England, Wales and Scotland shown in this figure are based on data from the National Forest Inventory. The trends shown take account of areas of new planting and identifiable permanent woodland loss. Areas of woodland loss that are not yet identifiable (e.g., conversion of woodland for the restoration of open habitats) are not accounted for. Further information can be found on the [National Forest Inventory](#) page.
2. Figures for 1998 to 2009 for England, Wales and Scotland were revised from those initially published, to produce results that are consistent with the National Forest Inventory and enable comparisons over time.
3. Areas at 31 March.

1.1.3 Woodland area by ownership

Forestry England, Forestry and Land Scotland, Natural Resources Wales and the Forest Service in Northern Ireland owned or managed 27% of the total woodland area in the UK in 2022 (Table 1.3). This proportion ranged from 16% of the woodland area in England to 53% in Northern Ireland.

Table 1.3 Area of woodland by ownership, UK, 2018 to 2022

thousand hectares

Ownership/year	England	Wales	Scotland	Northern Ireland	UK
FE/FLS/NRW/FS woodland					
2018	214	117	470	62	863
2019	215	117	470	62	864
2020	215	117	470	62	863
2021	214	115	467	62	858
2022	214	115	467	62	858
Private sector woodland					
2018	1,093	192	976	50	2,311
2019	1,101	193	989	51	2,334
2020	1,105	193	999	54	2,352
2021	1,107	195	1,009	55	2,366
2022	1,109	196	1,019	55	2,379
Total woodland					
2018	1,307	309	1,446	113	3,175
2019	1,316	310	1,459	113	3,198
2020	1,320	310	1,469	117	3,215
2021	1,321	310	1,476	117	3,224
2022	1,323	310	1,486	118	3,237

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Natural Resources Wales, Forest Service, National Forest Inventory.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to woodland formerly owned/managed by FC Wales.
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately owned woodland.

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. Further information on how the figures have been estimated is available in the Sources chapter.
4. Northern Ireland figures are obtained from the Northern Ireland Woodland Register.
5. There may be a delay between changes in woodland ownership occurring and the changes being reflected in the statistics.
6. Areas at 31 March.

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.

Statistics on certified timber are provided in Chapter 2.

1.42 million hectares of woodland in the UK were certified at 31 March 2022 (Table 1.4). This represented 44% of the total UK woodland area, 60% in Scotland, 56% in Northern Ireland, 47% in Wales and 24% in England.

Table 1.4 Woodland area certified, UK, 31 March 2022

thousand hectares

Country	FE/FLS/NRW/FS	Private sector	Total	Percentage of woodland area (%)
England	214	101	315	24
Wales	115	30	145	47
Scotland	467	428	895	60
Northern Ireland	62	3	65	56
UK	858	562	1,420	44

Source: Forest Stewardship Council, Programme for the Endorsement of Forest Certification, Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service.

Notes:

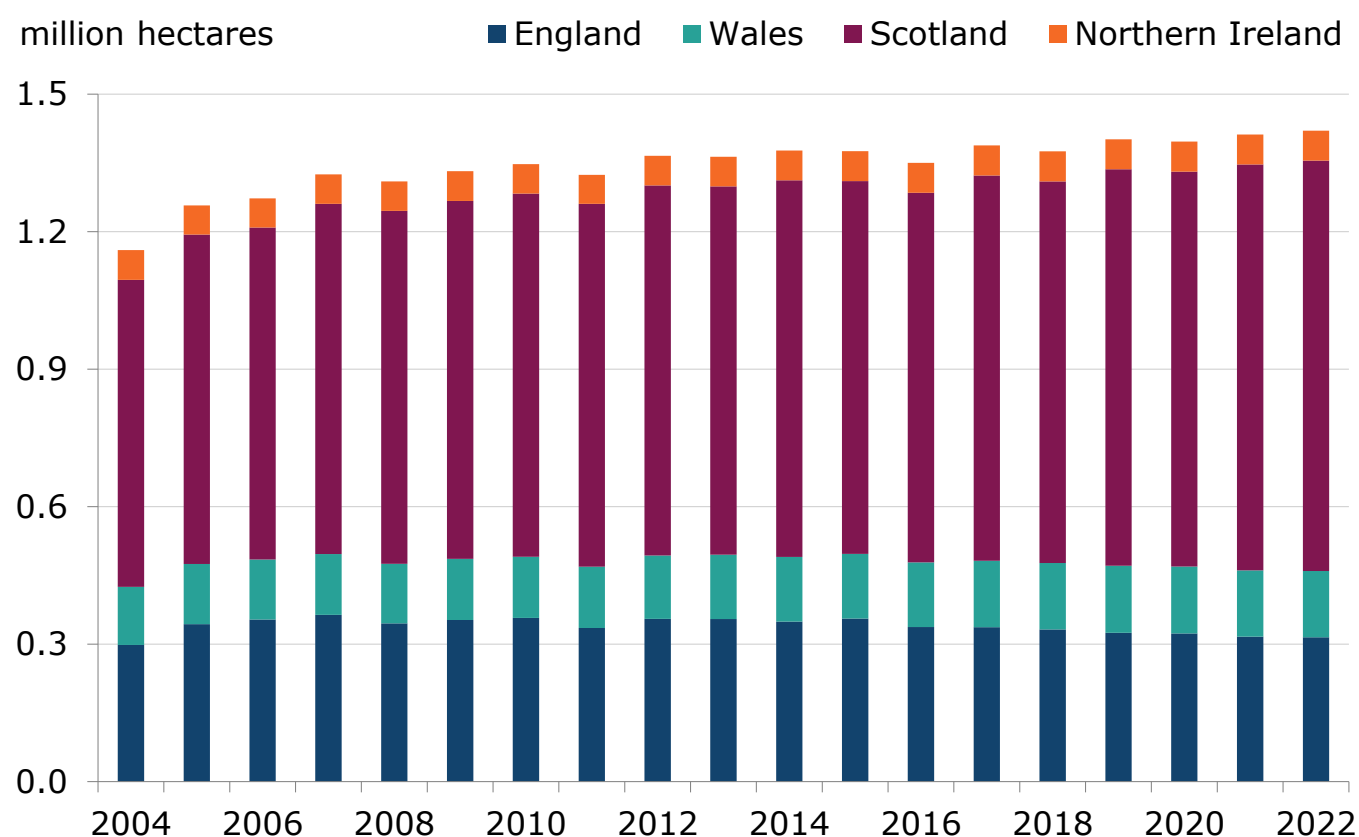
1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately owned woodland.
3. Areas at 31 March 2022.
4. All certified woodland in 2022 is certified under the Forest Stewardship Council (FSC) scheme or the Programme for the Endorsement of Forest Certification (PEFC) scheme, with many woodlands certified under both schemes.
5. The estimates are based on UK data published by FSC and PEFC, supplemented by data from individual certificates and other sources. Where possible, figures are for the woodland area certified, rather than the land area certified.
6. All Forestry England/Forestry and Land Scotland/Natural Resources Wales WGWE/Forest Service woodland is certified. The Forestry England/Forestry and Land Scotland/Welsh Government Woodland Estate/Forest Service areas are the latest areas, as shown in Table 1.1, rather than the areas shown on certificates.

Data: Longer time series of the above table are available from the Data Downloads webpage.

Figure 1.2 presents certified woodland area by country since 2004. This shows an increase in certified woodland area of around 260 thousand hectares (22%) from 2004 to 2022, with most of this increasing occurring in the early 2000s.

The 1.42 million hectares of certified woodland in the UK at March 2022 represents a 1% increase on the previous year.

Figure 1.2 Area of certified woodland, UK, 2004 to 2022



Source: Forest Stewardship Council, Programme for the Endorsement of Forest Certification, Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service.

Notes:

1. All certified woodland is certified under the Forest Stewardship Council (FSC) scheme or the Programme for the Endorsement of Forest Certification (PEFC) scheme, with many woodlands certified under both schemes.
2. The estimates are based on UK data published by FSC and PEFC, 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. Figures for earlier years were revised for consistency with results from the National Forest Inventory.

Provisional Woodland Statistics 2022 (published June 2022) was the first official statistics release produced by Forest Research to include woodland certified by [Grown in Britain](#) (GiB). As GiB's data is new this year, they are currently designated as experimental statistics and are not included in Figure 1.2 or Table 1.4, that present areas certified by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). Instead, the GiB certified areas are summarised below.

The total area of woodland certified by GiB at 31 March 2022 is 252 thousand hectares; where 245 thousand hectares of this area is also certified by FSC and/or PEFC, and 8 thousand hectares is certified by GiB only.

Of the 8 thousand hectares that are only certified by GiB, more than 99% is in England with the remainder in Wales.

This is a 10% increase on the total area of certified woodland reported by GiB at 31 March 2021 (230 thousand hectares).

1.3 Land use

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

The woodland areas and land areas shown for Natural Resources Wales relate to the Welsh Government Woodland Estate. There is approximately 900 hectares of woodland on National Nature Reserves and other land managed by Natural Resources Wales that is not included in the Natural Resources Wales figures.

Woodland accounted for 79% of all Forestry England/Forestry and Land Scotland/Natural Resources Wales/Forest Service Northern Ireland land in the UK at 31 March 2022 (Table 1.5). This proportion was highest in Wales (93%) and lowest in Scotland (74%).

Table 1.5 Land use of FE, FLS, NRW and FS¹, 2018 to 2022

thousand hectares

Land use	England	Wales	Scotland	Northern Ireland	UK
Woodland					
2018	214	117	470	62	863
2019	215	117	470	62	864
2020	215	117	470	62	863
2021	214	115	467	62	858
2022	214	115	467	62	858
Other land					
2018	39	6	169	13	227
2019	39	6	164	13	222
2020	38	6	164	13	221
2021	39	8	169	13	229
2022	39	9	167	13	227
Total land area					
2018	253	123	639	75	1,090
2019	253	123	634	75	1,086
2020	253	123	634	75	1,085
2021	253	123	636	75	1,087
2022	253	123	634	75	1,086

Source: Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland). NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. "Other land" includes agricultural land and areas of moorland and mountain.
3. There may be a delay between changes in woodland ownership occurring and the changes being reflected in the statistics.
4. The reduction in the area of public woodland in Wales in 2021 relates to a change in how institutional arrangements for land around Lake Vyrnwy are accounted for. See note 9, page 105 of [Natural Resources Wales Annual Accounts 2018/19](#) for further information on the status of this land.

5. Areas at 31 March.

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.

For conifers, the data presented in this chapter are interim estimates at 31 March 2021, published in the NFI [25-year forecast of softwood timber availability](#) report in 2022. For broadleaves, the data presented in this chapter are interim estimates at 31 March 2012, published in the NFI 50-year forecast of hardwood timber availability report in 2014. Both reports are available from the [National Forestry Inventory homepage](#).

The data presented in Tables 1.6 to 1.9 (and Figure 1.3a and 1.3b) relate to stocked areas. These differ from the woodland areas presented in earlier sections, as stocked areas exclude felled areas and (for private sector land) areas of integral open space.

The data on growing stock presented in Table 1.10 form the basis of the softwood availability forecast (Table 2.4a), and the data on growing stock presented in Table 1.11 form the basis for the hardwood availability forecast (Tables 2.4b).

Further information can be found on the [National Forest Inventory homepage](#).

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 per cent of the coniferous woodland area in Great Britain was occupied by stands of 40 years old or younger (Table 1.6c). A further 13% of stands were aged over 60 years.

Table 1.6a Stocked coniferous woodland area under FE/FLS/NRW ownership by age class, Great Britain, 2021

thousand hectares

Age class (years)	England	Wales	Scotland	Great Britain
0-20	37	19	107	165
21-40	38	24	88	153
41-60	28	17	87	132
61-80	16	10	39	67
81-100	5	1	11	18
100+	1	0	3	4
All age classes	125	71	335	540

See Table 1.6c for information on sources and notes.

Table 1.6b Stocked coniferous woodland area under private sector ownership by age class, Great Britain, 2021

thousand hectares

Age class (years)	England	Wales	Scotland	Great Britain
0-20	25	13	143	180
21-40	40	15	197	252
41-60	58	15	140	213
61-80	22	4	26	52
81-100	5	1	5	11
100+	4	0	2	7
All age classes	153	49	513	715

See Table 1.6c for information on sources and notes.

Table 1.6c Total stocked coniferous woodland area by age class, Great Britain, 2021

thousand hectares

Age class (years)	England	Wales	Scotland	Great Britain
0-20	61	31	250	346
21-40	78	39	285	405
41-60	86	32	227	345
61-80	37	15	65	118
81-100	11	2	16	29
100+	5	1	6	11
All age classes	278	119	848	1,255

Source (Table 1.6a, 1.6b & 1.6c): [National Forest Inventory: 25-year forecast of softwood timber availability](#) (Forest Research, 2022) (supporting data).

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales. NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Stocked area only: excludes felled areas and (for private sector land) open space.
4. Areas at 31 March 2021.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

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 1.7c). More than one quarter (28%) of stands were aged over 60 years.

Table 1.7a Stocked broadleaf woodland area under FE/FLS/NRW¹ ownership by age class, Great Britain, 2012

thousand hectares

Age class (years)	England	Wales	Scotland	Great Britain
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

See Table 1.7c for information on sources and notes.

Table 1.7b Stocked broadleaf woodland area under private sector² ownership by age class, Great Britain, 2012

thousand hectares

Age class (years)	England	Wales	Scotland	Great Britain
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

See Table 1.7c for information on sources and notes.

Table 1.7c Total stocked broadleaf woodland area by age class, Great Britain, 2012

thousand hectares

Age class (years)	England	Wales	Scotland	Great Britain
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 (Table 1.7a, 1.7b & 1.7c): National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, 2014) (supporting data).

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales. NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Stocked area only: excludes felled areas and (for private sector land) open space.
4. Areas at 31 March 2012.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

1.4.3 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 (54%) of the conifer area in Great Britain (Table 1.8c), followed by Scots pine (17%) and larches (8%). Sitka spruce is less dominant in England, accounting for over one quarter (28%) of the conifer area there.

Table 1.8a Stocked coniferous woodland area under FE/FLS/NRW¹ ownership by principal species, Great Britain, 2021

thousand hectares				
Principal species	England	Wales	Scotland	Great Britain
Sitka spruce	48	46	212	306
Scots pine	18	2	49	70
Corsican pine	22	2	1	26
Norway spruce	7	5	12	24
Larches	8	5	20	33
Douglas fir	10	6	6	23
Lodgepole pine	3	2	28	34
Other conifers	7	3	6	15
All conifers	125	71	335	530

See Table 1.8c for information on sources and notes.

Table 1.8b Stocked coniferous woodland area under private sector² ownership by principal species, Great Britain, 2021

thousand hectares

Principal species	England	Wales	Scotland	Great Britain
Sitka spruce	31	29	302	362
Scots pine	37	1	101	139
Corsican pine	10	1	0	11
Norway spruce	17	3	12	32
Larches	21	8	38	67
Douglas fir	13	4	7	23
Lodgepole pine	4	2	45	51
Other conifers	20	2	7	28
All conifers	153	49	513	715

See table 1.8c for information on sources and notes.

Table 1.8c Total stocked coniferous woodland area by principal species, Great Britain, 2021

thousand hectares

Principal species	England	Wales	Scotland	Great Britain
Sitka spruce	79	74	515	668
Scots pine	55	3	150	208
Corsican pine	32	2	2	36
Norway spruce	24	8	24	57
Larches	30	13	57	100
Douglas fir	23	10	13	46
Lodgepole pine	8	4	73	84
Other conifers	26	5	12	44
All conifers	278	119	848	1,245

Source (Table 1.8a, 1.8b & 1.8c): [National Forest Inventory: 25-year forecast of softwood timber availability](#) (Forest Research, 2022).

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales. NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g. owned by local authorities) and privately-owned woodland.
3. Stocked area only: excludes felled areas and (for private sector land) open space.
4. Areas at 31 March 2021.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

1.4.4 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 1.9c). Birch is more dominant in Scotland, accounting for 43% of the broadleaf area there.

Table 1.9a Stocked broadleaf woodland area under FE/FLS/NRW¹ ownership by principal species, Great Britain, 2012

thousand hectares

Principal species	England	Wales	Scotland	Great Britain
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

See Table 1.9c for information on sources and notes.

Table 1.9b Stocked broadleaf woodland area under private sector² ownership by principal species, Great Britain, 2012

thousand hectares

Principal species	England	Wales	Scotland	Great Britain
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

See Table 1.9c for information on sources and notes.

Table 1.9c Total stocked broadleaf woodland area by principal species, Great Britain, 2012

thousand hectares

Principal species	England	Wales	Scotland	Great Britain
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 (Table 1.9a, 1.9b & 1.9c): National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, 2014).

Notes:

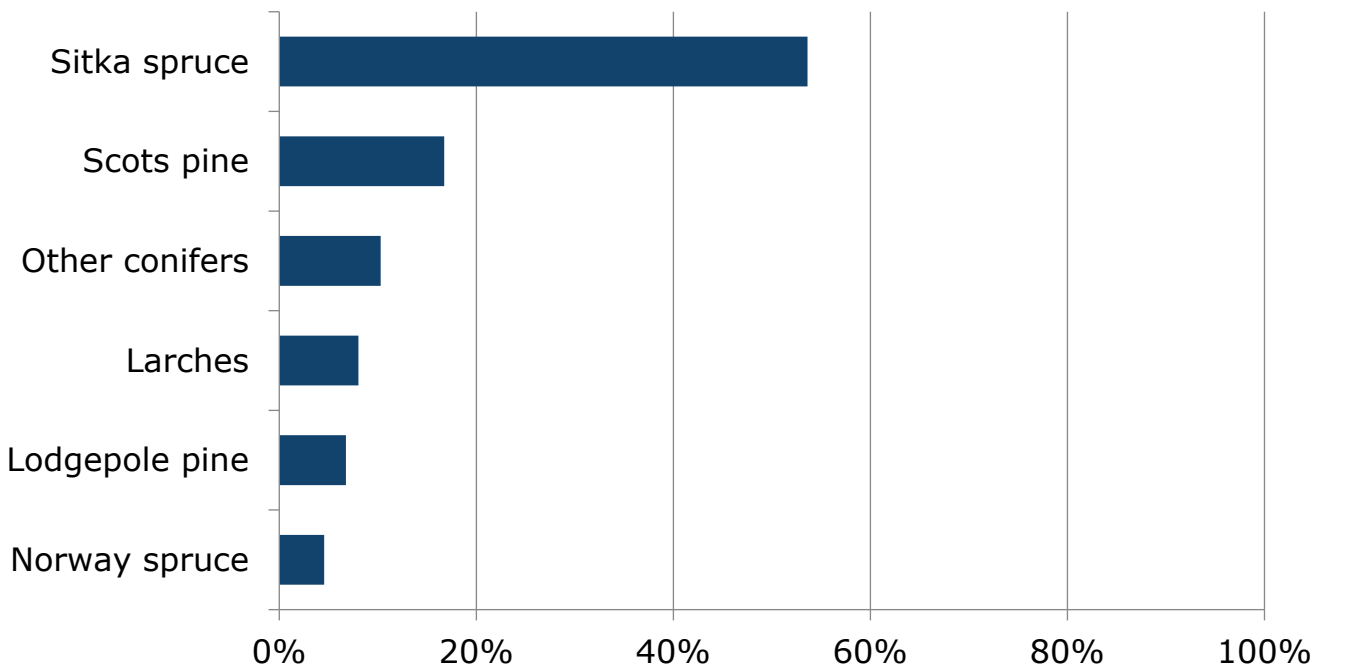
1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales. NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g. owned by local authorities) and privately-owned woodland.
3. Stocked area only: excludes felled areas and (for private sector land) open space.
4. Areas at 31 March 2012.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

1.4.5 Woodland area by species: summary

Figures 1.3a and 1.3b show that, whilst the conifer area is dominated by a small number of species (Sitka spruce and Scots pine together account for over two thirds of the conifer area), broadleaves are more varied.

Figure 1.3a Stocked woodland area by principal conifer species, Great Britain, 2021



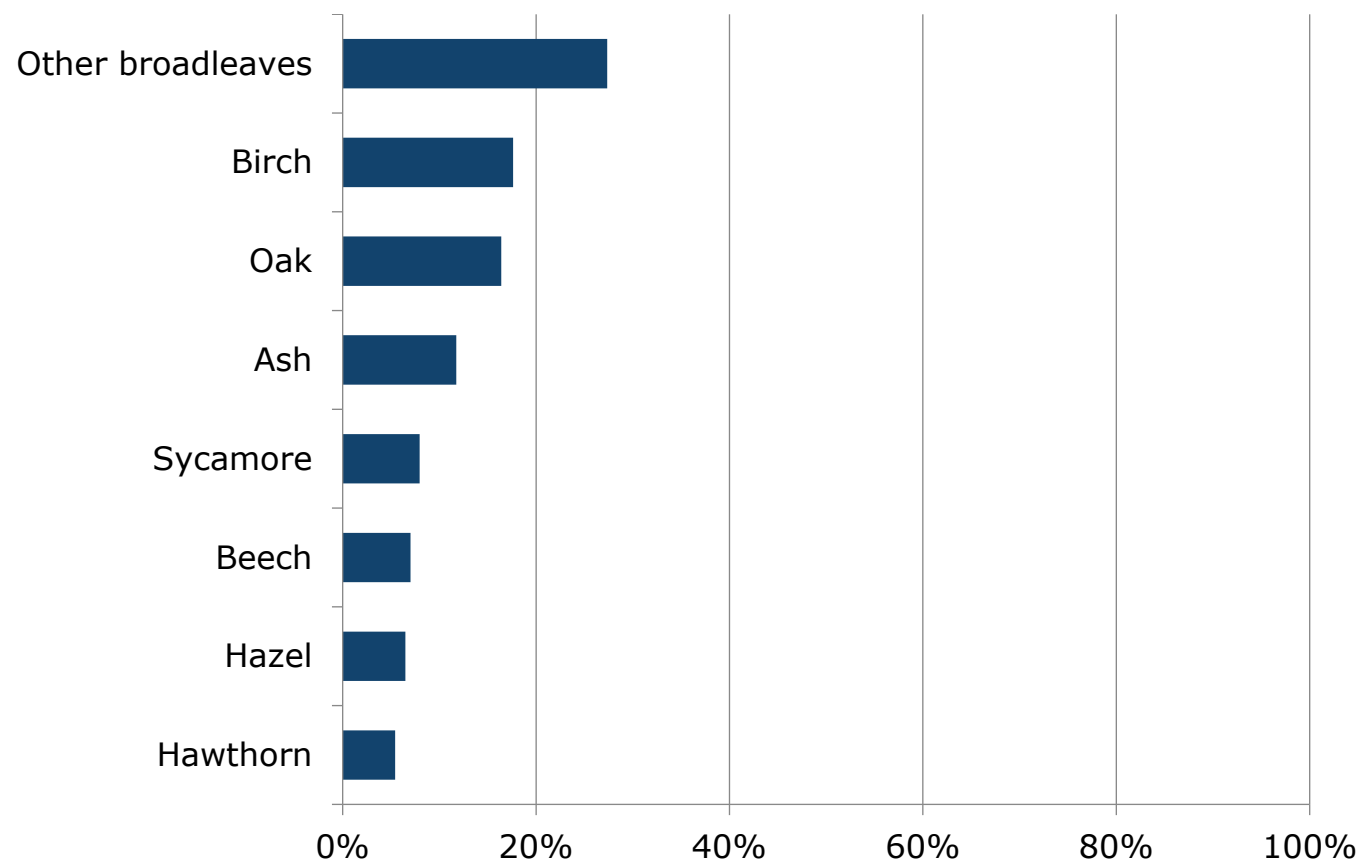
Source: National Forest Inventory: 25-year forecast of softwood timber availability (Forest Research, 2022).

Notes:

- 1. Stocked area only: excludes felled areas and (for private sector land) open space.
- 2. Areas at 31 March 2021.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 1.3b Stocked woodland area by principal broadleaf species, Great Britain, 2012



Source: National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, 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. For further information see the Sources chapter.

1.4.6 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 in 2021 was 396 million m³ overbark standing (Table 1.10c).

Sitka spruce accounted for over one half (55%) of the conifer growing stock, followed by Scots pine (15%) and larches (9%). This largely reflects the distribution of species by area (see Table 1.8c).

Table 1.10a Growing stock under FE/FLS/NRW¹ ownership by principal conifer species, Great Britain, 2021

Principal species	million m ³ overbark standing			
	England	Wales	Scotland	Great Britain
Sitka spruce	10.1	13.1	52.1	75.3
Scots pine	3.2	0.5	9.3	13.0
Corsican pine	4.7	0.5	0.4	5.5
Norway spruce	1.4	1.3	3.0	5.7
Larches	1.6	1.3	3.9	6.9
Douglas fir	2.7	1.6	1.7	6.0
Lodgepole pine	0.6	0.6	4.7	5.9
Other conifers	1.4	1.0	1.0	3.5
All conifers	25.8	20.0	76.1	121.8

See Table 1.10c for information on sources and notes.

Table 1.10b Growing stock under private sector² ownership by principal conifer species, Great Britain, 2021million m³ overbark standing

Principal species	England	Wales	Scotland	Great Britain
Sitka spruce	12.4	9.8	118.0	140.5
Scots pine	15.2	0.3	28.8	44.5
Corsican pine	4.6	0.3	0.1	5.1
Norway spruce	7.6	1.6	6.3	15.5
Larches	9.1	4.0	14.8	28.2
Douglas fir	6.7	2.0	3.4	12.4
Lodgepole pine	1.2	0.4	12.7	14.3
Other conifers	8.2	1.2	2.8	12.2
All conifers	65.1	19.8	188.0	273.9

See Table 1.10c for information on sources and notes.

Table 1.10c Total growing stock by principal conifer species, Great Britain, 2021

million m³ overbark standing

Principal species	England	Wales	Scotland	Great Britain
Sitka spruce	22.6	22.9	170.2	215.8
Scots pine	18.5	0.8	38.1	57.6
Corsican pine	9.2	0.8	0.5	10.6
Norway spruce	9	2.9	9.3	21.3
Larches	10.8	5.4	18.8	35.1
Douglas fir	9.4	3.7	5.1	18.4
Lodgepole pine	1.8	1	17.4	20.2
Other conifers	9.6	2.2	3.8	15.7
All conifers	90.9	39.8	264.1	395.7

Source (Table 1.10a, 1.10b & 1.10c): National Forest Inventory: 25-year forecast of softwood availability (Forest Research, 2022).

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales. NRW estimates only relate to the Welsh Government Woodland Estate (WGWE)
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g. owned by local authorities) and privately-owned woodland.
3. Areas at 31 March 2012.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

1.4.7 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 in 2012 was 245 million m³ overbark standing (Table 1.11c).

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 1.11c).

Table 1.11a Growing stock under FE/FLS/NRW¹ ownership by principal broadleaf species, Great Britain, 2012million m³ overbark standing

Principal species	England	Wales	Scotland	Great Britain
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

See Table 1.11c for information on sources and notes.

Table 1.11b Growing stock under private sector² ownership by principal broadleaf species, Great Britain, 2012million m³ overbark standing

Principal species	England	Wales	Scotland	Great Britain
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

See Table 1.11c for information on sources and notes.

Table 1.11c Total growing stock by principal broadleaf species, Great Britain, 2012

million m³ overbark standing

Principal species	England	Wales	Scotland	Great Britain
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 (Table 1.11a, 1.11b & 1.11c): National Forest Inventory: 50-year forecast of hardwood availability (Forestry Commission, 2014).

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales. NRW estimates only relate to the Welsh Government Woodland Estate (WGWE).
2. Private sector: all other woodland. Includes woodland managed by NRW outside the WGWE, other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Areas at 31 March 2012.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

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 0.8 million hectares in 2012 to 1.1 million hectares in 2021 (Table 1.12 and Figure 1.4). Just over one half (51%) of all farm woodland was in Scotland in 2021, with a further 36% in England, 12% in Wales and the remaining 2% in Northern Ireland.

Table 1.12 Area of farm woodland, UK, 2012 to 2021

thousand hectares

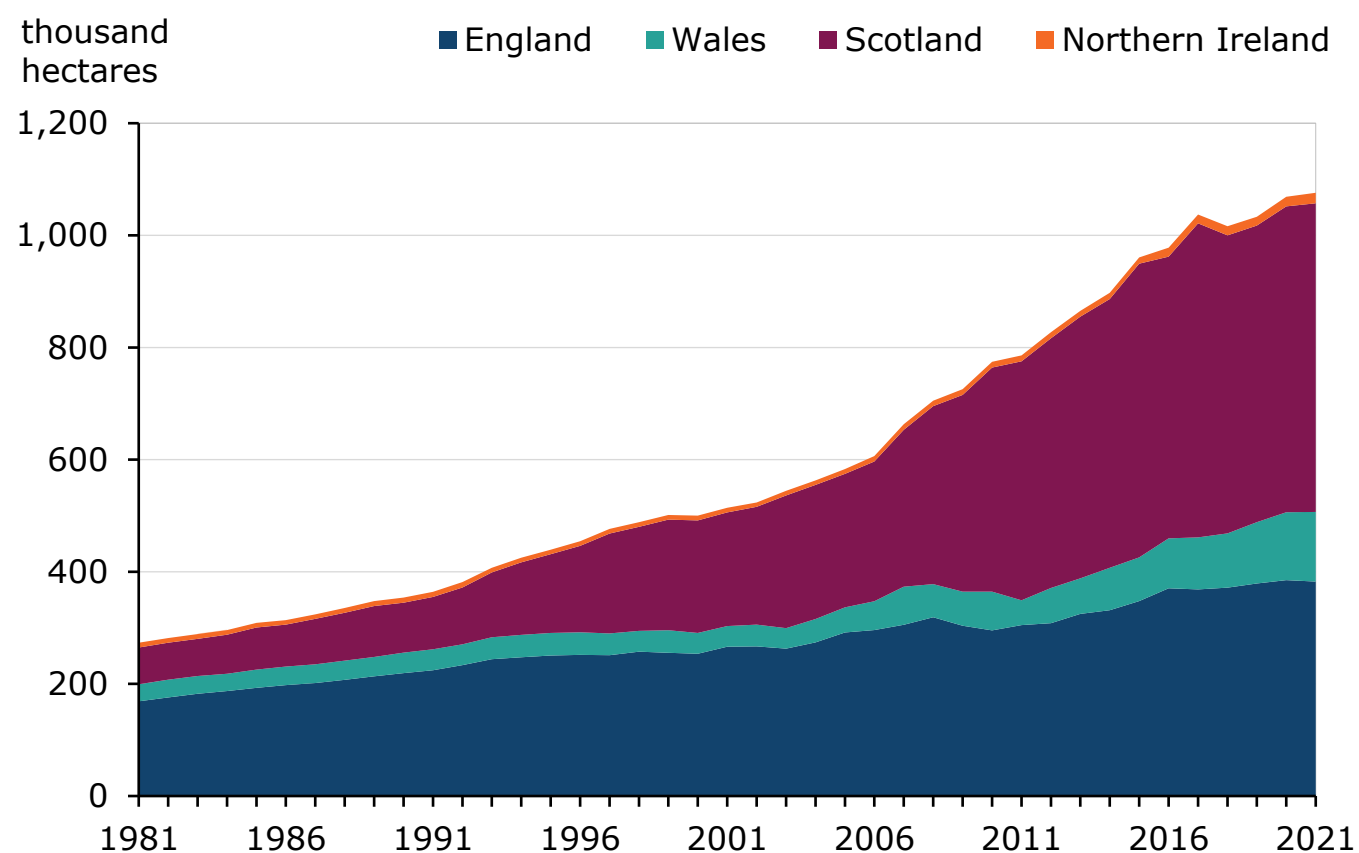
Year	England	Wales	Scotland	Northern Ireland	UK
2012	308	63	445	11	827
2013	325	63	467	10	865
2014	331	76	479	11	897
2015	348	78	524	11	961
2016	370	89	502	16	978
2017	369	93	560	16	1,037
2018	372	97	532	16	1,016
2019	379	109	529	16	1,033
2020	385	121	546	17	1,069
2021	382	124	550	19	1,076

Source: Defra, Scottish Government, Welsh Government, Northern Ireland Executive.

Notes:

1. Changes in the area of farm woodland over time indicate a change in the area of farm land that is reported as woodland and do not necessarily indicate a change in woodland area.
2. Figures include estimates for farm woodland that is not in receipt of grant aid.

Figure 1.4 Area of farm woodland, UK, 1981 to 2021



Source: Defra, Scottish Government, Welsh Government, Northern Ireland Executive.

Notes:

1. Changes in the area of farm woodland over time indicate a change in the area of farm land that is reported as woodland and do not necessarily indicate a change in woodland area.
2. Figures include estimates for farm woodland that is not in receipt of grant aid.

1.6 New planting and publicly funded restocking

1.6.1 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 (where known). 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.

13.8 thousand hectares of new woodland were created in the UK in 2021/22 (Table 1.13a). Conifers accounted for 50% of the new planting area in 2021/22.

Table 1.13a New planting by forest type, UK, 2017/18 to 2021/22

thousand hectares

Year (ending 31/3)	England	Wales	Scotland	Northern Ireland	UK
Conifers					
2017/18	0.24	0.10	4.68	0.11	5.13
2018/19	0.42	0.32	7.27	0.10	8.11
2019/20	0.24	0.04	7.43	0.06	7.77
2020/21	0.18	0.08	6.94	0.07	7.27
2021/22	0.27	0.18	6.34	0.09	6.88
Broadleaves					
2017/18	1.26	0.10	2.46	0.10	3.92
2018/19	0.99	0.35	3.94	0.14	5.42
2019/20	2.10	0.04	3.61	0.14	5.90
2020/21	1.87	0.21	3.72	0.22	6.02
2021/22	1.98	0.40	4.14	0.45	6.97
Total					
2017/18	1.50	0.20	7.14	0.21	9.05
2018/19	1.41	0.67	11.21	0.24	13.53
2019/20	2.34	0.08	11.05	0.20	13.66
2020/21	2.05	0.29	10.66	0.28	13.29
2021/22	2.26	0.58	10.48	0.54	13.85

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Forest Service, grant schemes.

Notes:

1. Private sector new planting figures are based on grant-supported new planting and (where possible) with estimates for areas planted without grant aid.
2. Figures for grant-aided planting relate to areas for which grants were paid during the year.
3. Estimates for areas planted without grant aid are believed to be under-reported and, as a result, the reported figures are likely to under-estimate the true level of planting activity. For England, woodland planting funded by sources other than the Countryside Stewardship Woodland Creation Grant, the Woodland Carbon Fund and the HS2 Woodland Fund include planting supported by the Woodland Trust, by the Environment Agency, by Natural England and land acquired by the

National Forest Company. For Scotland, a small amount of new planting without grant aid was included for 2016/17 and 2018/19 to 2019/20.

4. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
5. Includes woodland formed by natural colonisation (where known).

Data: Longer time series of the above table are available from the [Data Downloads page](#).

In 2021/22, most new planting (95%) took place on private sector land (Table 1.13b).

Table 1.13b New planting by ownership, UK, 2017/18 to 2021/22

thousand hectares

Year (ending 31/3)	England	Wales	Scotland	Northern Ireland	UK
FC/FLS/NRW/FS					
2017/18	0.00	0.00	0.87	0.00	0.87
2018/19	0.02	0.00	1.03	0.00	1.05
2019/20	0.10	0.00	0.27	0.05	0.42
2020/21	0.01	0.06	0.57	0.00	0.64
2021/22	0.00	0.02	0.62	0.02	0.67
Private sector					
2017/18	1.50	0.20	6.27	0.21	8.18
2018/19	1.39	0.67	10.19	0.24	12.48
2019/20	2.24	0.08	10.78	0.15	13.24
2020/21	2.04	0.23	10.09	0.28	12.65
2021/22	2.25	0.55	9.85	0.52	13.18
Total					
2017/18	1.50	0.20	7.14	0.21	9.05
2018/19	1.41	0.67	11.21	0.24	13.53
2019/20	2.34	0.08	11.05	0.20	13.66
2020/21	2.05	0.29	10.66	0.28	13.29
2021/22	2.26	0.58	10.48	0.54	13.85

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Forest Service, grant schemes.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland).
2. Private sector: all other woodland. Includes other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Private sector new planting figures are based on grant-supported new planting and (where possible) with estimates for areas planted without grant aid.
4. Figures for grant-aided planting relate to areas for which grants were paid during the year.
5. Estimates for areas planted without grant aid are believed to be under-reported and, as a result, the reported figures are likely to under-estimate the true level of planting activity. For England,

woodland planting funded by sources other than the Countryside Stewardship Woodland Creation Grant, the Woodland Carbon Fund and the HS2 Woodland Fund include planting supported by the Woodland Trust, by the Environment Agency, by Natural England and land acquired by the National Forest Company. For Scotland, a small amount of new planting without grant aid was included 2016/17 and 2018/19 to 2019/20.

6. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
7. Includes woodland formed by natural colonisation (where known).

Data: Longer time series of the above table are available from the Data Downloads web page.

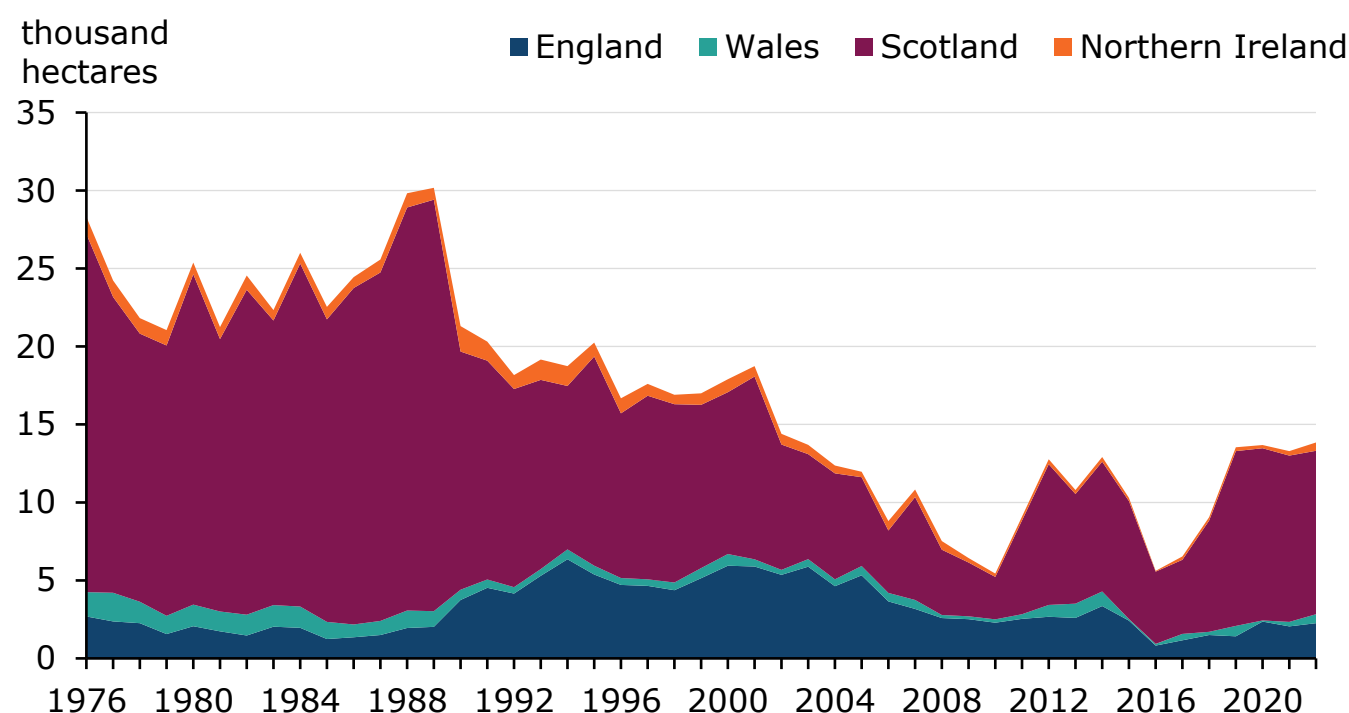
Figure 1.5 shows areas of new planting by country since the year ending March 1976. Trends in new planting rates have been influenced by changes to the incentives available to land owners (in the form of grants) and the availability of land for planting.

In the last 10 years, areas of new planting in the UK have ranged from under 6 thousand hectares to around 14 thousand hectares.

At 13.8 thousand hectares in 2021/22, the current level of new planting in the UK is 4% higher than the level reported in 2020/21.

For further information, see the New Planting and Restocking section of the Sources chapter.

Figure 1.5 New planting, UK, 1976 to 2022



Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on grant-supported new planting and (where possible) with estimates for areas planted without grant aid.
2. Figures for grant-aided planting relate to areas for which grants were paid during the year.
3. Estimates for areas planted without grant aid are believed to be under-reported and, as a result, the reported figures are likely to under-estimate the true level of planting activity. For England, woodland planting funded by sources other than the Countryside Stewardship Woodland Creation Grant, the Woodland Carbon Fund and the HS2 Woodland Fund include planting supported by the Woodland Trust, by the Environment Agency, by Natural England and land acquired by the National Forest Company. For Scotland, a small amount of new planting without grant aid was included for 2016/17 and 2018/19 to 2019/20.
4. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
5. Includes woodland formed by natural colonisation (where known).

1.6.2 Publicly funded restocking

Restocking is the replacement of trees on areas of woodland that have been felled; this can be done either through replanting or natural regeneration. The statistics presented here include felled areas that have been restocked by both natural regeneration and replanting.

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.

This release only covers publicly funded restocking, that is:

- restocking of Forestry England/Forestry and Land Scotland/Natural Resources Wales/Forest Service woodland and
- grant aided restocking of private sector woodland.

Grant support for restocking in Scotland has been limited since 2008. The Forestry Grant Scheme was launched in Scotland in March 2015 and does include support for restocking in most but not all circumstances. As a result, grant-aided restocking does not represent all private sector restocking in Scotland. It is therefore likely that conifer restocking in Scotland in recent years is under-reported in this release and other statistics

Grant support in England is now provided by the Countryside Stewardship scheme, which opened for applications in early 2016. Funding for restocking under Countryside Stewardship is only available under limited circumstances (through the tree health grant). The restoration (and restocking with native species) of PAWS

(Plantation on Ancient Woodland Sites) is also supported by the HS2 Woodland Fund. No estimate has been made for restocking in England that is no longer supported by grants and therefore restocking in England in recent years is under-reported in this release and other statistics.

A total of 15.3 thousand hectares of publicly funded restocking were reported in the UK in 2021/22 (Table 1.14a).

Table 1.14a Publicly funded restocking by forest type, UK, 2017/18 to 2021/22

thousand hectares					
Year (ending 31/3)	England	Wales	Scotland	Northern Ireland	UK
Conifers					
2017/18	1.58	0.97	8.14	0.85	11.54
2018/19	1.26	1.04	9.12	0.72	12.15
2019/20	2.11	0.92	8.19	0.69	11.91
2020/21	1.76	1.16	7.96	0.62	11.51
2021/22	2.29	0.93	8.34	0.79	12.35
Broadleaves					
2017/18	0.47	0.70	1.52	0.08	2.77
2018/19	0.38	0.66	2.07	0.11	3.23
2019/20	0.63	0.58	1.69	0.03	2.92
2020/21	0.65	0.68	1.21	0.02	2.57
2021/22	0.81	0.54	1.56	0.02	2.93
Total					
2017/18	2.04	1.67	9.66	0.94	14.31
2018/19	1.65	1.70	11.20	0.83	15.38
2019/20	2.74	1.50	9.88	0.71	14.83
2020/21	2.42	1.85	9.17	0.64	14.07
2021/22	3.09	1.48	9.90	0.81	15.28

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on areas for which grants were paid during the year.
2. Estimates of areas planted without grant aid are also included (where possible) up to 2009/10, but no estimates are available since then. As a result, the reported figures are likely to underestimate the true level of planting activity.
3. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
4. Includes woodland restocked by natural regeneration (where known).
5. Restocking by natural regeneration in non-clearfell areas may be under-represented.

Data: Longer time series of the above table are available from the [Data Downloads page](#).

Table 1.14b Publicly funded restocking by ownership, UK, 2017/18 to 2021/22

thousand hectares

Year (ending 31/3)	England	Wales	Scotland	Northern Ireland	UK
FC/FLS/NRW/FS					
2017/18	2.04	1.55	5.78	0.86	10.23
2018/19	1.57	1.22	7.15	0.79	10.72
2019/20	2.48	1.48	5.35	0.62	9.94
2020/21	1.98	1.67	5.00	0.60	9.26
2021/22	2.54	1.34	5.59	0.65	10.11
Private sector					
2017/18	0.00	0.12	3.87	0.08	4.07
2018/19	0.08	0.48	4.05	0.04	4.65
2019/20	0.26	0.02	4.52	0.09	4.89
2020/21	0.43	0.18	4.16	0.04	4.81
2021/22	0.55	0.14	4.32	0.16	5.17
Total					
2017/18	2.04	1.67	9.66	0.94	14.31
2018/19	1.65	1.70	11.20	0.83	15.38
2019/20	2.74	1.50	9.88	0.71	14.83
2020/21	2.42	1.85	9.17	0.64	14.07
2021/22	3.09	1.48	9.90	0.81	15.28

Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Welsh Government, Forest Service, grant schemes.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland).
2. Private sector: all other woodland. Includes other publicly owned woodland (e.g., owned by local authorities) and privately-owned woodland.
3. Private sector figures are based on areas for which grants were paid during the year.
4. Estimates of areas planted without grant aid are also included (where possible) up to 2009/10, but no estimates are available since then. As a result, the reported figures are likely to underestimate the true level of planting activity.

5. The planting season lies both sides of 31 March, and the weather can cause planting to be advanced or delayed.
6. Includes woodland restocked by natural regeneration (where known).
7. Restocking by natural regeneration in non-clearfell areas may be under-represented.

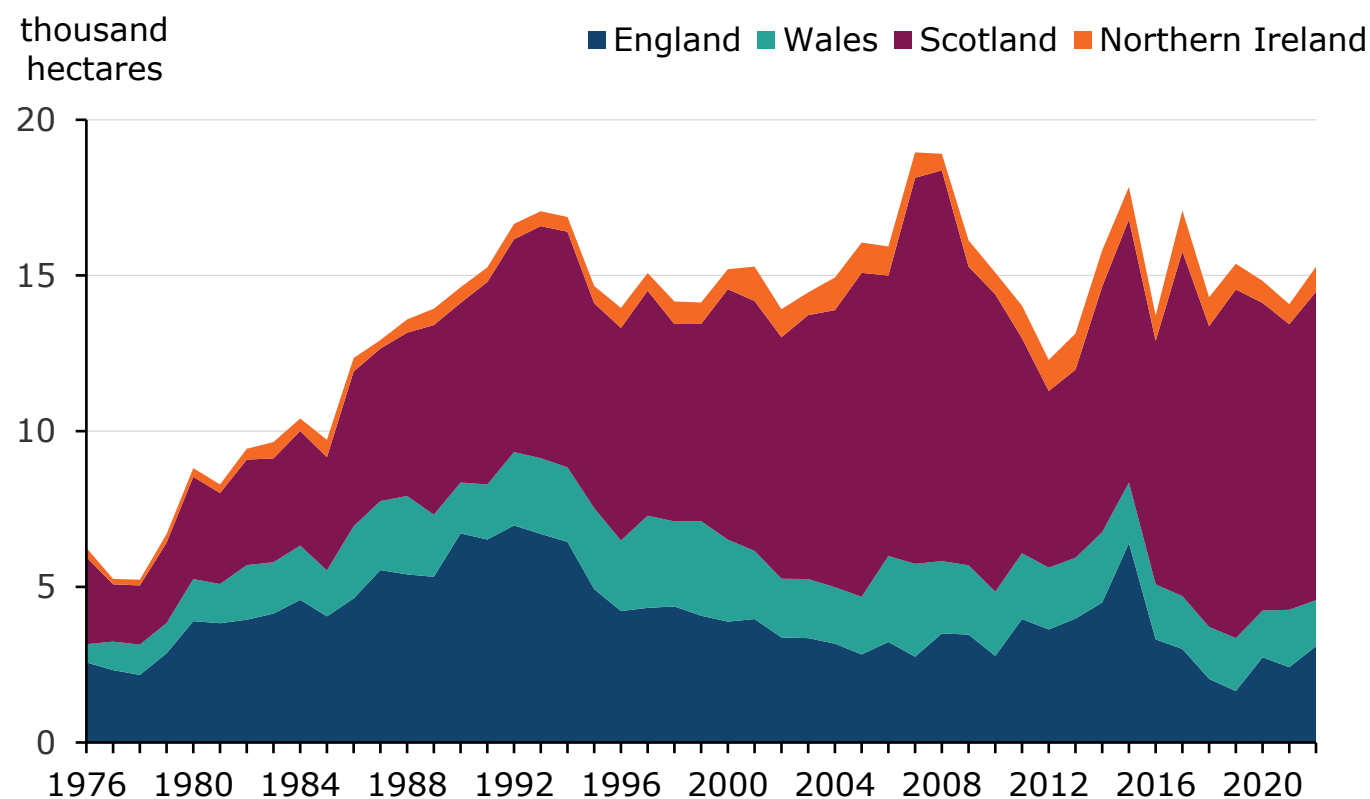
Data: Longer time series of the above table are available from the [Data Downloads page](#).

Figure 1.6 shows reported areas of restocking by country since the year ending March 1976. It indicates an increase in restocking rates during the period. Over the same period, there has been a general increase in UK wood production (see UK-Grown Timber chapter).

The reported area of restocking fell significantly after a peak of 19 thousand hectares in 2006/07. This followed changes to grant support for restocking in Scotland, that resulted in some non-grant aided Sitka spruce restocking being excluded from the estimates.

The chart shows a dip in the area of restocking in 2015/16, following changes to grant schemes across the UK. Reported restocking has continued to fall in England, where grant aid is now only available in very limited circumstances. The reported area of publicly funded restocking in the UK in 2021/22 represents a 9% increase from the previous year. For further information, see the New Planting and Restocking section of the Sources chapter.

Figure 1.6 Publicly funded restocking, UK, 1976 to 2022



Source: Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, Natural Resources Wales, Forest Service, grant schemes.

Notes:

1. Private sector figures are based on areas for which grants were paid during the year.
2. Estimates of areas planted without grant aid are also included (where possible) up to 2009/10, but no estimates are available since then. As a result, the reported figures are likely to underestimate the true level of planting activity.
3. The planting season lies both sides of 31 March and the weather can cause planting to be advanced or delayed.
4. Includes woodland restocked by natural regeneration.
5. Restocking by natural regeneration in non-clearfell areas may be under-represented.

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, Scottish Forestry, Natural Resources Wales or the Forest Service in Northern Ireland.

Felling licences may be conditional (where felling approval is granted subject to replanting) 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 without the requirement to replant may be issued if there are overriding environmental considerations, for example to enable the restoration of important habitats.

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 removal of trees might also be required through a Statutory Plant Health Notice (SPHN). A SPHN may require the felling and destruction of infected trees or containment of infested material on site, and is issued by the Forestry Commission, Scottish Forestry, Natural Resources Wales or the Forest Service to prevent the spread of pests and diseases. Similar actions are also required within the public woodland estate managed by these organisations. There is no legal requirement for woodland to be restocked after felling under a SPHN.

Since 2010/11, SPHNs have mainly been issued to attempt to slow down the spread of *Phytophthora ramorum*, first found in the UK in 2002 on viburnum, and in 2009 on Japanese larch, a significant sporulating host resulting in a dramatic upsurge in the disease.

Statutory felling of infected *P. ramorum* infected larch does not apply within the designated *P. ramorum* management zone in south west Scotland where the high levels of infection and proportion of larch in the area make this unfeasible.

However, felling licences are still required, and movement licences are required to stop spread out of this area. In Wales' *P. ramorum* Core Disease Zone SPHNs are still served to contain material on site, but felling still requires a felling licence.

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 thinning may be seen as an indication of the level of woodland loss on land that is not owned or managed by Forestry England, Forestry and Land Scotland, 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.

The National Forest Inventory report [Preliminary estimates of the changes in canopy cover in British woodlands between 2006 and 2015 \(2016\)](#) has reported:

- 3.3 thousand hectares of observed permanent woodland loss between 2006 and 2015;
- a further 0.7 thousand hectares of ground under development and 0.2 thousand hectares of newly established habitats;
- 69% of the clearfelled area observed in 2006 had been restocked by 2012, leaving around 33.9 thousand hectares of woodlands in transition and open areas;

- 63% of the area observed as clearfelled between 2006 and 2009 had been restocked by 2012, leaving around 28.6 thousand hectares of woodlands in transition and open areas.

These are interim estimates that are likely to underestimate the final position; updated estimates will be available when results from the NFI second cycle field survey are released.

1.7.1 Felling licences

Table 1.15 shows the area covered by unconditional felling licences issued by the Forestry Commission, Scottish Forestry and Natural Resources Wales in the last 10 years. The figures do not include unconditional felling licences issued to permit thinning of woodlands. The table covers woodland in England, Scotland and Wales that is not owned or managed by Forestry England, Forestry and Land Scotland or Natural Resources Wales 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 Great Britain were covered by unconditional felling licences (with no requirement to restock) in the year to March 2022. Of this, 0.3 thousand hectares were in England and 0.1 thousand hectares were in Scotland.

Table 1.15 Area of private sector woodland covered by unconditional felling licences^{1,2}, Great Britain, 2012/13 to 2021/22

thousand hectares

Year	England	Wales	Scotland	Great Britain
2012/13	0.3	0.3	0.2	0.9
2013/14	0.4	0.1	0.1	0.6
2014/15	0.2	0.0	0.1	0.3
2015/16	0.2	0.1	0.2	0.5
2016/17	0.2	0.0	0.0	0.2
2017/18	0.2	0.0	0.0	0.2
2018/19	0.7	0.1	0.0	0.8
2019/20	0.3	0.1	0.3	0.6
2020/21	0.4	0.4	0.3	1.0
2021/22	0.3	0.0	0.1	0.4

Source: Forestry Commission, Scottish Forestry, Natural Resources Wales

Notes:

1. Felling licences issued in the period. Excludes areas exempt from felling licence approval and licences issued for thinning.
2. From April 2019 Felling Permissions, issued under the Forestry and Land Management Act (Scotland) 2018, have replaced Felling Licences in Scotland.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

1.7.2 Statutory Plant Health Notices

Table 1.16a shows the number of sites where a Statutory Plant Health Notice has been served in the UK between 2012/13 and 2021/22. For Scotland, the figures now show the number of Statutory Plant Health Notices issued, rather than number of sites.

All woodland, including sites owned or managed by Forestry England, Forestry and Land Scotland, Natural Resources Wales or the Forest Service in Northern Ireland are covered. As Statutory Plant Health Notices are not issued in the *Phytophthora ramorum* management zone in southwest Scotland, the figures presented here do not cover all felling of infected larch.

In the UK, a total of 721 sites were served with Statutory Plant Health Notices between April 2021 and March 2022 (Table 1.16a).

Table 1.16a Number of sites where a Statutory Plant Health Notice has been served, UK, 2012/13 to 2021/22

Year	England	Wales	Scotland	Northern Ireland	UK
2012/13	161	89	43	15	308
2013/14	227	272	55	28	582
2014/15	144	71	17	17	249
2015/16	75	57	32	3	167
2016/17	103	53	67	0	223
2017/18	82	153	70	14	319
2018/19	128	215	284	0	627
2019/20	48	205	198	0	451
2020/21	203	177	283	2	665
2021/22	269	148	304	0	721

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

Note:

1. The number of sites where infection of larch 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. For Scotland, figures relate to the number of Statutory Plant Health Notices issued.
2. Excludes felling within the *Phytophthora ramorum* management zone in south west Scotland, where Statutory Plant Health Notices are not issued.
3. [x] denotes missing data.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

In 2021/22, 4.0 thousand hectares of woodland required felling under Statutory Plant Health Notices, with 1.5 thousand hectares in England, 1.3 thousand hectares in Scotland and 1.2 thousand hectares in Wales (Table 1.16b). No Statutory Plant Health Notices were issued in Northern Ireland in 2021/22.

Table 1.16b Felling areas¹ under Statutory Plant Health Notices, UK, 2012/13 to 2021/22

thousand hectares					
Year	England	Wales	Scotland ^{2,3}	Northern Ireland	UK
2012/13	0.5	1.5	0.3	0.2	2.5
2013/14	0.9	4.6	0.2	0.5	6.2
2014/15	0.3	0.4	0.1	0.0	0.9
2015/16	0.2	1.5	0.1	0.0	1.8
2016/17	0.3	0.2	0.2	0.0	0.7
2017/18	0.2	1.3	0.3	0.1	1.8
2018/19	0.6	1.9	1.4	0.0	3.9
2019/20	0.3	1.5	1.0	0.0	2.8
2020/21	1.3	1.3	1.8	0.0	4.5
2021/22	1.5	1.2	1.3	0.0	4.0

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

Note:

1. The area that is required to be felled within the Statutory Plant Health Notice.
2. Felling areas in Scotland relate to larch only.
3. Excludes felling within the *Phytophthora ramorum* management zone in south west Scotland, where Statutory Plant Health Notices are not issued.
4. [x] denotes not available.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Forestry Statistics 2022

Chapter 2: UK-Grown Timber

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

The Research Agency of the
Forestry Commission

Introduction

This chapter covers the production of timber from woodland and the primary processing of harvested wood to give basic wood products.

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.

Figures for 2021 were previously published in [UK Wood Production and Trade: provisional figures](#), released on 19 May 2022. Some figures have been revised from those previously published. For further details on revisions, see the Timber section of the Sources chapter.

A copy of all UK-grown timber tables can be accessed in spreadsheet format from the [Data Downloads page](#).

Key findings

The main findings for 2021 are (with percentage changes from 2020):

Removals¹ (harvesting) of UK roundwood:

- 10.4 million green tonnes of softwood (4%);
- 0.8 million green tonnes of hardwood (-1%);

Deliveries¹ of UK roundwood to wood processors and others:

- 11.2 million green tonnes of roundwood (softwood and hardwood), (4%), of which:
 - Sawmills: 6.3 million green tonnes (7%);
 - Wood-based panels: 1.5 million green tonnes (21%);
 - Integrated pulp and paper mills: 0.4 million green tonnes (4%);
 - Woodfuel: 2.3 million green tonnes (-10%);
 - Other uses, including round fencing, shavings and exports of roundwood: 0.7 million green tonnes (unchanged);

Production of wood products in the UK included:

- 3.6 million cubic metres of sawnwood (8%);
- 3.5 million cubic metres of wood-based panels (18%);
- 3.6 million cubic metres of paper and paperboard (unchanged).

¹The difference between total removals and deliveries reported here (around 0.1 million green tonnes in 2021) is likely to reflect a number of factors, including changes in stock levels and the different data sources and methodologies used.

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 released by the Office for National Statistics.

The data are derived from a number of sources:

- FE/FLS/NRW/FS figures are obtained from Forestry England, Forestry and Land Scotland, 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 11.2 million green tonnes of roundwood was removed from UK woodlands in 2021.

Softwood accounted for most of (93%) removals from UK woodland and totalled 10.4 million green tonnes in 2021 (Table 2.1a). This represented a 4% increase on the previous year's figure.

Hardwood removals totalled 0.8 million green tonnes in 2021 (Table 2.1b).

Private sector woodlands accounted for 62% of softwood production and 88% of hardwood production in 2021.

Table 2.1a Softwood production, UK, 2012 to 2021

thousand green tonnes

Year	FE/FLS/NRW/FS ¹ woodland	Private sector ² woodland	Total softwood
2012	4,836	5,259	10,095
2013	5,084	5,852	10,936
2014	4,900	6,627	11,527
2015	4,691	5,968	10,659
2016	5,011	5,734	10,745
2017	4,761	6,075	10,836
2018	4,522	6,827	11,349
2019	3,937	5,884	9,822
2020	4,616	5,437	10,053
2021	4,009	6,407	10,416

Source: Forestry England, Forest and Land Scotland, Natural Resources Wales, Forest Service, industry surveys, industry associations.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, FS: Forest Service (Northern Ireland).
2. Private sector: removals from all other woodland (including some publicly owned woodland).

Table 2.1b Hardwood production, UK, 2012 to 2021

thousand green tonnes

Year	FE/FLS/NRW/FS ¹ woodland	Private sector ² woodland	Total hardwood ^{3,4}
2012	55	478	532
2013	78	452	530
2014	71	464	535
2015	73	491	564
2016	68	527	595
2017	85	651	736
2018	88	746	834
2019	68	800	868
2020	87	742	829
2021	96	727	823

Source: Forestry England, Forest and Land Scotland, Natural Resources Wales, Forest Service, industry surveys, industry associations.

Notes:

1. FE: Forestry England, FLS: Forestry and Land Scotland, NRW: Natural Resources Wales, 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.
4. The increase in hardwood removals between 2016 and 2017 is largely attributed to a revised estimate for deliveries of UK grown hardwood used for woodfuel (see Table 2.6). This new estimate should not be interpreted as an increase in a single year.

Data: Longer time series of the above table, including estimates by country (England/Wales/Scotland/Northern Ireland) are available from the [Data Downloads page](#).

2.1.2 Origin of private sector softwood removals

It is estimated that 74% of all softwood removals from private sector woodlands were harvested in Scotland, 15% in England, 9% in Wales and the remainder in Northern Ireland in 2021 (Table 2.2).

Private sector softwood removals in the UK in 2021 were 18% higher than the 2020 figure.

Table 2.2 Private sector softwood removals by country, UK, 2012 to 2021

thousand green tonnes					
Year	England	Wales	Scotland	Northern Ireland	UK
2012	847	611	3,761	40	5,259
2013	929	695	4,205	23	5,852
2014	1,165	739	4,691	33	6,627
2015	1,052	686	4,203	28	5,968
2016	1,013	643	4,043	34	5,734
2017	961	783	4,295	36	6,075
2018	1,130	628	5,022	47	6,827
2019	1,222	485	4,133	44	5,884
2020	972	550	3,837	78	5,437
2021	973	581	4,747	106	6,407

Source: Private Sector Softwood Removals Survey

Data: Longer time series of the above table, including estimates for hardwood removals and for removals FE/FLS/NRW/FS woodlands, are available from the [Data Downloads page](#).

2.1.3 Origin of FE/FLS/NRW/FS removals

Information on removals from Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW) and Forest Service (FS) woodlands is obtained from administrative systems.

A total of 4.0 million green tonnes of softwood was removed from FE/FLS/NRW/FS woodlands in 2021, a 13% decrease from the 2020 figure (Table 2.3).

Over one half (53%) of FE/FLS/NRW/FS softwood removals in 2021 occurred in Scotland, 22% in England, 17% in Wales and 8% in Northern Ireland.

Table 2.3 FE/FLS/NRW/FS softwood removals by country, UK, 2012 to 2021

thousand green tonnes					
Year	England	Wales	Scotland	Northern Ireland	UK
2012	1,154	663	2,627	392	4,836
2013	1,188	693	2,819	384	5,084
2014	1,064	722	2,749	365	4,900
2015	1,023	692	2,644	333	4,691
2016	1,146	778	2,745	343	5,011
2017	1,087	660	2,666	349	4,761
2018	1,048	696	2,438	339	4,522
2019	905	525	2,143	364	3,937
2020	1,014	619	2,577	405	4,616
2021	878	668	2,123	340	4,009

Source: Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales, Forest Service (FS)

Data: Longer time series of the above table, including estimates for hardwood removals and for removals from private sector woodlands, are available from the [Data Download page](#).

2.1.4 Softwood availability forecast

The [National Forest Inventory](#) published the "25-year forecast of softwood availability" in July 2022 and the "50-year forecast of hardwood availability" was 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. The forecasts are outside the scope of National Statistics but are provided here to give more context to the data on wood production.

As the hardwood forecast was produced in 2014, the figures do not take into account any of the findings from the [Preliminary estimates of the changes in canopy cover in British woodlands between 2006 and 2015](#), released in 2016.

The key assumptions underpinning the headline softwood forecast scenario include:

- For private woodlands in GB, felling generally takes place when trees in a stand have, on average, achieved a target diameter (replacing a previous assumption based on growth rates).
- The estate of Forestry England, Forestry and Land Scotland and Natural Resources Wales is managed according to current management plans; note that Forestry England, Forestry and Land 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 United Kingdom averages 16.5 million cubic metres a year over the 25-year period 2022 to 2046 (Table 2.4a). The majority (66%) of this softwood is projected to come from private sector woodland.

Table 2.4a 25-year forecast of softwood availability; average annual volumes within periods, UK, 2022 to 2046

thousand m³ overbark standing

Annual average in the period	England	Wales	Scotland	Great Britain	Northern Ireland	United Kingdom
FE/FLS/NRW/FS¹						
2022-26	1,107	1,284	3,674	6,065	498	6,563
2027-31	1,158	1,017	3,538	5,713	628	6,341
2032-36	1,097	799	3,201	5,096	698	5,794
2037-41	1,006	816	2,699	4,521	635	5,157
2042-46	1,039	457	2,610	4,107	534	4,641
Private sector²						
2022-26	2,570	843	5,092	8,505	24	8,529
2027-31	2,616	683	6,529	9,828	42	9,870
2032-36	2,319	773	8,608	11,700	43	11,743
2037-41	2,495	870	9,609	12,974	40	13,015
2042-46	2,057	790	7,965	10,812	25	10,837
Total softwood						
2022-26	3,677	2,128	8,766	14,570	522	15,092
2027-31	3,774	1,700	10,067	15,541	670	16,211
2032-36	3,415	1,572	11,809	16,796	741	17,537
2037-41	3,501	1,686	12,309	17,495	676	18,171
2042-46	3,096	1,248	10,575	14,919	558	15,477

Source: National Forest Inventory: 25-year forecast of softwood availability (Forest Research, July 2022)

Notes:

1. Forecasts for the public forest estate assume that woodlands are managed according to current management plans.
2. Private woodland forecasts for Great Britain represent potential availability of softwood timber under the assumption of a management scenario of felling at a specified target diameter where viable.
3. To convert softwood 'overbark standing' into green tonnes multiply by 0.818. See the Sources chapter for more details on conversion factors.

These figures are outside the scope of National Statistics. For more information see the Sources chapter.

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 Forestry England, Forestry and Land Scotland and Natural Resources Wales is managed according to current management plans.

Under the above scenario, hardwood availability for Great Britain averages 1.6 million m³ a year over the 50-year period (Table 2.4b). The majority (89%) of this hardwood 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](#).

Table 2.4b Hardwood availability forecasts, Great Britain, 2013 to 2061

thousand m³ overbark standing

Annual average in the period	England	Wales	Scotland	Great Britain
FE/FLS/NRW¹				
2013-16	126	12	9	147
2017-21	92	11	9	111
2022-26	110	17	10	137
2027-31	86	12	10	108
2032-36	99	14	15	128
2037-41	129	19	24	172
2042-46	189	56	31	276
2047-51	116	19	40	175
2052-56	134	28	45	208
2057-61	146	28	64	237
Private sector²				
2013-16	122	20	83	225
2017-21	333	46	139	519
2022-26	538	77	193	808
2027-31	720	100	233	1,054
2032-36	825	115	262	1,202
2037-41	1,047	153	367	1,567
2042-46	1,915	243	586	2,743
2047-51	1,678	227	675	2,580
2052-56	1,254	198	554	2,006
2057-61	645	139	343	1,127
Total hardwood				
2013-16	249	32	92	373
2017-21	425	58	148	631
2022-26	648	94	203	945
2027-31	806	112	244	1,162
2032-36	923	130	277	1,330
2037-41	1,176	171	391	1,738
2042-46	2,104	299	616	3,019
2047-51	1,795	246	715	2,755
2052-56	1,388	227	599	2,214
2057-61	791	167	406	1,364

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

Notes:

1. The estate of Forestry England (FE), Forestry and Land Scotland (FLS) and Natural Resources Wales (NRW) is assumed to be managed according to current management plans.
2. In private woodland, harvesting is assumed to be limited to areas with evidence of recent thinning activity. 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: forestresearch.gov.uk/tools-and-resources/national-forest-inventory/
3. An update to these figures is due to be published in December 2021.
4. To convert hardwood 'overbark standing' into green tonnes multiply by 0.900. See the Sources chapter for more details on conversion factors.

These figures are outside the scope of National Statistics. For more information see the Sources chapter.

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 2021, deliveries of UK roundwood (softwood and hardwood) totalled 11.2 million green tonnes, a 4% increase from the previous year (Tables 2.5 and 2.6).

Most UK roundwood deliveries (93%) were softwood and totalled 10.4 million green tonnes in 2021 (Table 2.5). 6.3 million green tonnes (60% of UK softwood deliveries) were used by sawmills, a 7% increase from the previous year. A further 1.6 million green tonnes were used for wood fuel (a 14% decrease), 1.5 million green tonnes were used to produce wood-based panels (a 21% increase), 0.4 million green tonnes by integrated pulp and paper mills (a 4% increase), and 0.6 million green tonnes for other uses, including round fencing, shavings and exports of roundwood (a 1% increase).

Table 2.5 Deliveries of UK-grown softwood, UK, 2012 to 2021

thousand green tonnes

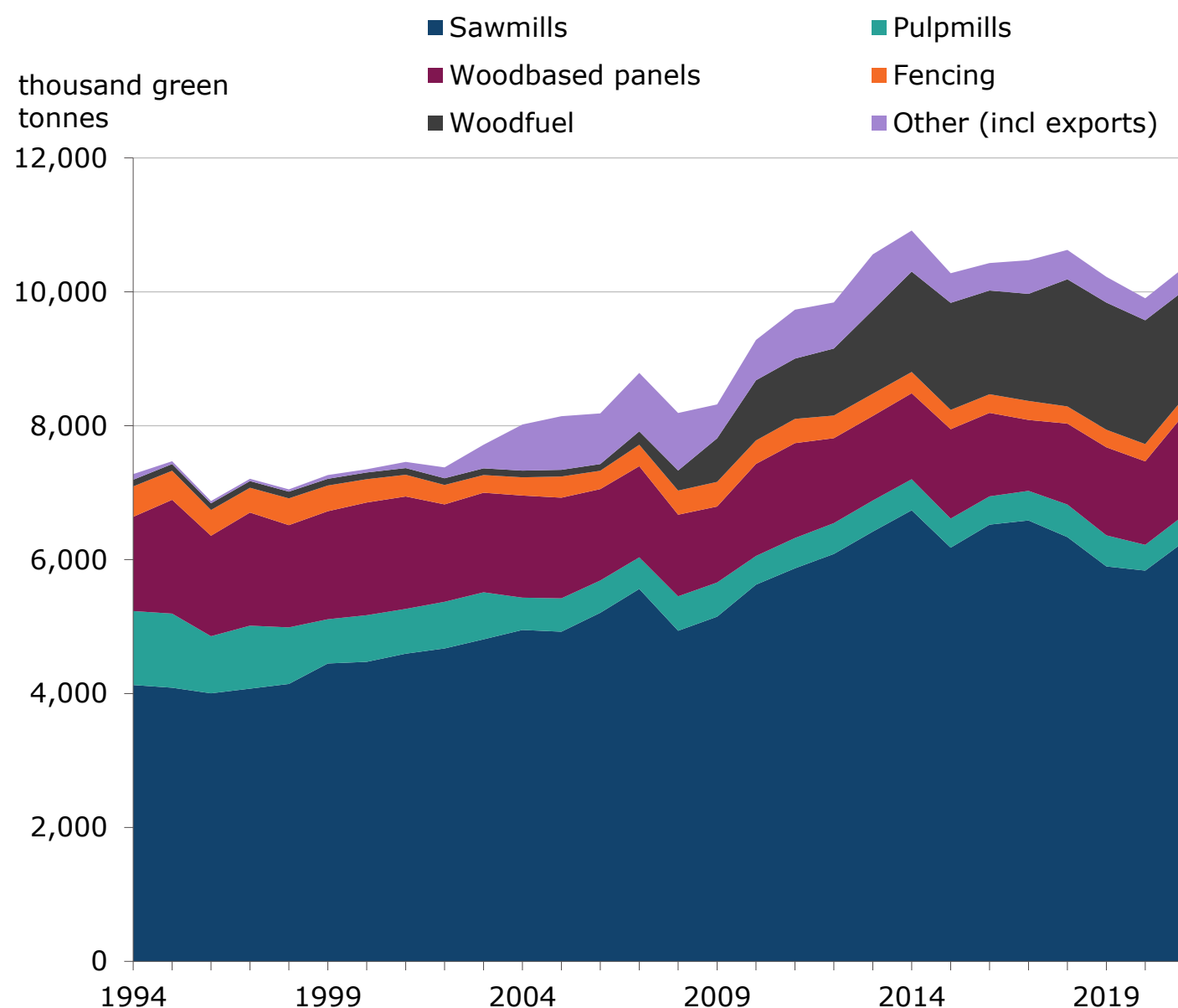
Year	Saw mills	Pulp mills	Wood-based panels	Fencing	Wood fuel ¹	Other ²	Exports	Total
2012	6,084	461	1,269	338	1,000	154	535	9,842
2013	6,418	465	1,263	332	1,250	191	640	10,559
2014	6,737	465	1,283	317	1,500	176	437	10,914
2015	6,179	435	1,334	288	1,600	164	276	10,276
2016	6,522	423	1,248	277	1,550	178	231	10,430
2017	6,586	442	1,059	283	1,600	170	331	10,471
2018	6,337	486	1,210	255	1,900	174	264	10,626
2019	5,898	464	1,316	262	1,900	183	201	10,225
2020	5,837	383	1,248	258	1,850	188	140	9,904
2021	6,268	399	1,508	247	1,600	176	168	10,366

Source: industry surveys, industry associations.

Notes:

1. Woodfuel derived from stemwood. Includes estimates of roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and make use of wood fuel 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, UK, 1994 to 2021



Sources: Industry surveys, industry associations.

Notes:

1. Woodfuel derived from stemwood. Includes estimates of roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and make use of wood fuel 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.

2.2.2 Hardwood deliveries

There was a total of 0.8 million green tonnes of UK hardwood deliveries in 2021 (Table 2.6). The majority of UK hardwood deliveries (85% in 2021) were used for woodfuel.

Table 2.6 Deliveries of UK-grown hardwood, UK, 2012 to 2021

thousand green tonnes

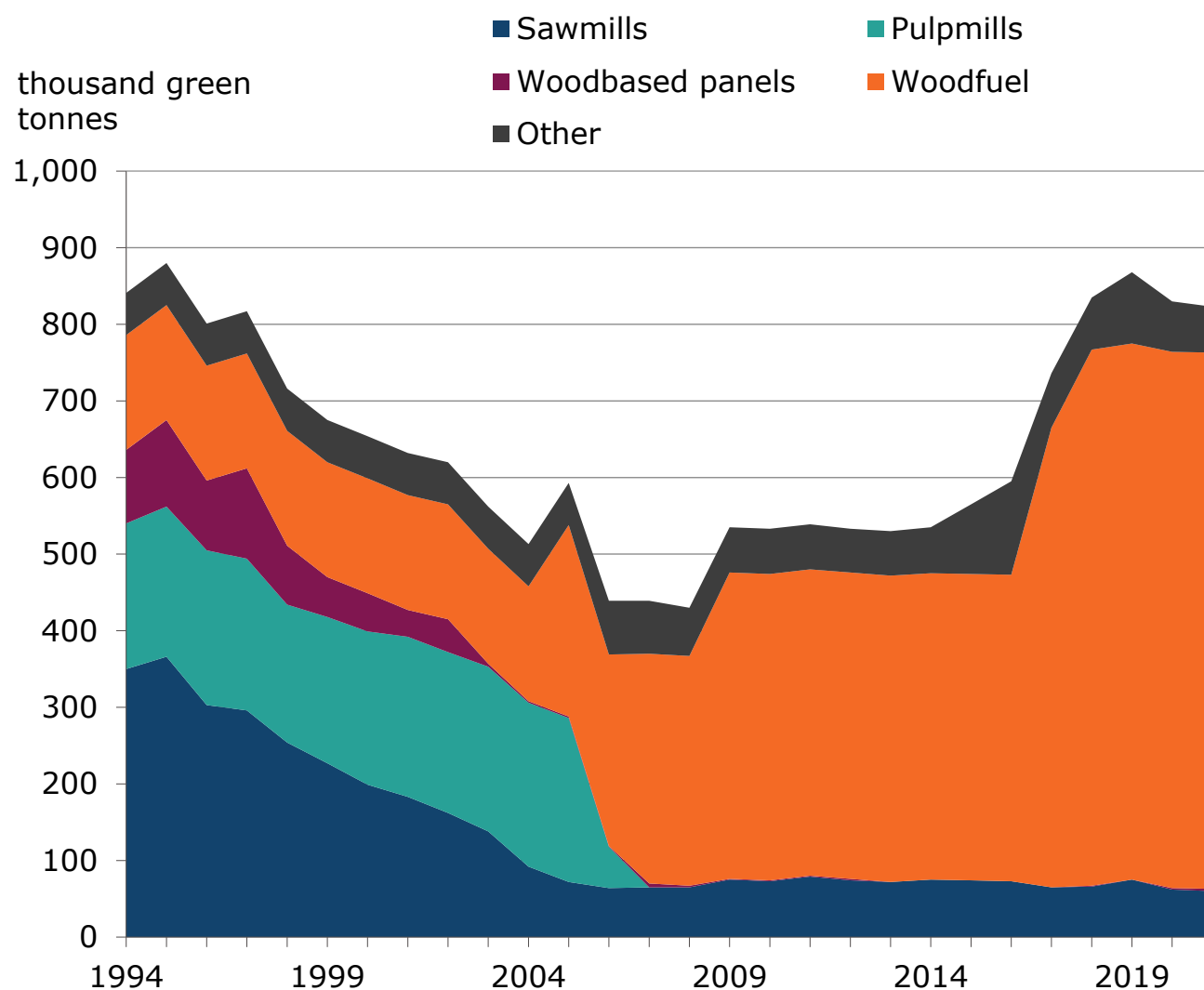
Year	Sawmills	Pulp mills	Wood-based panels	Woodfuel	Other	Total
2012	74	0	2	400	57	532
2013	72	0	0	400	58	530
2014	75	0	0	400	60	535
2015	74	0	0	400	91	564
2016	73	0	0	400	122	595
2017	65	0	0	600	71	736
2018	66	0	1	700	68	834
2019	75	0	0	700	93	868
2020	62	0	2	700	66	829
2021	60	0	3	700	60	823

Source: industry surveys, industry associations.

Notes:

1. Figures are based on processing industries' purchases of hardwood grown in the UK and estimates for woodfuel and other uses.
2. Woodfuel reported here is derived from stemwood and includes estimated roundwood use for biomass energy.
3. The apparent increase in woodfuel from 2016 to 2017 reflects a new estimate of the level of hardwood deliveries for woodfuel and should not be interpreted as an increase in a single year.
4. Other includes round fencing and roundwood exports.

Figure 2.2 Deliveries of UK-grown hardwood, UK, 1994 to 2021



Source: industry surveys, industry associations.

Notes:

1. Other includes round fencing and roundwood exports.
2. The apparent increase woodfuel from 2016 to 2017 reflects a new estimate of the level of hardwood deliveries for woodfuel and should not be interpreted as an increase in a single year.

2.3 Sawmills - All Mills

Data are collected by Forest Research in an annual Sawmill Survey. The following section includes summary results, covering number of mills, consumption and production are available for all mills.

In addition, there are also more detailed figures for larger mills only. The threshold defining larger mills was changed for the collection of 2016 data, from annual sawnwood production of 10 thousand m³ to annual sawnwood production of 25 thousand m³. Further information on this change is provided in the section on Larger Mills within this chapter and in the Sawmill Survey section of the Sources chapter.

Consumption units are given in green tonnes. For production, the units used are m³ sawnwood. For conversion factors between different units, see the Timber section of the Sources chapter.

2.3.1 Summary: consumption & production

In 2021, sawmills in the UK consumed a total of 6.6 million green tonnes of softwood, an 8% increase from 2020 (Table 2.7a).

A further 0.07 million green tonnes of hardwood were consumed by UK sawmills in 2020. Most of the logs, 6.3 million green tonnes of softwood and 0.06 million green tonnes of hardwood, were grown in the UK.

Table 2.7a Consumption by sawmills, UK, 2012 to 2021

thousand green tonnes

Year	UK-grown soft wood	Imported softwood	Total softwood	UK grown hardwood	Imported hardwood	Total hardwood
2012	6,084	124	6,209	74	17	91
2013	6,418	126	6,544	72	13	86
2014	6,737	159	6,895	75	14	89
2015	6,179	182	6,361	74	14	88
2016	6,522	209	6,731	73	17	90
2017	6,586	267	6,853	65	13	78
2018	6,337	325	6,662	66	13	79
2019	5,898	343	6,242	75	13	88
2020	5,837	263	6,100	62	12	73
2021	6,268	321	6,590	60	12	72

Source: Forest Research Sawmill Survey

A total of 3.6 million m³ of sawnwood was produced in the UK in 2021, an 8% increase from 2020.

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 2.7b Sawnwood production by sawmills, UK, 2012 to 2021

thousand m ³ sawnwood		
Year	Softwood production	Hardwood production
2012	3,364	48
2013	3,539	45
2014	3,719	47
2015	3,454	45
2016	3,627	46
2017	3,727	41
2018	3,625	41
2019	3,416	46
2020	3,311	37
2021	3,574	37

Source: Forest Research Sawmill Survey

2.3.2 Number of mills by size

A total of 141 sawmills processed UK roundwood in 2021 (Table 2.8). Most mills (80%) produced less than 25 thousand m³ sawnwood (softwood and hardwood) during the year.

Over the past ten years, the number of active sawmills has decreased by 20%. Most of this change has occurred in the smallest size categories.

Table 2.8 Number of sawmills by size category of mill, UK, 2012 to 2021

Number of mills by size category (thousand m ³)								
Year	<1	1-<5	5-<10	10-<25	25-<50	50-<100	100+	Total
2012	67	46	15	19	11	8	11	177
2013	65	43	15	17	13	6	13	172
2014	66	39	15	17	13	8	12	170
2015	63	41	17	17	12	6	12	168
2016	57	40	17	20	6	10	13	163
2017	57	40	14	22	5	10	12	160
2018	57	34	13	21	8	7	12	152
2019	53	34	14	20	8	6	12	147
2020	52	31	14	18	10	8	11	144
2021	52	28	12	21	9	7	12	141

Source: Forest Research Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

Data: Longer time series of the above table are available from the [Data Downloads page](#).

2.3.3 Number of mills by country

Around one half (52%) of the 141 active sawmills in 2021 were in England, around one third (33%) were in Scotland, 9% in Wales and 6% in Northern Ireland (Table 2.9).

Table 2.9 Number of sawmills by country, UK, 2012 to 2021

Year	England	Wales	Scotland	Northern Ireland	UK
2012	93	15	60	9	177
2013	90	15	58	9	172
2014	90	15	56	9	170
2015	90	15	54	9	168
2016	87	14	53	9	163
2017	86	13	52	9	160
2018	81	12	50	9	152
2019	79	12	47	9	147
2020	77	12	46	9	144
2021	74	12	46	9	141

Source: Forest Research Sawmill Survey

Data: Longer time series of the above table are available from the [Data Downloads page](#).

2.3.4 Number of sawmills by type of wood sawn

Around two thirds (68%) of the 141 active sawmills in 2021 processed softwood only (Table 2.10). A further 26% processed both softwood and hardwood, and the remainder processed only hardwood.

Table 2.10 Number of sawmills by type of wood sawn, UK, 2012 to 2021

Year	Softwood only	Hardwood only	Both	Total
2012	117	11	49	177
2013	117	11	44	172
2014	114	9	47	170
2015	111	9	48	168
2016	108	9	46	163
2017	108	10	42	160
2018	101	9	42	152
2019	100	8	39	147
2020	97	8	39	144
2021	96	9	36	141

Source: Forest Research Sawmill Survey

2.3.5 Consumption of softwood by size of mill

Despite accounting for only 20% of all sawmills (see Table 2.8), those with total annual sawnwood production of 25 thousand m³ or more accounted for 87% of the total softwood consumed by sawmills in 2021 (Table 2.11).

Table 2.11 Consumption of softwood by size category of mill, UK, 2012 to 2021

Consumption (thousand green tonnes) by size category (thousand m ³)								
Year	<1	1-<5	5-<10	10-<25	25-<50	50-<100	100+	Total
2012	31	169	204	539	738	1,133	3,395	6,209
2013	33	170	197	476	804	777	4,085	6,544
2014	33	143	193	486	833	1,090	4,117	6,895
2015	29	153	224	553	795	801	3,805	6,361
2016	26	139	219	588	372	1,117	4,270	6,731
2017	26	149	172	692	339	1,352	4,122	6,853
2018	30	124	154	626	585	1,009	4,134	6,662
2019	27	124	189	639	550	831	3,881	6,242
2020	29	109	172	504	598	1,146	3,541	6,100
2021	29	105	144	605	576	931	4,200	6,590

Source: Forest Research Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

Data: Longer time series of the above table are available from the [Data Downloads page](#).

2.3.6 Consumption of softwood by mills in each country

Mills in Scotland consumed around one half (51%) of the 6.6 million green tonnes of softwood delivered to UK sawmills in 2021 (Table 2.12). A further 29% was consumed by mills in England, 10% in Northern Ireland and the remainder in Wales.

Table 2.12 Consumption of softwood by country, UK, 2012 to 2021

thousand green tonnes

Year	England	Wales	Scotland	Northern Ireland	UK
2012	1,818	672	3,191	528	6,209
2013	1,876	720	3,416	532	6,544
2014	1,979	729	3,657	530	6,895
2015	1,914	673	3,243	531	6,361
2016	1,981	756	3,437	558	6,731
2017	2,086	709	3,475	583	6,853
2018	2,026	666	3,329	640	6,662
2019	1,990	580	2,994	678	6,242
2020	1,820	585	3,064	631	6,100
2021	1,925	627	3,374	664	6,590

Source: Forest Research Sawmill Survey

Data: Longer time series of the above table are available from the [Data Downloads page](#).

2.3.7 Production of sawn softwood by size of mill

UK sawmills produced a total of 3.6 million m³ of softwood in 2021, an 8% increase from the 2020 figure (Table 2.13).

Sawmills with total annual sawnwood production of 25 thousand m³ or more accounted for 87% of the total sawn softwood produced by sawmills in 2021.

Table 2.13 Production of sawn softwood by size of mill, UK, 2012 to 2021

Production (thousand m³) by size category (thousand m³)

Year	<1	1-<5	5-<10	10-<25	25-<50	50-<100	100+	Total
2012	17	98	104	314	393	564	1,874	3,364
2013	19	98	102	287	429	404	2,200	3,539
2014	19	83	100	282	448	563	2,224	3,719
2015	17	88	120	296	466	422	2,045	3,454
2016	16	80	115	338	186	597	2,296	3,627
2017	16	86	86	384	178	647	2,328	3,727
2018	18	71	74	355	311	468	2,327	3,625
2019	17	71	89	349	306	382	2,203	3,416
2020	17	66	81	277	321	551	1,997	3,311
2021	17	58	66	332	308	483	2,309	3,574

Source: Forest Research Sawmill Survey

Notes:

1. Categories are based on total sawnwood production (softwood and hardwood), in thousand m³.

Data: Longer time series of the above table are available from the [Data Downloads page](#).

2.3.8 Production of sawn softwood by mills in each country

Sawmills in Scotland accounted for 1.9 million m³ (52%) of sawn softwood produced in 2021 (Table 2.14). A further 29% was produced by mills in England, 10% in Northern Ireland and the remaining 8% in Wales.

Table 2.14 Production of sawn softwood by country, UK, 2012 to 2021

thousand m³

Year	England	Wales	Scotland	Northern Ireland	UK
2012	999	334	1,743	288	3,364
2013	1,024	357	1,869	289	3,539
2014	1,090	362	1,981	286	3,719
2015	1,055	332	1,783	284	3,454
2016	1,091	374	1,867	294	3,627
2017	1,157	327	1,917	326	3,727
2018	1,120	316	1,837	351	3,625
2019	1,107	275	1,684	351	3,416
2020	1,007	271	1,683	349	3,311
2021	1,050	293	1,859	371	3,574

Source: Forest Research Sawmill Survey

Data: Longer time series of the above table are available from the [Data Downloads page](#).

2.4 Sawmills - Larger Mills

The following, more detailed, tables are available for larger mills (those producing at least 25 thousand m³ sawnwood annually) only.

These larger mills are estimated to account for 87% of all sawn softwood produced in 2021 (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

Total softwood consumption by the 28 sawmills covered by the detailed sawmill survey in 2021 was 5.7 million green tonnes (Table 2.15). Sawn softwood production by these mills was 3.1 million m³ and other softwood products (chips, bark, sawdust, etc) amounted to 3.0 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 Northern Ireland and the remaining 8% in Wales.

Table 2.15 Softwood consumption and production by larger mills, UK, 2021

Large mills	England	Wales	Scotland	Northern Ireland	UK
Number of mills	10	2	14	2	28
Consumption (thousand green tonnes)	1,585	479	3,021	622	5,707
Sawnwood production (thousand m ³)	875	216	1,661	348	3,101
Other products (thousand tonnes)	740	268	1,612	353	2,972

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).

2.4.2 Source of softwood logs

Of all softwood sawlogs consumed by larger sawmills in 2021, 59% came from Scotland, 18% from England, 13% from Wales and 5% from Northern Ireland (Tables 2.16 and 2.16a). The remaining 6% were imported from other countries.

98% of softwood sawlogs used by Scottish mills in 2021 came from Scotland. The corresponding proportions of mills' log use coming from within the same country were 57% for England, 77% for Wales and 48% for Northern Ireland.

Table 2.16a Source of softwood logs for larger mills¹, UK, 2021

Source	thousand green tonnes				
	England	Wales	Scotland	Northern Ireland	UK
England	910	42	75	0	1,026
Wales	352	367	0	0	719
Scotland	324	70	2,946	0	3,340
Northern Ireland	0	0	0	300	300
Total UK logs	1,585	479	3,021	300	5,386
Other countries	0	0	0	321	321
Total log consumption	1,585	479	3,021	622	5,707

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).

Table 2.16b Source of softwood logs for larger mills, UK, 2017 to 2021
percent of total softwood consumption

Year	England	Wales	Scotland	Northern Ireland	Other countries	Total
2017	20	14	57	4	5	100
2018	20	13	57	5	6	100
2019	21	13	54	6	7	100
2020	21	11	57	6	5	100
2021	18	13	59	5	6	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).

2.4.3 Sawn softwood product markets

In 2021, 39% of sawn softwood produced by larger sawmills was used for fencing, 27% for construction, 25% for packaging and pallets, and the remaining 9% went to all other markets (Tables 2.17 and 2.17a).

Table 2.17a Sawn softwood product markets for larger mills¹, UK, 2021
per cent of total softwood product markets

Product market	England	Wales	Scotland	Northern Ireland	UK
Construction	13	9	37	28	27
Fencing	58	33	30	45	39
Packaging/pallets	23	40	22	28	25
Other	6	18	10	0	9
Total	100	100	100	100	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).

Table 2.17b Sawn softwood product markets for larger mills¹, UK, 2017 to 2021

per cent of total softwood product markets					
Year	Construction	Fencing	Packaging/pallets	Other	Total
2017	32	36	24	8	100
2018	33	36	24	7	100
2019	30	37	26	7	100
2020	27	43	24	6	100
2021	27	39	25	9	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ 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 3.0 million tonnes in 2021 (Table 2.15). Over one third (37%) of other softwood products were sold to wood processing industries in the form of chips and 17% were sold to these industries in sawdust and other formats (Table 2.18). A further 18% of other products were sold to bio-energy (including pellet manufacturers), 21% were sold to others and 6% were used internally for heat or energy.

Table 2.18a Other softwood products for larger mills, UK, 2021

per cent of total other softwood products

Destination and type of product	England	Wales	Scotland	Northern Ireland	UK
Sold to wood processing industries					
Wood chips	32	61	44	0	37
Bark	0	0	0	0	0
Sawdust & other	18	26	19	0	17
Total	50	87	64	0	55
Sold to bio-energy					
Wood chips	10	3	11	34	13
Bark	0	0	1	0	1
Sawdust & other	0	0	4	20	5
Total	10	4	16	54	18
Other Sales					
Wood chips	20	0	5	2	8
Bark	9	8	7	10	8
Sawdust & other	8	0	5	2	5
Total	37	9	18	14	21
Internal use for heat/energy					
Wood chips	2	0	2	31	5
Bark	0	0	0	0	0
Sawdust & other	0	0	1	0	1
Total	3	1	3	32	6

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).

The proportion of other products that were reported as sold to bio-energy have shown an overall reduction over the last five years (Table 2.18b).

Table 2.18b Other softwood products for larger mills, UK, 2017 to 2021
per cent of total other softwood products

Year	Sold to wood processing industries	Sold to bio-energy (incl. pellet manufacturers)	Other sales	Internal use for heat/energy	Total²
2017	56	22	19	3	100
2018	46	24	25	5	100
2019	53	20	19	8	100
2020	54	20	19	7	100
2021	55	18	21	6	100

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).
2. Total includes 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 25 thousand m³ of sawnwood in 2021 (Tables 2.19a and 2.19b).

Table 2.19a Sawmill employment for larger mills¹, UK, 2021

Employment type	full-time equivalents				
	England	Wales	Scotland	Northern Ireland	UK
Direct	1,058	149	1,457	299	2,963
Line & production workers	842	136	1,265	226	2,469
Managerial & administrative staff	149	13	175	71	408
Haulage of logs to the mill	67	0	17	2	86
Others²	0	0	12	0	12
Line & production workers	0	0	12	0	12
Managerial & administrative staff	0	0	0	0	0

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).
2. 'Others' refers to others undertaking work for the sawmill, including contractors and their employees.
3. The results exclude any employment on harvesting, and any employment at the site not directly related to the sawmill (e.g., exclude work producing pallets or other wood products from sawn wood).
4. Excludes haulage employment on contract.

Table 2.19b Sawmill employment for larger mills¹, UK, 2017 to 2021

full-time equivalents

Employment	Line & production workers	Managerial & administrative staff	Haulage of logs to the mill	Total employment
Direct				
2016	2,369	428	79	2,875
2017	2,368	416	75	2,859
2018	2,220	395	76	2,691
2019	2,268	380	82	2,730
2020	2,469	408	86	2,963
Others²				
2016	76	3	x	79
2017	50	0	x	50
2018	76	0	x	76
2019	76	5	x	81
2020	12	0	x	12

Source: Forest Research Sawmill Survey

Notes:

1. Sawmills producing at least 25 thousand m³ sawnwood (softwood and hardwood).
2. Excludes haulage employment on contract.
3. x denotes data not available.

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 Confederation of Forest Industries (Confor).

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 2021, a 3% increase from the 2020 total (Table 2.20).

UK roundwood represented 83% of the inputs for the integrated pulp & paper mills in 2021, with the remaining 17% coming from sawmill products.

Table 2.20 Inputs for the integrated pulp & paper mills¹, UK, 2012 to 2021

thousand green tonnes

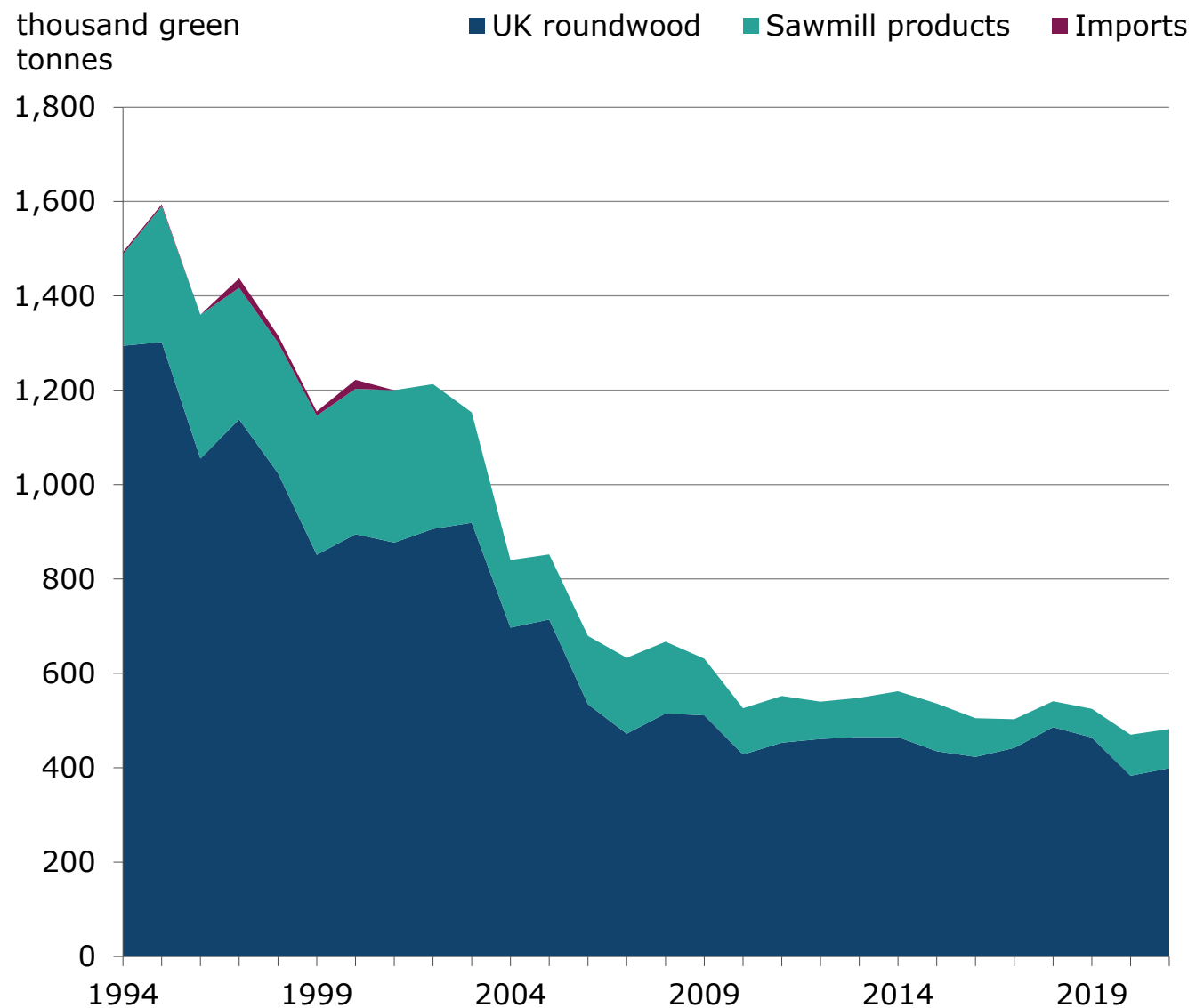
Year	UK roundwood ²	Sawmill products	Total
2012	461	79	540
2013	465	83	548
2014	465	97	562
2015	435	101	536
2016	423	82	505
2017	442	61	503
2018	486	55	541
2019	464	61	525
2020	383	87	470
2021	399	83	482

Source: Confor

Notes:

1. Excludes inputs of recycled paper and cardboard. All inputs are softwood.
2. UK roundwood derived from stemwood.

Figure 2.3 Inputs to integrated pulp and paper mills, UK, 1994 to 2021



Source: Confor

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 3.6 million tonnes of paper and paperboard was produced in the UK in 2021, similar to the level in the previous year. Packaging materials accounted for 52% of the total UK paper production in 2021, sanitary and household papers for 19% and other paper and paperboard (including graphic papers) for 29%.

Table 2.21 Production of paper and paperboard, UK, 2012 to 2021

thousand tonnes

Year	Sanitary & household papers	Packaging materials	Other (including graphic papers)	Total paper & paperboard
2012	795	1,798	1,887	4,480
2013	802	1,851	1,908	4,561
2014	768	1,801	1,828	4,397
2015	772	1,894	1,304	3,970
2016	730	1,800	1,147	3,677
2017	734	1,935	1,188	3,858
2018	738	1,904	1,253	3,894
2019	762	1,884	1,205	3,851
2020	742	1,917	972	3,631
2021	689	1,898	1,053	3,640

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 provide statistics on the inputs to mills that produce wood-based panels in the UK. The mills used a total of 4.1 million tonnes of material in 2021, an 8% increase from 2020. The inputs in 2021 comprised 1.5 million green tonnes of roundwood (36%), 1.5 million green tonnes of sawmill products (37%), 1.1 million tonnes of recycled wood fibre (26%) and 0.03 million tonnes of imports (1%).

Table 2.22 Softwood inputs to wood-based panel mills, UK, 2012 to 2021

thousand green tonnes

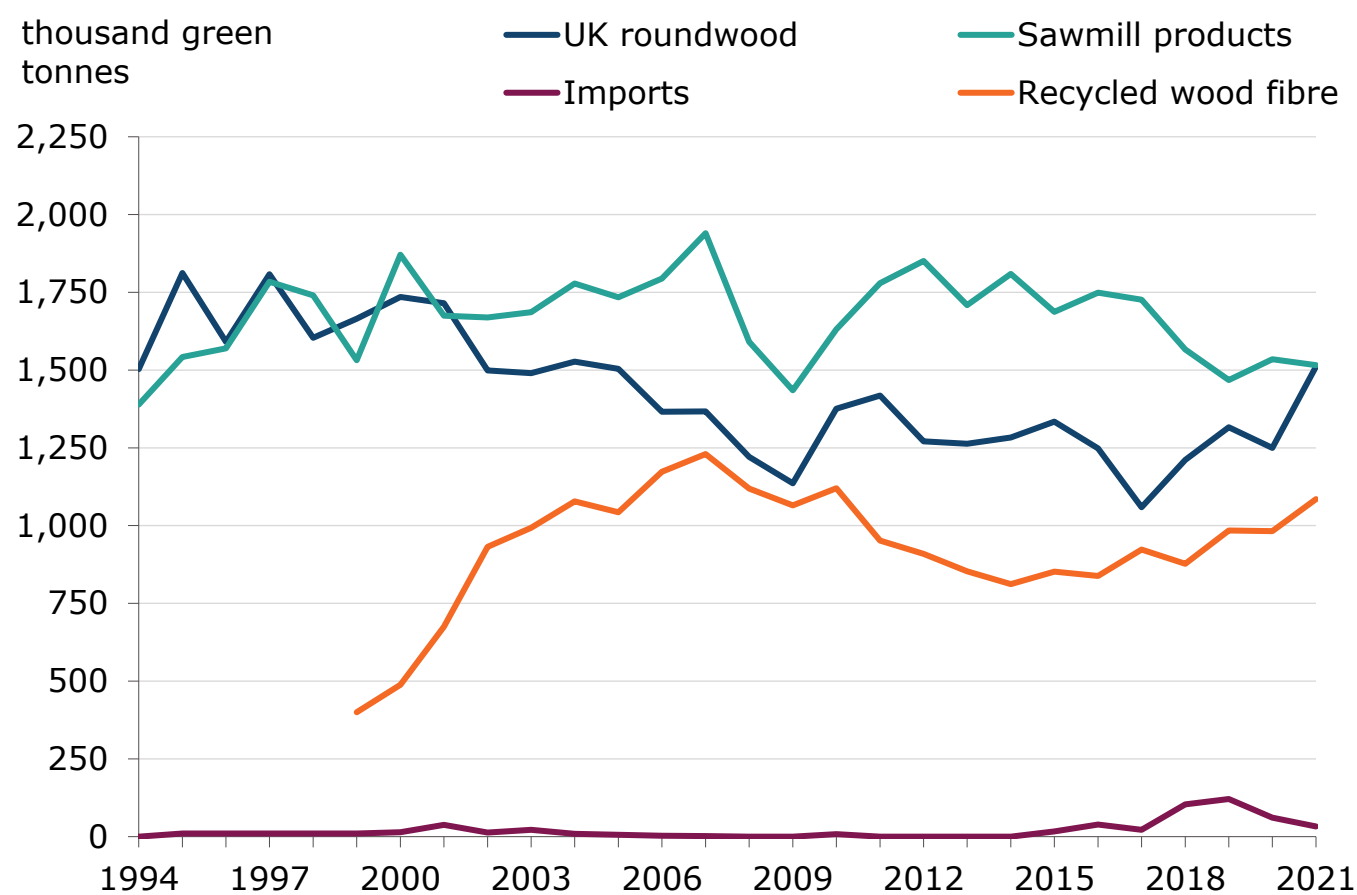
Year	UK round- wood ¹ softwood	UK round- wood ¹ hardwood	Sawmill products	Imports ² softwood	Imports ² hardwood	Recycled wood fibre ^{3,4}
2012	1,269	2	1,851	0	0	909
2013	1,263	0	1,709	0	0	853
2014	1,283	0	1,809	0	0	812
2015	1,334	0	1,687	12	5	852
2016	1,248	0	1,749	10	29	838
2017	1,059	0	1,726	0	22	923
2018	1,210	1	1,566	30	74	877
2019	1,316	0	1,468	43	78	984
2020	1,248	2	1,535	22	39	982
2021	1,508	3	1,516	33	0	1,085

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 wood-based panel production. It comprises wood originally grown in the UK and wood originally grown in forests outside the UK.
4. Quantities are as delivered, with an assumed average moisture content of 25%. To convert to green tonnes (assuming moisture content of 52%), multiply by 1.56.

Figure 2.4 Inputs to wood-based panel mills, UK, 1994 to 2021



Source: Wood Panel Industries Federation.

Note:

1. Recycled wood fibre data not available before 1999.

2.6.2 Production of wood-based panel products

Total production of wood-based panels in 2021 was 3.5 million m³, an 18% increase from 2020 (Table 2.23). Over three quarters (77%) of wood-based panel products produced in the UK in 2021 were particleboard (including oriented strand board (OSB)).

Table 2.23 Wood-based panel production, UK, 2012 to 2021

thousand m ³			
Year	Particleboard ¹	Fibreboard ²	Total
2012	2,215	788	3,003
2013	2,276	756	3,032
2014	2,319	749	3,068
2015	2,324	756	3,080
2016	2,349	684	3,033
2017	2,501	675	3,176
2018	2,355	724	3,079
2019	2,495	751	3,246
2020	2,296	656	2,952
2021	2,688	798	3,486

Source: Wood Panel Industries Federation

Notes:

1. Includes Oriented Strand Board (OSB).
2. Includes Medium Density Fibreboard (MDF).
3. Changes in the mix of materials used and type of product produced can result in apparent discrepancies between the trends for inputs (Table 2.22) and production.

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.

1.6 million green tonnes of UK softwood were estimated to have been used directly for woodfuel (including biomass energy) in 2021, a 14% decrease from the previous year (Table 2.24). A further 247 thousand green tonnes of UK softwood were consumed by round fencing manufacturers and 176 thousand green tonnes for other uses in 2021.

Table 2.24 Miscellaneous uses of softwood roundwood, UK, 2012 to 2021

thousand green tonnes				
Year	Fencing	Woodfuel ¹	Other ¹	Total
2012	338	1,000	154	1,492
2013	332	1,250	191	1,773
2014	317	1,500	176	1,992
2015	288	1,600	164	2,052
2016	277	1,550	178	2,006
2017	283	1,600	170	2,053
2018	255	1,900	174	2,329
2019	262	1,900	183	2,346
2020	258	1,850	188	2,296
2021	247	1,600	176	2,022

Source: Survey of Round Fencing Manufacturers, industry associations

Notes:

1. Woodfuel derived from stemwood. Includes estimates of roundwood use for biomass energy. The figures are estimated by the Expert Group on Timber and Trade Statistics, and make use of wood fuel 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.

Hardwood

An estimated 700 thousand green tonnes of UK hardwood were used for woodfuel (including biomass energy) in 2020. A further 30 thousand green tonnes were estimated to have been consumed by round fencing manufacturers and 30 thousand green tonnes for other uses, including exports.

2.7.1 Softwood round fencing manufacturers

There were 45 active round fencing manufacturers in 2021 (Table 2.25).

Over three fifths of round fencing manufacturers (62%) consumed less than 5 thousand green tonnes of softwood annually.

Table 2.25 Number of softwood round fencing manufacturers by size category¹, UK, 2012 to 2021

Year	<1	1-<5	5-<10	10+	Total
2012	21	21	11	7	60
2013	20	22	11	7	60
2014	18	21	10	7	56
2015	15	19	10	6	50
2016	17	16	11	6	50
2017	16	17	9	7	49
2018	15	15	10	6	46
2019	14	16	10	6	46
2020	15	15	9	6	45
2021	16	12	11	6	45

Source: Survey of Round Fencing Manufacturers

Notes:

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

Longer time series of roundwood purchased by round fencing manufacturers, by size category and by country (England/Wales/Scotland/Northern Ireland) are available from the [Data Downloads page](#).

2.7.2 Roundwood purchased by softwood round fencing manufacturers

A total of 273 thousand green tonnes of softwood (UK grown and imported) was purchased by softwood fencing manufacturers in 2021 (Table 2.26). This represents a decrease of 2% from the 2020 total of 279 thousand green tonnes.

Table 2.26 Total roundwood purchased² by size category¹ of softwood round fencing manufacturers, UK, 2012 to 2021

thousand green tonnes					
Year	<1	1-<5	5-<10	10+	Total
2012	8	57	69	226	360
2013	7	57	79	204	346
2014	7	54	74	201	335
2015	6	46	79	185	316
2016	7	41	78	177	303
2017	6	45	71	185	307
2018	6	37	71	162	276
2019	6	40	76	166	288
2020	6	38	69	166	279
2021	6	32	75	159	273

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.

Longer time series of roundwood purchased by round fencing manufacturers, by size category and by country (England/Wales/Scotland/Northern Ireland) are available from the [Data Downloads page](#).

2.8 Exports

UK softwood exports in 2021 consisted of 145 thousand green tonnes of sawlogs and 23 thousand green tonnes of industrial roundwood (excluding sawlogs), giving a total of 168 thousand green tonnes of roundwood (Table 2.27). The quantity of softwood roundwood exports increased by 20% between 2020 and 2021.

The UK also exported 51 thousand tonnes of softwood chips in 2021, an 8% decrease from the previous year.

Table 2.27 Summary of softwood exports, 2012 to 2021

thousand green tonnes

Year	Industrial roundwood ¹	Roundwood sawlogs	Total roundwood	Chips
2012	405	130	535	142
2013	379	260	640	126
2014	228	209	437	151
2015	75	202	276	86
2016	48	183	231	51
2017	124	207	331	92
2018	67	197	264	112
2019	46	154	201	109
2020	29	110	140	55
2021	23	145	168	51

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).

Estimates of the certified softwood removals in the UK by country, are also provided (Table 2.28a). As these figures are relatively new and the quality of data at this level is still improving, these estimates are currently labelled as experimental statistics.

Information on areas of certified woodland is provided in Chapter 1.

2.9.1 Volume certified

71% of private sector softwood removals in 2021 were from certified woodlands (Table 2.28). The percentage of private sector softwood removals that are certified has fluctuated over recent years; industry experts have indicated 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 England, Forestry and Land Scotland, Natural Resources Wales and Forest Service woodland are certified, this equates to around 82% of all softwood removals in 2021 from certified sources.

77% of sawmills' roundwood consumption in 2021 was certified. For round fencing manufacturers, 68% of total softwood consumption was certified.

Table 2.28a Per cent of volume certified, UK, 2012 to 2021

per cent certified volume

Year	Softwood removals from Private sector woodland	Total softwood removals ¹	Consumption (softwood and hardwood) by sawmills	Consumption (softwood) by round fencing manufacturers
2012	70	84	81	60
2013	76	87	83	55
2014	72	84	80	69
2015	69	83	80	71
2016	66	82	80	70
2017	76	87	79	71
2018	71	82	77	61
2019	65	79	77	69
2020	67	82	78	64
2021	71	82	77	68

Source: industry surveys

Notes:

1. Includes all removals from FE/FLS/NRW/FS woodland.

Experimental statistics providing a country breakdown of softwood removals from certified woodlands in 2021 indicate that 87% of softwood removals from woodlands in Wales were certified, 85% from Scotland, 77% from Northern Ireland and 69% from England.

Table 2.28b Percent of volume certified by country¹: softwood removals, UK, 2021

percent certified volume

Country	Softwood removals from Private sector woodland	Total softwood removals²
England	41	69
Wales	73	87
Scotland	79	85
Northern Ireland	2	77
UK	71	82

Source: Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW), Forest Service (FS), Private Sector Softwood Removals Survey

Notes:

1. These figures are currently experimental statistics.
2. Includes all removals from FE/FLS/NRW/FS woodland.

2.9.2 Chain of custody certificates

Sawmills and round fencing manufacturers were also asked whether they held a Chain of Custody certificate. 74% of sawmills for which the certification status was known held a Chain of Custody certificate in 2021 (Table 2.29). This proportion varied with size of mill, from 15% for mills producing less than 5 thousand m³ sawnwood to 100% for those producing 25 thousand m³ sawnwood or more. 56% of round fencing manufacturers for which the certification status was known held a Chain of Custody certificate.

Table 2.29 Chain of custody certificates, UK, 2021

Mills	number of mills			
	Mills holding certificate	Mills without certificate	Certification status not known ¹	Total ¹
Sawmills² (size of mill³)				
<5	2	11	67	80
5-<25	10	3	20	33
25+	28	0	0	28
Total	40	14	87	141
Round fencing manufacturers	10	8	27	45

Source: industry surveys

Notes:

1. Includes non-respondents to survey in current year.
2. For large sawmills (those producing at least 25 thousand m³) that did not report whether or not they held a certificate or did not respond to the 2021 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 m³.

2.10 Woodfuel and pellets

Wood from various sources can be used for fuel, including roundwood, chips and sawdust from wood processing, specific products such as pellets and briquettes, and recycled wood.

The following pages provide data on:

- recycled wood used for woodfuel (Table 2.30 below);
- woodfuel supply by sawmills and round fencing manufacturers (Table 2.31);
and
- wood pellet production (Table 2.32) and feedstock (Table 2.33).

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

2.10.1 Recycled wood used for woodfuel

Estimates of recycled wood used for woodfuel have been obtained from the Wood Recyclers' Association. In 2021, it is estimated that around 2.5 million tonnes of recycled wood were used for woodfuel, a 2% increase from the previous year.

Table 2.30 Recycled wood used for woodfuel¹, UK, 2012 to 2021

million tonnes

Year	Total
2012	0.76
2013	0.83
2014	1.34
2015	1.45
2016	1.55
2017	1.66
2018	2.17
2019	2.49
2020	2.48
2021	2.54

Source: Wood Recyclers Association

Notes:

1. Post consumer recovered wood, comprising wood originally grown in the UK and wood originally grown in forests outside the UK.
2. Figures from 2014 relate to capacity, rather than consumption.
3. Quantities are as delivered, with an assumed average moisture content of 25%. To convert to green tonnes (assuming moisture content of 52%), multiply by 1.56.

These figures are outside the scope of National Statistics.

2.10.2 Woodfuel supply by sawmills and round fencing manufacturers

An estimated 819 thousand green tonnes (mainly softwood) of woodfuel were supplied by sawmills in 2021 and a further 81 thousand green tonnes were supplied by round fencing manufacturers (Table 2.31). Around three quarters (74%) of the total woodfuel supplied was sold to bioenergy.

Table 2.31 Woodfuel supply¹ by sawmills and round fencing manufacturers, UK, 2017 to 2021

thousand green tonnes					
Type of processor	2017	2018	2019	2020	2021
Sawmills					
Sales to bioenergy	620	633	533	569	621
Sales to firewood	15	7	17	23	12
Used internally for heat/energy	96	152	206	180	186
Total	731	792	757	772	819
Round fencing manufacturers					
Sales to bioenergy	55	52	43	43	44
Sales to firewood	7	8	10	10	9
Used internally for heat/energy	3	4	25	27	28
Total	66	65	77	79	81

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.

2.10.3 Wood pellets

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 Tables 2.30 and 2.31). 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 304 thousand tonnes of wood pellets and briquettes are estimated to have been produced in the UK in 2021. This represents a 2% increase from the 2020 estimate of 298 thousand tonnes.

Table 2.32 Wood pellet feedstock, UK, 2012 to 2021

thousand tonnes

Year	Total
2012	278
2013	301
2014	354
2015	343
2016	329
2017	287
2018	279
2019	298
2020	298
2021	304

Source: Forest Research Survey of UK Pellet and Briquette Production

A total of 611 thousand tonnes of feedstock was used to produce wood pellets in the UK in 2021, a 5% decrease from the total for 2020 (Table 2.33).

Table 2.33 Wood pellet feedstock, UK, 2017 to 2021

thousand tonnes²

Year	Roundwood	Sawmill products¹	Total
2017	354	295	648
2018	453	226	679
2019	307	263	570
2020	390	254	644
2021	363	248	611

Source: Forest Research Survey of UK Pellet and Briquette Production

Note:

1. May also include wood from other sources (e.g., energy crops, arboriculture arisings and recycled wood).
2. Tonnes as delivered.

2.11 Experimental statistics on preservative treatment of sawnwood and round fencing

In 2020, a new question on the use of preservative treatment was added to both the Sawmill Survey and the Survey of Round Fencing Manufacturers. This question was continued in the 2021 surveys.

39% of sawnwood and 82% of round fencing produced in the UK that was reported by respondents to the 2021 surveys was preservative treated. In addition, 25% of the preservative treated sawnwood and 95% of the preservative treated round fencing was suitable for use in ground contact.

Table 2.34 Preservative treatment of domestically sawnwood and round fencing produced in the UK, 2020 to 2021

Preservative treatment	2020	2021
Sawnwood production		
Percent of total production that was preservative treated	42%	39%
Percent of preservative treated production that was suitable for use in ground contact	27%	25%
Round fencing production		
Percent of total production that was preservative treated	77%	82%
Percent of preservative treated production that was suitable for use in ground contact	92%	95%

Source: Sawmill Survey, Survey of Round Fencing Manufacturers

Note:

1. These figures are currently experimental statistics.
2. Figures relate to respondents only.

Forestry Statistics 2022

Chapter 3: Trade

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

None

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.

Most information on imports and exports come 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 later 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 2021 were previously published in [UK Wood Production and Trade: provisional figures](#), released on 19 May 2022. Some figures for 2021 and earlier years 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 can be accessed in spreadsheet format from the [Data Downloads page](#).

Key findings

The main findings are:

UK imports:

- 8.2 million cubic metres of sawnwood in 2021, a 13% increase from 2020;
- 3.8 million cubic metres of wood-based panels in 2021, a 16% increase from 2020;
- 9.1 million tonnes of wood pellets in 2021, a 1% increase from 2020;
- 4.2 million tonnes of paper in 2021, an 8% decrease from 2020.
- The total value of wood product imports in 2021 was £8.5 billion, representing a 14% increase from 2020; of which £3.1 billion was pulp and paper.
- Sawn softwood, particleboard, fibreboard, and paper and paperboard were overwhelmingly imported from EU countries in 2021.
- Sawn hardwood and wood pulp imports originated from a range of both EU and non-EU countries in 2021.
- The vast majority of UK imports of plywood and wood pellets in 2021 came from countries outside the EU.
- Apparent consumption of wood in the UK was 53.1 million m³ wood raw material equivalent underbark in 2021, representing a 3% decrease from the previous year.

UK exports:

- The total value of wood product exports in 2021 was £2.0 billion, a 27% increase from 2020; of which £1.7 billion was pulp and paper.

3.1 Apparent consumption of wood in the UK

Apparent consumption is the amount of timber used as wood and wood products by people and industries in the United Kingdom. It is calculated as total domestic 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.

As table 3.1 covers a broad range of products (including secondary processed wood products), volumes are expressed in wood raw material equivalent (WRME) underbark. WRME volumes represent the amount of wood that would have been required to make the product.

UK production of roundwood totalled 10.9 million m³ WRME underbark in 2021 (Table 3.1). A further 46.9 million m³ WRME underbark of wood and wood products were imported to the UK and 4.7 million m³ WRME underbark were exported, giving an apparent consumption of 53.1 million m³ WRME underbark. This represented a 3% decrease in apparent consumption from the previous year. These figures exclude recycled wood and recovered paper (see Table 3.3 for statistics on recovered paper).

Imports accounted for 81% of all wood (production + imports) in the UK in 2021.

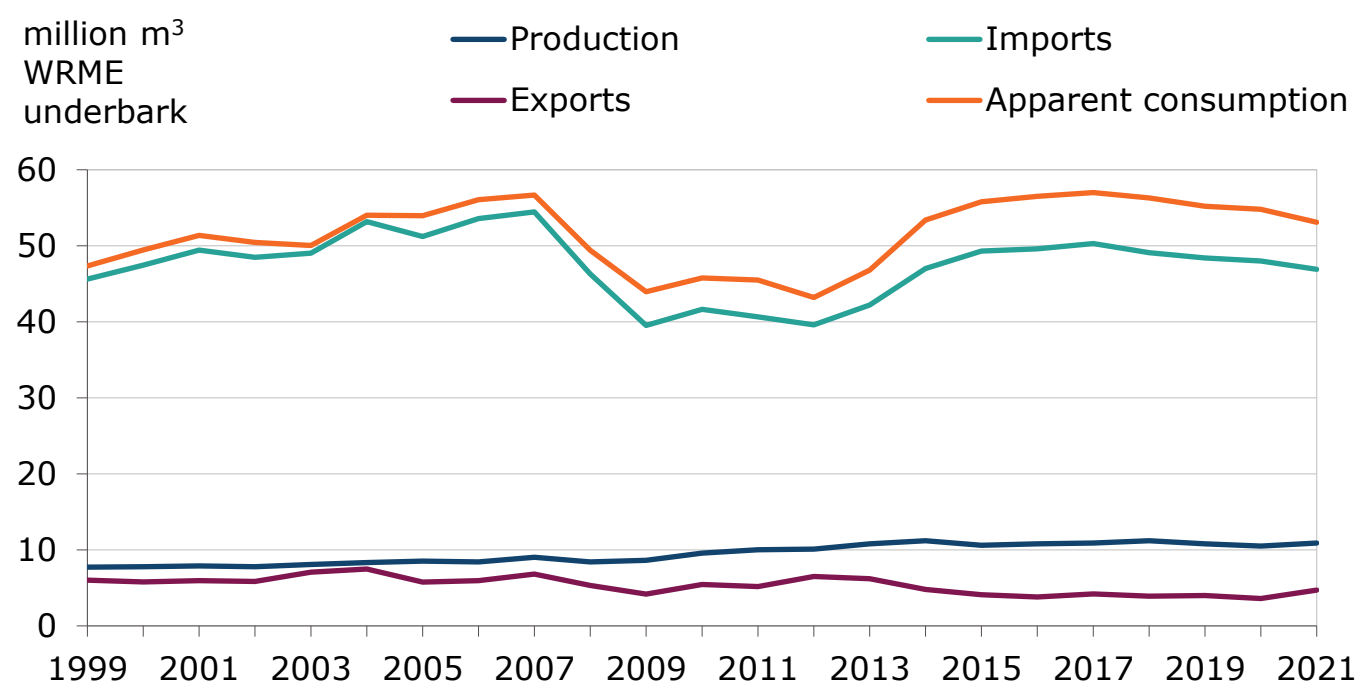
Table 3.1 Apparent consumption of wood¹, UK, 2012 to 2021million m³ WRME underbark

Year	UK production ²	Imports	Exports	Apparent Consumption
2012	10.1	39.6	6.5	43.2
2013	10.8	42.2	6.2	46.8
2014	11.2	47.0	4.8	53.4
2015	10.6	49.3	4.1	55.8
2016	10.8	49.6	3.8	56.5
2017	10.9	50.3	4.2	57.0
2018	11.2	49.1	3.9	56.4
2019	10.8	48.4	4.0	55.2
2020	10.5	48.0	3.6	54.8
2021	10.9	46.9	4.7	53.1

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 wood¹, UK, 1999 to 2021

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

Table 3.2 provides volumes of UK production, trade, and apparent consumption in selected wood products. It differs from table 3.1 in terms of both coverage (table 3.1 covers a wider range of wood and wood products, including secondary processed products) and in terms of units (wood raw material equivalents in table 3.1, volumes of product in table 3.2).

UK production accounted for 31% of the UK sawnwood market, 50% of the UK wood-based panel market and 54% of the UK paper market in 2021 (Table 3.2).

Table 3.2 Apparent consumption of wood products^{1,2}, UK, 2021

Product	UK production	Imports	Exports	Apparent consumption
Coniferous sawnwood	3,574	7,623	237	10,960
Non-coniferous sawnwood	37	536	39	534
Total sawnwood	3,611	8,159	277	11,493
Veneer sheets	0	14	0	14
Plywood	0	1,541	55	1,486
Particleboard	2,688	1,159	195	3,652
Fibreboard	798	1,080	71	1,807
Total woodbased panels	3,486	3,794	321	6,959
Sanitary & household papers	689	486	101	1,074
Packaging materials	1,898	1,929	456	3,371
Other paper & paperboard	1,053	1,791	490	2,354
Total paper & paperboard	3,640	4,206	1,048	6,798

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. Includes sleepers.

3.3 Flow of recovered paper

UK production of recovered paper (the amount recovered from businesses and households in the UK) totalled 7.1 million tonnes in 2021 (Table 3.3), an increase of 7% from 2020. Imports increased by 22% and exports increased by 12% between 2020 and 2021, resulting in a 1% rise in apparent consumption over this period.

Table 3.3 Flow of recovered paper, UK, 2012 to 2021

thousand tonnes				
Year	UK production	Imports	Exports	Apparent consumption ¹
2012	8,099	160	4,447	3,812
2013	7,901	184	4,248	3,837
2014	8,014	136	4,436	3,714
2015	7,912	305	4,881	3,336
2016	7,825	125	4,932	3,018
2017	7,772	107	4,733	3,147
2018	7,539	120	4,530	3,129
2019	7,348	83	4,327	3,104
2020	6,647	130	3,842	2,935
2021	7,102	159	4,299	2,963

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 2021 included 8.2 million cubic metres of sawnwood (a 13% increase from the previous year), 3.8 million cubic metres of wood-based panels (16% increase), 9.1 million tonnes of wood pellets (1% increase) and 5.2 million tonnes of pulp and paper (3% decrease) (Table 3.4a).

Table 3.4a Import quantities, UK, 2012 to 2021¹

thousand m³

Year	Sawn wood ² (thousand m ³)	Wood-based panels ³ (thousand m ³)	Other wood ⁴ (thousand m ³)	Wood pellets (thousand tonnes)	Pulp & paper ⁵ (thousand tonnes)
2012	5,179	2,650	965	1,487	7,812
2013	5,488	2,964	1,267	3,432	7,213
2014	6,425	3,260	1,329	4,773	7,319
2015	6,323	3,215	1,378	6,573	7,560
2016	6,794	3,410	1,133	6,782	7,092
2017	7,663	3,800	1,379	6,885	6,798
2018	7,213	3,878	1,766	7,992	6,663
2019	7,040	3,650	2,229	8,878	6,130
2020	7,218	3,267	2,136	9,078	5,329
2021	8,159	3,794	1,602	9,128	5,152

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. Sawnwood includes sleepers from 2017.
3. Includes veneer sheets.
4. Includes roundwood, wood charcoal, chips, particles, residues and from 2017, includes recovered wood.
5. Further details of pulp and paper import quantities are provided in Table 3.4a.

Paper accounted for the majority of pulp and paper imports, with a total of 4.2 million tonnes imported in 2021 (Table 3.4b). This represented an 8% decrease from the previous year.

Table 3.4b Import quantities, UK, 2012 to 2021¹: Pulp and paper

thousand tonnes

Year	Paper	Pulp	Recovered paper	Total Pulp & Paper
2012	6,631	1,021	160	7,812
2013	5,929	1,100	184	7,213
2014	5,949	1,234	136	7,319
2015	6,032	1,223	305	7,560
2016	5,876	1,092	125	7,092
2017	5,610	1,081	107	6,798
2018	5,477	1,066	120	6,663
2019	5,150	897	83	6,130
2020	4,555	644	130	5,329
2021	4,206	787	159	5,152

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

1. There are reliability concerns for some of these figures, particularly for individual products (see Sources chapter).

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 2021 (Table 3.5a), representing a 16% increase from 2020.

Table 3.5a Export quantities, UK, 2012 to 2021¹

thousand m³

Year	Sawn wood ² (thousand m ³)	Wood-based panels ³ (thousand m ³)	Other wood ⁴ (thousand m ³)	Wood pellets (thousand tonnes)	Pulp & paper ⁵ (thousand tonnes)
2012	141	597	1,779	54	5,585
2013	167	432	1,267	106	5,390
2014	175	404	1,083	98	5,467
2015	187	286	1,018	88	5,712
2016	193	314	821	21	5,700
2017	218	374	638	126	5,528
2018	238	295	595	63	5,317
2019	215	384	604	33	5,160
2020	231	389	293	4	4,617
2021	277	321	302	2	5,352

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. Sawnwood includes sleepers from 2017.
3. Includes veneer sheets.
4. Includes roundwood, wood charcoal, chips, particles, residues and, from 2017, includes recovered wood.
5. Further details of pulp and paper export quantities are provided in Table 3.5a.

Recovered paper accounted for the majority of pulp and paper exports, with 4.3 million tonnes exported in 2021 (Table 3.5b).

Table 3.5b Export quantities: pulp and paper, UK, 2012 to 2021¹

thousand tonnes

Year	Paper	Pulp	Recovered paper	Total Pulp & Paper
2012	1,102	36	4,447	5,585
2013	1,119	23	4,248	5,390
2014	1,010	21	4,436	5,467
2015	807	24	4,881	5,712
2016	760	7	4,932	5,700
2017	788	7	4,733	5,528
2018	772	15	4,530	5,317
2019	825	9	4,327	5,160
2020	749	26	3,842	4,617
2021	1,048	5	4,299	5,352

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).

3.6 UK import values by product

Wood product imports in 2021 were valued at a total of £8.5 billion, a 14% increase from 2020 (Table 3.6a). Pulp and paper (including recovered paper) accounted for 36% of the total import value in 2021. Sawnwood imports were valued at £2.7 billion in 2021, wood-based panels at £1.3 billion and wood pellets at £1.3 billion.

Table 3.6a Import values, UK, 2012 to 2021¹

£ million

Year	Sawn wood ²	Wood-based panels ³	Other wood ⁴	Wood pellets	Pulp & Paper ⁵	Total
2012	1,084	791	75	185	4,266	6,402
2013	1,180	882	88	412	4,165	6,727
2014	1,420	936	80	547	4,196	7,180
2015	1,311	957	88	780	4,375	7,510
2016	1,423	1,010	85	915	4,003	7,436
2017	1,636	1,155	90	961	4,004	7,845
2018	1,743	1,201	122	1,117	4,075	8,257
2019	1,598	1,134	184	1,309	4,076	8,301
2020	1,587	970	198	1,339	3,388	7,482
2021	2,668	1,313	173	1,295	3,088	8,538

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. Sawnwood includes sleepers from 2017.
3. Includes veneer sheets.
4. Includes roundwood, wood charcoal, chips, particles, residues and from 2017, includes recovered wood.
5. Further details of pulp and paper import values are provided in Table 3.6a.

Paper imports were valued at £2.7 billion in 2021, accounting for 86% of all pulp and paper imports (Table 3.6b).

Table 3.6b Import values, UK, 2012 to 2021¹

£ million

Year	Paper	Pulp	Recovered paper	Total Pulp & Paper
2012	3,727	519	21	4,266
2013	3,644	500	21	4,165
2014	3,667	509	19	4,196
2015	3,711	642	23	4,375
2016	3,434	557	13	4,003
2017	3,418	572	14	4,004
2018	3,415	639	21	4,075
2019	3,538	520	17	4,076
2020	2,903	451	35	3,388
2021	2,666	396	26	3,088

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).

3.7 UK export values by product

Wood product exports from the UK were valued at a total of £2.0 billion in 2021, a 27% increase from the 2020 total (Table 3.7). Total exports of wood products in 2021 comprised 85% pulp and paper, 8% wood-based panels, 5% sawnwood and 2% other wood.

Table 3.7a Export values, UK, 2012 to 2021¹

£ million

Year	Sawnwood ²	Wood-based panels ³	Other wood ⁴	Wood pellets	Pulp & Paper ⁵	Total
2012	34	130	51	4	1,589	1,807
2013	37	109	47	5	1,519	1,717
2014	43	107	39	2	1,480	1,672
2015	44	75	35	1	1,441	1,597
2016	50	91	26	0	1,307	1,473
2017	55	109	41	6	1,651	1,861
2018	64	103	41	5	1,597	1,809
2019	58	123	41	2	1,491	1,714
2020	63	114	36	1	1,336	1,549
2021	96	158	44	0	1,674	1,972

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. Sawnwood includes sleepers from 2017.
3. Includes veneer sheets.
4. Includes roundwood, wood charcoal, chips, particles, residues and from 2017, includes recovered wood.
5. Further details of pulp and paper export values are provided in Table 3.7a.

Paper exports were valued at £0.9 billion in 2021, accounting for 56% of all pulp and paper exports (Table 3.7b).

Table 3.7b Export values: pulp and paper, UK, 2012 to 2021¹

£ million

Year	Paper	Pulp	Recovered paper	Total Pulp & Paper
2012	1,048	10	531	1,589
2013	1,017	8	494	1,519
2014	997	7	476	1,480
2015	901	7	534	1,441
2016	838	4	465	1,307
2017	997	5	649	1,651
2018	1,022	5	570	1,597
2019	1,049	4	437	1,491
2020	931	11	394	1,336
2021	940	3	731	1,674

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).

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 2021.

Sawn softwood, particleboard, fibreboard, and paper and paperboard were overwhelmingly imported from EU countries in 2021 (Table 3.8):

- Sweden (35%), Latvia (21%) and Finland (13%) provided the majority of imports of sawn softwood to the UK.
- Most particleboard imports to the UK came from Germany (20%), France (14%), Belgium (12%) and Ireland (11%).
- Most fibreboard imports to the UK came from Ireland (35%) and Germany (19%).
- Most paper and paperboard imports came from Sweden (17%), Germany (16%) and Finland (15%).

Sawn hardwood and wood pulp imports originated from a range of both EU and non-EU countries in 2021:

- The USA (19%), Latvia (14%), Cameroon (10%) and Estonia (7%) provided one half of the sawn hardwood imported to the UK.
- Norway (28%), Brazil (24%) and Sweden (22%) provided three quarters of wood pulp imports to the UK.

The vast majority of UK imports of plywood and wood pellets came from countries outside the EU in 2021:

- China (40%) and Brazil (20%) were the principal sources of plywood imports to the UK.
- The USA (60%) provided the majority of wood pellet imports to the UK.

Table 3.8 Country of origin of wood imports to the UK, 2021

per cent of total UK imports (volume) in each category

Source	Sawn ¹ soft wood	Sawn ¹ hard wood	Ply- wood	Particle- board	Fibre- board	Pellets	Wood pulp	Paper and paper- board
Sweden	35	1	0	0	0	0	22	17
Germany	11	3	0	20	19	0	1	16
Finland	13	0	8	0	1	0	7	15
Latvia	21	14	2	10	3	12	0	0
France	0	5	1	14	1	0	0	6
Ireland	4	2	0	11	35	0	1	0
Netherlands	0	2	0	0	1	0	0	4
Italy	0	5	0	1	0	0	3	5
Austria	1	1	1	1	1	0	1	4
Belgium	0	0	1	12	9	0	0	2
Portugal	0	0	0	9	3	2	2	3
Spain	0	1	1	2	9	0	2	3
Poland	1	4	1	2	3	0	0	2
Estonia	2	7	0	0	0	4	0	0
Other EU	3	8	0	2	1	0	0	1
Total EU	92	53	16	85	85	18	39	78
USA	0	19	0	0	0	60	2	4
Canada	1	4	1	0	0	16	0	2
Brazil	0	1	20	0	0	2	24	2
China	0	0	40	1	4	0	0	1
Russia	5	2	7	4	3	4	0	1
Norway	2	3	0	0	0	0	28	4
Indonesia	0	0	3	0	0	0	0	1
Chile	0	0	2	0	0	0	0	1
Malaysia	0	2	5	0	0	0	0	0
Cameroon	0	10	0	0	0	0	0	0
Other non-EU	0	6	4	9	7	0	6	6
Total non-EU	8	47	84	15	15	82	61	22

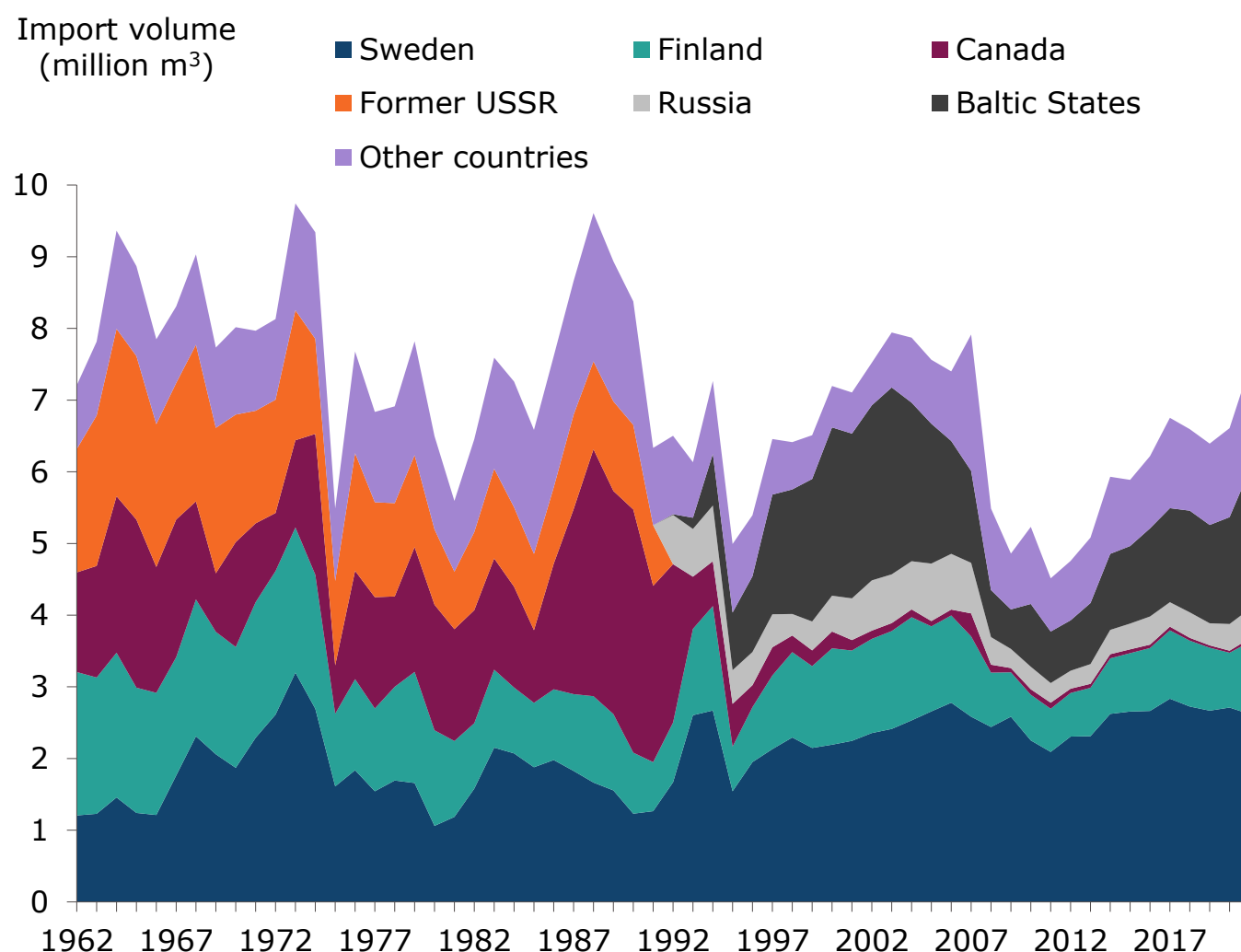
Source: UK overseas trade statistics (HM Revenue & Customs), industry associations.

Notes:

1. Sawnwood imports in this table exclude sleepers.

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 between around 5 million m³ and 10 million m³ from 1962 to present. Imports to the UK from Canada have reduced substantially since the early 1990s. In contrast, imports from the Baltic States increased between 1992 and 2003 and, although there was some decline between 2003 to 2012, imports from the Baltic States to the UK have started to increase again in recent years. Since 1993, Sweden has consistently been the principal country of origin for UK sawn softwood imports.

Figure 3.2 Country of origin of sawn softwood¹ imports to the UK, 1962 to 2021



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

Notes:

1. Sawn softwood imports in this chart exclude sleepers.

Forestry Statistics 2022

Chapter 4: Carbon

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

The Research Agency of the
Forestry Commission

Introduction

This chapter contains information on:

- carbon in forests;
- carbon sequestration;
- 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.

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

A copy of all carbon tables can be accessed in spreadsheet format from the [Data Downloads](#) 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 assessment of the science published in November 2009.

Key findings

The main findings are:

- The total carbon stock in UK forests is estimated to have increased, from around 3.2 billion tonnes of carbon dioxide equivalent in 1990 to 4.0 billion tonnes of carbon dioxide equivalent in 2020, of which 2.8 billion tonnes of carbon dioxide equivalent are in soils and 0.9 billion tonnes of carbon dioxide equivalent are in living woody biomass.
- Around one half (51%) of the total UK forest carbon stock in 2020 is in Scotland (2.0 billion tonnes of carbon dioxide equivalent), 36% in England (1.5 billion tonnes), 8% in Wales (0.3 billion tonnes) and 4% in Northern Ireland (0.2 billion tonnes).
- The net annual rate of carbon dioxide accumulation by UK forests is projected to fall from around 18 million tonnes CO₂ in total in 2020 to around 10 million tonnes CO₂ by 2040.
- A total of 366 projects had been validated to the Woodland Carbon Code in the UK at 31 March 2022, covering over 19 thousand hectares and projected to sequester 6.9 million tonnes of carbon dioxide over their lifetime.
- Around four fifths (5.5 million tonnes) of projected carbon dioxide sequestration by Woodland Carbon Code projects is in Scotland, 1.1 million tonnes in England, 0.2 million tonnes in Wales and 11 thousand tonnes in Northern Ireland.

4.1 Forest carbon stock

Forest carbon stock is the amount of carbon that has been sequestered from the atmosphere and is now stored within the forest ecosystem, mainly within living biomass and soil, and to a lesser extent also in dead wood and litter.

Table 4.1a presents modelled estimates of UK forest carbon stock that were compiled for submission to international organisations. The total carbon stock stored within UK forests is estimated to have increased, from around 3.2 billion tonnes of carbon dioxide equivalent in 1990 to 4.0 billion tonnes of carbon dioxide equivalent in 2020 (Table 4.1a). The carbon stored in forest soils accounts for around 70% of total forest carbon stock.

Table 4.1a Forest carbon stock, UK, 1990 to 2020

	million tonnes of carbon dioxide equivalent ¹				
	1990	2000	2010	2015	2020
Carbon in above-ground biomass	376	482	586	630	674
Carbon in below-ground biomass	135	174	211	227	242
Carbon in dead wood	130	138	143	147	149
Carbon in litter	165	175	182	188	190
Soil carbon ^{2,3}	2,366	2,533	2,629	2,726	2,761
Total forest carbon	3,172	3,502	3,750	3,918	4,016

Source: Forest Research

Notes

1. To convert tonnes carbon dioxide equivalent (CO₂e) to tonnes carbon (C), multiply by 12/44.
2. Carbon in soil to a depth of 0 to 100 cm.
3. Changes in soil carbon stocks over the period can be attributed to changes in UK forest area.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Around one half (51%) of the estimated total UK forest carbon stock in 2020 is in Scotland (2.0 billion tonnes of carbon dioxide equivalent), 36% in England (1.5

billion tonnes), 8% in Wales (0.3 billion tonnes) and 4% in Northern Ireland (0.2 billion tonnes).

Table 4.1b Forest carbon stock by country, UK, 2020

million tonnes of carbon dioxide equivalent¹

	England	Wales	Scotland	Northern Ireland	UK
Carbon in above-ground biomass	338	64	259	13	674
Carbon in below-ground biomass	122	23	93	5	242
Carbon in dead wood	61	14	68	5	149
Carbon in litter	80	18	85	7	190
Soil carbon ²	864	217	1,545	134	2,761
Total forest carbon	1,465	337	2,050	165	4,016

Source: Forest Research

Notes

1. To convert tonnes carbon dioxide equivalent (CO₂e) to tonnes carbon (C), multiply by 12/44.
2. Carbon in soil to a depth of 0 to 100 cm.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

4.2 Carbon sequestration

Forest carbon sequestration is the process of increasing the carbon content of the forest through processes that remove carbon dioxide from the atmosphere (i.e., photosynthesis). Once sequestered the carbon is stored in the forest within living biomass, soil and litter and contributes to the forest carbon stock. The forest carbon sink describes the natural reservoir that accumulates and stores sequestered carbon. The forest carbon sink is dynamic and can gain (e.g., sequestration by photosynthesis) and lose (e.g., emission by forest fires) carbon. The forest carbon sink is quantified as the net annual accumulation of carbon (carbon sequestration) by living biomass, soils and litter in forests.

The figures presented in Table 4.2 and Figure 4.2 represent the net annual accumulation of carbon dioxide by UK forests, taking into account carbon emissions due to timber harvesting, forest wildfires and deforestation. The figures in Tables 4.2 and 4.3 are restricted to woodland only. Carbon stored in harvested wood products (HWPs) is not included in these figures. However, carbon associated with HWPs is included in the [UK's greenhouse gas inventory statistics](#) and [energy and emissions projections](#).

The net annual rate of carbon dioxide accumulation by UK forests is projected to fall from around 18 million tonnes CO₂ in total in 2020 to around 10 million tonnes CO₂ by 2040 under a central scenario (Table 4.2 and Figure 4.1).

The projected decline in carbon accumulation from the 2010s to 2040s results from the age composition of UK forests (Figure 4.1). Many of the trees currently in UK forests were planted in the 1970s and 1980s (Figure 1.6). Since then, tree planting rates have fallen, resulting in an uneven age distribution today.

This uneven age distribution results in peaks and troughs in the level of carbon sequestration in UK forests over time, due to a changing balance between restocked young woodlands (following timber extraction) which grow relatively

more slowly, and more established woodlands which grow relatively more quickly during their active growth phase.

As a result, timber availability is forecast to increase over this period, and so the capacity of UK forests to sequester carbon dioxide is set to decline.

Table 4.2 Net annual change in forest carbon stocks (CO₂ equivalent)¹, UK, 1990 to 2050

million tonnes of carbon dioxide equivalent²

Year³	England	Wales	Scotland	Northern Ireland	UK
1990	6.1	1.5	6.8	0.6	15.0
1995	7.0	1.6	7.4	0.6	16.5
2000	7.9	1.6	8.1	0.6	18.2
2005	8.2	1.6	8.5	0.6	19.0
2010	8.5	1.6	8.7	0.6	19.5
2015	8.3	1.2	8.0	0.6	18.2
2020	8.2	1.2	7.6	0.6	17.5
2025	7.6	1.3	6.2	0.5	15.6
2030	6.8	1.3	4.1	0.5	12.8
2035	5.9	1.5	2.9	0.5	10.8
2040	5.0	1.6	2.6	0.6	9.8
2045	4.2	1.7	3.3	0.6	9.8
2050	3.8	1.6	4.6	0.5	10.6

Source: UK Greenhouse Gas Inventory (2020).

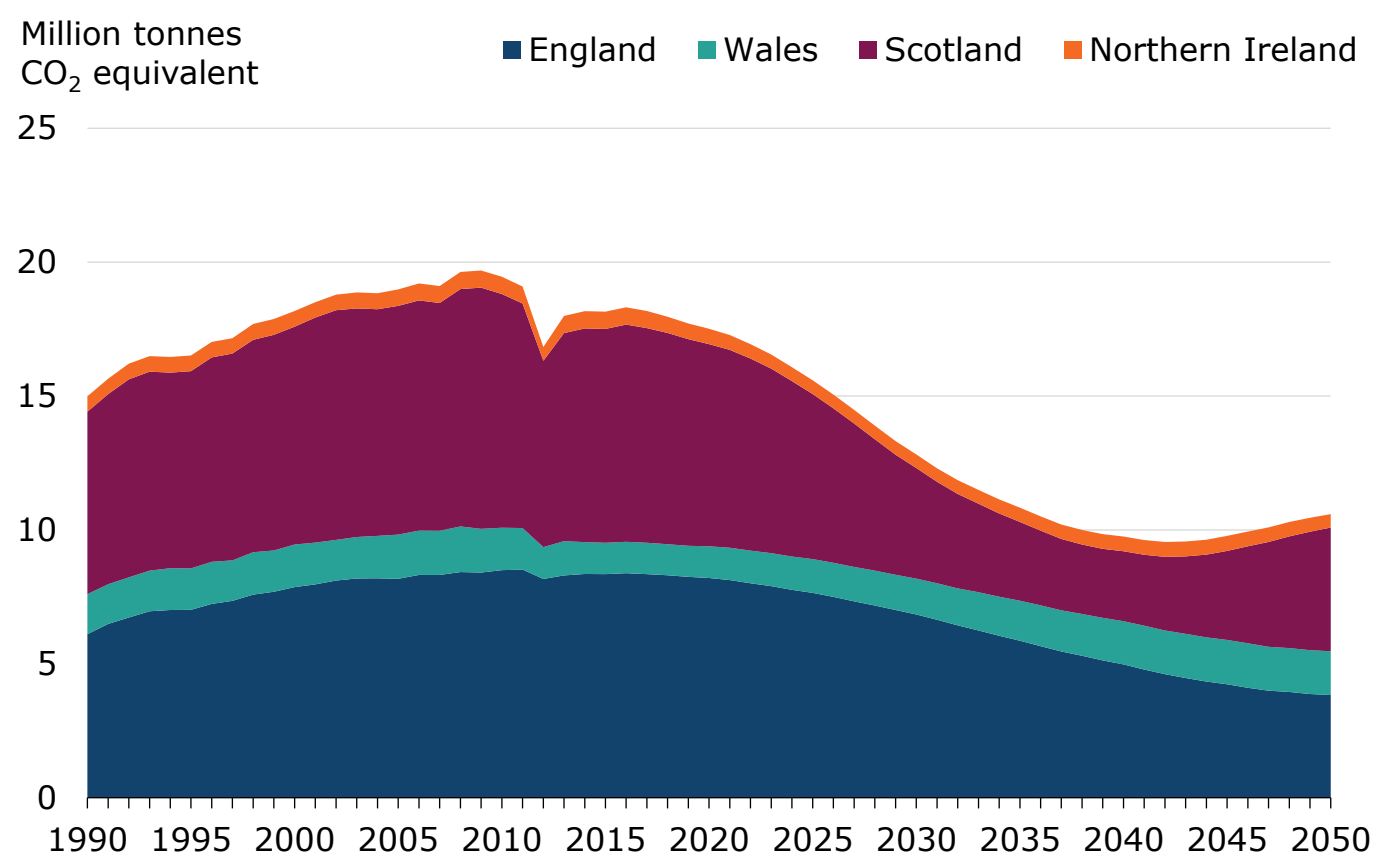
Notes:

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 (CO₂). To convert from tonnes CO₂ 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 current policies and the duration of agreed funding continue at the same

rate into the future. Planting of new woodland follows [a central projection](#) whereby current planting is maintained to 2021 (2024 in England), after which it is assumed grant-aided planting is reduced to 10% of this rate for the remainder of the period to 2050.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 4.1 Net annual change in forest carbon stocks (CO₂ equivalent), UK, 1990 to 2050



Source: UK Greenhouse Gas Inventory (2020), National Atmospheric Emissions Inventory.

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 (CO₂). To convert from tonnes CO₂ 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 current policies and the duration of agreed funding continue at the same rate into the future. Planting of new woodland follows [a central projection](#) whereby current

planting is maintained to 2021 (2024 in England), after which it is assumed grant-aided planting is reduced to 10% of this rate for the remainder of the period to 2050.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

4.3 Woodland Carbon Code

The Woodland Carbon Code is a voluntary standard, introduced 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 Land 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.

Table 4.3a provides annual data on projects registered under the Woodland Carbon Code. 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 366 projects had been validated (including those that had also been verified) to the Woodland Carbon Code at 31 March 2022, covering over 19 thousand hectares and projected to sequester 6.9 million tonnes of carbon dioxide over their lifetime (Table 4.3a).

A total of 1,534 projects were registered under the Woodland Carbon Code at 31 March 2022, covering around 59 thousand hectares of woodland and projected to sequester 18.7 million tonnes of carbon dioxide (Table 4.3a)

Table 4.3a Woodland Carbon Code projects¹, UK, 2018 to 2022

	Verified ¹	Validated only ¹	Awaiting validation	Total
Number of projects				
March 2018	37	119	83	239
March 2019	70	117	79	266
March 2020	88	151	124	363
March 2021	94	208	406	708
March 2022	119	247	1,168	1,534
Area of woodland (hectares)				
March 2018	1,578	3,680	10,868	16,125
March 2019	2,404	5,856	9,134	17,394
March 2020	2,633	9,372	2,962	14,967
March 2021	2,841	12,281	16,662	31,785
March 2022	4,416	14,128	40,905	59,449
Projected carbon sequestration² (thousand tonnes of carbon dioxide equivalent)				
March 2018	713	1,790	3,285	5,788
March 2019	1,093	2,331	2,760	6,184
March 2020	1,207	3,480	1,121	5,809
March 2021	1,299	4,442	5,368	11,109
March 2022	1,927	4,927	11,860	18,714

Source: Provisional Woodland Statistics 2022

Notes:

1. Projects can be validated/verified individually or come together as part of a group. The statistics presented here show the number of projects validated or verified whether they were put through the process individually or as part of a group.
2. 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.

Awaiting validation: when a project or group is undergoing assessment by a certification body.

Validated: the initial evaluation of a project or group against the requirements of the Woodland Carbon Code. Upon completion a project/group will receive a 'Validation Opinion Statement'. The project/group will then be certified for a period of up to 5 years.

Verified: Verification is the evaluation of a project as it progresses to confirm the amount of CO₂ sequestered to date as well as that it continues to meet the requirements of the Code.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Together, all validated (including verified) projects were predicted to sequester 5,528 thousand tonnes of carbon dioxide in Scotland, 1,085 thousand tonnes in England, 230 thousand tonnes in Wales and 11 thousand tonnes in Northern Ireland over their lifetime (Figure 4.2 and Table 4.3b).

Table 4.3b Woodland Carbon Code projects¹, UK, at 31 March 2022

	England	Wales	Scotland	Northern Ireland	UK
Number of projects					
Awaiting validation	443	175	468	82	1,168
Validated only	63	24	158	2	247
Verified	45	5	68	1	119
Total validated ²	108	29	226	3	366
Total	551	204	694	85	1,534
Area of woodland (hectares)					
Awaiting validation	5,381	1,385	33,618	520	40,905
Validated only	1,373	466	12,275	15	14,128
Verified	638	100	3,670	9	4,416
Total validated ²	2,011	566	15,945	23	18,544
Total	7,392	1,951	49,563	543	59,449
Projected carbon sequestration³ (thousand tonnes of carbon dioxide equivalent)					
Awaiting validation	2,253	493	8,896	236	11,860
Validated only	737	181	4,001	8	4,927
Verified	349	49	1,526	3	1,927
Total validated ²	1,085	230	5,528	11	6,854
Total	3,320	722	14,423	247	18,714

Source: Provisional Woodland Statistics 2022

Notes:

1. Projects can be validated/verified individually or come together as part of a group. The statistics presented here show the number of projects validated or verified whether they were put through the process individually or as part of a group.
2. All validated projects, including those that have also been verified.
3. 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.

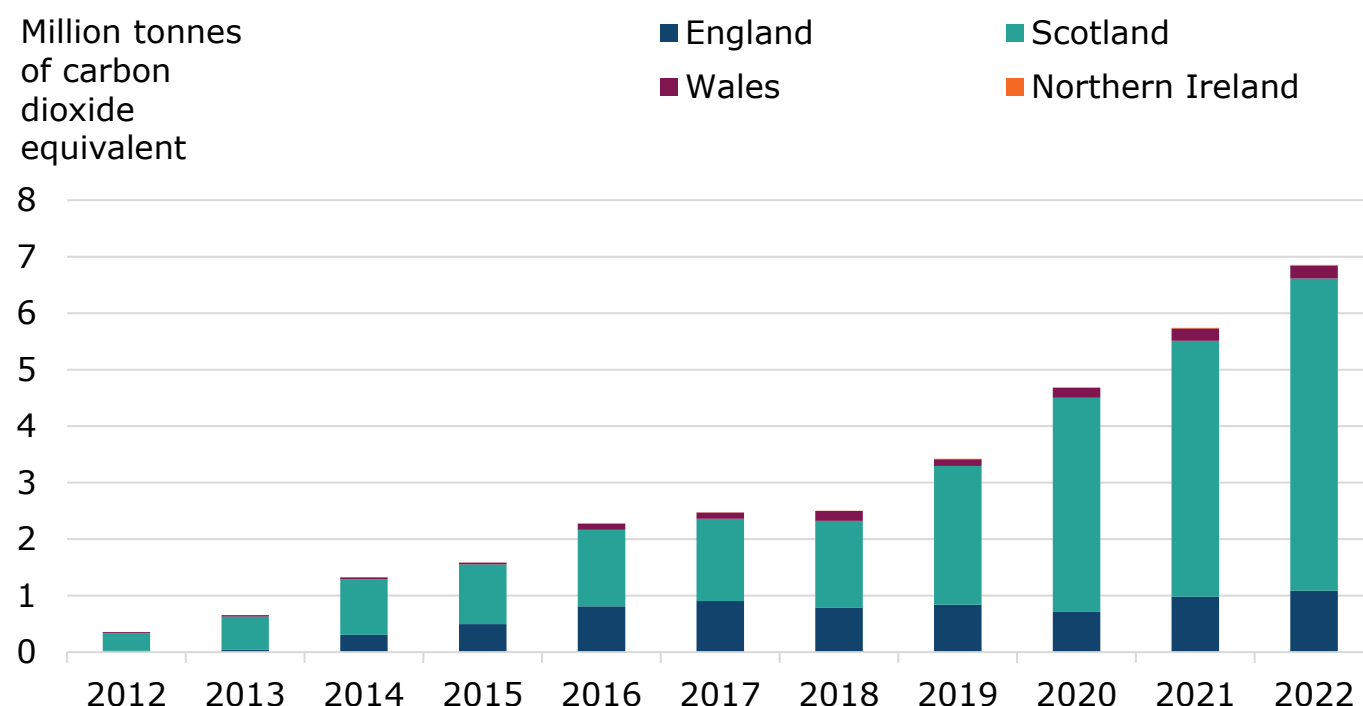
Awaiting validation: when a project or group is undergoing assessment by a certification body.

Validated: the initial evaluation of a project or group against the requirements of the Woodland Carbon Code. Upon completion a project/group will receive a 'Validation Opinion Statement'. The project/group will then be certified for a period of up to 5 years.

Verified: Verification is the evaluation of a project as it progresses to confirm the amount of CO₂ sequestered to date as well as that it continues to meet the requirements of the Code.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 4.2 Projected carbon sequestration¹ of validated Woodland Carbon Code projects^{2,3} by country, UK, 2012 to 2022



Source: Provisional Woodland Statistics 2022

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.
2. Projects can be validated/verified individually or come together as part of a group. The statistics presented here show the number of projects validated or verified whether they were put through the process individually or as part of a group.
3. All validated projects, including those that have also been verified.

Awaiting validation: when a project or group is undergoing assessment by a certification body.

Validated: the initial evaluation of a project or group against the requirements of the Woodland Carbon Code. Upon completion a project/group will receive a 'Validation Opinion Statement'. The project/group will then be certified for a period of up to 5 years.

Verified: Verification is the evaluation of a project as it progresses to confirm the amount of CO₂ sequestered to date as well as that it continues to meet the requirements of the Code.

4.4 Public Opinion of Forestry - climate change

Forest Research has conducted similar surveys of public attitudes to forestry and forestry-related issues every two years since 1995. The most recent [Public Opinion of Forestry surveys](#) were conducted in 2021 (in England, Scotland and Wales) and 2019 (in Northern Ireland).

In the UK survey in 2021, questions were asked to gauge the public's agreement on climate change issues, including on the management of UK forests in response to the threat of climate change (Table 4.4). Some of the public views presented below do not reflect expert opinion.

There were high levels of agreement (respondents stating that they agreed or strongly agreed) with the statements:

- "A lot more trees should be planted", supported by 83% of the UK public in 2021; and
- "Different types of trees should be planted that will be more suited to future climates", supported by 72% in 2021.

Conversely, there were much lower levels of agreement with the statements:

- "No action is needed, let nature take its course", supported by 30% in 2021; and
- "Trees should not be felled under any circumstances, even if they are replaced", supported by 36% in 2021.

Table 4.4 Management of forests in response to the threat of climate change, UK, 2013 to 2021

percent of respondents who agree or strongly agree

	2013	2015	2017	2019	2021
A lot more trees should be planted	86	80	84	88	83
Different types of trees should be planted that will be more suited to future climates	71	67	76	78	72
Trees should not be felled in any circumstances, even if they are replaced	22	25	26	29	36
No action is needed, let nature take its course	18	22	24	26	30

Source: UK Public Opinion of Forestry Surveys.

Base: Figures for 2021 are based on all respondents who had visited woodland in the past few years (approximately 3,500). Figures for earlier years are based on all respondents (approximately 2,000).

Notes:

1. The range of uncertainty around any result should be no more than $\pm 3.5\%$ (for surveys with around 2,000 respondents). To compare results over time, a difference of at least 5 percentage points (for surveys each with around 2,000 respondents) is required to indicate that there is a significant difference.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Forestry Statistics 2022

Chapter 5: Environment

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

The Research Agency of the
Forestry Commission

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 GB or UK totals. 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.

A copy of all environment tables can be accessed in spreadsheet format from the [Data Downloads](#) page.

Key findings

The main findings are:

- The UK woodland bird index has remained relatively stable since the early 1990s, following a period of long-term decline. Since 2015 woodland generalist species have fallen by 3% and woodland specialist species have fallen by 10%.
- Around three quarter (77%) of respondents to the UK Public Opinion of Forestry survey 2021 agreed with the statement "action should be taken by authorities and woodland managers to protect trees from damaging pests and disease".
- In 2020, the total area of native woodland in Great Britain is estimated to be around 1.51 million hectares (49% of all woodland in Great Britain).
- In 2020, non-native coniferous woodland is the single largest habitat type in Great Britain, accounting for 1.29 million hectares (42%).

5.1 Populations of wild birds

Bird populations provide a good indication of the broad state of wildlife in the UK. This is because they are a well-studied taxonomic group, enabling a more informed interpretation of observed changes, who occupy a range of habitats while still responding to the same environmental pressures that also operate on other groups of wildlife.

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. This data has been produced since the early 1970s for the majority of habitat groups, meaning there is considerable long-term data available on the changes in bird populations, which aids in the interpretation of more short-term variation. The latest statistical release on [wild bird populations in the UK](#) was published in November 2020 and includes data to 2019 (an update was published in December 2021, however, this covered only wintering waterbirds). The next release is expected in December 2022.

The index for woodland birds was expanded in 2007 to cover 38 species. A further change in 2015 resulted in a reduction to 37 species, of which 12 are generalists and 25 are woodland specialists (those that breed or feed mainly or solely in woodland).

Since the early 1990s, when the majority of species group indices stabilised, 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 (Figure 5.1).

Causes for the long-term decline in the woodland bird index 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.

In recent years, woodland bird indices have largely decreased. Since 2015 woodland generalist species have fallen by 3% and woodland specialist species have fallen by 10%.

Table 5.1 Population of wild birds, UK, 2010 to 2019

index (year 2000 = 100)

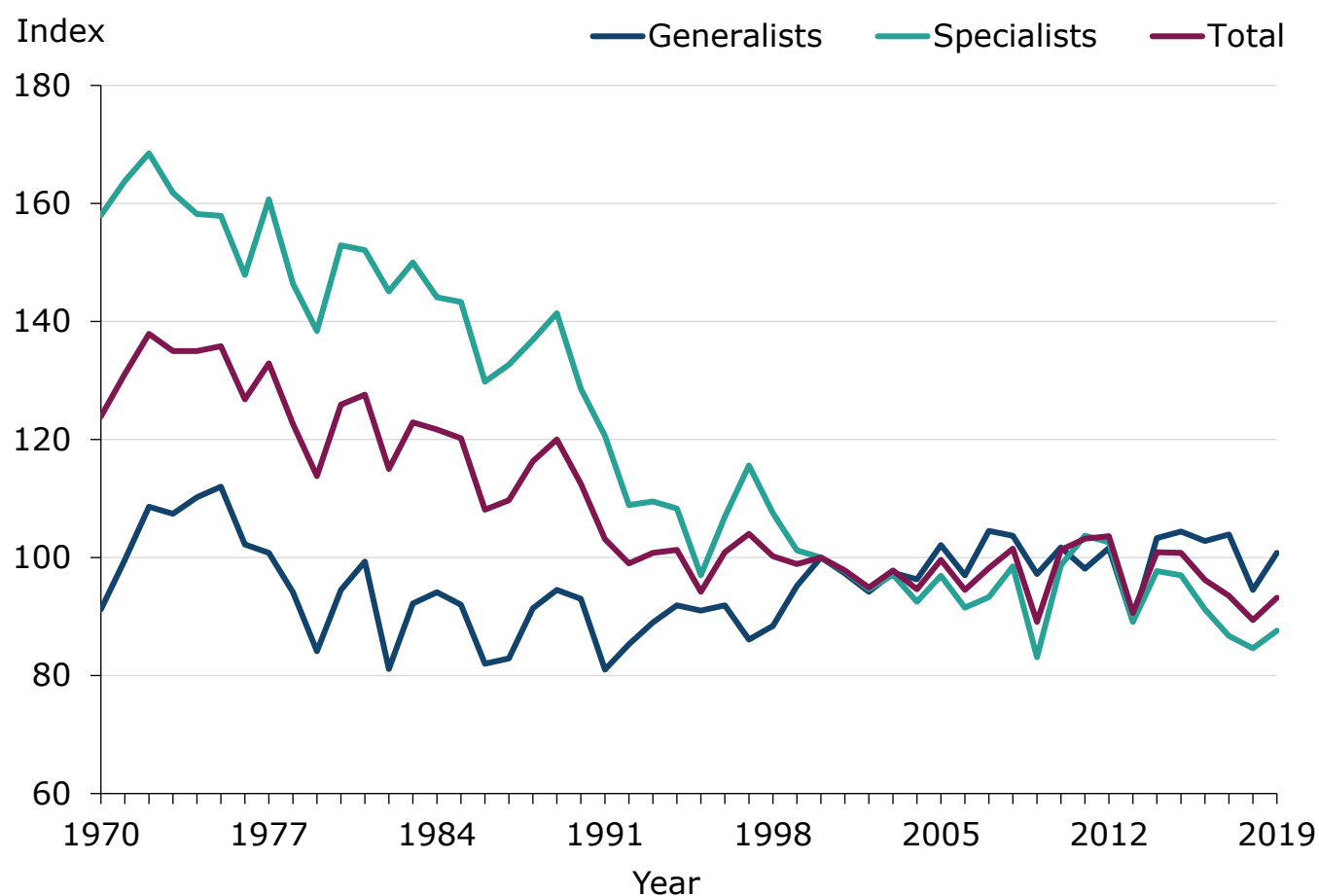
Year	Total breeding birds	Farmland birds	Seabirds	Woodland birds	Woodland generalists	Woodland specialists
2010	97.9	87.0	84.2	101.3	101.7	98.7
2011	95.6	86.4	78.0	103.2	98.1	103.7
2012	96.7	87.0	75.9	103.6	101.6	102.6
2013	89.3	79.0	72.9	90.6	89.2	89.1
2014	96.4	80.2	80.0	100.9	103.3	97.7
2015	99.3	84.6	77.9	100.8	104.4	97.0
2016	96.6	77.4	80.8	96.2	102.8	91.2
2017	97.7	80.7	82.4	93.5	103.9	86.7
2018	90.9	77.5	75.5	89.4	94.5	84.6
2019	93.3	77.7	79.7	93.2	100.8	87.6

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](#) (1970 to 2019) statistical release (Defra, 2020).

Figure 5.1 Woodland bird index, UK, 1970 to 2019



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:

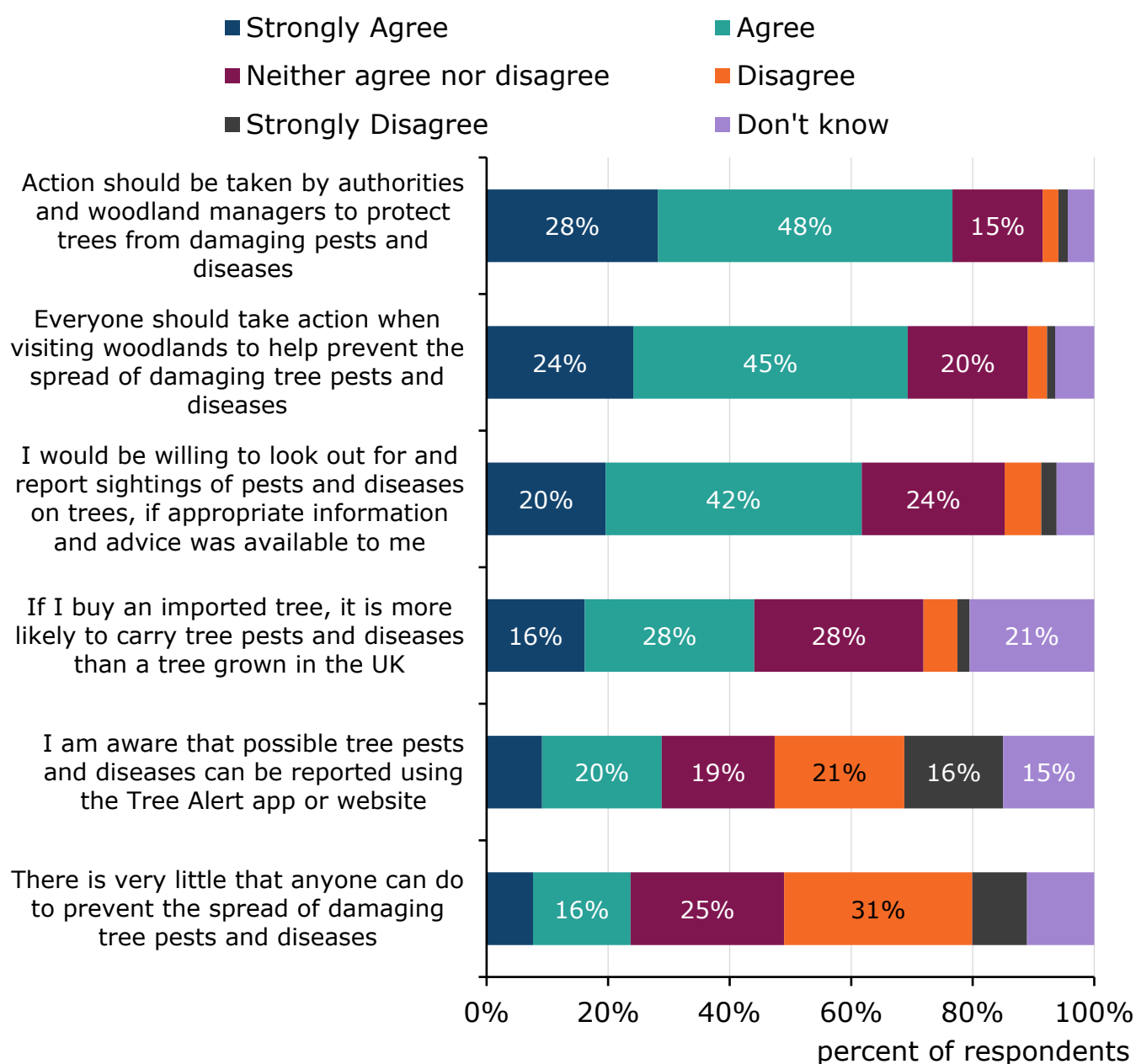
1. Based on data in [Wild Bird Populations in the UK](#) (1970 to 2019) statistical release (Defra, 2020).
2. Year 2000 = 100.

5.2 Public Opinion of Forestry - tree health

Forest Research has surveyed public attitudes to forestry and forestry-related issues since 1995. The most recent surveys were conducted in 2021 (with separate surveys in Wales, Scotland and across the UK as a whole) and in 2019 (in Northern Ireland). Full results are available on the [Public Opinion of Forestry homepage](#).

Respondents to the UK survey in 2021 were asked their views on a range of statements relating to tree health. 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 disease”, with 77% of UK respondents agreeing (agree or strongly agree) (Figure 5.2 and Table 5.2). This compares with only 24% 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, UK, 2021



Source: UK Public Opinion of Forestry Survey, 2021.

Base: All respondents (approximately 5,000).

Notes:

1. The range of uncertainty around any result should be no more than $\pm 2.1\%$.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Table 5.2 Public opinion on tree health, UK, 2015 to 2021

percent of respondents who agree or strongly agree

	2015	2017	2019	2021
Action should be taken by authorities and woodland managers to protect trees from damaging pests and diseases	75	85	85	77
Everyone should take action when visiting woodlands to help prevent the spread of damaging tree pests and diseases	57	74	74	69
I would be willing to look out for and report sightings of pests and diseases on trees, if appropriate information and advice was available to me	55	65	65	62
If I buy an imported tree, it is more likely to carry tree pests and diseases than a tree grown in the UK	42	48	46	44
I am aware that possible tree pests and diseases can be reported using the Tree Alert app or website	22	23	25	29
There is very little that anyone can do to prevent the spread of damaging tree pests and diseases	21	23	23	24

Source: UK Public Opinion of Forestry surveys, 2015 to 2021.

Base: 2,000 respondents (2015 to 2019); 5,000 respondents (2021).

Note:

1. The range of uncertainty around any result should be no more than $\pm 3.5\%$ in any of the years shown. To compare results over time, a difference of at least 5 percentage points is required to indicate that there is a significant difference.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

5.3 Woodland types and habitats

National Forest Inventory (NFI) reports on woodland ecological condition, released in 2020, provide estimates of the areas of woodland types and of woodland habitats in Great Britain.

Table 5.3a presents estimates of the extent of each type of woodland from this report. The total area of native woodland in Great Britain is estimated to be around 1.51 million hectares. This equates to around one half (49%) of the woodland area in Great Britain. The proportion of native woodland is highest in England (68%), followed by Wales (48%) and Scotland (32%).

Table 5.3a Woodland area by type, Great Britain, 2013

thousand hectares				
Type of woodland	England	Wales	Scotland	Great Britain
Native	914	150	443	1,507
Near native & fragments	29	7	20	57
Non-native	398	155	908	1,461
Not determinable	2	1	17	20
Total	1,343	313	1,388	3,045

Source: NFI Woodland Ecological Condition (2020)

Notes:

1. The report [NFI Woodland Ecological Condition Scoring Methodology](#) provides further details on woodland types.
2. Comparisons with woodland area should not be made as woodland area is defined differently to woodland habitat (with woodland area being greater than habitat area due to the treatment of land uses like open space and clear-fell).
3. Clear-fell and transition land are included in the estimates. Woodland type for some clear-fell and transition land cannot be determined and are assigned as not determinable.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Non-native coniferous woodland is the single largest habitat type in Great Britain, accounting for 1.29 million hectares (42%). This is the most common habitat type for Scotland (59%) and Wales (46%). For England, lowland mixed deciduous woodland accounts for over one half (56%) of woodlands.

Table 5.3b Woodland area by habitat type, Great Britain, 2013

thousand hectares

Habitat type	England	Wales	Scotland	Great Britain
Lowland beech/yew woodland	54	6	1	62
Lowland mixed deciduous woodland	748	79	82	909
Native pine woodlands	0	0	124	124
Non-HAP native pinewood	0	0	38	38
Upland birchwoods (Scotland), birch dominated upland oakwoods (England, Wales)	11	2	120	134
Upland mixed ashwoods	32	7	15	54
Upland oakwoods	44	26	33	103
Wet woodland	78	28	63	169
Wood pasture & parkland	8	0	3	11
Broadleaf habitat NOT classified as priority	19	12	21	53
Non-native coniferous woodland	328	145	819	1,292
Clearfelled and transition	22	6	70	97
Total	1,344	313	1,389	3,045

Source: NFI Woodland Ecological Condition (2020)

Notes:

1. The report [NFI Woodland Ecological Condition Scoring Methodology](#) provides further details on habitat types.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Forestry Statistics 2022

Chapter 6: Social

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

The Research Agency of the
Forestry Commission

Introduction

This chapter contains statistics on the number and profile of visits to all woodlands from household surveys.

The statistics in this chapter need to be viewed in the context of broader changes in the UK population, with an increasing and ageing population.

More recently, the COVID-19 pandemic has affected visits to the outdoors.

Some information on visits to forests and woodlands from the 2021 Public Opinion of Forestry surveys is provided in this release and there is further information on visits to the outdoors more generally in the following:

- The [People and Nature Survey](#) for England (see monthly indicators);
- The [National Survey for Wales](#);
- [Scotland's People and Nature Survey](#); and
- The [People in the Outdoors Monitor for Northern Ireland](#).

Geographical coverage for social 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, either by Forest Research or by other organisations. Figures for earlier years have not been revised from those previously published. For further details on revisions, see the Social section of the Sources chapter.

The frequency with which the estimates in this chapter are updated varies depending on the data sources used. Whilst some of the information presented is now several years old, it represents the latest available data and has been included to provide a more rounded picture of the social use of forests in the UK.

Previous editions of Forestry Statistics have included data on day visitors to Northern Ireland Forest Service sites where an admission charge was made. However, as charging at forest car parks was suspended for much of the year, it is not possible to provide comparable estimates for 2020/21 or 2021/22 and this section has been dropped from the 2021 and 2022 editions.

In addition, as there have been no new estimates of visitors to Scotland's national forest and lands (formerly known as the National Forest Estate in Scotland) (from All Forests Surveys that ran in Scotland in 2004/2007 and 2012/13, with an update to the estimated total in 2016), the section on on-site surveys has been dropped from recent editions.

A copy of all social tables can be accessed in spreadsheet format from the [Data Downloads page](#).

Key findings

The main findings are:

- Around two thirds (69%) of respondents to the UK Public Opinion of Forestry Survey 2021 had visited forests or woodlands in the last few years. Of those, 36% reported an increase in the number of visits in the last 12 months.
- Around one half (51%) of respondents to the UK Public Opinion of Forestry Survey 2021 who had visited forests or woodlands in the last few years reported an increase in their level of happiness when in forests and woodlands as a result of the coronavirus (COVID-19) restrictions that had been in place since March 2020.
- There were an estimated 123 million visits to woodlands in Scotland in 2019/20.
- There were an estimated 368 million visits to woodlands in England in 2018/19.
- Around one half (49%) of visits to woodlands in England in 2018/19 were within 2 miles.
- “Health and exercise” and “fresh air or to enjoy pleasant weather” were important reasons for visits to woodlands in England and Wales.
- Walking was the most common activity on visits to woodland in England.

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.

- [Scottish Recreation Survey](#) (2009 to 2012),
- [Scotland's People and Nature Survey](#) (2013, 2017/18, 2019/20),
- [Welsh Outdoor Recreation Survey](#) (2011, 2014),
- [Monitor of Engagement with the Natural Environment](#) (England, 2009/10 to 2017/18).

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 2018/19 estimate a total of 368 million visits to woodlands in England (Table 6.1). This is a statistically significant decrease from the 2017/18 figure of 437 million visits.

The Welsh Outdoor Recreation Survey 2014 estimated a total of 68 million visits to woodlands by Welsh residents. This is a statistically significant decrease from the estimated total of 86 million in 2011, but similar to the 2008 estimate (64 million).

Scotland's People and Nature Survey 2017/18 reports an estimated total of 117 million visits to woodlands in Scotland. This is a statistically significant increase from the 2013 estimate of 90 million visits.

Table 6.1 Number of visits to woodland by journey starting point, Great Britain, 2009 to 2019

million visits

Year	England	Wales	Scotland
2009	317	[x]	57
2010	326	[x]	63
2011	358	86	65
2012	357	[x]	62
2013	378	[x]	90
2014	417	68	[x]
2015	446	[x]	[x]
2016	439	[x]	[x]
2017	437	[x]	117
2018	368	[x]	[x]
2019	[x]	[x]	123

Sources:

England 2009 - 2018: Monitor of Engagement with the Natural Environment (MENE), carried out by TNS;

Wales 2011, 2014: Welsh Outdoor Recreation Survey carried out by TNS;

Scotland 2009 to 2012: Scottish Recreation Survey (ScRS), carried out by TNS;

Scotland 2013, 2017, 2019: Scotland's People and Nature Survey (SPANs), carried out by TNS.

Notes:

1. MENE covered trips taken in England, including those from holiday bases, by respondents living in England. Results relate to 12 month periods from March to February. The survey has now been replaced by the People and Nature Survey for England.
2. The Welsh Outdoor Recreation Survey totals shown are for trips with woodland as the main destination.
3. 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, from May 2017 to April 2018 and from May 2019 to March 2020. 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.
4. In each survey, visits to overseas destinations are excluded.
5. [x]: data not available.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

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.

Tables 6.2a to 6.2e shows the main characteristics of visits to woodlands over the most recent 5 years.

In 2018/19, walking was the main mode of transport for almost one half (47%) of visits to woodland.

Table 6.2a Mode of transport to visit woodlands, England, 2014/15 to 2018/19

Main mode of transport	per cent of respondents				
	2014/15	2015/16	2016/17	2017/18	2018/19
On foot	60	60	54	53	47
Car/van	36	36	42	44	45
Bicycle	2	2	2	1	1

Source: Monitor of Engagement with the Natural Environment (MENE), Natural England.

Notes:

1. All trips that included a visit to woodland.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Around one half (49%) of visits to woodland were within 2 miles.

Table 6.2b Distance travelled to visit woodlands, England, 2014/15 to 2018/19

per cent of respondents

Distance travelled (one way)	2014/15	2015/16	2016/17	2017/18	2018/19
Less than 1 mile	39	32	28	29	25
1 to 2 miles	25	31	28	27	24
3 to 5 miles	19	20	21	23	26
6 to 10 miles	9	8	11	11	10
Over 10 miles	9	10	12	10	16

Source: Monitor of Engagement with the Natural Environment (MENE), Natural England.

Notes:

1. All trips that included a visit to woodland.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Health or exercise was the most popular reason for visiting woodlands in England in 2018/19 (70%).

Table 6.2c Motivation for visits to woodlands, England, 2014/15 to 2018/19

per cent of respondents

Motivation for visit	2014/15	2015/16	2016/17	2017/18	2018/19
For health or exercise	53	60	55	56	70
To exercise your dog	66	65	60	53	53
For fresh air or to enjoy pleasant weather	39	41	39	41	46
To relax and unwind	35	42	37	37	40
To enjoy scenery	32	38	34	36	34
To be somewhere you like	23	26	25	26	29
For peace and quiet	22	27	33	26	29
To enjoy wildlife	27	30	28	28	28
To spend time with family	17	14	15	16	28

Source: Monitor of Engagement with the Natural Environment (MENE), Natural England.

Notes:

1. All trips that included a visit to woodland.
2. Excludes other reasons for visiting, each reported by fewer than 20% of respondents in 2018/19.
3. Respondents were able to select more than one option, so results do not sum to 100%.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Walking (with or without a dog) was the most popular activity on visits to woodland in England in 2018/19.

Table 6.2d Activities on visits to woodlands, England, 2014/15 to 2018/19

Activities during visit	per cent of respondents				
	2014/15	2015/16	2016/17	2017/18	2018/19
Walking without a dog	22	23	31	56	56
Walking with a dog	68	66	59	36	36
Playing with children	6	6	8	10	15
Eating or Drinking Out	5	6	8	10	15
Cycling/mountain biking	4	3	6	4	6

Source: Monitor of Engagement with the Natural Environment (MENE), Natural England.

Notes:

1. All trips that included a visit to woodland.
2. Excludes other activities, each reported by fewer than 5% of respondents in 2018/19.
3. Respondents were able to select more than one option, so results do not sum to 100%.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Most visits to woodlands in England (62%) lasted up to 2 hours in 2018/19.

Table 6.2e Duration of visits to woodlands, England, 2014/15 to 2018/19

per cent of respondents

Duration of visit	2014/15	2015/16	2016/17	2017/18	2018/19
Up to 1 hour	51	50	43	45	39
1+ to 2 hours	28	29	29	26	23
2+ to 3 hours	8	9	11	12	18
Over 3 hours	12	12	16	17	20

Source: Monitor of Engagement with the Natural Environment (MENE), Natural England.

Notes:

1. All trips that included a visit to woodland.
2. Results might not sum to 100% due to rounding.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

6.1.2 Wales

Household surveys in Wales

The National Survey for Wales began in March 2016 and replaced a number of separate surveys of households in Wales, including the [Welsh Outdoor Recreation Survey \(WORS\)](#). The survey is completed by around 12,000 people each year and covers a wide range of topics.

Table 6.3 shows the reasons provided for their visit to the outdoors by respondents who stated that the main destination of the visit was woodland. "Health and exercise" and "fresh air or to enjoy pleasant weather" were the most important reasons reported for visits to woodlands in Wales.

Table 6.3 Reasons for visit to woodland or forest, Wales, 2016/17 to 2018/19

Reason for visit	per cent of respondents	
	2016/17	2018/19
For health or exercise	47	55
For fresh air or to enjoy pleasant weather	50	47
For pleasure/enjoyment	42	42
To spend time with family	39	41
To relax and unwind	34	41
To enjoy scenery and wildlife	38	39
To exercise the dog	38	30
For peace and quiet	22	29
To spend time with friends	16	22

Source: National Survey for Wales (Welsh Government).

Notes:

1. Visits where the main destination was woodland.
2. Respondents were able to select more than one option, so results do not sum to 100%.
3. Excludes other reasons for visiting, each reported by fewer than 20% of respondents in 2018/19.

6.1.3 Public Opinion of Forestry Survey: Woodland visitors

The [Public Opinion of Forestry Survey](#) obtains people's attitudes to forestry and forestry-related issues, including visits to woodland.

The 2021 surveys were run in February/March 2021 and were impacted by the Coronavirus (COVID-19) pandemic in two ways. Firstly, the restrictions in place in early 2021 led to a change in methodology for the surveys, with the 2021 surveys being run online or by telephone for the first time (previously, face-to-face interviewing had been used). Secondly, requirements to stay at home (with people only being allowed outdoors for one hour a day in order to undertake exercise) and requirements to stay in local areas, both of which were in force for some of the year leading up to the survey, may have resulted in changes to the responses provided to the survey. It is not possible to quantify the extent to which any changes observed in the survey are a result of COVID-19 restrictions (either on the survey design or on the behaviour of respondents).

The results shown in Tables 6.4 to 6.6 and Figures 6.1 and 6.2 have been taken from the UK and country reports on the latest surveys in 2021 and from surveys in earlier years.

In the UK 2021 survey, over two thirds (69%) of respondents said that they had visited woodland in the last few years for walks, picnics or other recreation (Table 6.4).

Table 6.4 Woodland visitors, UK, 2003 to 2021¹

per cent of respondents

Year	England	Wales	Scotland	Northern Ireland	UK
2003	66	62	64	77	67
2005	65	69	50	67	65
2007	76	79	75	62	77
2009	77	[x]	57	[x]	77
2010	[x]	[x]	[x]	72	[x]
2011	68	68	75	[x]	67
2013	65	64	76	[x]	66
2014	[x]	[x]	[x]	75	[x]
2015	55	64	78	[x]	56
2017	62	72	84	[x]	61
2019	63	77	[x]	78	63
2021	69	63	86	[x]	69

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

Base: UK/GB = 4,000 respondents (2003 to 2007), 2,000 respondents (2009 to 2019), 5,000 respondents (2021);

Scotland and Wales = 1,000 respondents each;

Northern Ireland = 120 respondents (2003), 1,000 respondents (all other years).

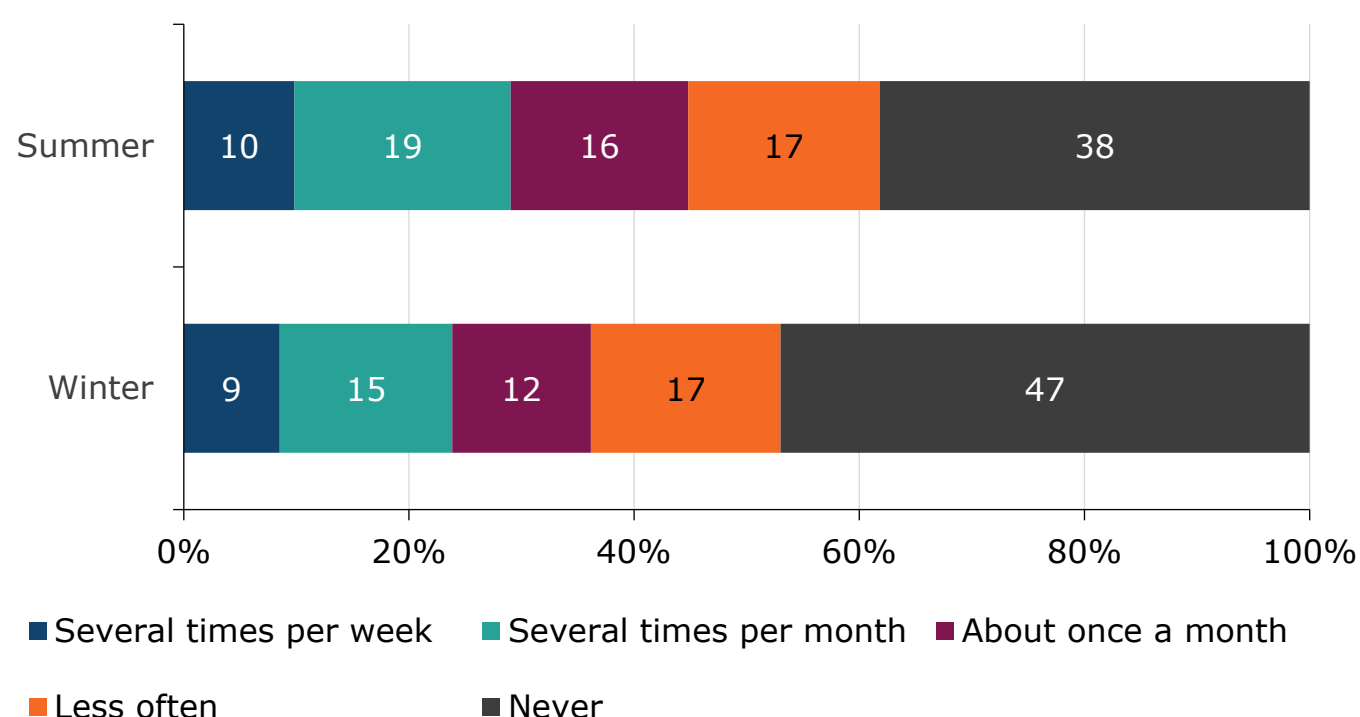
Notes:

1. Those stating that they had visited woodland in the last few years. Data for Wales from 2015 and for Scotland from 2017 relates to visits in the last 12 months.
2. The range of uncertainty around any result should be no more than $\pm 4.6\%$ (for surveys with around 1,000 respondents) and $\pm 2.1\%$ (for around 5,000 respondents). To compare results over time, a difference of at least 5 percentage points (for surveys each with around 2,000 respondents) and at least 7 percentage points (for surveys each with around 1,000 respondents) is required to indicate that there is a significant difference.
3. [x] Denotes data not available (survey not run that year or question not asked).

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Survey respondents were asked how frequently they had visited during the previous summer and winter. Figure 6.1, which presents UK results for the 2021 survey, shows that respondents visited much more often during the summer, with 45% of respondents visiting at least once a month in the summer compared to 36% in the winter.

Figure 6.1 Frequency of visits to woodlands, UK, 2021



Source: UK Public Opinion of Forestry Survey, 2021.

Base: All respondents (approximately 5,000).

Notes:

1. The range of uncertainty around any result should be no more than $\pm 2.1\%$.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

In the UK 2021 Public Opinion of Forestry survey, 77% of respondents aged 16 to 34 said that they had visited woodland in the last few years for walks, picnics or other recreation (Table 6.5). This compares with 71% of respondents aged 35 to 54 and 62% of those aged 55 or over.

Table 6.5 Woodland visitors¹ by age group, UK, 2003 to 2021

per cent of respondents

Year	Aged 16 to 34	Aged 35 to 54	Aged 55 and over	Total
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
2015	54	62	53	56
2017	60	68	55	61
2019	61	71	56	63
2021	77	71	62	69

Source: UK and GB Public Opinion of Forestry Surveys, 2003 to 2021.

Base: 4,000 respondents (2003 to 2007); 2,000 respondents (2009 to 2019); 5,000 respondents (2021).

Notes:

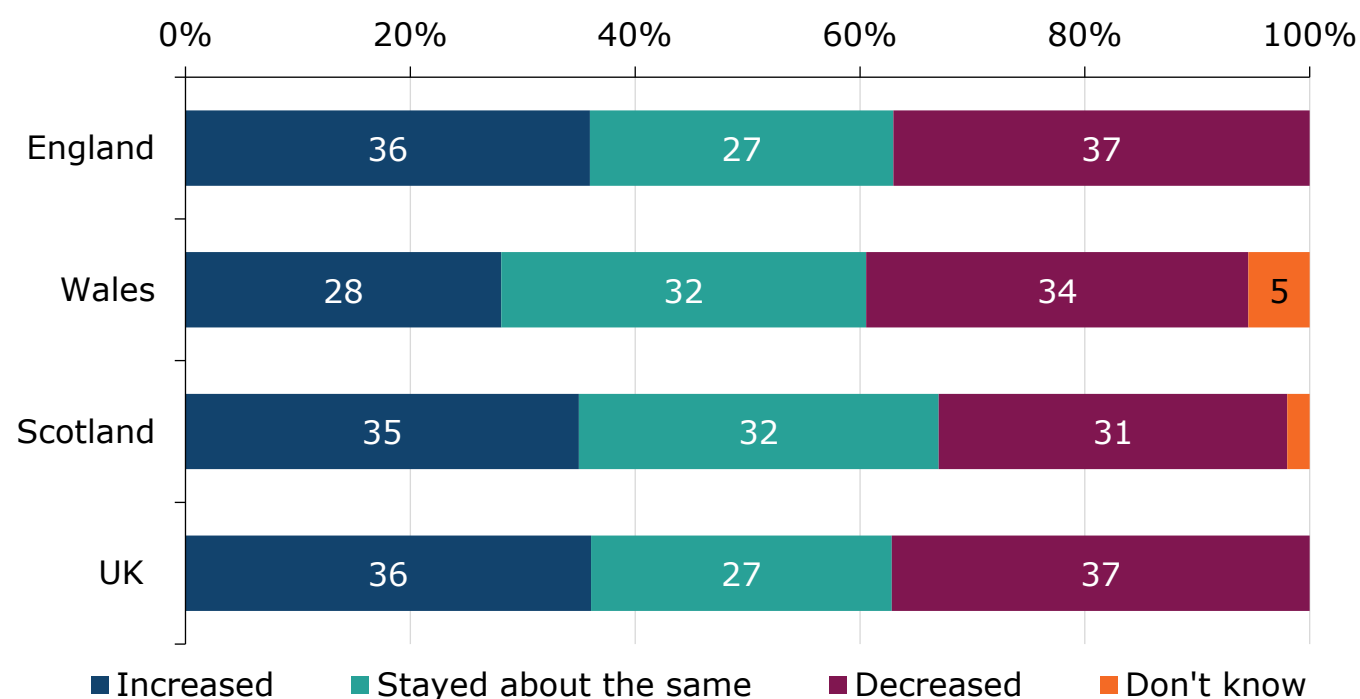
1. Those stating they had visited woodland in the last few years.
2. The range of uncertainty around any result should be no more than $\pm 3.5\%$ (for surveys with around 2,000 respondents) and $\pm 2.1\%$ (for surveys with around 5,000 respondents). To compare results over time, a difference of at least 5 percentage points (for surveys each with around 2,000 respondents) is required to indicate that there is a significant difference.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

The 2021 Public Opinion of Forestry surveys included new questions related to the impact of the COVID-19 pandemic.

In all 3 surveys, respondents were asked how the number of visits to forests and woodlands had changed in the last 12 months. 36% of respondents to the UK survey (who had visited woodlands in the last few years) reported an increase in the number of visits they had made, 27% reported no change and 37% reported a decrease.

Figure 6.2 Change in number of visits to woodlands over last 12 months, UK, 2021



Source: UK, Scotland and Wales Public Opinion of Forestry Surveys, 2021.

Base: All respondents to Wales and Scotland surveys (approximately 1,000 respondents); respondents to the UK survey who had visited woodlands in the last few years (approximately 3,500).

Notes:

1. The range of uncertainty around any result should be no more than $\pm 3.5\%$ (Scotland and Wales), $\pm 2.7\%$ (England) and $\pm 2.5\%$ (UK).

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

The UK survey in 2021 also asked how views on forests and woodlands had changed in the last 12 months.

When asked about their feeling of connection to forests and woodlands, 43% of respondents who had visited woodlands reported an increase, 40% reported no change and 13% reported a decrease.

Around one half of respondents who had visited woodlands (51%) reported an increase in their level of happiness when in forests and woodlands. Around one third (35%) reported no change and 10% reported a decrease.

Around one half of respondents who had visited woodlands (48%) reported an increase in the amount of time they had taken to appreciate forests and woodlands. Around one third (33%) reported no change and 15% (in the UK and in England) reported a decrease.

Table 6.6 Change in views of forests and woodlands due to pandemic, UK, 2021

per cent of respondents

	Significantly increased	Some increase	Stayed the same	Some decrease	Significantly decreased
Your feeling of connection to forests and woodlands	17	27	40	8	5
Your level of happiness when in forests and woodlands	21	30	35	6	4
The amount of time you take to appreciate forests and woodlands	19	29	33	7	7

Source: UK Public Opinion of Forestry Survey 2021.

Base: All respondents who had visited woodlands in the last few years (approximately 3,500).

Notes:

1. The range of uncertainty around any result should be no more than $\pm 2.5\%$.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Forestry Statistics 2022

Chapter 7: Employment & Businesses

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

The Research Agency of the
Forestry Commission

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 in this chapter have been revised since Forestry Statistics 2021. For further details on revisions, see the Employment section of the Sources chapter.

A copy of all Employment & Businesses tables can be accessed in spreadsheet format from [the Data Downloads page](#).

Key findings

The main findings are:

- The Business Register and Employment Survey (May 2022) reported average employment¹ in 2020 of 19 thousand in forestry, 8 thousand in sawmilling and 5 thousand in panel mills.
- There was estimated to be a total of 7.4 thousand full time equivalent staff employed² by primary wood processors in the UK in 2021, a 6% increase from the total for 2020.
- The latest major accident rates for Great Britain, covering 2020/21, show small reductions compared to 2019/20 rates for forestry, wood product and pulp, paper and paper product sectors.
- There were 194 establishments in the primary wood processing industries in the UK using UK-grown roundwood in 2021.

² There are a number of differences in the scope of the employment estimates provided by the Business Register and Employment Survey (BRES) and the full-time equivalent figures obtained from the annual surveys of the UK timber industry run by Forest Research (FR). In particular, the BRES figures cover employment by all businesses in the relevant sectors that pay VAT and/or PAYE. This will include businesses that do not use UK grown timber. The FR surveys include businesses below the VAT and PAYE thresholds but exclude businesses that do not use UK grown timber.

7.1 Employment: Business Register and Employment Survey

The Business Register and Employment Survey, 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 7.2a), as they include primary processing of imported material and also some secondary processing.

Average employment in 2020 for forestry was estimated at 19 thousand in forestry, 8 thousand in sawmilling and 5 thousand in panel mills (Table 7.1).

Table 7.1 Employment in forestry and wood processing¹, United Kingdom, 2016 to 2020

	thousands				
Standard Industrial Classification (SIC)2	2016	2017	2018	2019	2020
Forestry	17	[c]	16	18	19
Sawmilling	9	9	10	7	8
Panels	5	5	6	5	5
Secondary products	67	60	73	63	60
Total wood products	81	74	89	76	73
Pulp, paper & paper products	56	55	62	53	50

Source: Business Register and Employment Survey (Office for National Statistics, May 2022: further estimates provided by ONS).

Notes:

1. Excludes other wood-using industries.
2. 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.

3. Pulp, paper & paper products breakdowns for all years have been suppressed in the figures released by ONS. Data produced by the Confederation of Paper Industries, presenting estimates on a different basis are provided in table 7.2b.
4. [c] denotes suppressed data.

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 7.4 thousand full time equivalent staff employed by primary wood processors in the UK in 2021 (Table 7.2a), a 6% increase from the total for 2020.

58% of those employed in primary wood processing in 2021 worked in sawmills and over one quarter (28%) in wood-based panel mills.

Table 7.2a Employment in primary wood processing, United Kingdom, 2017 to 2021

Year	full-time equivalents				
	Sawmills	Pulp & paper	Wood-based panels	Fencing	Total
2017	4,562	700	2,110	405	7,777
2018	4,297	693	2,175	399	7,564
2019	4,105	663	2,075	397	7,240
2020	4,052	660	1,933	404	7,049
2021	4,288	635	2,106	414	7,443

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.

Table 7.2b presents the estimated total number of direct employees at all UK paper and board mills. There were around 7.7 thousand employees in 2021, a 4% decrease from the previous year.

Table 7.2b Direct employment in paper and board mills, United Kingdom, 2017 to 2021

	number of employees				
Year	2017	2018	2019	2020	2021
Direct employees	7,911	7,849	8,010	8,016	7,693

Source: Confederation of Paper Industries.

Notes:

1. Figures exclude contractors, self-employed and employees at ancillary sites.
2. Covers all mills producing paper in the UK. This differs from the employment data in table 7.2a, which is restricted to mills using UK-grown roundwood.

7.3 Health & safety

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations is the legal system, provided by the Health & Safety Executive (HSE), under which fatal and defined non-fatal injuries to workers and members of the public are reported by employers.

As of April 2012, a legislative change introduced the requirement to report injuries to workers that lead to absence from work or inability to do their usual job, for over seven days. Prior to this, reporting was required for absences of at least three days. From October 2013, legislative changes were introduced to simplify this reporting of workplace injuries. One key change was the introduction of 'specified' injuries, which replaced the previous 'major injury' category. We report on the total number and rate of accidents by SIC, as well as major accidents – those occurring in the workplace and causing an absence or impingement on usual performance for 7-days or more.

The latest major accident rates for Great Britain, covering 2020/21, show small reductions compared to 2019/20 rates for forestry, wood products and pulp, paper & paper products. Over the longer term, the rate for forestry has generally declined. The total reported accident rate for forestry in 2020/21 is now at a similar level to the rate for agriculture (Table 7.3, Figure 7.1a and Figure 7.1b).

Table 7.3 Accidents to employees¹ in forestry and wood processing³, Great Britain, 2016/17 to 2020/21

Standard Industrial Classification (SIC) ²	Number of major accidents ⁴	Major accident ⁴ rate/1000 employees	Total number of reported accidents	Total reported accident rate/1000 employees
Forestry				
2016/17	31	1.9	120	7.3
2017/18	37	2.2	94	5.7
2018/19	33	2.2	90	6.0
2019/20	28	1.6	81	4.6
2020/21 [p]	23	1.5	73	4.7
Wood products				
2016/17	149	3.0	557	11.1
2017/18	124	2.3	515	9.7
2018/19	136	2.3	568	9.6
2019/20	111	2.1	514	9.8
2020/21 [p]	88	1.8	355	7.2
Pulp, paper & paper products				
2016/17	71	1.5	257	5.5
2017/18	60	1.1	245	4.3
2018/19	72	1.4	279	5.5
2019/20	78	1.6	278	5.8
2020/21 [p]	84	1.5	262	4.7

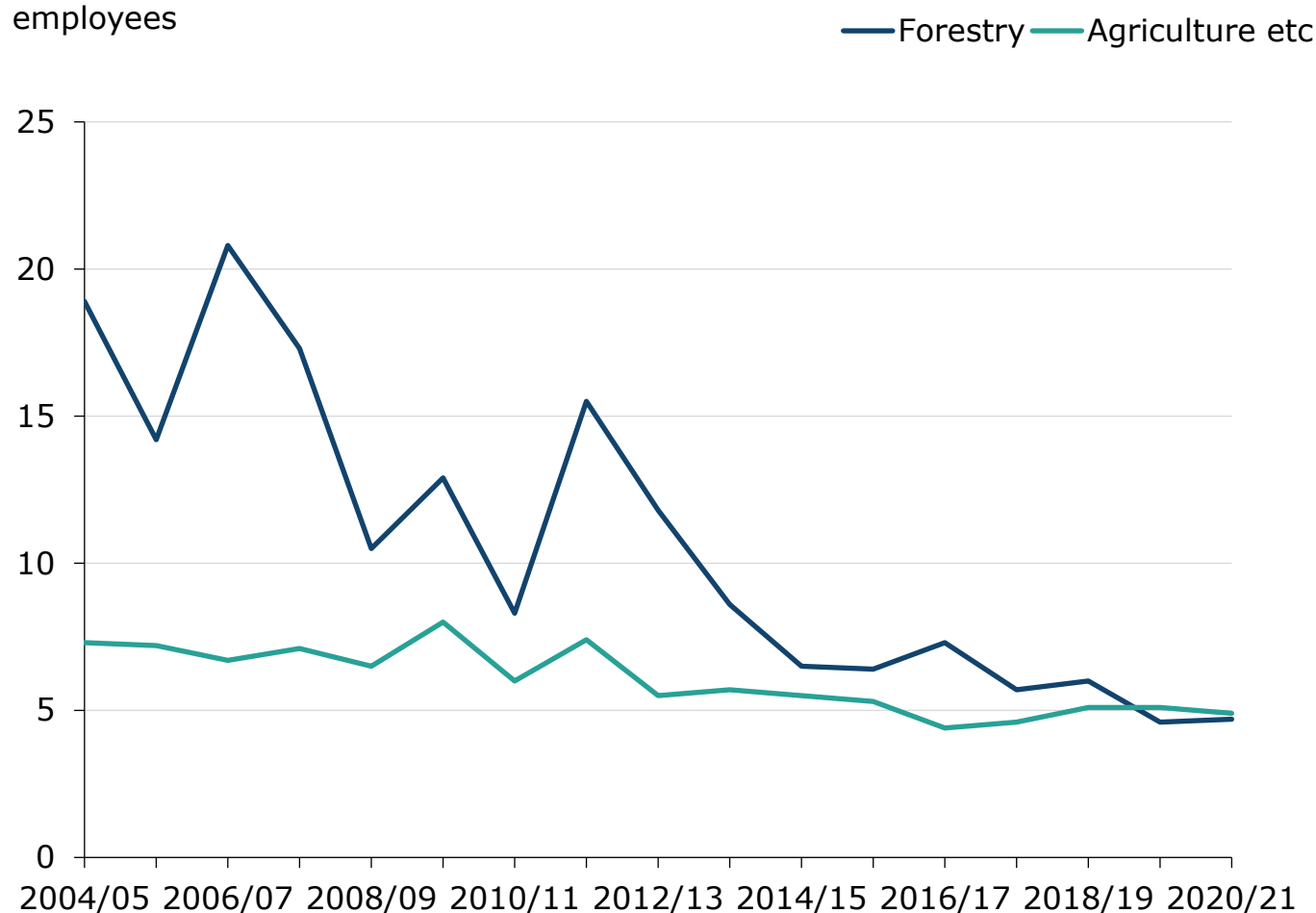
Source: Health & Safety Executive

Note:

1. Employees only; excludes self-employed.
2. 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.
3. Excludes other wood-using industries.
4. Data for previous years susceptible to revision.
5. [p] denotes provisional figures.

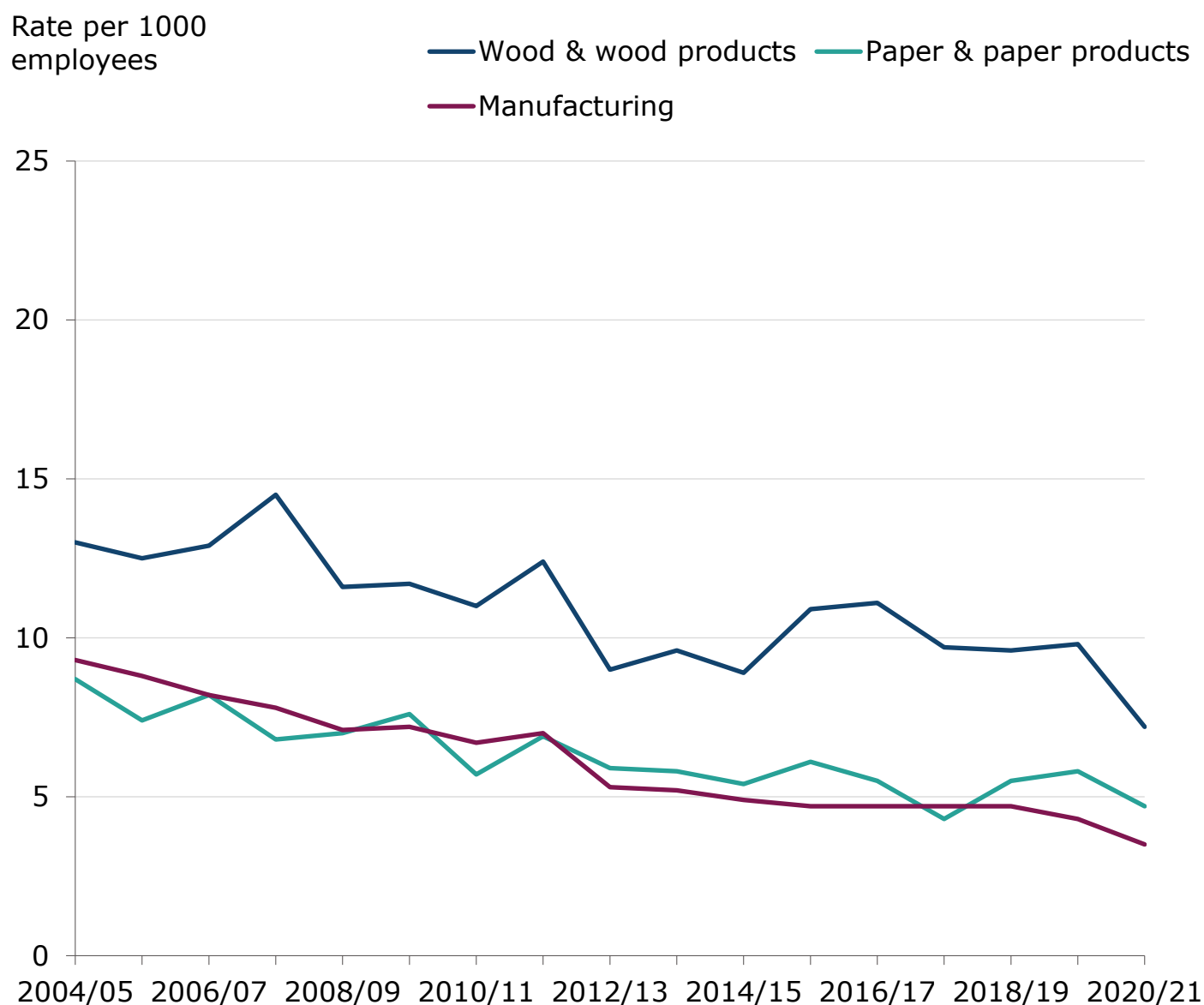
Figure 7.1a Accidents to employees: Total reported accidents per 1000 employees, Great Britain, 2004/05 to 2020/21

Rate per 1000 employees



See Figure 7.1b for information on sources and notes.

Figure 7.1b Accidents to employees: Total reported accidents per 1000 employees, Great Britain, 2004/05 to 2020/21



Source (Figure 7.1a & Figure 7.1b): Health & Safety Executive

Note:

1. Employees only; excludes self-employed.
2. 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.
3. As a result of a change in reporting requirements, data from 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 Forest Research 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 between 2020 and 2021.

Table 7.4 Number of establishments in the primary wood processing industries using UK-grown roundwood, United Kingdom, 2012 to 2021

Year	Sawmills	Pulp & paper mills	Wood-based panel mills	Round fencing manufacturers	Total ¹
2012	177	2	7	60	246
2013	172	2	6	60	240
2014	170	2	6	56	234
2015	168	2	6	50	226
2016	163	2	6	50	221
2017	160	2	6	49	217
2018	152	2	6	46	206
2019	147	2	6	46	201
2020	144	2	6	45	197
2021	141	2	6	45	194

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 4,450 forestry businesses, 515 sawmilling businesses, 140 wood-based panel businesses and 235 pulp & paper businesses were registered for VAT and/or PAYE purposes in the UK in 2021.

Table 7.5 Number¹ of VAT and/or PAYE registered businesses by Standard Industrial Classification (SIC)², United Kingdom, 2012 to 2021

Year	Forestry	Sawmilling	Panels	Pulp & paper
2012	3,375	585	135	255
2013	3,505	560	130	240
2014	3,685	555	130	230
2015	3,925	555	125	230
2016	4,050	550	125	225
2017	4,060	540	120	240
2018	4,150	540	130	240
2019	4,185	530	125	230
2020	4,270	510	135	220
2021	4,450	515	140	235

Source: UK Business; Activity, Size and Location: 2021 (Office for National Statistics, October 2021).

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 2007) categories. Further details on the SIC codes used are provided in the Sources: Employment and businesses page.

Forestry Statistics 2022

Chapter 8: Finance & Prices

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

The Research Agency of the
Forestry Commission

Introduction

This chapter contains statistics on:

- timber prices;
- 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 for earlier years have been revised since Forestry Statistics 2021. For further details on revisions, see the Finance & Prices section of the Sources chapter.

A copy of all Finance & Prices tables can be accessed in spreadsheet format from our [Data Downloads page](#).

Key findings

The main findings are:

- The Coniferous Standing Sales Price Index for Great Britain was 40.5% higher in real terms in the year to March 2022, compared with the previous year.
- The Softwood Sawlog Price Index for Great Britain was 13.3% higher in real terms in the 6 months to March 2022, compared with the corresponding period of the previous year.
- The Small Roundwood Price Index for Great Britain was 6.6% higher in real terms in the 6 months to March 2022, compared with the corresponding period of the previous year.
- Gross value added (GVA) in primary wood processing (sawmilling, panels and pulp & paper) was £1.53 billion in the UK in 2020. GVA in forestry was £0.74 billion.
- Net expenditure on public forests by Forestry England/Natural Resources Wales/Forestry and Land Scotland in 2021/22 totalled £2.8 million in 2021/22. A further £97.2 million was spent by the Forestry Commission, Welsh Government, Natural Resources Wales and Scottish Forestry on other forestry activities.
- £14.8 million was paid in grants for forestry by the Forestry Commission for England, £45.8 million for Scotland by Scottish Forestry, £6.1 million by the Welsh Government and £2.8 million for Northern Ireland by Forest Service in 2021/22.

8.1 Timber prices

Timber Price Indices are based on sales by Forestry England, Forestry and Land Scotland and Natural Resources Wales and are released every 6 months.

The Coniferous Standing Sales Price Index monitors changes in the average price received per cubic metre for timber that Forestry England/Forestry and Land Scotland/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 Forestry England/Forestry and Land Scotland/Natural Resources Wales.

The Small Roundwood Price Index monitors changes in the average price received per cubic metre for roundwood that is smaller in diameter than logs. This includes chipwood, pulpwood and woodfuel. It is based on sales at roadside and currently only covers sales by Forestry England, Forestry and Land Scotland and Natural Resource Wales.

Standing timber, sawlogs and small roundwood are distinct markets and may show different price movements. The data are averages for historic periods, so may be slow to show any true turning points. Prices can be influenced by a range of factors, including imbalances between supply and demand.

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 \(PPIs\)](#).

Table 8.1 presents the coniferous standing sales, softwood sawlog and small roundwood price indices for Great Britain to March 2022.

The coniferous standing sales price index for Great Britain was 40.5% higher in real terms (38.8% higher in nominal terms) in the year to March 2022, compared with the previous year (Table 8.1). The softwood sawlog price index was 13.3% higher in real terms (and 13.5% higher in nominal terms) in the 6 months to March 2022, compared with the corresponding period of the previous year. The small roundwood price index was 6.6% higher in real terms (6.7% higher in nominal terms) in the 6 months to March 2022, compared with the corresponding period in the previous year.

Table 8.1 Coniferous standing sales, sawlog and small roundwood price indices¹, Great Britain, 2013 to 2022

index (period to September 2021 = 100)

Period to March	Standing sales ² in nominal terms ³	Standing sales ² index in real terms ⁴	Sawlog index in nominal terms	Sawlog index in real terms	Small roundwood index in nominal terms	Small roundwood index in real terms
2013	34.3	40.3	44.5	51.8		
2014	39.6	45.6	49.8	56.7		
2015	47.5	54.0	47.0	53.2		
2016	43.0	48.6	44.2	49.7		
2017	48.0	53.0	50.4	55.2	76.7	84.0
2018	62.6	68.0	65.2	70.0	89.8	96.4
2019	80.9	86.3	82.4	87.1	103.4	109.3
2020	70.2	73.2	69.8	72.0	109.6	113.1
2021	75.8	74.7	85.3	84.5	92.2	91.3
2022	105.1	105.1	96.8	95.7	98.4	97.3

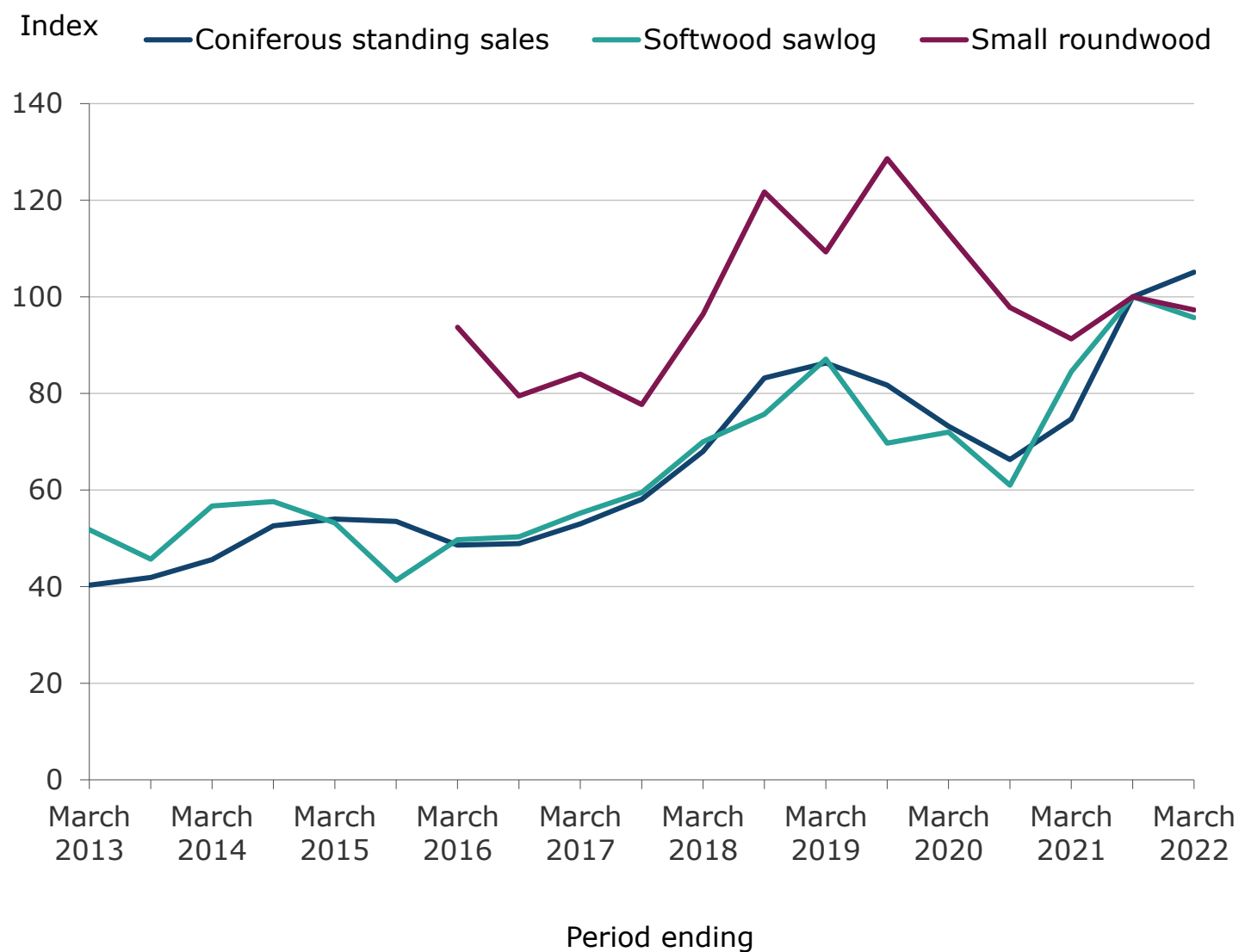
Source: Timber Price Indices: data to March 2022

Notes:

1. The price indices are constructed from information on sales by Forestry England/Forestry and Land Scotland/Natural Resources Wales only.

2. The standing sales index uses the Fisher method with 5-year chain linking to take account of changes in the size mix over time and covers sales of conifers in the previous 12 months.
3. The softwood sawlog index and the small roundwood index cover sales in the previous 6 months.
4. Nominal prices are the actual prices at that point in time.
5. Real terms values are obtained by using the GDP deflator to convert to "constant prices" (in this case prices in 2021). This allows trends in timber prices to be tracked without the influence of inflation.
6. Excludes sales by Natural Resources Wales between April 2017 and March 2021 for Coniferous Standing and Sawlog Price Indices, and between April 2017 and September 2021 for Small Roundwood Index.
7. Standing sales prices in Scotland exclude any premature felling and/or components directly linked to retained product agreements on Long Term Contracts.
8. The index excludes sawlogs put up for sale that were not sold. There was an unusually high number of unsold lots in Scotland in the six months to September 2015.
9. Sawlog prices in Scotland in the six months to September 2020 include a number of sales of logs felled under Statutory Plant Health Notice; this has reduced the overall average log price.

Figure 8.1 Coniferous standing sales, sawlog and small roundwood price indices in real terms, Great Britain, 2013 to 2022



Source: Timber Price Indices: data to March 2022.

Notes:

1. Same notes apply as Table 8.1.

8.2 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) 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). Further information on the ABS is available from the [ONS website](#).

Table 8.2 shows that, in 2020, GVA in primary wood processing (sawmilling, panels and pulp & paper) was reported to be £1.53 billion and GVA in forestry was £0.74 billion.

Table 8.2 Gross value added in forestry and wood processing³, United Kingdom, 2016 to 2020

£ million

Standard Industrial Classification (SIC) ¹	2016	2017	2018	2019	2020
Forestry	596	698	669	724	739
Wood products					
Sawmilling	413	420	580	496	508
Panels ²	316	363	453	379	391
Secondary products	2,850	2,532	2,657	2,808	2,577
Total wood products	3,579	3,315	3,690	3,683	3,476
Pulp, paper & paper products					
Pulp & paper	610	707	841	687	632
Articles of paper & paperboard	2,786	2,607	2,537	2,912	2,934
Total pulp, paper & paperboard	3,396	3,314	3,378	3,598	3,566
Total wood processing	6,975	6,629	7,068	7,281	7,042
Total primary wood processing	1,339	1,490	1,874	1,561	1,531

Source: Annual Business Survey (Office for National Statistics, June 2022)

Notes:

- 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.
- The 2016 and 2018 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) for those years. Panels accounted for at least 99% of the total of SIC codes 16.21 (panels) and 16.22 in 2017, 2019 and 2020.
- Excludes other wood-using industries.

8.3 Government expenditure on public forests

Table 8.3 provides information on expenditure and income from public forests by Forestry England, Natural Resources Wales, and by Forestry and Land Scotland. This covers expenditure and income (shown as negative expenditure) for land that is owned or managed by Forestry England/Natural Resources Wales/Forestry and Land Scotland. Other expenditure by the Forestry Commission, the Welsh Government and Scottish Forestry is covered in Table 8.5.

Net expenditure on public forests by Forestry England/Natural Resources Wales/Forestry and Land Scotland in 2021/22 totalled £2.8 million. This comprised £12.4 million in England, -£3.1 million in Wales and -£6.5 million in Scotland.

Recreation, conservation & heritage accounted for £72.8 million of the total expenditure in 2021/22, harvesting & haulage for £46.8 million and other expenditure on public forests for £138.7 million.

Timber sales generated a total income of £188.8 million in 2021/22. Recreation, conservation & heritage accounted for a further £33.2 million and other income from public forests for an additional £33.4 million.

Table 8.3 Funding public forests: expenditure and income^{1,2,3}, Great Britain, 2017/18 to 2021/22

£ million

Country & expenditure	2017/18	2018/19	2019/20	2020/21	2021/22
Great Britain					
Harvesting & haulage	36.8	36.4	40.8	42.8	46.8
Recreation, etc ⁴	72.7	70.2	78.7	69.1	72.8
Other expenditure	96.4	110.4	107	129.2	138.7
Timber	-111.3	-131.2	-136.2	-168.2	-188.8
Recreation, etc ⁴	-31.4	-31.5	-32.0	-27.0	-33.2
Other income	-24.8	-27.5	-32.1	-31.8	-33.4
Net expenditure	38.4	26.8	26.2	14.1	2.8
England					
Harvesting & haulage	11.3	14	16.2	15.6	15.6
Recreation, etc ⁴	49.4	49.4	57.8	51.9	53.2
Other expenditure	32.9	38.3	36.6	34.2	37.6
Timber	-43.4	-53.2	-50.8	-52.7	-56.2
Recreation, etc ⁴	-28.3	-27.8	-27.9	-22.6	-28.8
Other income	-5.8	-8.8	-9.5	-8.5	-9.0
Net expenditure	16.1	11.9	22.4	17.9	12.4
Wales					
Harvesting & haulage	[x]	[x]	[x]	4.8	5.0
Recreation, etc ⁴	[x]	[x]	[x]	1.8	2.0
Other expenditure	[x]	[x]	[x]	26.2	29.0
Timber	[x]	[x]	[x]	-30.4	-37.1
Recreation, etc ⁴	[x]	[x]	[x]	-0.7	-1.2
Other income	[x]	[x]	[x]	-0.6	-0.7
Net expenditure	[x]	[x]	[x]	1.1	-3.1
Scotland					
Harvesting & haulage	25.5	22.4	24.6	22.4	26.2
Recreation, etc ⁴	23.3	20.8	20.9	15.4	17.6
Other expenditure	63.5	72.1	70.4	68.8	72.1
Timber	-67.9	-78	-85.4	-85.1	-95.5
Recreation, etc ⁴	-3.1	-3.7	-4.1	-3.7	-3.2
Other income	-19.0	-18.7	-22.6	-22.7	-23.7
Net expenditure	22.3	14.9	3.8	-4.9	-6.5

Source: Forestry England, Natural Resources Wales, Forestry and Land Scotland

Notes:

1. Expenditure and income (shown as negative expenditure) by Forestry England, Natural Resources Wales, and Forestry and Land Scotland only. Excludes expenditure incurred by other departments. Figures for Wales on a comparable basis are currently only available for 2020/21 and 2021/22, so GB totals for earlier years relate to England and Scotland only.
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.
4. Recreation, etc. includes conservation and heritage.
5. [x] denotes data not available.

8.4 Other government expenditure on forestry

Table 8.4 provides information on other expenditure (excluding public forests) by the Forestry Commission, Natural Resources Wales and Scottish Forestry. Wales figures for previous years on a comparable basis are not available. For 2021/22 figures on Grants and partnership funding have not been made available by the Welsh Government. Thus, Wales and Great Britain totals are missing.

Expenditure on land that is owned or managed by Forestry England/Natural Resources Wales/Forestry and Land Scotland is covered in Table 8.3.

In addition to expenditure on public forests, the Forestry Commission spent £15.0 million on other activities in England in 2021/22. Scottish Forestry spent a further £63.1 million on other activities in Scotland. Jointly, Natural Resource Wales and the Welsh Government/ Natural Resources Wales spent a further £4.3 million.

A further £14.8 million of funding was provided to Forest Research by Defra, the Forestry Commission and the Devolved Administrations. In total, an additional £97.2 million was spent on other government expenditure in Great Britain (Table 8.4).

Table 8.4 Other government expenditure on forestry^{1,2}, Great Britain, 2019/20 to 2021/22

£ million

Country and type of expenditure	2019/20	2020/21	2021/22
Great Britain	92.1	72.9	97.2
Grants and partnership funding ³	66.5	43.2	66.9
Policy, regulation & administration	14.1	16.3	15.5
Research - GB Funded ⁴	11.6	13.4	14.8
England	6.5	5.3	15.0
Grants and partnership funding ³	5.8	3.3	12.9
Policy, regulation & administration	0.7	2.0	2.1
Wales	2.4	3.7	4.3
Grants and partnership funding ³	1.1	1.1	1.1
Policy, regulation & administration	1.3	2.6	3.2
Scotland	71.7	50.5	63.1
Grants and partnership funding ³	59.6	38.8	52.9
Policy, regulation & administration	12.1	11.7	10.2

Source: Forestry Commission, Welsh Government/Natural Resources Wales and Scottish Forestry, Forest Research

Notes:

1. Expenditure by the Forestry Commission, Scottish Forestry, Welsh Government and Natural Resources Wales only. Excludes expenditure incurred by other departments.
2. Excludes miscellaneous income.
3. EU co-financing not subtracted from grant expenditure. In England authority for the Rural Development Programme for England (RDPE) grant scheme rests with Defra. In Scotland, the drop in grants and partnership funding between 2019/20 and 2020/21 predominately reflects a change to accruals resulting from an improvement in accounting procedures.
4. The estimates for GB funded research relate to core funding of Forest Research only and excludes work by Forest Research that is funded by external organisations.

8.5 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, by Rural Development Contracts in 2006 and has now been replaced by the Forestry Grant Scheme. The English Woodland Grant Scheme (EWGS) was launched in July 2005 and has now been replaced by Countryside Stewardship and other grants (e.g., the Woodland Carbon Fund and the HS2 Woodland Fund). Better Woodlands for Wales (BWW) was launched in December 2005 and has now been replaced by Glastir (administered by the Welsh Government).

The following tables provide information relating to planting and grants:

- Table 1.13a and 1.13b for total areas of new planting;
- Table 1.14a and 1.14b for total areas of grant-funded restocking;
- Table 8.4 for expenditure by the Forestry Commission, Scottish Forestry and Welsh Government on grants and partnership funding;
- Table 8.5 (below) for grant expenditure by the Forestry Commission (including grant expenditure managed by the Forestry Commission on behalf of Defra), by Scottish Forestry and by the Welsh Government.

Table 8.5 presents information on grant money paid in 2012/13 to 2021/22. In total, £69.5 million in grant money relating to forestry was paid in 2021/22 (an 8% increase compared to the previous financial year).

At a country level, £45.8 million was paid in grants in Scotland in 2021/22 (a 44% increase from the previous year, but lower than the £52.2 million paid in 2019/20), £14.8 million was paid in England (a 31% decrease), £6.1 million was paid in Wales (a 34% decrease) and £2.8 million in Northern Ireland (an increase of 57% from the previous year).

Table 8.5 Grant money paid, UK, 2012/13 to 2021/22

£ million

Year	England ¹	Wales ²	Scotland ³	Northern Ireland	UK
2012/13	32.8	5.0	32.3	1.4	71.5
2013/14	33.9	4.1	35.5	1.6	75.1
2014/15	32.4	1.8	39.2	1.4	74.8
2015/16	23.0	3.6	27.5	1.0	55.1
2016/17	23.8	3.3	30.5	1.5	59.0
2017/18	13.5	4.7	37.9	1.6	57.6
2018/19	20.5	5.9	50.2	1.7	78.3
2019/20	22.4	6.0	52.2	1.6	82.2
2020/21	21.6	9.3	31.7	1.8	64.4
2021/22	14.8	6.1	45.8	2.8	69.5

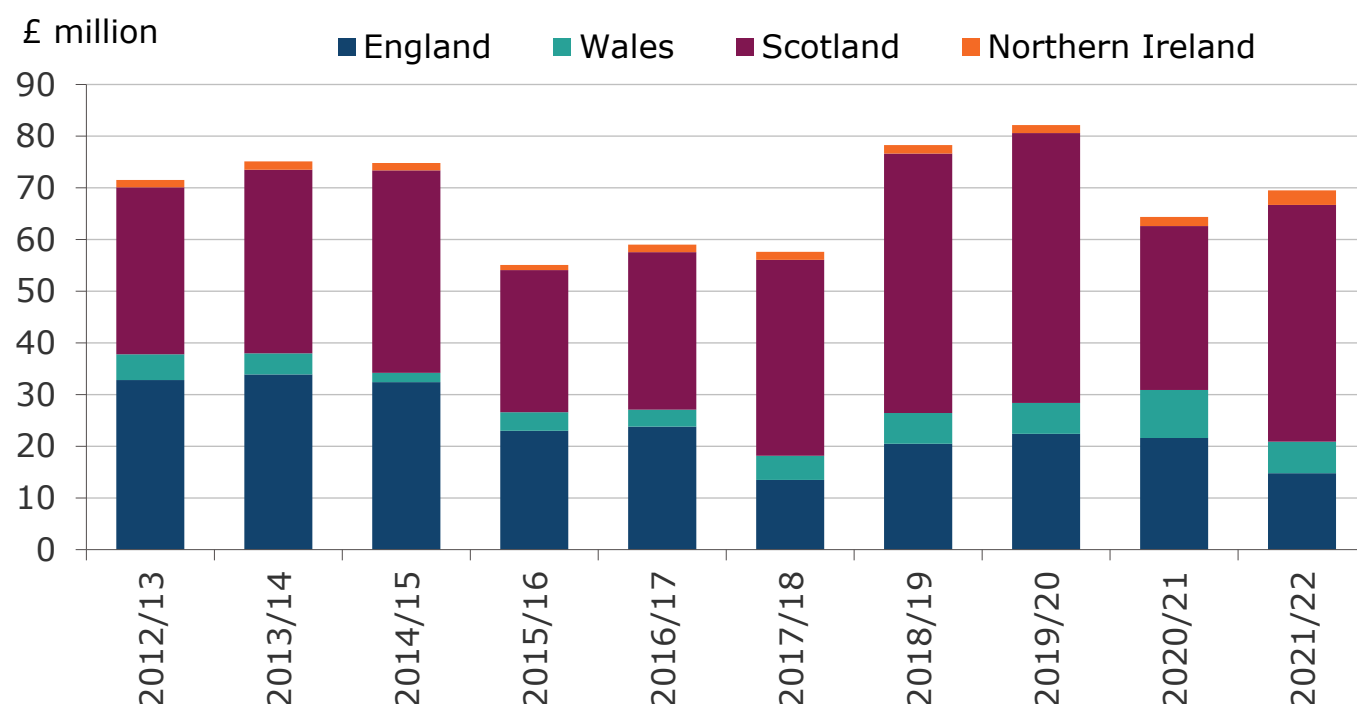
Source: Forestry Commission, Welsh Government, Scottish Forestry, Northern Ireland Forest Service

Notes:

1. England includes grant scheme expenditure managed by the Forestry Commission on behalf of Defra.
2. Wales relates to grants paid by the Welsh Government.
3. Scotland includes grants paid under the Forestry Grant Scheme and legacy schemes (including Rural Development Contracts). The drop in grants paid between 2019/20 and 2020/21 predominately reflects a change to accruals resulting from an improvement in accounting procedures.

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

Figure 8.2 Grant money paid, UK, 2012/13 to 2021/22



Source: Forestry Commission, Welsh Government, Scottish Forestry, Northern Ireland Forest Service

Notes:

1. England includes grant scheme expenditure managed by the Forestry Commission on behalf of Defra.
2. Wales relates to grants paid by the Welsh Government.
3. Scotland includes grants paid under the Forestry Grant Scheme and legacy schemes (including Rural Development Contracts). The drop in grants paid between 2019/20 and 2020/21 predominately reflects a change to accruals resulting from an improvement in accounting procedures.

Forestry Statistics 2022

Chapter 9: International Forestry

Release date:

29 September 2022

Coverage:

United Kingdom

Geographical breakdown:

Country

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.

Data for the European Union (EU) relate to all 27 current EU members, excluding the UK, for all the years shown. Data for Europe cover 26 of the EU members (excluding Cyprus), Russia and a number of other European countries, including Norway, Switzerland, Serbia and Ukraine. Cyprus is included in the EU total, but is part of FAO's Asia region and is thus not included in the Europe total.

A copy of all International Forestry tables can be accessed in spreadsheet format from the [Data Downloads](#) page.

Key findings

The main findings are:

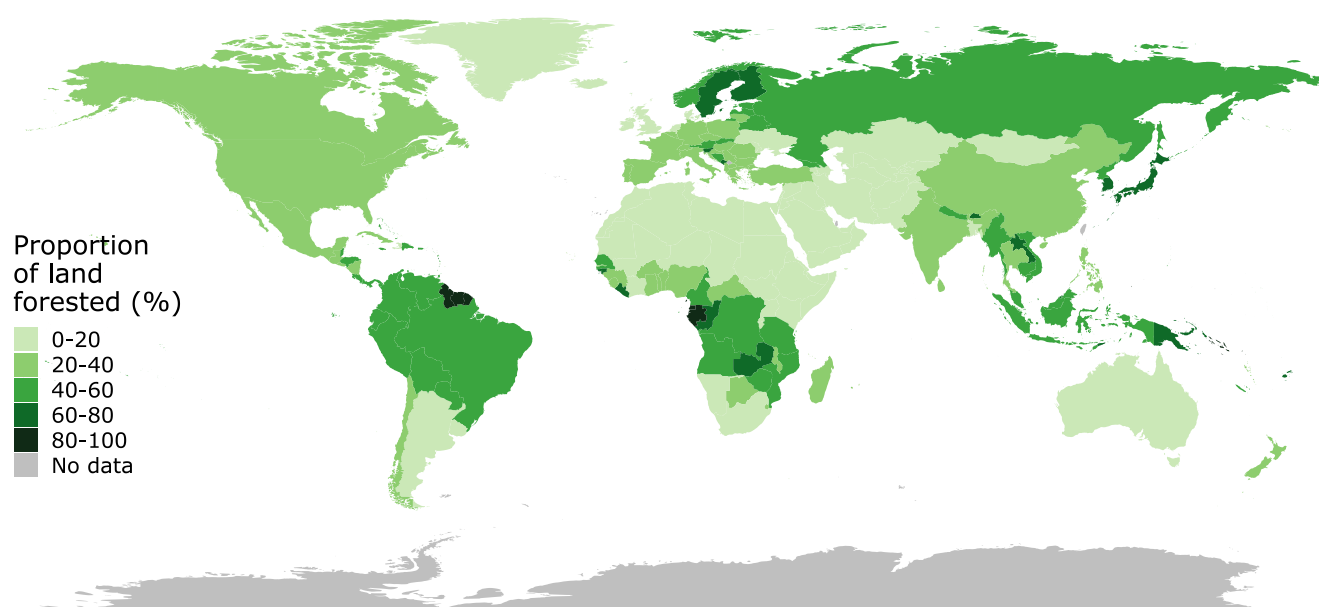
- At around 13% forest cover in 2020, the UK is one of the least densely forested countries in Europe. This compares with 46% for Europe as a whole and 31% worldwide.
- The global forest area reduced by around 4.7 million hectares (0.1%) per year between 2010 and 2020.
- Carbon stocks in forest living biomass have increased in Europe, North & Central America and Asia between 1990 and 2020, but have shown an overall decrease at a global level over this period.
- A total of 3.9 billion m³ underbark of wood was removed from global forests in 2020, of which around one half (49%) was used as woodfuel and the remainder as industrial roundwood (for use by wood processors).
- Global production of wood products in 2020 totalled 473 million m³ of sawnwood, 368 million m³ of wood-based panels and 401 million tonnes of paper and paperboard.
- Europe consumed 25% of all sawnwood, 22% of the world's wood-based panels and 21% of all paper and paperboard in 2020.
- The UK was the second largest net importer (imports less exports) of forest products in 2020, with net imports of US \$7.6 billion. The largest net importer was China.

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.

The UK is one of the least densely forested countries in Europe, with around 13% of its total land area covered in forest in 2020 (Figure 9.1, Table 9.1). This compares with 46% for Europe as a whole and 31% worldwide.

Figure 9.1 Forest cover as a percentage of total land area, World, 2020



Source: FAO Global Forest Resources Assessment 2020.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Table 9.1 Forest cover as a percentage of total land area: international comparisons, World, 2020

Country	Forest area (million ha)	Total land area (million ha)	Forest as % of land area
Europe ¹	1,017	2,213	46
United Kingdom	3	24	13
EU ²	159	400	40
Denmark	1	4	15
Finland	22	30	74
France	17	55	32
Germany	11	35	33
Ireland	1	7	11
Italy	10	29	33
Spain	19	50	37
Sweden	28	41	69
Other EU	51	148	34
Russia	815	1,638	50
Africa	637	2,989	21
Asia	623	3,109	20
North & Central America	753	2,133	35
Oceania	185	849	22
South America	844	1,746	48
World	4,059	13,039	31

Source: FAO Global Forest Resources Assessment 2020.

Notes:

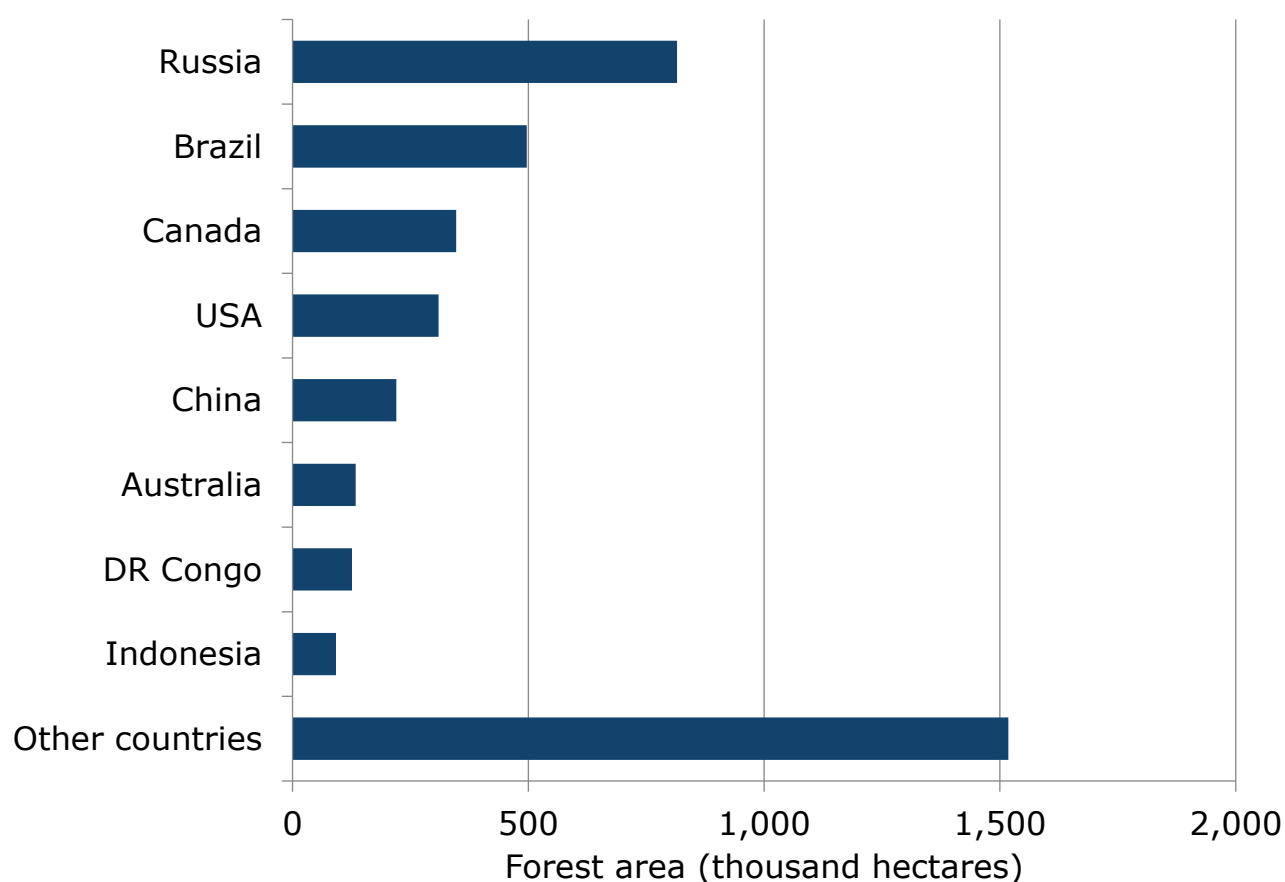
1. The Europe region covers 26 EU countries (excluding Cyprus), the UK, Russia and other countries, including Norway, Switzerland, Serbia and Ukraine.
2. The EU covers 27 member states as at September 2022. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.2 Forest area by country

Figure 9.2 shows the countries with the largest forest areas. Around one half (49%) of the total forest area of 4,059 million hectares in 2020 is located in four countries (Russia, Brazil, Canada and the USA).

Figure 9.2 Forest area by country, World, 2020



Source: FAO Global Forest Resources Assessment 2020.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.3 Annual changes in forest area

The global forest area has reduced from around 4,128 million hectares in 1990 to 4,059 million hectares in 2020. This represents a decrease of around 7.8 million hectares (0.2%) per year between 1990 and 2000, of around 5.2 million hectares (0.1%) per year between 2000 and 2010 and of around 4.7 million hectares (0.1%) per year between 2010 and 2020 (Table 9.2).

The forest area has reduced in most regions since 1990, except for Europe and Asia (where areas have increased).

Table 9.2 Annual changes in forest area by region, World, 1990 to 2020
percentage change in forest area

Region	1990 to 2000	2000 to 2010	2010 to 2020
Europe ¹	0.1	0.1	0.0
UK ²	0.6	0.4	0.4
EU ³	0.5	0.3	0.2
Africa	-0.4	-0.5	-0.6
Asia	0.0	0.4	0.2
North and Central America	0.0	0.0	0.0
Oceania	-0.1	-0.1	0.2
South America	-0.5	-0.6	-0.3
World	-0.2	-0.1	-0.1

Source: FAO Global Forest Resources Assessment 2020.

Notes:

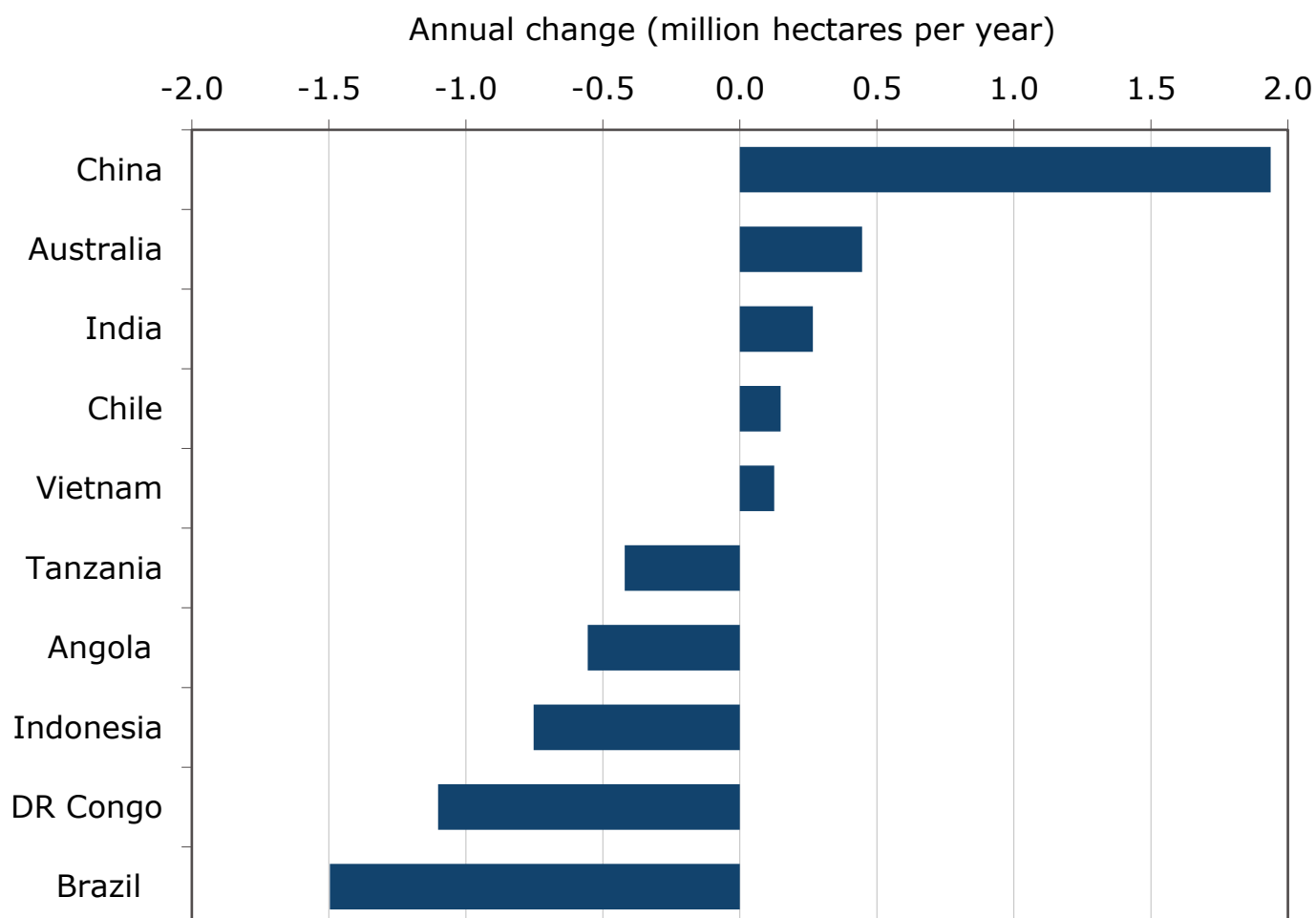
1. The Europe region covers 26 EU countries (excluding Cyprus), the UK, Russia and other countries, including Norway, Switzerland, Serbia and Ukraine.
2. UK figures for 2020 are 2018-based estimates. Revised estimates (from Chapter 1) suggest that Table 9.2 slightly under-estimates the change in forest area in the UK in the most recent time period.

3. The EU covers 27 member states as at September 2022. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Between 2010 and 2020, the largest decrease in forest area was in Brazil (1.5 million hectares per year on average) and the largest increase was in China (1.9 million hectares per year on average) (Figure 9.3).

Figure 9.3 Countries with largest changes in forest area, World, 2010 to 2020



Source: FAO Global Forest Resources Assessment 2020.

Notes:

1. Top and bottom 5 countries with the largest annual change shown only.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.4 Forest carbon stocks

Carbon stocks in forest living biomass have increased in Europe and North & Central America between 1990 and 2020, but have shown an overall decrease at a global level over this period (Table 9.3).

The overall decrease has mainly been driven by declines in South America and Africa, where forest areas have decreased. Carbon stocks in biomass also increased slightly in Asia, where carbon sequestered in new plantations has balanced out carbon losses from areas of deforestation.

Table 9.3 Carbon stocks in forest living biomass by region, World, 1990 to 2020

Region	giga tonnes of carbon ¹				
	1990	2000	2010	2015	2020
Europe ²	45	48	51	53	55
Africa	59	56	54	52	51
Asia	34	35	36	37	38
North and Central America	39	40	41	41	42
Oceania	14	14	14	14	14
South America	106	102	98	97	96
World	298	296	294	295	295

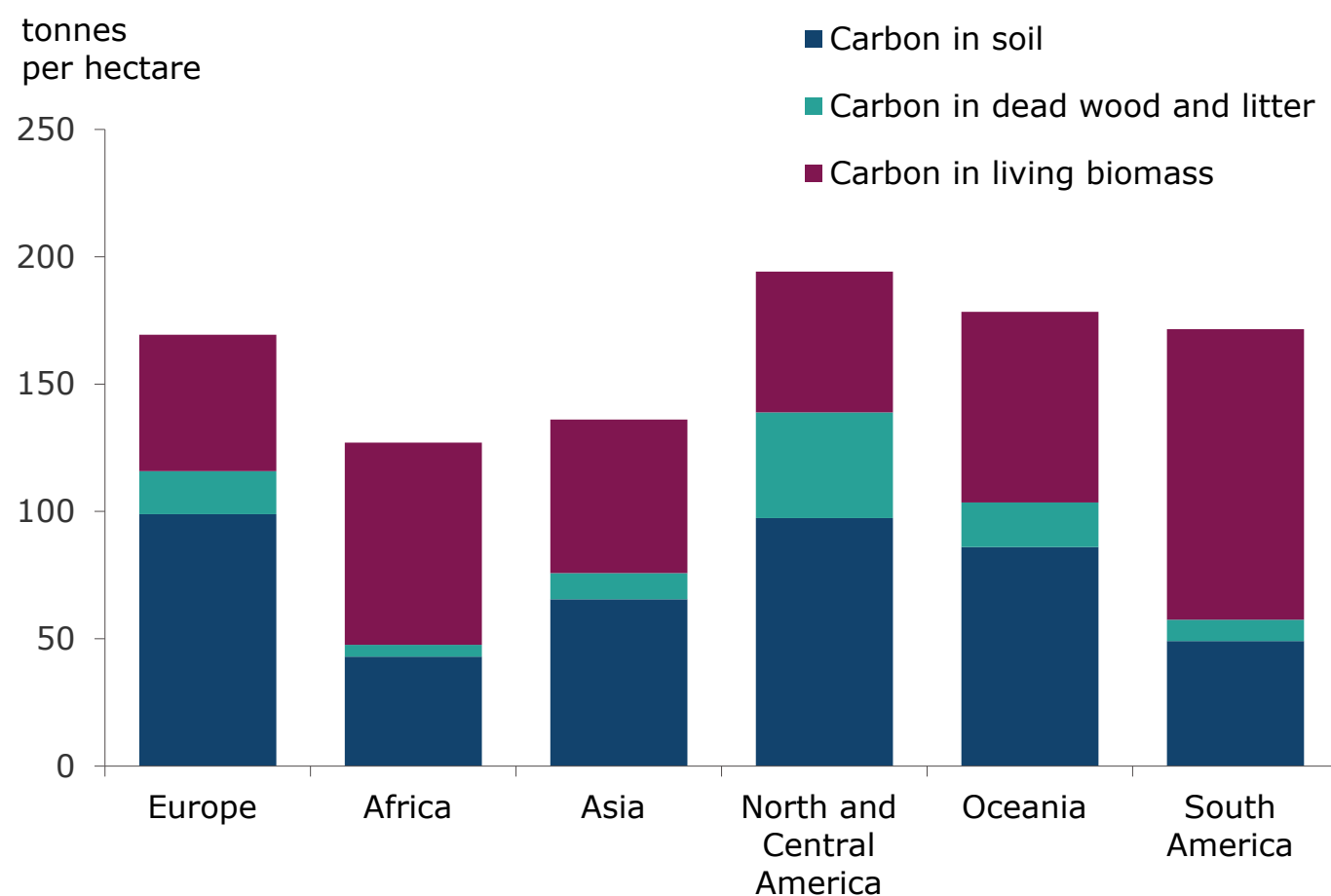
Source: FAO Global Forest Resources Assessment 2020.

Notes:

1. A giga tonne is a thousand million tonnes (10⁹ tonnes).
2. The Europe region covers 26 EU countries (excluding Cyprus), the UK, Russia and other countries, including Norway, Switzerland, Serbia and Ukraine.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 9.4 Forest carbon stock per hectare by region, World, 2020



Source: FAO Global Forest Resources Assessment 2020.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.5 Wood removals

A total of 3.9 billion m³ underbark of wood was removed from global forests in 2020, of which around one half (49%) was for use as woodfuel and the remainder was industrial roundwood (for use by wood processors) (Table 9.4).

North & Central America and Europe together accounted for around three fifths (58%) of all industrial roundwood removals in 2020. Globally, removals of industrial roundwood increased by 7% between 2015 and 2020, resulting from increases in all regions except North & Central America.

Nearly three quarters (74%) of woodfuel removals in 2020 took place in Asia and Africa.

Table 9.4 Wood removals by region, World, 1990 to 2020

million m³ underbark

Region	1990	2000	2010	2015	2020
Industrial roundwood	1,585	1,690	1,723	1,854	1,984
Europe	517	519	533	579	633
UK	6	8	8	9	8
EU ¹	311	335	331	343	378
Africa	61	71	72	75	79
Asia	268	273	379	403	453
North & Central America	595	631	484	515	511
Oceania	34	47	57	64	77
South America	110	147	198	217	229
Woodfuel	1,814	1,795	1,864	1,901	1,928
Europe	138	109	155	169	170
UK	0	0	1	2	2
EU ¹	67	85	115	119	121
Africa	445	551	644	679	712
Asia	897	808	764	735	706
North & Central America	162	129	129	136	145
Oceania	9	13	11	10	10
South America	162	185	162	171	180
Total roundwood	3,399	3,485	3,587	3,755	3,912
Europe	655	628	687	748	804
UK	6	8	10	11	11
EU ¹	378	420	446	462	499
Africa	506	623	715	754	792
Asia	1,166	1,081	1,144	1,138	1,159
North & Central America	757	761	614	652	656
Oceania	43	60	68	74	87
South America	272	332	359	388	409

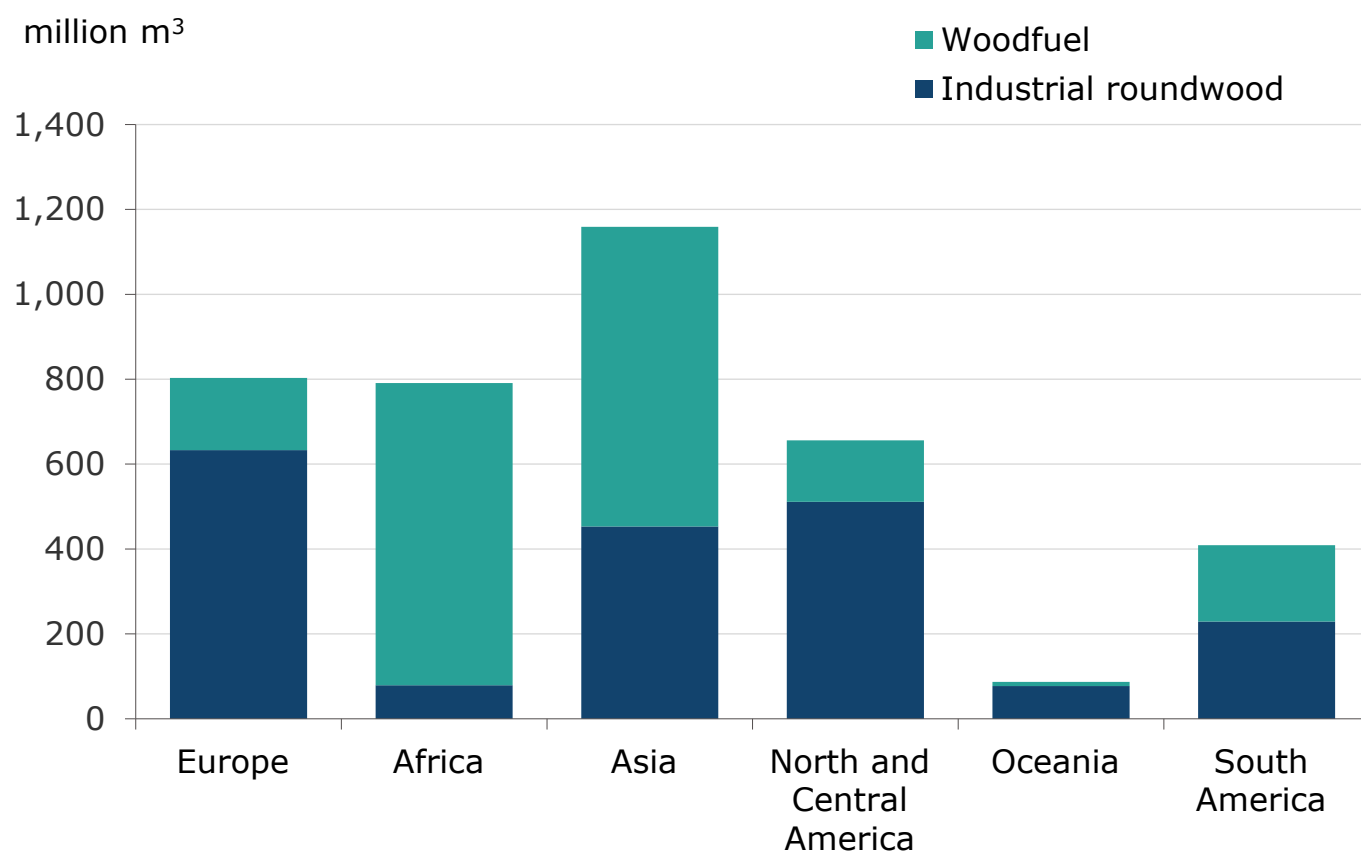
Source: FAO.

Notes:

1. The EU covers 27 member states as at September 2022. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 9.5 Wood removals by region, World, 2020



Source: FAO.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.6 Production of wood products

Global production of wood products in 2020 totalled 473 million m³ of sawnwood, 368 million m³ of wood-based panels and 401 million tonnes of paper & paperboard (Table 9.5).

Europe produced just over one third (36%) of all sawnwood in 2020 (mainly in EU countries), with over one quarter (28%) in Asia and a further quarter (26%) produced in North & Central America. Overall, sawnwood production increased by 5% between 2015 and 2020, driven by increases in most regions.

Wood-based panels were more commonly produced in Asia, accounting for over one half (58%) of global production in 2020. Nearly one quarter (23%) were produced in Europe (mainly in EU countries) and 13% in North & Central America. At a global level, wood-based panel production increased by 6% between 2015 and 2020, mainly driven by increases in Europe and in Asia.

Asia also accounted for almost one half (49%) of paper and paperboard production in 2020, with one quarter (25%) in Europe and a further 20% in North & Central America. At a global level, paper and paperboard production fell only slightly between 2015 and 2020.

Table 9.5 Production of wood products by region, World, 1990 to 2020

Region	1990	2000	2010	2015	2020
Sawnwood	419	385	376	448	473
Europe	149	130	139	150	170
UK	2	3	3	3	3
EU ¹	80	98	98	101	109
Africa	8	8	9	10	11
Asia	105	61	86	125	133
North and Central America	129	146	102	127	123
Oceania	6	8	9	9	9
South America	22	32	30	26	26
Wood-based panels	126	178	284	345	368
Europe	48	59	71	79	85
UK	2	3	3	3	3
EU ¹	34	48	53	56	57
Africa	2	1	2	2	3
Asia	27	46	153	196	213
North and Central America	44	61	42	48	47
Oceania	2	3	3	3	3
South America	4	8	15	16	18
Paper and paperboard	235	325	392	407	401
Europe	74	100	106	104	99
UK	5	7	4	4	4
EU ¹	59	83	91	88	81
Africa	3	4	4	4	3
Asia	57	95	170	192	198
North and Central America	92	111	94	88	81
Oceania	3	4	4	4	4
South America	8	11	15	15	15

Source: FAO.

Notes:

1. The EU covers 27 member states as at September 2022. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.7 Apparent consumption of wood products

Apparent consumption (defined as production + imports - exports) of wood products around the world totalled 465 million m³ sawnwood, 367 million m³ wood-based panels and 401 million tonnes of paper and paperboard in 2020 (Table 9.6).

Two fifths (40%) of all sawnwood in 2020 was consumed in Asia and around one quarter each in North & Central America (26%) and in Europe (25%). Reflecting the increased production of sawnwood (see Table 9.5), apparent consumption of sawnwood increased by 5% overall between 2015 and 2020. This was driven by increases in apparent consumption in Asia, Europe and North & Central America.

Asia consumed over one half (57%) of the world's wood-based panels in 2020, around one quarter (22%) was consumed in Europe and 15% in North & Central America. Apparent consumption of wood-based panels worldwide increased by 7% between 2015 and 2020, largely resulting from increased demand in Asia and in Europe.

Over one half (52%) of all paper and paperboard in 2020 was consumed in Asia, 21% in Europe and a further 20% in North & Central America. At a global level, apparent consumption of paper and paperboard in 2020 achieved levels similar to those reported in 2015.

Table 9.6 Apparent consumption of wood products by region, World, 1990 to 2020

Region	1990	2000	2010	2015	2020
Sawnwood	426	387	372	444	465
Europe	158	121	110	107	114
UK	13	10	9	10	10
EU ¹	83	90	82	79	86
Africa	10	10	17	19	16
Asia	112	78	116	170	185
North and Central America	119	143	95	119	121
Oceania	6	8	8	8	8
South America	20	27	26	20	19
Woodbased panels	127	181	282	342	367
Europe	52	57	67	73	79
UK	5	6	6	6	6
EU ¹	36	46	48	51	55
Africa	1	2	3	4	6
Asia	25	50	148	192	209
North and Central America	44	64	48	56	56
Oceania	2	2	3	3	3
South America	3	6	12	13	14
Paper & paperboard	236	325	391	403	401
Europe	71	90	95	91	86
UK	9	12	11	9	7
EU ¹	53	72	74	71	67
Africa	4	5	7	8	7
Asia	62	103	178	198	208
North and Central America	88	109	90	86	80
Oceania	3	5	5	4	4
South America	8	12	16	16	16

Source: FAO.

Notes:

1. The EU covers 27 member states as at September 2020. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

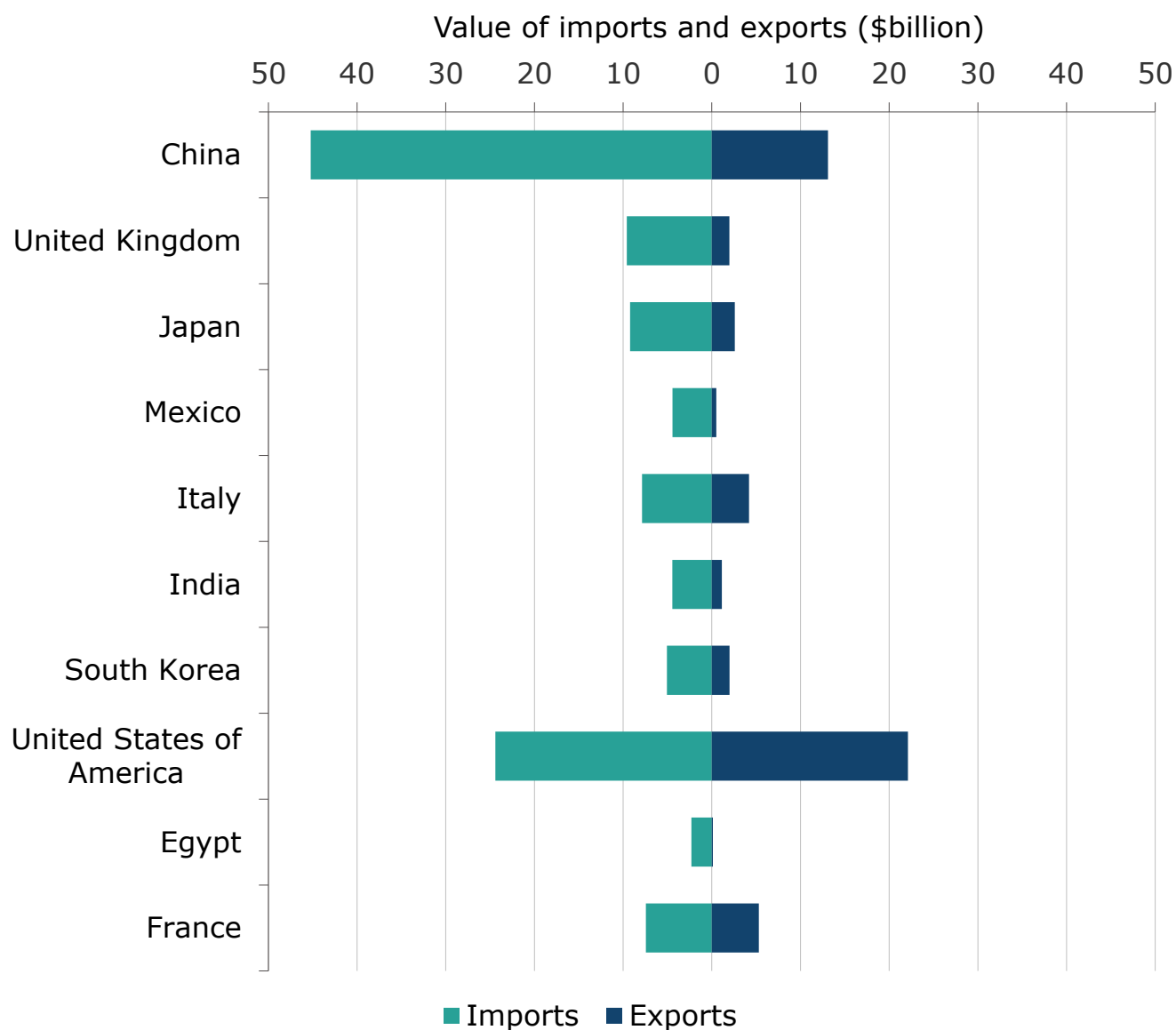
These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.8 World trade in forest products

Figures 9.6 and 9.7 show the largest ten net importers and exporters (ranked by value) of forest products in 2020. This covers trade in roundwood, sawnwood, wood-based panels, wood pulp and paper and paperboard, but excludes trade in secondary processed wood (e.g., furniture made from wood). Values are expressed in US dollars (the units reported in the data published by FAO).

The UK was the second largest net importer (imports less exports) of forest products in 2020, with net imports of US \$7.6 billion (Figure 9.6). The largest net importer in 2020 was China (US \$32.1 billion) and Japan was the third largest net importer (US \$6.6 billion).

Figure 9.6 Largest net importers of forest products, World, 2020



Source: FAO

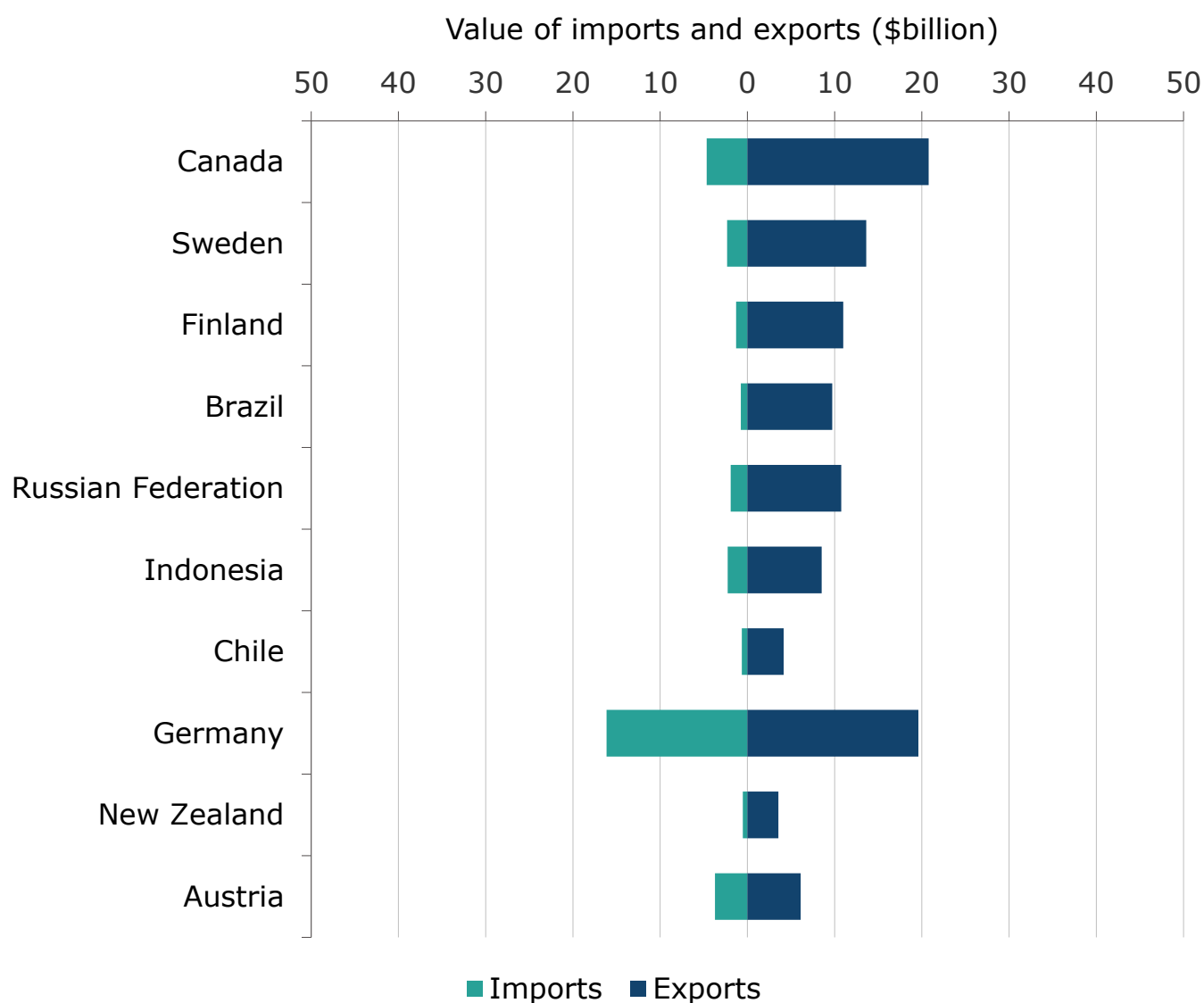
Notes:

1. Excludes trade in secondary wood products.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

The largest net exporters (exports less imports) of forest products in 2020 were Canada (with net exports valued at US \$16.1 billion), Sweden (US \$11.3 billion) and Finland (US \$9.7 billion) (Figure 9.7).

Figure 9.7 Largest net exporters of forest products, World, 2020



Source: FAO

Notes:

1. Excludes trade in secondary wood products.

-
2. These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Glossary

Ancient woodland

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

Awaiting validation

Status for a Woodland Carbon Code project or group that is undergoing assessment by a certification body.

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 is 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.

Confor

Confederation of Forest Industries.

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 27 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 and Sweden.

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 Research (FR)

The Forestry Commission agency responsible for forestry and tree related research (including statistics).

Forest Service (FS)

An executive agency of the Department of Agriculture, Environment and Rural Affairs (DAERA). Forest Service fulfils DAERA's legal obligations for forestry in Northern Ireland.

Forestry and Land Scotland (FLS)

The Scottish Government agency responsible for managing the national forests and lands in Scotland, created on 1 April 2019.

Forestry Commission (FC)

The government department responsible for forestry matters in England. The Forestry Commission's functions in Wales transferred to the Welsh Government and to Natural Resources Wales on 1 April 2013. The Forestry Commission's functions in Scotland transferred to Scottish Forestry and to Forestry and Land Scotland on 1 April 2019. The Forestry Commission is supported by two agencies: Forestry England and Forest Research.

Forestry England (FE)

The Forestry Commission agency responsible for managing the national forests in England. Prior to April 2019, Forestry England was known as Forest Enterprise England.

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, payments and customs 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.

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.

PEFC

Programme for the Endorsement of Forest Certification.

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 replacement of trees on areas of woodland that have been felled; this can be done either through replanting or natural regeneration.

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 Forestry (SF)

The Scottish Government agency responsible for forestry policy, support and regulations, created on 1 April 2019. Scottish Forestry also has responsibility for

managing the UK Woodland Carbon Code on behalf of the Forestry Commission in England, the Welsh Government and the Northern Ireland Forest Service.

Scottish Government (SG)

The executive branch of the devolved government of Scotland.

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/ Scottish Forestry/ 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. A temporary reduction in standing volume will result.

Tonne of carbon dioxide equivalent (tCO₂e)

Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO₂) equivalent. To convert from tonnes CO₂ to tonnes carbon multiply by 12/44.

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)

United Kingdom of Great Britain and Northern Ireland.

Validated

The initial evaluation of a project or group against the requirements of the Woodland Carbon Code. Upon completion a project/ group will receive a 'Validation Opinion Statement'. The project/ group will then be certified for a period of up to five years.

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.

Verified

Verification is the evaluation of a Woodland Carbon Code project as it progresses to confirm the amount of CO₂ sequestered to date as well as that it continues to meet the requirements of the Code.

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% or having the potential to achieve this, including integral open space, and including felled areas that are due to be restocked. Generally (including the UK) woodland is defined as having a minimum area of 0.5 hectares.

Wood Raw Material Equivalent (WRME)

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

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 of Official Statistics web page](#).

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. This edition of Forestry Statistics includes the following tables and charts that are outside the scope of 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;
- Table 2.30: Recycled wood used for woodfuel;
- Tables 4.1 to 4.3, Figure 4.1: Carbon;
- Table 5.2 and Figure 5.2: Tree health;
- Tables 5.3a and 5.3b: Woodland types and habitats;

- Tables 6.1 to 6.6, Figures 6.1 and 6.2: Social;
- Tables 9.1 to 9.6, Figures 9.1 to 9.7: International forestry.
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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*.

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 National Inventory of Woodland and Trees (1995 to 1999) 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. Both definitions are slightly different than those used internationally which are based on 10% canopy cover, a minimum height at maturity of 5m and minimum area of 0.5 hectares.

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 managed by Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW), or the Forest Service (FS) in Northern Ireland. Woodland owned by local authorities, the Ministry of Defence, non-government organisations including the Woodland Trust and other public sector bodies are included in “private sector woodland”.

The Natural Resources Wales woodland areas relate to the Welsh Government Woodland Estate. There is approximately 900 hectares of woodland on National Nature Reserves and other land managed by Natural Resources Wales that is not included in the Natural Resources Wales figures.

The following pages provide more detail on the data sources and methodology used to produce statistics on woodland area and planting. For more information see the [quality report on woodland statistics](#).

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 England, Forestry and Land Scotland and Natural Resources Wales administrative records of FE/FLS/NRW land areas;
- [National Forest Inventory](#) (NFI) woodland map (GB);
- Statistics on new planting in Great Britain;
- Northern Ireland Woodland Register; and
- Forest Service administrative records of FS woodland areas (Northern Ireland).

Estimates of woodland area in Great Britain are based on figures produced from forest inventories. Until recently, forest inventories in Great Britain were undertaken every 15 years or so. The current National Forest Inventory (NFI), unlike previous inventories, is planned to run on a continuous 5-year cycle.

As forest inventories are generally not designed to produce annual figures, a process is required for updating the results on an annual basis to take account of changes in woodland area. The methodology currently used to calculate annual woodland area estimates is described below.

The data processing takes place in Excel. The main outputs are aggregates from the source data, or breakdowns expressed as percentages, and do not require complex data analysis techniques.

1. For Great Britain, woodland area estimates are based on the latest NFI woodland area map of Great Britain available. In this release, woodland area estimates at March 2021 and at March 2022 are both based on the provisional NFI woodland area map at March 2021.
2. The map is overlaid with a map of Forestry England, Forestry and Land Scotland and Natural Resources Wales (Welsh Government Woodland Estate only) land, to enable a breakdown by ownership to be estimated. This also enables FE/FLS/NRW “other land” areas to be derived (Table 1.5). For woodland area estimates at March 2021, FE/FLS/NRW legal boundaries at March 2021 are used, and for estimates at March 2022, FE/FLS/NRW legal boundaries at March 2022 are used.
3. The woodland area breakdown by type of woodland (conifer or broadleaf) is estimated from the conifer/broadleaf breakdown of stocked woodland area, with areas of felled and open space allocated to conifer or broadleaf pro-rata. Estimates for stocked areas at March 2012 derived from NFI interim field survey results are updated to take into account new planting since that date, for which the conifer/broadleaf breakdown is also known. As the area of new planting is much smaller than total woodland area, the effect of this update on the overall conifer/broadleaf breakdown is very small.

The steps above are sufficient to determine woodland area estimates at March 2021, broken down by ownership and conifer/broadleaf.

To obtain estimates at March 2022, two more steps need to be performed, which are described below.

4. Net ownership transfers of woodland between private sector and FE/FLS/NRW from March 2021 to March 2022, as inferred by the differences in

FE/FLS/NRW legal boundaries between those two dates, are broken down by conifer/broadleaf. The breakdown is based on NFI Interpreted Forest Type (IFT) at those dates, derived from photographic interpretation of the NFI woodland map. The "Conifer" and "Mixed mainly conifer" (>80% conifer) IFT categories are assigned to conifers, and the "Broadleaves" and "Mixed mainly broadleaved" (>80% broadleaved) categories are assigned to broadleaves. For the other IFT categories, the conifer/broadleaf breakdown is allocated pro-rata based on the conifer/broadleaf breakdown of woodland area by ownership (private sector or FE/FLS/NRW) before transfer.

5. The woodland area figures are then updated to March 2022 by adding areas of new planting in 2021/22, broken down by ownership and type.

Information on previous methodologies can be found in the Methodology Note: Annual Woodland Estimates produced in May 2012, on the [Methodology and Outputs page](#).

The methodology and outputs relevant to UK woodland area, planting and restocking were reviewed in 2014. For more information see the [Methodology Review: Woodland Area, Planting and Restocking](#).

The provisional 2021 woodland map differs from the figures for woodland area provided in the NFI report on Tree cover outside woodland in Great Britain, that were based on the NFI 2013 map and the National Tree Map™ (NTMTM), the latter in combination with samples of visual aerial photograph interpretation and field sampling outside of areas on the NFI map. The estimates in the tree cover report include estimates of woodland area outside the NFI map derived from the other sources. Work is ongoing to calibrate the figures, and the NFI woodland map for 2019 incorporates amendments made to date as a result of the calibration (as well as additional areas of woodland creation since 2013). See the [National Forest Inventory](#) for more information on the methodology used and comparisons of results from the NFI and previous woodland area estimates.

Figures for Northern Ireland (Forest Service and non-Forest Service woodland) are provided by the [Forest Service](#). Woodland areas from 2012 provided in this release have been obtained from the NI draft woodland register.

The NI draft 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 draft 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.

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 FE/FLS/NRW/FS woodlands are certified, the total woodland area (as derived above, from the NFI woodland map and FE/FLS/NRW 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 as a land cover, so felled areas and small areas (less than 0.5 ha) of

open space 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 \(2007\)](#) and associated Land Cover Map; a more recent Land Cover Map 2015 is also available).

Detailed information on the quality of the woodland area statistics presented in this publication is available in the [Quality Report: Woodland Statistics](#). Further quality information on our Official Statistics is also available from this location.

Revisions

Data at March 2022 have not been revised from those published in Provisional Woodland Statistics 2022 in March 2022.

Information on revisions made since Forestry Statistics 2021 are provided in Provisional Woodland Statistics 2022.

Information on significant revisions to published statistics is provided in the [quality report on woodland statistics](#). Our [revisions policy](#) sets out how revisions and errors are dealt with.

Further information

Figures for woodland area in the UK are provided to international organisations every 4 to 5 years; to the Food and Agriculture Organisation of the United Nations (FAO) for the [Global Forest Resources Assessment](#), and to [Forest Europe](#) for the State of Europe's Forests report.

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). [Official statistics on UK greenhouse gas emissions](#) are produced by the Department for Business, Energy and Industrial Strategy.

Release schedule

Woodland area and certified woodland area data are released twice a year.

Provisional figures are published in Provisional Woodland Statistics (previously Woodland Area, Planting and Publicly Funded Restocking) in early June. Final figures are released in Forestry Statistics at the end of September.

Provisional figures for woodland area and certified woodland area at March 2023 will be published on 15 June 2023 in Provisional Woodland Statistics 2023.

Final results for woodland area and certified woodland area at March 2023 will be published on 28 September 2023 in Forestry Statistics 2023 and Forestry Facts & Figures 2023.

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:

1. 1905 Felled areas and scrub were not included.
2. 1924 Undertaken by questionnaire; woods smaller than 2 acres (0.8 hectares) were not included.
3. 1947 Woodlands with an area of less than 5 acres (2 hectares) were not included.
4. 1965 Woodlands with an area of less than 1 acre (0.4 hectares) were not included.
5. 1980 Woodlands with an area of less than 0.25 hectares were not included.

6. 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.
7. 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.
8. Estimates of woodland area prior to 1905 have been obtained from a variety of sources, including:
9. Domesday Survey of England - for information in 1086;
10. Scottish Woodland History (TC Smout, 1997) - for estimate for end Middle Ages in Scotland;
11. Roy maps ca. 1750 - 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 page](#).

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 England, Forestry and Land Scotland, Natural Resources Wales and Forest Service new planting and restocking comes from administrative systems. For new planting and restocking by Forestry and Land Scotland and by Natural Resources Wales, the figures obtained relate to net areas (i.e., excluding integral open space). These are converted to estimates of gross areas (i.e., including integral open space) for consistency with other planting and woodland area data, by using an assumption of 15% open space.

Information about other woodland has come principally from grant schemes, including Countryside Stewardship in England, the English Woodland Grant Scheme (EWGS), Glastir in Wales, Forestry Grant Scheme in Scotland and legacy grant schemes.

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 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 changed with the introduction of Rural Development Contracts in Scotland in 2008 and again with the introduction of the Forestry Grant Scheme in 2015. This will have led to a reduction in the proportion of private sector restocking that is grant aided and therefore reported for Scotland.

New planting estimates for England also include areas supported by the Woodland Trust and areas funded by Natural England (Higher Level Stewardship / Countryside Stewardship). From 2016/17, the estimated area of new planting includes new woodland creation supported by the Woodland Trust under the MOREwoods and

Partnerships England projects. From 2017/18, the estimated area of new planting also includes new woodland creation supported by the Environment Agency.

Areas of land acquired by the National Forest Company for new planting have been included from 2015/16. To avoid potential double counting, areas of new planting by the National Forest Company that are believed to be supported by grant aid or by the Woodland Trust (and have therefore already been included in the figures reported for these other sources) have been excluded.

Local estimates for private sector areas of planting and restocking which are not grant-aided were included for England, Wales and Scotland up to 2009/10, where possible. Estimates of non-grant-aided planting and restocking were relatively small (less than one thousand hectares annually), and it has been assumed that all of this area is broadleaves. A small estimate for broadleaved new planting without grant aid in Scotland in 2016/17 and 2018/19 to 2019/20 was also included. No estimates have been included for restocking with Sitka spruce in Scotland, or for restocking in England, that are no longer supported by grants. It is assumed that there is no private sector non-grant aided new planting and restocking in Northern Ireland.

The use of natural regeneration in non-clearfell systems may be increasing - particularly for broadleaves in England. These systems are not satisfactorily represented by measuring restocking area within any given year, and so broadleaf regeneration may 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](#).

The [methodology and outputs relevant to UK woodland area, planting and restocking were reviewed](#) in 2014.

Revisions

Figures for 2021/22 are final, and are unchanged from the provisional figures previously released in Provisional Woodland Statistics 2022.

Information on significant revisions to published statistics is provided in the [quality report on woodland statistics](#). [Our revisions policy](#) sets out how revisions and errors are dealt with.

Further information

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). [Official statistics on UK greenhouse gas emissions](#) are produced by the Department for Business, Energy and Industrial Strategy.

Release schedule

New planting and restocking data are released twice a year. Provisional figures are published in Provisional Woodland Statistics in early June. Final figures are released in Forestry Statistics at the end of September.

Provisional figures for new planting and restocking in 2022/23 will be published on 15 June 2023 in Provisional Woodland Statistics 2023.

Final results for new planting and restocking in 2022/23 will be published on 28 September 2023 in Forestry Statistics 2022 and Forestry Facts & Figures 2022.

Felling

Introduction

Under the Forestry Act 1967 and the Forestry and Land Management Act (Scotland) 2018, 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 (or felling permissions under the Forestry and Land Management Act in Scotland) 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, Scottish Forestry, Natural Resources Wales and the Northern Ireland 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, Scottish Forestry, 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).

Quality

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

Revisions

Figures on felling licences and figures for Statutory Plant Health Notices in 2021/22 are released for the first time in this publication.

[Our revisions policy](#) sets out how revisions and errors are dealt with.

Further information

Some related figures for England on felling licences have been released. Data on the total area covered by felling licences (conditional and unconditional) were released on 16 June 2022 in [Forestry Commission Key Performance Indicators: Report for 2020-21](#).

Further information on felling licences (including details of exemptions) can be found at:

- [Tree felling licence guidance from the Forestry Commission \(England\)](#);
- [Tree felling licence and other regulations from Natural Resources Wales \(Wales\)](#);
- [Felling permissions from Scottish Forestry \(Scotland\)](#).

Further information on [tree pests and diseases in the UK](#) is available on GOV.UK.

Release schedule

Figures on felling licences and Statutory Plant Health Notices in 2022/23 will be published on 28 September 2023 in Forestry Statistics 2023.

Sources: Timber

Introduction

This page provides an overview of the sources for 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:

- Administrative records of removals from Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW) and Northern Ireland Forest Service (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 FE/FLS/NRW/FS woodlands.

Timber availability forecasts are obtained from the "25 year forecast of softwood availability 2022", released in July 2022, and the "50 year forecast of hardwood availability", released in April 2014, and made available by [National Forest Inventory](#).

Deliveries are estimated from the following sources:

- the Sawmill Survey;
- the Wood Panel Industries Federation (for wood-based panels);
- the Confederation of Forest Industries, Confor (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](#).

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"](#).

Further quality information on our Official Statistics, including separate reports for each of the industry surveys used in this release, is available in [our code of practice](#).

Revisions

Figures for 2021 and earlier years have been previously published. They are however subject to revisions from those published in "UK Wood Production and Trade: 2021 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](#).

[Our revisions policy](#) sets out how revisions and errors to these statistics are handled.

Further information

Most of these statistics are used to compile data that are sent to international organisations in the Joint Forest Sector Questionnaires, in some cases giving more detail than in this release. These returns are published as Official Statistics on the Forest Research website; provisional figures in May and final figures in September/October. The statistics are used by UNECE Timber Bulletins and UN/FAO Forest Product Statistics and are published on the [FAOSTAT database](#). 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 the [Joint Forest Sector Questionnaire definitions](#).

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's Timber Committee webpage](#). Copies of [previous UK returns for the UNECE Timber Forecast Questionnaire](#) are available online.

The Department for Business, Energy and Industrial Strategy publishes an [annual Digest of UK Energy Statistics](#). 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 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2021 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Wood production

Sources

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

- Forestry England (FE), Forestry and Land Scotland (FLS), Natural Resources Wales (NRW) and Northern Ireland Forest Service (FS) administrative records - for all removals from FE/FLS/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 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.

Methodology

Figures for removals from FE/FLS/NRW/FS woodlands are converted from cubic metres (m³) 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 FE/FLS/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 FE/FLS/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"](#).

Revisions

Private sector softwood removals are subject to revision annually (see following page, on the Private Sector Softwood Removals Survey). Removals from FE/FLS/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 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". Figures for 2021 and earlier years have not been revised from those provided in "UK Wood Production and Trade: 2021 provisional figures".

Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 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 FE/FLS/NRW/FS removals. Approximate country breakdowns are also estimated for hardwood removals.

Longer time series, presenting estimates of FE/FLS/NRW/FS and private sector removals by country and by softwood/hardwood are [available on our data downloads web page](#).

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2022 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Private Sector Softwood Removals Survey

Introduction

The Private Sector Softwood Removals Survey is an annual survey conducted by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Natural Resources Wales and the Northern Ireland Forest Service) of a sample of harvesting companies in the UK.

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](#) is issued annually to around 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;
- (from the 2008 survey) the quantity sold to bioenergy (including wood pellet manufacture);
- (for the 2013 - 2017 surveys) the quantity of softwood roundwood harvested as required by plant health legislation and
- (from the 2018 survey) the quantity of removals by type of product.

Response rates

The questionnaire was issued to 46 harvesting companies for the collection of 2021 data, of which 33 responded, giving a response rate of 72%. These respondents are estimated to account for around 99% of all the softwood harvested by companies covered by the survey.

Private Sector Softwood Removals Survey Response Rates, 2012-2021

Year	Forms issued	Responses received	Response rate ¹	Weighted response rate ²
2012	37	27	73%	95%
2013	40	28	70%	96%
2014	39	30	77%	97%
2015	40	27	68%	94%
2016	40	26	65%	94%
2017	40	31	78%	95%
2018	43	37	86%	90%
2019	40	26	65%	88%
2020	42	33	79%	94%
2021	46	33	72%	99%

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 the softwood harvested by companies covered by the survey that is accounted for by respondents.

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.

In the current 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. This figure remains under review.

Quality

Detailed information on the survey quality is available in the ["Quality Report: Private Sector Softwood Removals Survey"](#).

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 2021 are final. Figures for 2021 and earlier years have not been revised from those provided in "UK Wood Production and Trade: 2021 provisional figures".

Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 provisional figures".

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2022 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Sawmill Survey

Introduction

The Sawmill Survey is an annual survey conducted by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Natural Resources Wales and the Northern Ireland 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 detailed survey has changed over the years, both in terms of coverage and periodicity. From 2016, the threshold for inclusion in the detailed sawmill survey has been raised to annual production of at least 25,000 m³ sawnwood. Information on changes prior to 2009 are available in previous editions of Forestry Statistics.

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 2.8 to 2.10.

Longer time series, providing data on numbers of mills and on softwood consumption and production are available on [our data downloads web page](#). 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 30 mills that have annual production of at least 25,000 m³ of sawnwood, and

- a short questionnaire is sent to all other mills that are believed to use UK sawlogs (currently around 120 mills).

Both the detailed and the short 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,
- (from the 2008 survey) total employment and
- (for the 2018 survey only) total wood inputs.
- (from the 2021 survey) preservative treatment of sawnwood

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, are available.

Response rates

Detailed questionnaires were issued to 30 mills for the collection of 2021 data, of which 27 responded, giving a response rate of 90%. For the short questionnaire, 31 responses were received from the 119 forms issued, corresponding to a 26% response rate. This gives an overall response rate of 39%.

Overall, the 58 sawmills responding to the sawmill survey in 2021 are estimated to account for around 88% of total UK sawnwood production.

Sawmill Survey Response Rates (all questionnaires), 2012-2021

Year	Forms issued	Responses received	Response rate ¹	Weighted response rate ²
2012	196	86	44%	84%
2013	191	83	43%	80%
2014	178	82	46%	84%
2015	179	84	47%	79%
2016	173	74	43%	83%
2017	170	73	43%	86%
2018	155	64	41%	79%
2019	151	57	38%	75%
2020	98	51	52%	87%
2021	149	58	39%	88%

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 sawnwood production that is accounted for by respondents.

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 2.16a to 2.19a.

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 2.16a to 2.18a does not necessarily reflect a change in volumes.

Quality

Detailed information on the survey quality is available in the "Quality Report: Sawmill Survey", available in our [code of practice](#).

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 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". The following figures have been revised since "UK Wood Production and Trade: 2021 provisional figures":

- The production of sawn softwood in 2021 has been revised down by 10 thousand m³.

Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 provisional figures".

Further information

Figures for UK production of sawn softwood have previously been [used alongside data from other sources to assess consumption of sawn softwood in the main end-user markets in the UK](#).

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2022 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Pulp & paper

Introduction

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

- The [Confederation of Forest Industries](#) (Confor) provides figures on inputs to the integrated pulp and paper mills and
- the [Confederation of Paper Industries](#) (CPI) provides figures on total UK pulp and paper production.

Integrated pulp and paper mills are paper mills that use UK roundwood to produce pulp (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: sanitary & household papers, packaging materials and other paper & paperboard. The production data produced by the Confederation of Paper Industries no longer includes graphic papers as a separate category. As a result, the "other" paper & paperboard category in table 2.21 now includes graphic papers.

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.

From 2018, data was also requested on wood inputs for energy use.

Methodology

The data on inputs to integrated pulp and paper mills are collected by Confor 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 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures".

Figures for 2021 and earlier years have not been revised from those in "UK Wood Production and Trade: 2021 provisional figures". Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 provisional figures".

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2022 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Wood-based panels

Introduction

Data on the wood-based panel sector are obtained from the [Wood Panel Industries Federation](#) (WPIF) 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.

From 2018, data was also requested on wood inputs for energy use.

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 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". Figures for 2021 and earlier years have not been revised from those in "UK Wood Production and Trade: 2021 provisional figures".

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2021 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Survey of Round Fencing Manufacturers

Introduction

The Survey of Round Fencing Manufacturers is an annual survey conducted by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Natural Resources Wales and the Northern Ireland Forest Service) of round fencing manufacturers (or mills) in the UK that are believed to consume UK-grown roundwood.

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.

Data collected

The questionnaire used for the Survey of Round Fencing Manufacturers is issued to around 40 mills, to collect information on the consumption of UK-grown and 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. A question on total wood inputs was added for the 2018 survey but has since been dropped. A question on the preservative treatment of round fencing production was included in the 2020 survey.

More [information on the Survey of Round Fencing Manufacturers](#), including copies of the questionnaires sent to businesses in recent years, are available.

Response rates

The questionnaire was issued to 45 mills for the collection of 2021 data, of which 18 responded, giving a response rate of 40%. These respondents accounted for an estimated 40% of roundwood purchased by softwood round fencing manufacturers.

Survey of Round Fencing Manufacturers Response Rates, 2012-2021

Year	Forms issued	Responses received	Response rate ¹	Weighed response rate ²
2012	68	26	38%	53%
2013	67	27	40%	51%
2014	62	26	42%	42%
2015	60	29	48%	54%
2016	55	23	42%	49%
2017	53	21	40%	36%
2018	53	22	42%	37%
2019	50	20	40%	45%
2020	38	15	39%	34%
2021	45	18	40%	40%

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 roundwood purchased by softwood round fencing manufacturers that is accounted for by respondents.

Methodology

Each year, figures for non-respondents are estimated by rolling forward data from previous years for these mills. In 2020, this approach was modified to assume that the change from 2019 to 2020 for non-respondents would be similar to that for respondents. This improved methodology was continued for the 2021 survey.

Quality

Detailed information on the survey quality is provided in the ["Quality Report: Survey of Round Fencing Manufacturers"](#).

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 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". Data for 2021 and earlier years have not been revised from those in "UK Wood Production and Trade: 2021 provisional figures". Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 provisional figures".

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2021 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

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, Forest Service (for exports from Northern Ireland) and HM Revenue and Customs.

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 includes the following categories; industrial roundwood (excluding sawlogs), sawlogs and chips.

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 2017 to reflect a perceived increase in woodfuel, but this should not be interpreted as an increase in a single year. A further increase in 2018 reflects a rise that is believed to have occurred during the year.

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. Exports of hardwood roundwood are estimated from the overseas trade statistics produced by HM Revenue and Customs.

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.

Figures for 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". Figures for 2021 and earlier years have not been revised from those in "UK Wood Production and Trade: 2021 provisional figures". Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 provisional figures".

Release schedule

Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2021 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Comparison of removals and deliveries of UK softwood roundwood

The table below provides a comparison between the figures for removals (obtained from Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service and Private Sector Removals Survey) and deliveries (obtained from industry surveys and trade associations) of UK softwood roundwood.

The estimated total for softwood removals in the UK has generally been higher than the estimate for total UK softwood deliveries. At least some of this difference may indicate a possible undercounting of deliveries, particularly for roundwood that is used directly for woodfuel.

A larger discrepancy of 0.7 million green tonnes in 2018 has been offset by a reversal, with the estimate for softwood deliveries in 2019 around 0.4 million green tonnes higher than removals in 2019. Taken together, the total discrepancy for 2018 and 2019 equates to total removals around 0.3 million green tonnes higher than deliveries, suggesting that at least some of the changes in the difference between removals and deliveries during that period may be related to changes in the level of stocks.

Comparison of removals and deliveries of UK softwood roundwood, 2012-2021

thousand green tonnes

Year	FE/FLS/ NRW/FS removals	Private sector removals	Total removals	Deliveries	Balance ¹
2012	4,836	5,259	10,095	9,842	254
2013	5,084	5,852	10,936	10,559	377
2014	4,900	6,627	11,527	10,914	613
2015	4,691	5,968	10,659	10,276	382
2016	5,011	5,734	10,745	10,430	316
2017	4,761	6,075	10,836	10,471	366
2018	4,522	6,827	11,349	10,626	723
2019	3,937	5,884	9,822	10,225	-403
2020	4,616	5,437	10,053	9,904	149
2021	4,009	6,407	10,416	10,366	51

Source: Forestry England, Forestry and Land Scotland, 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.

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 FE/FLS/NRW/FS woodlands. The table below provides figures for the last 10 years.

Estimation of hardwood removals from private sector woodlands, 2012-2021

thousand green tonnes

Year	Deliveries	FE/FLS/NRW/FS removals	Private sector removals
2012	532	55	478
2013	530	78	452
2014	535	71	464
2015	564	73	491
2016	595	68	527
2017	736	85	651
2018	834	88	746
2019	868	68	800
2020	829	87	742
2021	823	96	727

Source: Forestry England, Forestry and Land Scotland, Natural Resources Wales, Forest Service, industry surveys, industry associations

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](#).

Data on UK pellet production and feedstock 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.

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 online.

Response rates

Response rates for the sawmill survey and survey of round fencing manufacturers are available on the relevant sources pages.

The 2021 survey of UK pellet and briquette production was sent to a total of 11 companies that were believed to manufacture pellets or briquettes. A total of 6 responded, giving a response rate of 55%. The respondents to the survey are estimated to account for around 92% of the total production of pellets and briquettes in the UK in 2021.

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, 2012-2021

Year	Forms issued	Response received	Response rate ¹	Weighted Response rate ²
2012	21	5	24%	75%
2013	18	8	44%	91%
2014	18	6	33%	91%
2015	18	5	28%	45%
2016	18	5	28%	68%
2017	17	4	24%	56%
2018	14	5	36%	89%
2019	14	5	36%	89%
2020	11	5	45%	91%
2021	11	6	55%	92%

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 and expert advice.

Quality

Detailed information on the pellet survey quality is available in the ["Quality Report: Survey of UK Pellet & Briquette Production"](#).

Revisions

All figures are subject to revision annually, as new information becomes available.

Figures for 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". The figures for 2021 and earlier years have not been revised since "UK Wood Production and Trade: 2021 provisional figures". Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 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 Scottish Forestry.

The Department for Business, Energy and Industrial Strategy (previously the Department of Energy and Climate Change) publishes [an annual Digest of UK Energy Statistics](#). 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

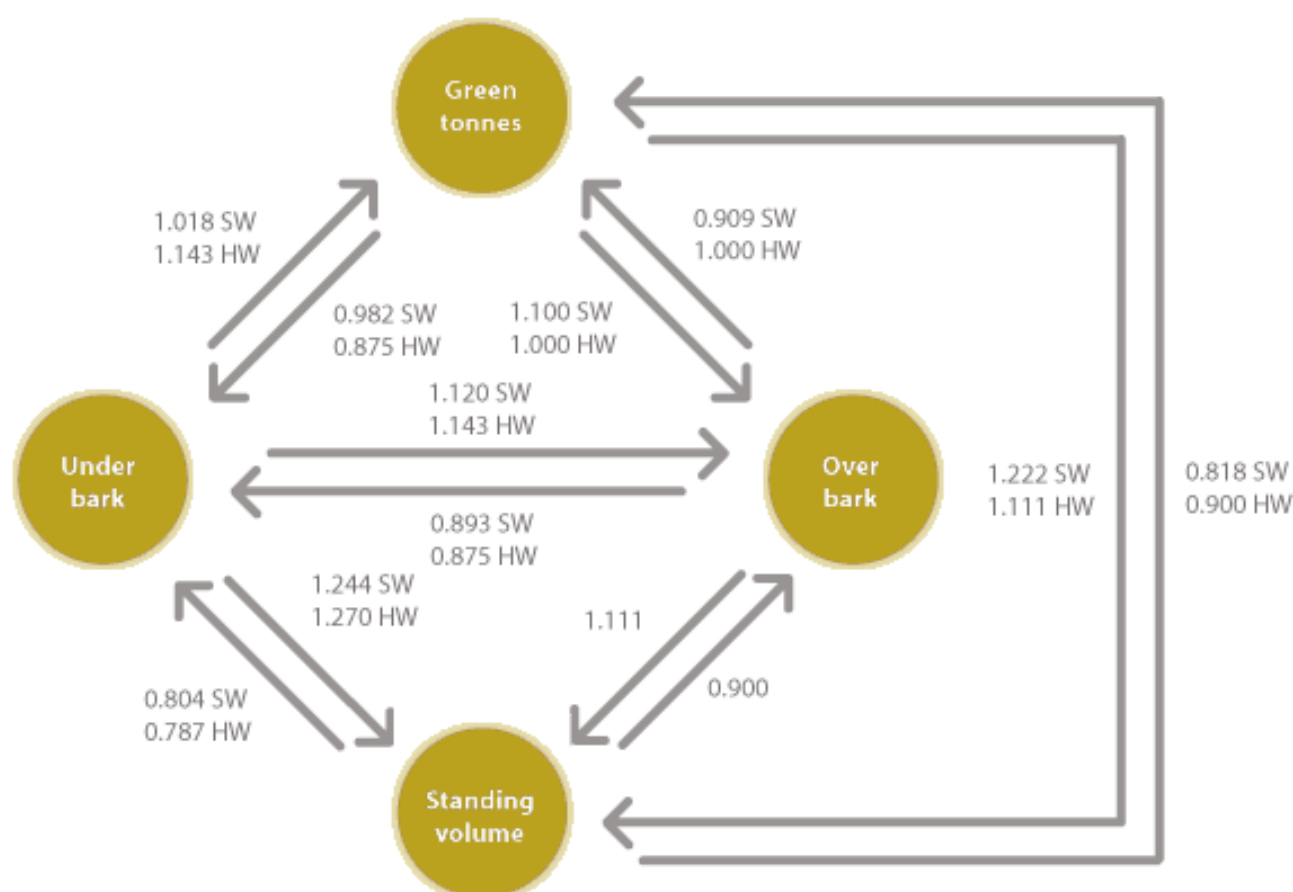
Provisional figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2021 provisional figures".

Final figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

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 diagram shows separate conversion factors to use when converting softwood (SW) and hardwood (HW) with arrows to indicate the direction of conversion. For example, to convert 1,000 green tonnes of SW into an under bark volume, the 1,000 green tonnes should be multiplied by the conversion factor of 0.982 to give 982 m^3 underbark. There is no difference between the softwood and hardwood conversion factors for converting between standing volume and overbark volumes.

The following factors have been used in Chapter 3 (Trade) to convert between cubic metres (m³) and metric tonnes:

In this case, all the factors are expressed as volumes (in m³) per weight (in tonnes). Therefore, to convert 1,000 tonnes of sawn softwood into a volume, the 1,000 tonnes should be multiplied by 1.82 to give 1,820 m³.

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 m³ 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	m ³	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.

Sources: Trade

Introduction

Statistics on imports and exports are based on the published overseas trade statistics are produced by HM Revenue & Customs (HMRC) and available through their [UK Trade Info platform](#).

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;
- recovered wood;
- 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.

The HMRC data are also available by country of origin (for imports) and destination country (for exports).

For consistency with timber deliveries data, softwood 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](#) (WPIF) and [Confederation of Paper Industries](#) (CPI). 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 are provided on their [Statistics pages](#).

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 provided in the ["Quality Report: UK Wood Production and Trade"](#).

Further quality information on our Official Statistics is available in [our code of practice](#).

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 2021 are final; provisional figures were previously released in "UK Wood Production and Trade: 2021 provisional figures". The following figures have been revised since "UK Wood Production and Trade: 2021 provisional figures":

- Import quantities in 2021 have been revised upwards by around 124 thousand m³ for woodbased panels and around 8 thousand m³ for 'other wood';
- Export quantities in 2021 have been revised downwards by around 3 thousand m³ for woodbased panels; and
- Import values in 2021 have been revised upwards by around £16 million for woodbased panels and around £1 million for 'other wood'.

Information on revisions made since "Forestry Statistics 2021" are provided in "UK Wood Production and Trade: 2021 provisional figures".

Information on significant revisions to published statistics is provided in the ["Quality Report: UK Wood Production and Trade"](#) at.

Our [revisions policy](#) sets out how revisions and errors to these statistics are handled.

Further information

Most of these statistics are used to compile data that are sent to international organisations in the Joint Forest Sector Questionnaires, in some cases giving more detail than in this release. These returns are published as Official Statistics on the Forest Research website; provisional figures in May and final figures in September/October. The statistics are used by UNECE Timber Bulletins, UN/FAO Forest Product Statistics and are published on [the FAOSTAT database](#).

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 the [Joint Forest Sector Questionnaire definitions](#).

The United Nations Economic Commission for Europe (UNECE) Committee on Forests and the Forest Industry 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's Timber Committee webpage](#). [Copies of UK returns for the UNECE Timber Forecast Questionnaire](#) are available online.

Figures for UK imports and exports of sawn softwood have [previously been used alongside data from other sources to assess consumption of sawn softwood in the main end-user markets in the UK](#).

Release schedule

Provisional trade figures for 2022 will be released on 18 May 2023 in "UK Wood Production and Trade: 2022 provisional figures".

Final trade figures for 2022 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Sources: Carbon

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

Forest carbon stock

Table 4.1a is adapted from Table 2d in the final UK report submitted in January 2019 to FAO for the [Global Forest Resources Assessment](#) (FRA) 2020. Table 4.1b has been compiled using the same approach to produce estimates by country within the UK.

Units: These tables are shown in million tonnes carbon dioxide equivalent (MtCO₂e) rather than million tonnes carbon (MtC). To convert from CO₂e to C multiply by 12/44.

Timescales: Carbon stock is estimated for 1990, 2000, 2010, 2015 and 2020.

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 = $0.36 \times$ above ground biomass) is used to estimate the breakdown between above- and below- ground biomass (Levy et al, 2004). Updated estimates of growing stock over time (making use of data from the National Forest Inventory) have been used.

Deadwood: Estimates of deadwood volume per hectare are taken from National Forest Inventory estimates. These are rated up by woodland area estimates for FRA 2020, 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 2020 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 2020 to provide a consistent time series. This soil estimate does not take account of soil carbon accumulation. 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 the National Atmospheric Emissions Inventory (NAEI, <http://naei.beis.gov.uk/>) which incorporates all air pollutants including greenhouse gases.

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 follow a central projection whereby planting up to 2020 is determined by the available grant for woodland creation (i.e. policy and funding in place), and after that planting rates drop to 10% of the baseline projection, reflecting the lack of funding beyond the current Rural Development Plan.

For more information, please refer to the [National Atmospheric Emissions Inventory](#) (NAEI).

Emissions and sequestration can be presented as tonnes carbon or tonnes carbon dioxide (CO₂). To convert from tonnes CO₂ 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](#). The register is a live database and summary data are extracted annually.

Further information on the Woodland Carbon Code is available at the [UK Woodland Carbon Code website](#).

Public opinion on climate change

Public Opinion of Forestry Surveys have been run every 2 years by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Welsh Government/Natural Resources Wales and Northern Ireland Forest Service). The surveys cover public attitudes to forestry and forestry-related issues. The surveys included up to 2 questions on climate change: one asking about ways in which forests and woodlands can impact on climate change and one asking about how UK forests should be managed in response to the threat of climate change (Table 4.4). Further information on the surveys is available in the Sources: Public Opinion of Forestry page.

References

Bradley, R.I., Milne, R., Bell, J., Lilly, A., Jordan, C., Higgins, A. (2005) "[A soil carbon and land use database for the UK](#)", Soil Use and Management 21 (363-369), DOI: 10.1079/SUM2005351.

Broadmeadow, M., Matthews, R. (2003) "[Forests, Carbon and Climate Change: the UK Contribution](#)", Forestry Commission, Edinburgh.

Department for Business, Energy and Industrial Strategy (2022) "[Final UK greenhouse gas emissions national statistics: 1990 to 2020](#)".

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.

Morison, J. et al (2012) "[Understanding the Carbon and GHG balance of UK Forests](#)", Forest Research.

[National Forest Inventory](#)

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

Most of the statistics in this chapter have been previously released. Data have not been revised from previous releases.

Our revisions policy sets out how revisions and errors to these statistics are dealt with, and is available on our [Quality of Official Statistics web page](#).

Release schedule

Woodland Carbon Code Statistics for the year ending March 2023 will be released in "Provisional Woodland Statistics: 2023 Edition" on 15 June 2023.

"Forestry Statistics 2023" and "Forestry Facts & Figures 2023" will be released on 28 September 2023.

The next Public Opinion of Forestry Survey is expected to run in early 2023, with results available in summer 2023.

Sources: Environment

Introduction

The statistics presented in the Environment chapter of this release cover:

- populations of wild birds;
- public opinion on tree health;
- woodland types and habitats.

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, 1970-2019 statistical release (Defra, November 2020), 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. A further change in 2015 resulted in the removal of one woodland specialist species from the index.

Public opinion on tree health

Public Opinion of Forestry Surveys have been run every 2 years by Forest Research (on behalf of the Forestry Commission, Scottish Forestry, Welsh Government/ Natural Resources Wales and Northern Ireland Forest Service). 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 document.

Woodland types and habitats

Data on woodland types and habitats comes from National Forest Inventory (NFI) report on Woodland Ecological Condition Statistics, released in February 2020. The accompanying report on NFI Woodland Ecological Condition Scoring Methodology provides more detailed information on definitions and methodology.

References

Department for Environment, Food and Rural Affairs (2020) "Wild bird populations in the UK, 1970-2019", National Statistics Release, available from the [GOV.UK website](https://www.gov.uk).

"NFI woodland ecological condition in Great Britain: Statistics", available from the [NFI pages on the Forest Research website](#).

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.

Revisions

Statistics on the environment obtained from others are subject to revision whenever the source data are revised.

Our revisions policy sets out how revisions and errors to these statistics are dealt with, and is available on our [Quality of Official Statistics web page](#).

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 2023, with results available in summer 2023.

"Forestry Statistics 2023" and "Forestry Facts & Figures 2023" will be released on 28 September 2023.

Sources: Social

Introduction

The data presented in the Social chapter of Forestry Statistics 2022 are based on general population surveys of individuals. This approach is employed for the People and Nature Surveys that run in Scotland and in England, the National Survey for Wales and the Public Opinion of Forestry surveys. (Tables 6.1 to 6.5).

Data Sources and Methodology

Household surveys

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

- Scottish Recreation Survey (to 2012)
- Welsh Outdoor Recreation Survey (2011, 2014)
- Monitor of Engagement with the Natural Environment (England 2009/10 onwards)
- Scotland's People and Nature Survey (2013 and 2017/18)

The [Monitor of Engagement with the Natural Environment](#) has also been used to provide information on visitor characteristics in table 6.2. The [People and Nature Survey](#) has now replaced the Monitor of Engagement with the Natural Environment.

Scotland's People and Nature Survey has replaced the Scottish Recreation Survey. Further information on both surveys are available at [the NatureScot website](#).

The [National Survey for Wales](#) has replaced the Welsh Outdoor Recreation Survey and provides statistics on visitor characteristics (Table 6.3).

Public Opinion of Forestry Surveys have been run, usually every 2 years, by Forest Research on behalf of the Forestry Commission/Forestry England/Defra, Scottish

Forestry, Welsh Government/ Natural Resources Wales and the Northern Ireland Forest Service. The surveys cover public attitudes to forestry and forestry-related issues, including visits to woodland (Tables 6.4 to 6.5 and Figure 6.1).

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.

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 357 million visits to woodland in England (by English residents) in 2012, should be within $\pm 8\%$, i.e. the true figure is likely to be between around 328 and 385 million.

Technical reports, providing further information on household surveys run or commissioned by other organisations, are available from relevant websites (see above).

Revisions

All of the statistics in the Social chapter have been previously released in other publications. Figures for earlier years have not been revised from those published in Forestry Statistics 2021.

Our revisions policy sets out how revisions and errors to these statistics are dealt with, and is available on our [Quality of Official Statistics web page](#).

Further information

Further information is available from the Forest Research website on the [social statistics](#) and the [Public Opinion of Forestry](#) pages.

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 2023, with results available in summer 2023.

"Forestry Statistics 2023" and "Forestry Facts & Figures 2023" will be released on 28 September 2023.

Sources: Employment and businesses

Data sources and methodology

Statistics on employment are obtained from:

- The [Business Register and Employment Survey](#) of the ONS, an annual survey of UK businesses
- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations ([Confor](#), [Wood Panel Industries Federation](#)) - for employment in primary wood processing; and
- [Confederation of Paper Industries](#) (CPI)

Statistics for accidents to employees are obtained from [Health & Safety Executive statistics for Great Britain](#).

Numbers of businesses are estimated from:

- Industry surveys (Sawmill Survey, Survey of Round Fencing Manufacturers) and industry associations (Confor, 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.

Standard Industrial Classification (SIC)

The Annual Business Survey, statistics on health and safety and statistics on VAT and/or PAYE registrations classify businesses by [UK Standard Industrial Classification \(SIC\) code](#).

Businesses are classified to SIC codes according to their main activity. The SIC codes are revised periodically to take account of changes in the global economy. The following codes from SIC 2003 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 and 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)
Pulp & paper	21.1 (manufacture of pulp, paper and paper products)	17.1 (manufacture of pulp, paper and paperboard)
Articles of paper & paperboard	21.2 (manufacture of articles of paper and paperboard)	17.2 (manufacture of articles of paper and paperboard)
Total wood processing	SIC 20 + SIC 21	SIC 16 + SIC 17
Total primary wood processing	SIC 20.1 + SIC 20.2 + SIC 21.1	SIC 16.1 + SIC 16.21 + SIC 17.1

In addition figure 7.1, covering accidents to employees, also uses the following SIC 2003/2007 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 7.2a, Table 7.2b 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 Forest Research's timber industry surveys and enquiries;
- businesses involved in secondary wood processing are excluded from Forest Research'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 from 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 revisions made to the sawmill survey and the survey of round fencing manufacturers have resulted in:

- Table 7.2a: reductions to employment in sawmills in all years by up to 0.2%.
- Table 7.4: a reduction in the number of sawmills by 1 in all years.

[Our revisions policy](#) sets out how revisions and errors to these statistics are handled.

Further information

For further information, please refer to our [Employment statistics page](#).

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

"Forestry Statistics 2023" and "Forestry Facts & Figures 2023" will be released on 28 September 2023.

Sources: Finance and prices

Introduction

The statistics presented in the Finance and Prices chapter of this release cover:

- timber prices;
- gross value added (GVA);
- government expenditure on forestry; and
- grant schemes.

Data Sources and Methodology

Timber Price Indices: Data sources

The Coniferous Standing Sales Price Index and the Softwood Sawlog Price Index (and sub-indices) are both based on sales of softwood (conifers) by Forestry England, Forestry and Land Scotland 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 Small Roundwood Price Index is also based on roundwood sales by Forestry England, Forestry and Land Scotland and Natural Resources Wales, but can include hardwood (broadleaves) as well as softwood.

The Coniferous Standing Sales Price Index (CSSPI) is based on administrative data for standing sales of conifers (softwood) by Forestry England/ Forestry and Land Scotland/ Natural Resources Wales. Around 60% of Forestry England/ Forestry and Land Scotland/ 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 Forestry England/ Forestry and Land Scotland/ Natural Resources Wales. The data used to compile the index covers volumes and values. Direct production by Forestry England/ Forestry and Land Scotland/ 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).

The Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index (and sub-indices) and the Small Roundwood 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 the Softwood Sawlog Price Index include roundwood sales by long term contract but, at present, price adjustments are not fully accounted for in the indices.

The data for the indices are obtained from Forestry England's and Forestry and Land Scotland's Sales Recording Packages (SRP). SRP was also used by Natural Resources Wales until February 2017. The indices exclude sales by Natural Resources Wales from April 2017 to March 2021 (for coniferous standing sales) and from April 2017 to September 2021 (for sales of sawlogs and small roundwood).

Further information on the data sources used are available in the Quality Assurance of Administrative Data report on timber sales data.

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 Forestry England/ Forestry and Land Scotland/ Natural Resources Wales. It covers all conifer standing sales (open market and negotiated) by Forestry England/ Forestry and Land Scotland/ 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, 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. 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 Outputs page](#) on the Forest Research website.

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 2021). 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](#).

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. All lengths of log are included.

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 2021 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 2021 = 100.

Methodology for Small Roundwood Price Index

The Small Roundwood Price Index is calculated from data covering separate 6-month periods to September and March, similar to the Softwood Sawlog Price Index. The index measures the average price per cubic metre overbark of small roundwood sales.

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 2021 prices, by removing the effects of general inflation). As for other indices, the GDP (Gross Domestic Product at market prices) deflator is used to convert from nominal to real terms.

For consistency with other indices, the Small Roundwood Price Index is rebased every 5 years; in this release, the period to September 2021 = 100.

Gross Value Added

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

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 on the [Annual Business Survey webpage](#).

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 through the ONS' [Classification and Standards](#). For further information on the SIC codes used in this release, see section on Employment and businesses within the Sources chapter.

Government expenditure

Information about government expenditure on forestry is obtained from administrative records held by the Forestry Commission, Forestry England, Scottish Forestry, Forestry and Land Scotland, the Welsh Government and Natural Resources Wales. Expenditure by other organisations is currently excluded.

More detailed financial data are published annually in each organisation's Annual Report & Accounts.

Data on grant expenditure are obtained from administrative records for woodland grant schemes across the UK.

Quality

The Coniferous Standing Sales Price Index, the Softwood Sawlog Price Index and the Small Roundwood Price Index are the only official statistics published for roundwood prices in the UK. So, although they are limited to sales by Forestry England, Forestry and Land Scotland, 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 Forestry England/ Forestry and Land Scotland/ Natural Resources Wales has accounted for around 40% 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 and the Small Roundwood 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](#).

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 2022](#)".

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 2019 have been revised from those shown in "Forestry Statistics 2021" 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 financial accounts of the Forestry Commission, Welsh Government/ Natural Resources Wales, Scottish Forestry/ Forestry and Land Scotland or Forest Research.

[Our revisions policy](#) sets out how revisions and errors are handled.

Further information

Tables providing [longer time series of the Coniferous Standing Sales Price Index](#) and the underlying data used to produce it, are available.

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 2022" will be released on 17 November 2022;

"Timber Price Indices: Data to March 2023" will be released on 18 May 2022.

"Forestry Statistics 2023" and "Forestry Facts & Figures 2023" will be released on 28 September 2023.

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 \(FRA\) 2020](#), compiled by the United Nations Food and Agriculture Organisation (FAO). The information in Table 9.1 uses forest area from FRA 2020, 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](#). Data on apparent consumption is derived as production plus imports less exports.

Data for the European Union (EU) presented in this edition of Forestry Statistics relate to the countries that were EU members at December 2021. The UK is therefore excluded from the EU figures for all years.

Quality

The UK data on forest area and carbon stocks are as submitted by Forest Research to FAO in early 2019. 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 2021 Forest Resources Assessment is available on the [FRA website](#).

The UK data on production, imports and exports were submitted by Forest Research to the UN Economic Commission for Europe in May 2021. 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.

Revisions

International statistics compiled from FRA are subject to revision every five years, when a new collection is undertaken. Information on revisions to historical data have been made following the release of the Global Forest Resources Assessment 2020 and are available in Forestry Statistics 2020.

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 2020" (Tables 9.4 to 9.6). At a global level, such revisions have been relatively minor (no more than 1% difference).

Our [revisions policy](#) sets out how revisions and errors to these statistics are handled.

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).

Statistics on forest resources are also collected every 4-5 years at a European level by Forest Europe. [The State of Europe's Forests 2015](#) was released in October 2015.

The United Nations Economic Commission for Europe (UNECE) Committee on Forests and the Forest Industry 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 Timber Committee webpage](#). Copies of UK returns for the [UNECE Timber Forecast Questionnaire](#) are available.

Release schedule

For information on the release schedules of statistics produced by others, see relevant websites (above).

International data on wood production and trade in 2023 will be released on 28 September 2023 in "Forestry Statistics 2023" and "Forestry Facts & Figures 2023".

Alice Holt Lodge

Farnham

Surrey, GU10 4LH, UK

Tel: **0300 067 5600**

**Northern Research
Station**

Roslin

Midlothian, EH25 9SY, UK

Tel: **0300 067 5900**

**Forest Research in
Wales**

Environment Centre

Wales

Deiniol Road, Bangor
Gwynedd, LL57 2UW,
UK

Tel: **0300 067 5774**

info@forestresearch.gov.uk

www.forestresearch.gov.uk

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