

Forestry Commission

Forestry Statistics 2005

Environment

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

Protected woodland areas

The information in Tables 4.1-4.4 has been reproduced from *Protected Forest Areas in the UK* (not National Statistics). It has been derived from a variety of sources, and is unlikely to give a wholly accurate inventory of protected areas in the United Kingdom. The woodland categories used in Tables 4.1 and 4.3 are defined as:

- ASNW: (ancient semi-natural woodland) both ancient and semi-natural.
- PAWS: (plantation on an ancient woodland site) ancient in the sense of continuously wooded over a long period but not semi natural.
- OSNW: (other semi-natural woodland) semi natural but not ancient.

Ancient semi-natural woodlands tend to be richer in plants and animals than other woodland areas. The area of ASNW, which was one of the *Quality of Life Counts* indicators of sustainable development, has declined over the centuries and woodlands have become increasingly fragmented. It is estimated to total 326 thousand hectares, of which almost two thirds is in England, over one quarter in Scotland and the remainder in Wales. Later estimates, produced by overlaying the Ancient Woodland Inventory on the National Inventory of Woodland and Trees give lower figures for ASNW.

Table 4.1 Areas of ancient and semi-natural woodland

	thousands of hectares					
	UK	GB	England	Scotland	Wales	N Ireland
ASNW	325.8	325.8	206.0	89.1	30.7	..
PAWS	224.1	224.1	135.1	59.1	29.9	..
OSNW	320.5	305.5	209.8	44.0	51.7	15.0
Total ancient	549.9	549.9	341.1	148.2	60.6	..
Total semi-natural	646.3	631.3	415.8	133.1	82.4	15.0

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

.. denotes no data available

The types of statutory protection include:

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

In the pan-European classification of protected forest areas, 10 thousand hectares of woodland in the UK are in the highest categories 'non-intervention nature reserves' and 'wilderness areas in near-natural condition', estimated from combinations of these designations and objectives.

Table 4.2 Summary of woodland areas under different types of statutory protection

thousands of hectares						
Type of protection	UK	GB	England	Scotland	Wales	N Ireland
SAC	47.0	47.0	23.8	22.1	1.0	0.04
SPA	1.3	1.3	1.3	..
NNR ¹	30.1	29.7	9.2	19.4	1.1	0.4
SSSI	128.7	126.7	79.8	38.0	8.9	2.0

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

.. denotes no data available

1. The Scottish figure is the area of NNR managed under the WGS, and probably underestimates the total woodland in NNRs in Scotland; this has a knock-on effect on the Great Britain and United Kingdom totals.

Management practices can provide a degree of protection, even when it is not statutory protection. In the pan-European classification of protected forest areas, the UK has 135 thousand hectares of woodland with 'conservation through active management' and 646 thousand hectares with 'protection of landscapes and specific natural elements'. Table 4.3 shows some of these areas managed by the public and voluntary sectors, including over 80 thousand hectares of woodland managed by voluntary organisations such as the National Trust, Wildlife Trust, Woodland Trust and RSPB.

Table 4.3 Summary of areas under 'protective' ownership (non-statutory protection)

thousands of hectares							
Type of protection	UK	GB	England	Scotland	Wales	N Ireland	
Public Sector							
FC/FS	ASNW	11.4	11.4	2.7	7.8	0.8	..
	PAWS	131.1	131.1	80.6	33.2	17.4	..
	OSNW	49.0	49.0	25.0	16.5	7.5	..
	A/SSSIs	40.0	37.4	21.4	12.6	3.4	2.3
	FNRs	36.2	36.0	12.6	19.4	4.0	0.2
LNR	10.0	9.4	7.8	
Voluntary Sector							
NT and NTS	28.0	26.0	18.9	4.0	3.0	2.1	
Wildlife trusts	26.5	25.0	14.2	8.6	2.3	1.5	
Woodland Trust	13.5	13.5	8.4	3.7	1.4	..	
RSPB	14.2	13.4	7.6	4.6	1.2	0.8	

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

The conditions attached to receiving payments under the Woodland Grant Scheme can also provide a degree of protection. Table 4.4 shows the total area under WGS management, which includes public (non-FC/FS) and voluntary sector as well as other non-FC/FS ownership. This table therefore includes the voluntary sector figures shown in Table 4.3.

Table 4.4 Summary of areas under WGS management (non-statutory protection) in GB

thousands of hectares				
Type of protection	GB	England	Scotland	Wales
Total	918.6	445.4	421.6	51.6
Public (non-FC/FS)	45.3	37.0	5.7	2.6
Voluntary sector	67.3	44.7	19.4	3.2

Source: Report 'Protected Forest Areas in the UK' (not National Statistics).

Carbon Sequestration

Under the Kyoto protocol, additional woodland planted since 1990 contributes to the UK's carbon dioxide emissions target by removing carbon from the air. Table 4.5 (taken from the DETR publication *Climate Change: The UK Programme* (not National Statistics)) shows estimates and forecasts for the amount of carbon.

The forest sink measures the net annual change in the mass of carbon; it includes carbon accumulation in forests by woody biomass, soils, litter and wood products. For 2000, the net addition to carbon in woody biomass was around 2 MtC per year while about 0.6 MtC per year were transferred to 'stores' in forest soil and litter, and 0.3 MtC per year to wood products. No wood products have yet been generated from new planting since 1990. The figures for the carbon sink due to expansion since 1990 are included in the total forest sink.

Table 4.5 Carbon sequestration

	Million tonnes carbon per year	
	Forest sink	Forest sink due to expansion of woodland due to trees planted since 1990
1990	2.6	0.0
1995	2.8	0.2
2000	2.9-2.9	0.3-0.3
2005	3.2-3.3	0.4-0.6
2010	3.1-3.4	0.6-0.8
2015	2.7-3.0	0.9-1.2
2020	2.4-2.8	1.2-1.6

Source: DETR publication: 'Climate Change: The UK Programme' (not National Statistics).