

Expanded Country Profile – United Kingdom of Great Britain and Northern Ireland

V1-0, March 2019

Forest and forestry conditions

Forest history

By the beginning of the twentieth century, forest cover in the UK had shrunk to just 4.7 % of the land area; woodland cover was higher in England (5.2 %) but much lower in Northern Ireland (1.1 %) (Forestry Commission, 2018). Forest cover at this time included woodlands of native species dating back to before the seventeenth century (most of which had been heavily modified by past management), a few state owned forests of similar age, and private estate forests planted from the seventeenth century onwards.

At 3.173 million hectares, forest cover is now 13.1 % (Forestry Commission, 2018); this means that nearly two thirds of current UK woodland was created in the last hundred years, mostly as plantations though occasionally by natural expansion of woodland. Woodland cover still varies significantly within the UK; it is 8.2 % in Northern Ireland, 10.0 % in England, and 14.8 % in Wales, and Scotland now has the highest percentage forest cover at 18.5 % (Forestry Commission, 2018).

Forestry tradition(s)

There is a long history of traditional woodland management in the UK, often as coppice with standards. As demand for products and costs of labour changed, however, these traditional forms of management declined. By 1947, 5 % of the woodland area in Great Britain was managed as coppice and 5 % as coppice with standards; these areas had dwindled to 1 % coppice and 1 % coppice with standards by 1965, and by 2000 the area of each had dropped to around 0.5 % (Mason, 2007).

During the twentieth century, and particularly following the large scale reforestation which began after the First World War, there was a shift to high forest management according to yield tables. While many estate forests and some state owned forests were managed by various forms of continuous cover forestry (Hart, 1995), clearfelling and replanting increasingly became the norm. Although areas of continuous cover have increased in recent years, at least partly because of the requirements of forest management certification (Mason, 2007), clearfelling remains the most common form of management, especially in the large proportion of Sitka spruce plantations on upland sites with poor soils and high wind risk.

There are few comparable publicly available data on rates of felling and restocking. Figures for Great Britain (Forestry Commission, 2016, Table 5) show that the area of new clearfelling in the period 2006/07-2008/09 was 28,600 ha, an average of roughly 9,500 ha per year; by 2014/15 the area of new felling in that year alone was 33,100 ha. Over the same period, the total area of restocking dipped and then rose, but overall declined from 18,100 ha in 2006/07 to 16,800 ha in 2014/15 (Forestry Commission, 2016, Table 13). While the annual area of conifer restocking has tended to decline and the area of broadleaf restocking has increased, the area of conifer restocking was still greater in 2014/15; 9,900 ha of conifers and 6,900 ha of broadleaves, compared with 14,600 ha of conifers and 3,600 ha of broadleaves in 2006/07. Overall, the area of restocking was 190 % of the area of new clearfelling in 2006/07, declining to 51 % in 2014/15.

There are differences between the countries, with England seeing an increase in the annual area of restocking over the period and a sharp jump in broadleaf restocking in 2014/15, for example. Annual restocking in England decreased from over 700 % of clearfelling in 2006/07 to as low as 58 % in

2009/10, before rising to 125 % in 2014/15. Restocking in Scotland decreased from 178 % of new felling to 34 %, while restocking in Wales decreased from 134 % to 68 %.

Today, a significant proportion of the UK woodland area is not under any form of active management, with smaller and broadleaved woodlands less likely to be managed. A recent estimate for England, including the public forest estate, suggests that '59 out of every 100 hectares of English woodland are actively managed, totalling 764,000 hectares of woodland in management' (Forestry Commission England, 2018). The proportion of woodland in management is highest in the northeast of England (69.4 %) and lowest in the southwest (54.7 %).

While it is easy to find figures for wood production (Forestry Commission, 2018), it is harder to find data on removals as a proportion of growing stock or increment. Figures for the percentage of the total amount of wood that grows in English woods that is harvested (Forestry Commission England, 2018) suggest that the proportion of softwood increment harvested averaged around 80 % between 2010 and 2017, while the proportion of hardwood increment harvested averaged only around 13 %; for softwood and hardwood combined, the average was 40 %.

Plantations vs natural forests

It is generally accepted that there is no truly natural woodland in Britain (Peterken, 1996), and we tend to refer instead to semi-natural woodland. Semi-natural woodland is considered to be of particular conservation value if it is on an ancient woodland site (a site which has been continuously wooded since before AD 1600 in England, Wales and Northern Ireland or since before AD 1750 in Scotland), when it is referred to as ancient semi-natural woodland (ASNW). In some cases, semi-natural vegetation has been cleared from ancient woodland sites and replaced with planted, non-native trees; these are referred to as plantations on ancient woodland sites (PAWS).

The UK's recent forest history has had a profound influence on the balance of woodlands of planted and natural origin. Official reporting suggests that there are around 344,000 ha of ASNW in the UK (213,000 ha in England, 89,000 ha in Scotland, and 42,000 ha in Wales) compared with 2,716,000 ha of planted forest (Forestry Commission, 2014a); ASNW therefore makes up less than 13 % of the total forested area. While the same official reporting assumes that there is no ASNW in Northern Ireland (Forestry Commission, 2014a), the Woodland Trust has identified 1,176 ha of semi-natural woodland as 'possibly' ancient, 289 ha as 'probably' ancient, and 72 ha as ancient (Woodland Trust, 2007).

Forest types

As an island nation on the margins of Europe, the UK has a relatively limited native tree flora, particularly in terms of conifers; the only native conifer of forestry importance is Scots Pine (*Pinus sylvestris* L.).

Roughly half of the current total wooded area is comprised of broadleaf species and half of conifer species, although the proportion of conifers varies greatly between the nations, with 26 % in England, 49 % in Wales, 58 % in Northern Ireland, and 74 % in Scotland (Forestry Commission, 2018).

Within Great Britain, only 17 % of the conifer area carries the native Scots Pine; 51 % of the conifer area, or about a quarter of the whole stocked forest area, carries the non-native Sitka Spruce (*Picea sitchensis* Bong. Carrière) (Forestry Commission, 2018). The proportion of Sitka Spruce varies from 26 % in England to 58 % in Scotland and 60 % in Wales. The proportion of Scots Pine is lowest in Wales (2 %) and much higher in Scotland (18 %) and England (20 %). In both England and Scotland, the majority of the coniferous woodland area is in private ownership (58 % in both cases), although

in England most of the Sitka Spruce woodland (60 %) and a much smaller proportion of the Scots Pine (28 %) is in public ownership. In Wales, by contrast, most of the coniferous woodland is in public ownership (64 %).

Birch (*Betula* spp., 18 %) followed by oak (*Quercus* spp., 16 %) make up the greatest proportions of the broadleaf woodland area in Great Britain (Forestry Commission, 2018). Scotland has by far the greatest proportion of birch (43 % compared with 11 % in England and 9 % in Wales) but the smallest proportion of oak (9 % compared with 19 % in England and Wales). In England, Scotland and Wales, the vast majority of the broadleaf woodland area is in private ownership (94 %, 89 % and 88 % respectively).

UK forests have been categorised into European Forest Types (Forest Europe, UNECE and FAO, 2011) as follows:

Hemiboreal and nemoral coniferous and mixed broadleaved-coniferous forest (3 %)
Acidophilous oak and oak-birch forest (10 %)
Mesophytic deciduous forest (11 %)
Beech forest (2 %)
Floodplain forest (2 %)
Non-riverine alder, birch or aspen forest (2 %)
Introduced tree species forest (52 %)
Unclassified forest (19 %)

Within Europe, only Iceland and Ireland have higher proportions of introduced tree species forest (70 % and 85 % respectively) (Forest Europe, UNECE and FAO, 2011).

At the GB level, 61 % of the conifer woodland area and over half of the broadleaf woodland area carries stands which are 40 years old or younger (Forestry Commission, 2018). A further 30 % of conifer woodland is made up of stands aged 41-60, with less than 10 % older than 60 years. Of the remaining broadleaf woodland, 18 % is made up of stands aged 41-60, 13 % 61-80, 9 % 81-100, and 6 % older than 100 years. For broadleaves, the age class distribution in private woodlands is similar to that for all woodlands, whereas public sector woodlands have a greater proportion of stands over 100 years old (18 %); for conifers, there is little difference between public and private sector age class distributions.

Land owner typology

Approximately three quarters of the current forest area in the UK is privately owned; the remainder is managed by the state forest services (Forestry Commission, 2018). The proportion of woodland in private ownership varies from 44 % in Northern Ireland to 62 % in Wales, 67 % in Scotland and 84 % in England.

By number, 92 % of private woodlands in the UK are 10 hectares or less in size, although these woodlands account for only 27 % of the privately owned forest area¹. A further 7 % of private woodlands by number are 11-50 ha in size and account for another 24 % of the privately owned forest area, while the tiny proportions by number in 51-500 and > 500 ha size categories account for 34 % and 15 % of the area respectively.

¹ Forestry Commission data submitted to the joint COST Action FACESMAP/UNECE/FAO Enquiry on Forest Ownership in the ECE Region in 2015.

More detailed information is available for small woods (0.5 to < 2 ha) in Great Britain (Forestry Commission, 2013). By area, England has the largest proportion (14 %) of these small woods and Scotland has by far the smallest proportion (5 %), while Wales (11 %) is close to the GB figure (10 %). Further breakdowns of woodland area into size categories from < 2 to 500 + ha (Forestry Commission, 2013, Table 7) unfortunately do not distinguish between public and private sector woodland, but do show that England is the only country in which the majority of the total woodland area is not in the two largest size categories (100 to < 500 ha and 500 + ha). In Wales, half of the total area is in the two largest categories, while in Scotland half of the area is in just one category (500 + ha). Conifers account for the vast majority of larger woods; 80 % of conifer woodland in Scotland is in the two largest size categories. Broadleaved woods, on the other hand, are skewed towards the smaller size categories; about a quarter of broadleaved woods in England and Wales, and the GB as a whole, are in the second smallest size category (2 to < 10 ha).

Information on even smaller woods is also available for Great Britain (Brewer *et al.*, 2017). There is a substantial area of individual trees, groups of trees and small woods < 0.5 ha in size; 742,000 ha in Great Britain, of which 565,000 ha are in England, 84,000 ha are in Scotland and 93,000 ha are in Wales. Small woods are broken down into non-linear small woods (> 0.1 ha, < 0.5 ha, > 20 m in width) and linear small woods, which 'form a large component of trees outside woodland and are found alongside watercourses, field boundaries, roads and railways' (Brewer *et al.*, 2017, p. 21). The authors estimate that the total area of small woods in Great Britain is 390,200 ha, with 294,800 ha in England, 46,200 ha in Scotland and 49,200 ha in Wales (Brewer *et al.*, 2017, Table 11). Most are non-linear, although the proportion varies from 51 % in Wales and 56 % in England to 76 % in Scotland.

Patterns of forest ownership in Scotland are different to those for the UK as a whole, and appear to be unique within Europe (Wightman, 2012). Wightman's research, based on four sample areas within Scotland, shows that 91 % of private sector woodland is owned either by landed estates or by investment owners, 55 % is owned by absentees, and 32 % of the private owners live outside Scotland. The author observes that 'Scotland's forest resource is thus dominated by the state, landed estates and forestry investors... The big contrast with other European countries is the insignificant proportion owned by individual resident owners, farmers, co-operatives, and municipalities' (Wightman, 2012, p. 11). Comparing data for Scotland with those for 19 European countries, including the UK, Wightman found that 'Scotland has the most concentrated pattern of private forest ownership and the lowest proportion of the population involved in owning forests' (Wightman, 2012, p. 13). In Scotland, 55 % of private forest holdings are over 50 ha, compared with 1.6 % in Austria, Belgium, France, Hungary, Latvia, Lithuania, Norway, Poland and Slovakia (Wightman, 2012, Table 12). In those same countries, 59.6 % of private forest holdings are less than 1 ha in extent, compared with 6.3 % in Scotland. These smallest woodlands make up only 0.01 % of the total privately-owned forest area in Scotland, while holdings of over 100 ha make up more than 93 % of the total area (Wightman, 2012, Table 4).

The area of woodland under community management in the UK is growing, though these woods are not always in community ownership. In Wales, for example, some 2,904 ha are managed by community woodland groups (Maria Wilding, pers. comm., 07/01/19).

A Defra study on woodland management and creation decisions in England (Eves *et al.*, 2014) identified five broad categories or 'segments' of private woodland owners/managers, key characteristics of which (based on Eves *et al.*, 2014, Table 2) may be summarised as follows:

Segment	Timber Producers	Multi-functional Owners	Profit-seeking Guardians	Aspiring Managers	Disengaged Conservationists
Level of management	Very high; most likely to have undertaken all types of management	High; majority have a written plan	High; but yet to make a profit - trying diverse activities	Very Low; relatively new to ownership compared to the other segments and are not yet managing	Very low; do not believe in management
Motives	Breaking even and to pass down through generations	Profit and to provide other private and social benefits; enjoy owning, sharing with family and owners wish to pass to future generations	Trying to make a profit; wildlife and personal amenity are also important	Not expecting to make a profit; relatively low value put on habitat, wildlife, landscape; not important to pass down generations	Escape from everyday life; wildlife and landscape is important
Activities	Timber production mainly but also other activities including game shooting; least likely to use as a place for relaxation	Above average participation in all activities	Above average participation in all activities, especially woodfuel for personal use and to sell as well as game shooting	Have not yet concentrated on activities for income. Very low priority to allow public access	Virtually no activities
Barriers to management	Few barriers	Few barriers	Cost and time constraints; owners find management harder than anticipated	Owners find management a chore; cost and time constraints	Believe woodland should be left alone; believe their holding is too small
Ownership & land characteristics	Largely managed; most likely to be owned by a trust; large and above average conifer	Mostly long-term private ownership; relatively large	Largely private; relatively large (and often multiple) holdings	Largely private; recently purchased; relatively small	Almost all private; mostly purchased and smallest average size
Average land size (ha)	68.5	51.1	39.4	10.4	5.9
Socio-economic characteristics	Highest proportion of 35-44 year olds. Highest total incomes	No distinctive characteristics	Youngest and lowest proportion of females of all groups (8 %)	Highest proportion of 55-64 year olds. High total incomes	Oldest and highest proportion of female of all groups (26 %)

Rare and threatened species and other environmental values and their conservation status

At the highest level, the *UK Biodiversity Indicators 2018* (Defra, 2018) paint a rather mixed picture for important species and habitats. The status of UK species of European importance (indicator C3b) has been seen to improve over the short term (2007-2013). However, while the distribution of UK priority species (C4b) has remained more or less unchanged over the long (1970-2016) and short term (2011-2016), the relative abundance of those species (C4a) has deteriorated over both the long (1970-2015) and short term (2010-2015). The abundance of common native woodland birds (C5b) has deteriorated over the long term (1970-2015) and, despite showing little or no change between 2010 and 2015, decreased in 2016. Meanwhile, the condition of Areas and Sites of Special Scientific Interest (C1c), though improving over the long term (2005-2018), showed little or no change in the short term (2013-2018), and the status of UK habitats of European importance (C3a) deteriorated between 2007 and 2013.

Additional reporting on biodiversity indicators for Northern Ireland (Corker and Barry, 2013) states that while most priority habitats 'showed a decline or were stable (or showed no clear trend) between 2000 and 2012... woodland priority habitats have increased'.

According to Hayhow *et al.* (2017, p. 8), 'The woodland bird indicator [based on 37 breeding woodland birds in the UK] is 23% lower than its 1970 level, showing no significant change over the short term. The climatic conditions of woodlands in the UK might become more suitable for some species in the indicator, such as the lesser spotted woodpecker [*Dendrocopos minor* L.] and nightingale [*Luscinia megarhynchos* Brehm]. But such changes are unlikely to counterbalance other negative drivers causing declines in woodland birds.' The authors single out Brambling (*Fringilla montifringilla* L.), Parrot Crossbill (*Loxia pytyopsittacus* Borkhausen), Scottish Crossbill (*Loxia scotica* Hartert), Capercaillie (*Tetrao urogallus* L.), Redwing (*Turdus iliacus* L.) and Willow Tit (*Poecile montana* Conrad von Baldenstein) as woodland species with a high likelihood of extinction (p. 20). They also note that non-woodland species such as Golden Plover (*Pluvialis apricaria* L.) may benefit from the 'removal of conifer plantations in inappropriate areas' (p. 37).

Focussing on trends in abundance and occupancy for over 1,200 individual woodland species, including vertebrates, invertebrates and plants, the *State of Nature 2016* report (Hayhow *et al.*, 2016) showed that 53 % declined and 47 % increased over the long term (1970-2013), while 51 % declined and 49 % increased over the short term (2002-2013). 11 % of 960 woodland species assessed using national red lists were categorised as threatened. The authors suggest that the 'increase in total forest cover during our study period, through the planting of both broadleaved and coniferous forest, has had a balanced impact overall. Some non-woodland species have lost habitat to trees, while other woodland specialists have benefitted, particularly from recent planting of native woodland' (Hayhow *et al.*, 2016a, p. 30). Woodland management also plays a role, however, and while there have been significant negative impacts from decreasing management, such as the decline in traditional coppice management (see *Forestry tradition(s)*, above), there have also been negative impacts from some recent management, such as decreasing availability of standing deadwood.

While the UK-level *State of Nature 2016* report suggests that woodland expansion has had a 'balanced impact overall' (Hayhow *et al.*, 2016a), the individual country reports for Northern Ireland, Scotland and Wales note some of the negative impacts of afforestation. While noting the very small areas of surviving ancient woodland (see *Plantations vs natural forests*, above), the Northern Ireland report highlights the fact that 'plantations of the non-native Sitka spruce have covered thousands of hectares and are responsible for the loss of large areas of upland blanket bog' (Hayhow *et al.*, 2016d,

p. 3). The Scottish report states that ‘Commercial afforestation and drainage resulted in the loss of 44% of Scotland’s blanket peat bog between the 1940s and the 1980s; the rate of loss of lowland mires was similar’ (Hayhow *et al.*, 2016e, p. 3), while the Welsh report states that ‘Between the 1940s and late 1980s, 44% of upland heathland (including dry heath and wet heath) was lost, mainly as a result of agricultural “improvement” and afforestation, predominantly with Sitka spruce and larch [*Larix spp.*]’ (Hayhow *et al.*, 2016b, p. 3).

The *State of Nature* reports also identify some key threats to woodland wildlife. The England (Hayhow *et al.*, 2016c) and Wales (Hayhow *et al.*, 2016b) reports both highlight the decline in coppice management, which has ‘disappeared as a form of management’ in Wales (Hayhow *et al.*, 2016b, p. 3). In addition, the Wales report mentions degradation and fragmentation of ASNW. The Scotland report (Hayhow *et al.*, 2016e) also picks up on the fragmentation and isolation of semi-natural habitats as a result of the intensification of food and timber production, and further notes that ‘grazing by high densities of deer and sheep reduces the quality of the native woodland that remains, and its ability to support the species and communities reliant on it’ (Hayhow *et al.*, 2016e, p. 2). In addition to over-grazing, the authors identify ‘commercial afforestation of existing woodland sites and invasive non-native species such as rhododendron’ as threats to Scottish native woods (Hayhow *et al.*, 2016e, p. 14).

In *The UK National Ecosystem Assessment Technical Report*, Quine *et al.* (2011, p. 261) state that ‘Grazing and browsing by both wild and domestic herbivores (primarily sheep and deer) is arguably the primary driver of biodiversity change in UK woodlands and forest’.

Socio-economic context

Legislation and law enforcement

Forestry-specific legislation relates primarily to felling licensing, environmental impact assessment, forest reproductive material, and plant health, but felling licence applications are expected to conform to the government’s *UK Forestry Standard* (Forestry Commission, 2017a), which covers a wide range of forestry practices. Also relevant is domestic legislation implementing the EU Habitats and Birds Directives, legislation implementing the ILO Core Labour Conventions, and extensive health and safety legislation.

According to the World Bank Worldwide Governance Indicators², in 2017 the UK ranked in the 94th percentile for regulatory quality, the 93rd percentile for rule of law, and the 95th percentile for control of corruption.

Local communities’ proximity to forests

Forestry occurs in a wide range of contexts from peri-urban areas, with local communities numbering in the millions, to remote rural locations, where a large plantation may be neighboured by only a handful of farms.

Figures for Great Britain (Brewer *et al.*, 2017) show that woods 0.5 ha or greater in size are overwhelmingly (97 % by area) rural; the proportion of urban woodland area is largest in England, at 5 %, and smallest in Scotland, at 1 %. While the majority of smaller woods (< 0.5 ha) are also in rural areas, there is a larger proportion of urban woods; for Great Britain as a whole, 81 % by area are in

² <http://info.worldbank.org/governance/wgi/index.aspx#home>

rural areas and 19 % are in urban areas. While Scotland again has the smallest proportion of urban woodland area at 11 %, Wales has the largest proportion of smaller urban woods at 24 %.

There are over a million hectares of farm woodland in the UK, with 54 % in Scotland, 36 % in England, 9 % in Wales and 2 % in Northern Ireland (Forestry Commission, 2018).

Local communities' use of forests for their livelihoods

In the UK context, there are relatively few situations in which local communities depend on forests for their basic needs, although in rural areas private water supplies may be located in forests, and forests may have important roles to play in regulating water quality and quantity in the catchments of public water supplies (Quine *et al.*, 2011).

While not wholly dependent on forests, a significant proportion of people harvest non-timber forest products (NTFPs) for personal or commercial use. Surveys carried out in 2005 showed that, of those respondents who had visited forests in the previous few years, 27 % in England (Forestry Commission England, 2005) and Scotland (Forestry Commission Scotland, 2005) and 31 % in Wales (Forestry Commission Wales, 2005) had gathered at least one forest product. 13 % in England and 15 % in Scotland and Wales had gathered items for eating or drinking. Taking into account the total numbers of survey respondents, i.e. including those who had not visited woodlands recently, and bearing in mind that the sample sizes for Scotland and Wales were relatively small, these figures suggest that 18 % of the population in England and Scotland and 22 % of the population in Wales had gathered at least one forest product³. As for commercial use of NTFPs, research in Wales 'identified 140 products which are processed, marketed and sold by 137 different enterprises from across Wales' (Wilding *et al.*, undated). 38 % of these products were foodstuffs, and 24 % were beverages.

Game shoots can be economically important for estates and their local communities (Quine *et al.*, 2011), and woods play an important role in game bird rearing and release. Income from venison is rarely sufficient to offset costs (Quine *et al.*, 2011), particularly in terms of deer damage to forestry interests, and deer are more often managed for practical than for economic reasons.

In 2015, a public survey showed that 9 % of respondents across the whole of the UK used wood as a fuel in their home (Forestry Commission, 2015). This figure varies from 8 % in England (Forestry Commission, 2015), 12 % in Scotland (Forestry Commission, 2017b) and 14 % in Wales (Forestry Commission, 2017c) to 29 % in Northern Ireland (Forestry Commission, 2014b). About a quarter of those who used wood as fuel in their homes in Northern Ireland and 15 % of those in Scotland said that it was their main fuel (Forestry Commission, 2014b, 2017b).

The forest and forest products sectors can be important employers, particularly in rural areas. UK employment in forestry alone was 17,000 in 2016, while some 7,800 full time equivalent staff were employed in primary wood processing in 2017 (Forestry Commission, 2018).

Social acceptability of forestry practices and criticism

In public surveys, 96 % of respondents in Northern Ireland (Forestry Commission, 2014b) and 95 % in Scotland (Forestry Commission, 2017b) said they believed that there was at least one good reason to

³ Note that figures on NTFP gathering for Scotland Wales are based on a GB-level survey. These calculations use the total number of respondents and the number who had recently visited forests from the GB survey rather than from the separate Scotland and Wales surveys which had greater numbers of respondents and different proportions who had visited forests.

support forestry with public money; in both cases, the most common reason was to provide places for wildlife to live. In Wales (Forestry Commission, 2017c), 96 % of respondents believed the woodlands near them provided at least one benefit for the local community, and again the most commonly cited benefit was that they provide places for wildlife to live. The survey in Wales also asked whether there were any disadvantages of woodlands, and 43 % of respondents believed that there was at least one woodland-related issue that disadvantaged the local community; 22 % said that nearby woods were used for fly tipping, and 15 % said that nearby woods provided a place for criminal activity (Forestry Commission, 2017c).

There has been relatively little criticism of the UK forestry sector in recent years. WWF UK does not currently campaign on UK forestry issues. In campaigning to protect ancient woodland, the Woodland Trust has generally concentrated on threats from infrastructure projects and other built development. While the RSPB has noted the negative impacts of forestry operations on designated natural features in Scotland, much of its criticism has been of historical impacts on open habitats from insensitive afforestation (RSPB, undated).

Indigenous community rights

There are no recognised Indigenous Peoples in the UK.

Export or import country

The UK is very much a net importer of wood products, and indeed was the second largest net importer of forest products in the world in 2016, with net imports of US \$8.0 billion (Forestry Commission, 2018). Exports include paper, wood-based panel products, and sawn timber.

FSC culture

Proportion of forests certified

According to *Forestry Statistics 2018*, 1,376,000 ha or 43 % of the total UK woodland area was FSC certified in March 2018 (Forestry Commission 2018). This proportion varied from 25 % in England to 47 % in Wales and 58 % in Northern Ireland and Scotland.

The figures in *Forestry Statistics* are for certified woodland area, and are lower than the total certified area reported by FSC which includes non-wooded parts of management units. In March 2018, the total certified area in the UK was 1,611,215 ha (FSC, 2018).

A large proportion of this area is also PEFC certified. The most recent estimate jointly published by FSC and PEFC, for mid-2017, suggests that around 1.4 million hectares are covered by both schemes (FSC and PEFC, 2018).

History of FSC certification

Public criticism of the forestry industry and consumer demand for assurances about woodland management motivated the development of forest management certification in the UK. FSC UK was established in 1995, and began work on a national standard.

However, although the need for forest certification was accepted, the UK forestry industry was opposed to what was seen as the imposition of an international FSC standard, and instead chose to develop an independent standard which could be used by certification schemes. This took the form of an 'audit protocol' based on the 1998 *UK Forestry Standard*. This standard was widely criticised by

auditors as being unusable in the field and at around this time the purchasing policies of the WWF 1995 Group of companies started to have a real market impact. This led industry bodies to ask the Forestry Commission to host a bridging process between the two groups of stakeholders in the UK. The Forestry Commission agreed and this new process became the *UK Woodland Assurance Standard*, or UKWAS.

A new version of a standard for UK forestry was drafted, using both the FSC UK standard and the *UK Forestry Standard* as the starting point. The standard was eventually approved by FSC International as meeting the Principles and Criteria, and the first edition of UKWAS was launched in 1999.

In 2002, PEFC also endorsed the standard. The UK is now in the unique position of having a single national standard approved by FSC and endorsed by PEFC, although strictly speaking FSC approves a version with the same requirements but presented in a very different format, alongside the full text of FSC's international Principles and Criteria.

After slow initial growth, the FSC certified forest area increased rapidly in the early 2000s when major players such as the Forestry Commission, Scottish Woodlands and Tilhill Forestry achieved certification. A peak in certified area, at around 1.69 million hectares, was reached in 2007. Part of this peak is likely to be attributable to a requirement for forest owners to hold FSC forest management certification in order to access certain grants; since this requirement was dropped, there has been a decrease in the total certified area. However, over the seven years for which FSC International has published monthly updates from its certificate database⁴, and despite some significant fluctuations from month to month, the certified area in the UK has grown from 1,577,485 ha in February 2012 to 1,635,543 ha in February 2019.

Attitude of stakeholders towards FSC

Certification is now generally accepted as a permanent feature of UK forestry. Although some forest managers remain unconvinced of the need for or benefits of FSC, it is probably fair to say that certification has greatly improved the image of the sector, and helps to account for the fact that organisations like WWF no longer actively campaign on UK forestry issues.

Which forests are certified

63 % of the certified woodland area in the UK is in public ownership (Forestry Commission, 2018); this proportion varies from 56 % in Scotland and 64 % in England to 81 % in Wales and 95 % in Northern Ireland. Of the remaining area, more than half is made up by two private group schemes⁵. Apart from the state forest services, the largest individual certificate holders are the National Trust, the Woodland Trust and the RSPB.

The UK area threshold for small or low intensity managed forest (SLIMF) is 500 ha; approximately one fifth of the total certified area is made up of SLIMF management units.

Standard development process

This section deals with the development of the existing UK national forest stewardship standard (NFSS), and not with the current small woods project.

⁴ <https://ic.fsc.org/en/facts-and-figures>

⁵ Based on publicly available data from <https://info.fsc.org/>

Composition of the SDG

The UKWAS Steering Group, currently recognised as the UK standards development group (SDG), includes representatives of the state forest services, private sector staff representing forestry professionals' and forest workers' organisations, and representatives of major ENGOs. The social chamber is relatively poorly represented. The economic chamber is heavily represented, and a condition of the approval of the current NFSS is that issues of chamber imbalance be addressed before the next revision.

First standard or revision

The latest version of the national forest stewardship standard, FSC-STD-GBR-03-2017 V1-0 EN, which became effective on 1 April 2018, is the fourth iteration. The contents of the standard have been discussed and agreed by stakeholders for two decades; unsurprisingly, the strong preference of the standards development group during the transfer to V5-2 of the Principles and Criteria was to adapt existing standard text wherever possible, rather than adopting international generic indicators (IGIs). This preference was further influenced by the fact that the NFSS is familiar to most forest managers in the UKWAS format. The design of the standard with the UKWAS format in mind means that it does not read like most FSC national standards, and there is little doubt that this caused issues during the recent approval process.

Main intended users

The stated intention of the standards development group in drafting the current version of the standard was 'to ensure that requirements are sufficiently flexible to apply to all scales and intensities of management' (UKWAS, 2018, p. 2). There is a perception, however, that the standard (and indeed FSC forest management certification as a whole) is best suited to larger, commercial forests; this perception is almost certainly influenced by the composition of the SDG.

Although non-timber products are claimed to be within the scope of the NFSS, in reality the NTFP requirements within the standard are very generic, and the only specific requirements relate to Christmas trees. The SDG chose not to address certification of ecosystem services in the standard (although a subsequent change to FSC's procedures means that this is no longer a requirement for ecosystem services certification). Therefore the standard is geared very much towards timber production.

Influence of stakeholders' participation in the process

Environmental interests are well represented by the two main ENGOs involved in the SDG (the Woodland Trust and the RSPB), who seek the views of other ENGOs. The majority of consultation responses are from individual forest owners/managers and from organisations representing forestry professionals. Responses are also received from recreational forest user groups.

National decision-making process

Decisions on the contents of the standard are entirely in the hands of the SDG, with technical advice from FSC UK. The FSC UK Board and UK-based FSC members take no direct part in decision making processes or in signing off the final draft.

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