2a. Status of threatened habitats

Type: State indicator

Indicator Description

There are 56 habitats recognised as being of 'principal importance' for the conservation of biological diversity in England under section 41 of the Natural Environment and Rural Communities Act 2006. Priority habitats are a focus for conservation action in England.
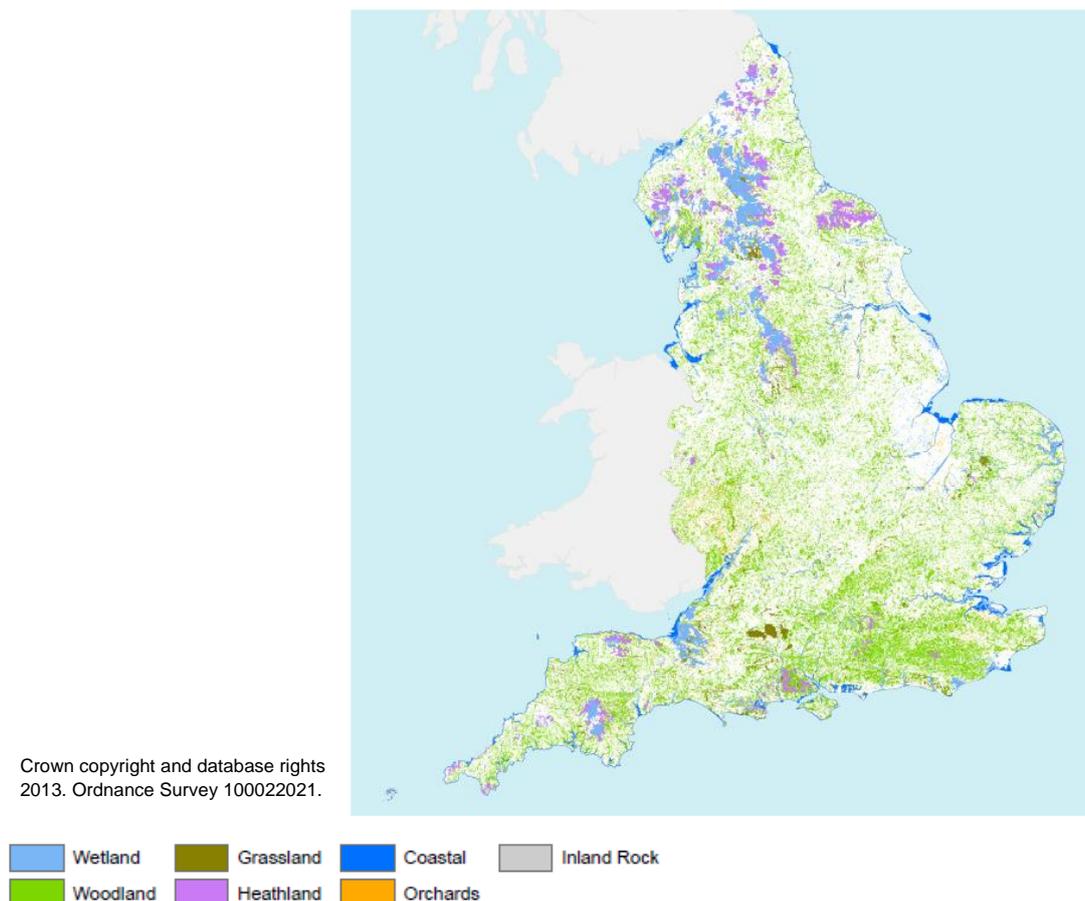
The first part of this indicator shows the extent of priority terrestrial and coastal habitat types across England.

2a.1. Extent of priority habitats

There are 1.87 million hectares of terrestrial and coastal priority habitats recorded in the 2013 priority habitats' inventory for England. These habitats represent around 14% of the total land area of the country (Figure 2a.1) but it is not currently possible to assess the extent to which this area changes from year to year (see background section for further details). Freshwater and marine habitats are not included in this indicator.

Deciduous woodland accounts for 39% of total priority habitats resource in England, the largest proportion of any habitat group. Wetland habitats account for a further 29%; heathlands for 16% and grasslands and coastal habitats for 7% each. Rarer habitats such as traditional orchards and limestone pavements together make up 1% of the total resource.

Figure 2a.1: Distribution of terrestrial and coastal priority habitats in England, 2013

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Wetland   Grassland   Coastal   Inland Rock

Woodland   Heathland   Orchards

Source: Natural England.

Priority habitats can be designated as protected areas called Sites of Special Scientific Interest (SSSIs). They can also be outside of these SSSI protected areas but be under Higher Level Stewardship (HLS) or Countryside Stewardship (CS) agreements, or fall within Forestry Commission (FC) 'Managed woodland'. Some priority habitats however, fall outside of the protection of all these schemes. The designated site network of SSSIs makes up 40% of the total priority habitat area in England (see indicator number 1 on 'Extent and condition of protected areas' for further details).

The majority of the land resource for 18 of the 24 terrestrial and coastal priority habitats designated in England falls within protected areas (see Table 2a.1 for a full list of priority habitats in England). Coastal saltmarsh and mudflats have the highest proportion of their resource covered by protected areas (96% and 92% respectively); other habitats such as coastal vegetated shingle, lowland raised bog, limestone pavements, mountain heaths and willow scrub, saline lagoons, coastal sand dunes and lowland heathland also have more than 80% of their land resource falling within protected areas. Examples of priority habitats where the majority of the land resource falls outside of the protected areas network include traditional orchards (almost 100%) and deciduous woodlands (88%).
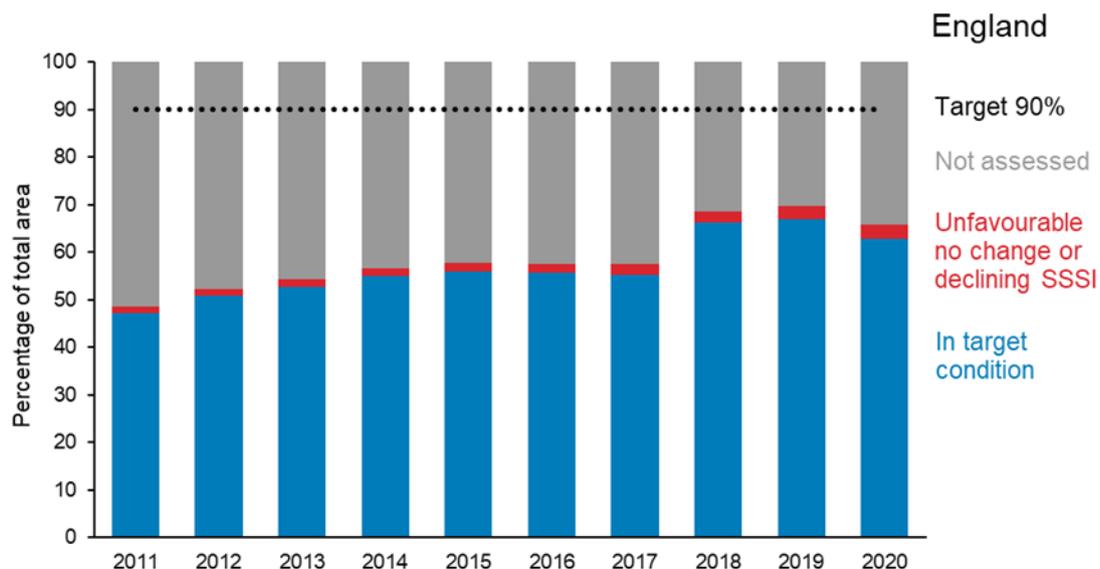
2a.2. Condition of priority habitats

Indicator Description

The second part of this indicator shows the condition of priority habitats. The measure outlines the percentage area of priority habitats in favourable condition (including those under Higher Level Stewardship or Countryside Stewardship agreements and those falling within Forestry Commission "Managed woodland"); unfavourable recovering condition; unfavourable, no change or declining condition; and those that are neither Sites of Special Scientific Interest nor under alternative agreements/management, and therefore their condition is unknown. Detail on how condition is assessed is given in the background section.

Biodiversity 2020: A strategy for England's wildlife and ecosystem services has a higher-level outcome to achieve "*… 90% of priority habitats in favourable or recovering condition".*

As of 31 March 2020, almost 1.18 million hectares of priority habitats were in target condition. This equates to 62.8% of all priority habitats in a favourable or unfavourable recovering condition (Figure 2a.2). One of the 24 habitat types achieved 90% of their area in favourable or unfavourable recovering condition, with a further 7 exceeding 80%, the target value for each individual habitat (see Figure 2a.4 in the background section).

Figure 2a.2: Condition of priority habitat as a percentage of total area, 2011 to 2020
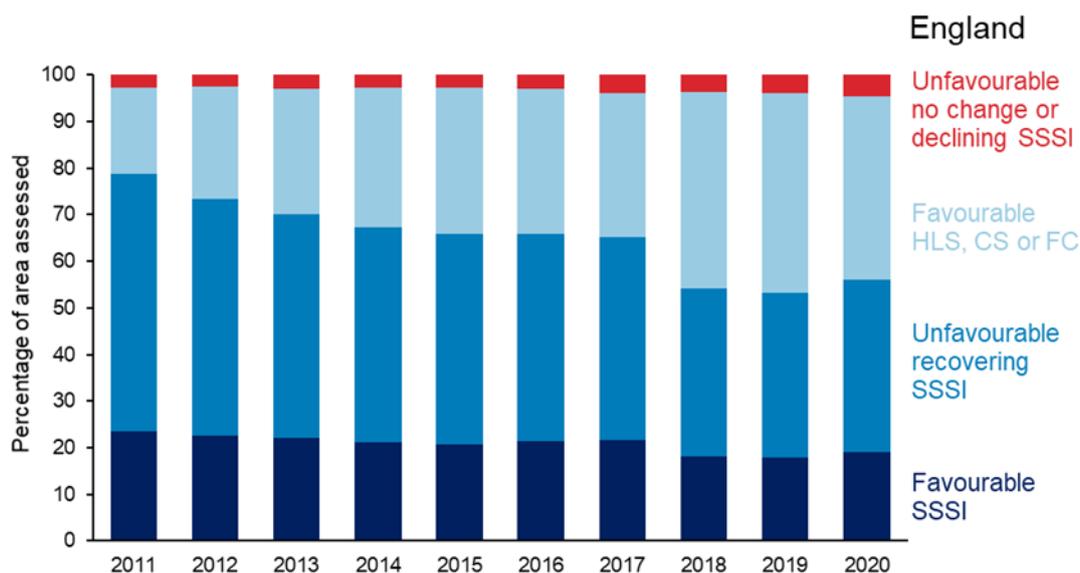

Notes:

1. The 'favourable SSSI', 'unfavourable recovering SSSI' and 'non SSSI under HLS, CS or FC' categories have been aggregated to more clearly display the percentage of the total area of priority habitat in target condition.
2. The black dotted line shows the '*Biodiversity 2020*' target.
3. The underlying dataset for this chart was revised in 2019 to include new data on priority habitats within FC managed woodland. The chart and dataset are therefore not directly comparable to those appearing in publications up to and including 2018.

Source: Natural England.

Broken down to within and outside of protected sites, 36.9% of all priority habitats are in a favourable or unfavourable recovering condition and are included within SSSIs; a further 25.9% are in favourable management but fall outside of SSSIs (i.e. they are under HLS or CS agreements or fall within FC managed woodland). Since 2011, there has been a 32.9% increase in the area of priority habitat in target condition (from 0.88 million hectares in 2011 to 1.18 million hectares in 2020). This has been largely due to the uptake of HLS management agreements outside of SSSIs in 2012 and 2013 and the uptake of CS management agreements outside of SSSIs from 2016 onwards. In the short term, the area of priority habitats in target condition has increased by 12.1% from a figure of 1.05 million hectares in 2015 to 1.18 million hectares in 2020.

Figure 2a.3: Condition of priority habitat as a percentage of area assessed, 2011 to 2020

Notes:

1. The blue sections of the bars correspond to the blue section of the bars in Figure 2a.2.
2. The underlying dataset for this chart was revised in 2019 to include new data on priority habitats within FC managed woodland. The chart and dataset are therefore not directly comparable to those appearing in publications up to and including 2018.

Source: Natural England.

It is not possible to report of the condition of some 34% of priority habitats that occur outside of SSSIs and that are not under HLS or CS agreements or within FC managed woodland. Some habitats also require further work to agree a monitoring methodology, notably woodlands and freshwater habitats.

Indicator assessment

Assessment of change in extent and condition of priority habitats

Extent: Long term: No comparable data; Short term: No comparable data; Latest year (2020): Not assessed.

Condition: Long term: Insufficient data; Short term (2015 to 2020): Improving; Latest year (2020): Decreased.

Notes:

1. The 2013 priority habitats' inventory does not allow for assessing changes to the extent of habitats, therefore, no assessments have been made for the extent measure (see background section for further details).
2. The short-term assessment of the condition measure is based on a 3% rule of thumb. The base year for this assessment uses a 3-year average. See Assessing Indicators.

Relevance

There are 56 habitats recognised as of 'principal importance' for the conservation of biological diversity in England under section 41 of the Natural Environment and Rural Communities Act 2006.

The indicator shows progress towards commitments to improve the status of our wildlife and habitats. It is relevant to outcomes 1, 1A and 2 in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* (see Annex A). It is also relevant to a number of international targets (see Annex B of the aforementioned publication for further details).

Background

Extent of priority habitats

In 2013, Natural England published a new priority habitats' inventory for England covering 24 priority habitats (Table 2.a.1). This 2013 inventory addressed problems with the original Biodiversity Action Plan (BAP) priority habitat inventories which were produced from 1999 onwards and derived from habitat datasets collated across the country. The 2013 inventory moves from multiple habitat layers to a single layer based on Rural Land Registry polygons (derived from OS MasterMap).

In bringing the existing inventories into a single layer with no overlaps, a set of criteria were used to assign one main habitat (or no main habitat) to each polygon. Where other habitats may be present in the polygon, e.g. as part of a mosaic, these are attributed as 'attribution habitats'. This also provides an audit trail showing which habitats were candidates for main and additional habitats and how the main habitat was identified, as well as details of any manual changes to the main or additional habitats. Overall, this does however lead to an overestimate of Priority Habitat cover in England, particularly for MG5 communities (unimproved neutral grassland, including hay meadows) that are a subset of the Lowland Meadows Priority Habitat.

The 2013 priority habitats' inventory does not allow for assessing changes to the extent of habitats, as changes to the inventory itself would represent improvements in current knowledge of the extent of priority habitats, rather than actual changes in the extent of those habitats. As a result, no assessment of change has been made for the extent measure. Furthermore, although there have been subsequent revisions to the priority habitats' inventory, this indicator consistently assesses changes in the condition of habitats reported in the 2013 inventory.

It is also worth noting that there are alternative data published for the extent (but not condition) of priority habitats in England, including (i) those based on the (now archived) Biodiversity Action Reporting System (BARS) and (ii) those used for the selection of biological SSSIs. However, the 2013 priority habitats inventory map is considered to be the best available national source of extent data for indicator 2a as it allows for an assessment of how the condition (based on management and designations) of these priority habitats has changed over time.

Defra, Natural England and the Joint Nature Conservation Committee (JNCC) are working to improve the quantity and quality of data on threatened habitats, for example, by improving standards for habitat mapping, and by investing in research to develop new methods that combine satellite, remote sensing and field data in order to provide better information on the stock and change in threatened habitats.

Table 2.a.1: The 24 priority habitats that are mapped into the 2013 single habitats' inventory for England

Blanket bog
Coastal and floodplain grazing marsh
Coastal saltmarsh
Coastal sand dunes
Coastal vegetated shingle
Deciduous woodland
Limestone pavements
Lowland calcareous grassland
Lowland dry acid grassland
Lowland fens
Lowland heathland
Lowland meadows
Lowland raised bog
Maritime cliffs and slope
Mountain heath and willow scrub
Mudflats

Purple moor-grass and rush pastures
Reedbeds
Saline lagoons
Traditional orchards
Upland calcareous grassland
Upland hay meadows
Upland heathland
Upland flushes, fens and swamps

The deciduous woodland inventory which was derived from Forest Research's National Inventory of Woodland and Trees has been replaced by one derived from the newer National Forest Inventory. The following categories were used to define deciduous woodland:

- Broadleaved (B)

- Mixed (Mb) – predominantly broadleaved

- Coppice (O)

- Coppice-with-Standards (P)

There are a number of terrestrial priority habitats for which no inventories exist, in particular for (i) inland rock outcrops and scree habitats and (ii) open mosaic habitats on previously developed land. Calaminarian grasslands are included in more recent versions of the priority habitats' inventory but the 2013 inventory is used for this indicator in order to ensure continuity of trend reporting. For certain habitat types; ponds, hedgerows and arable field margins, it may be impractical to map the entire resource, but changes in extent and condition can still be derived from a sample survey.

Priority habitat maps have been published for rivers and lakes. The rationale for these maps is to identify the most natural remaining freshwater habitats in order to protect them against deterioration and provide a focus for undertaking improvement works to maximise their natural function for characteristic biological assemblages.

Condition of priority habitats

Biodiversity 2020: A strategy for England's wildlife and ecosystem services includes a high-level outcome to achieve:

"… 90% of priority habitats in favourable or recovering condition and at least 50% of SSSIs in favourable condition, while maintaining at least 95% in favourable or recovering condition by 2020."

This indicator focuses on the condition of priority habitats and the individual contributions to the 90% outcome. The second part of the outcome on SSSIs is presented separately as part of indicator 1, 'Extent and condition of protected areas'.

Overall progress towards the 90% outcome is assessed as the proportion of the total area of priority habitat that is in 'favourable or unfavourable recovering' condition, with the value for each individual habitat being more than 80% favourable or unfavourable recovering (see Figure 2a.4 for details on individual priority habitats).

'Favourable' condition status indicates that a particular site meets agreed standards for the priority habitat of interest. 'Recovering' condition status indicates that the site fails to meet the standards but has appropriate management in place that will achieve those standards; sites with inappropriate or no suitable management are 'unfavourable'.

Given the overlap with the SSSI outcome, and the different levers available to achieve favourable condition inside and outside SSSIs, it is important to report separately on the condition of SSSI and non-SSSI priority habitat. Some habitats require further work to agree a monitoring methodology, notably in woodlands and freshwater habitats. It is also necessary to ensure that priority habitat

assessed as 'favourable' is also meeting the needs of associated species. A proposed methodology for assessing and reporting favourable and unfavourable recovering condition for priority habitats is set out below.

Assessment and definition of 'favourable' and 'recovering' condition for priority habitats

1. Terrestrial and coastal habitats.

Methodology for 'favourable' condition assessment. SSSI resource condition assessed through CSM; non-SSSI resource condition through stratified random sampling.

Definition of 'recovering' condition: Under appropriate management (i.e. the area under appropriate AES options).

2. Freshwater habitats.

Methodology for 'favourable' condition assessment. SSSI resource condition assessed through CSM; non-SSSI resource assessed using WFD monitoring methodology with water bodies assessed as at 'High Ecological Status' treated as synonymous with 'favourable'.

Definition of 'recovering' condition: WFD monitoring methodology with water bodies progressing towards 'Good Ecological Status' treated as synonymous with 'recovering'.

3. Woodland habitats.

Methodology for 'favourable' condition assessment. SSSI resource condition assessed through CSM; non-SSSI resource condition through stratified random sampling.
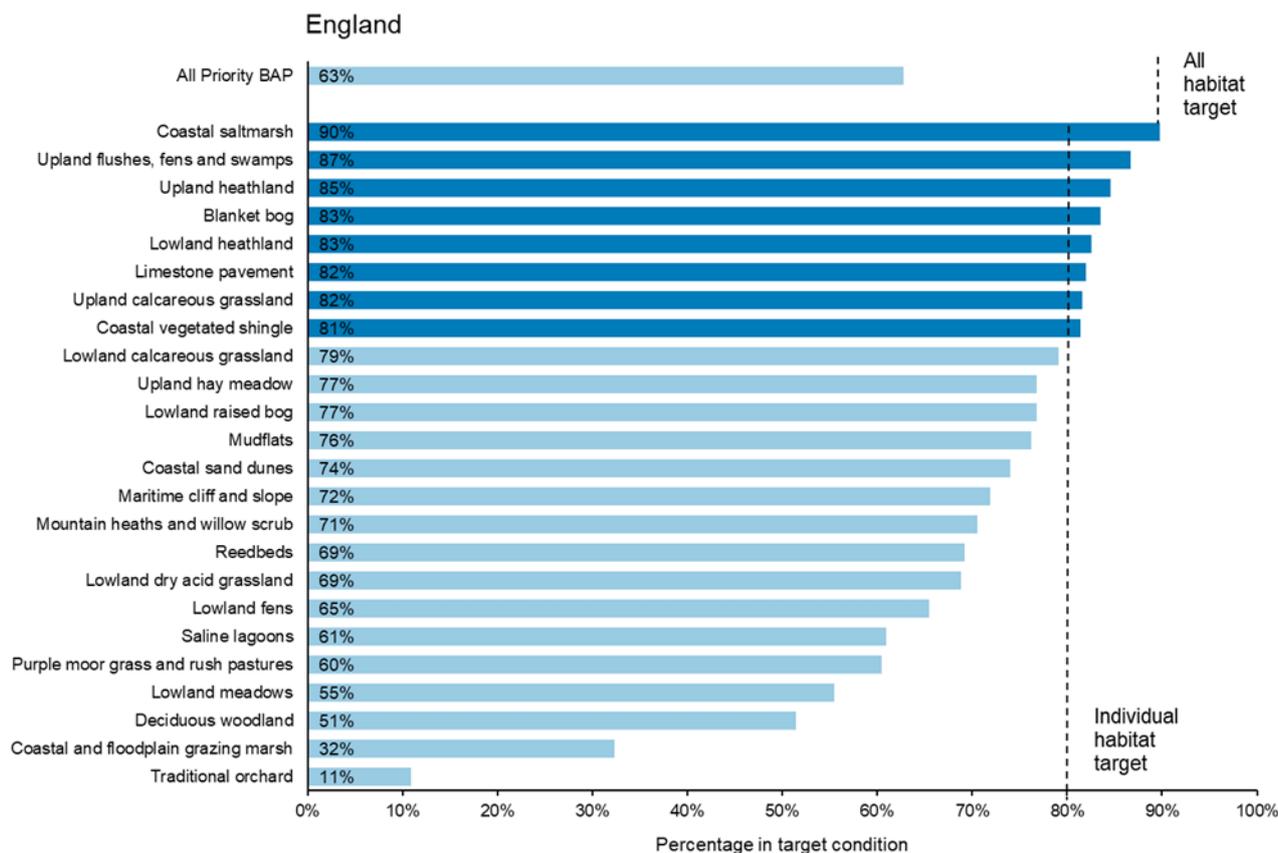
Definition of 'recovering' condition: Woodlands meeting UK Forestry Standard for biodiversity – no monitoring yet in place. Under appropriate management (i.e. the area under appropriate AES/EWGS options).

Note: AES – agri-environment scheme; CSM – Common Standards Monitoring for SSSIs; EWGS – England Woodland Grant Scheme.

Common Standards Monitoring (CSM) guidelines provide the basis for assessing the extent of priority habitat that is in favourable or unfavourable recovering condition within designated sites (SSSIs). Figure 2a.4 shows the percentage of individual priority habitats in target condition. A detailed breakdown of the condition data for each of these habitats, together with their extent, is available in the associated dataset for this indicator.

'In favourable management' has been used as a proxy outside of SSSI and counts towards the target of being in 'unfavourable recovering condition'. For non-SSSI priority habitat, only HLS, CS, or FC management has been included as 'unfavourable recovering' for the purpose of this provisional analysis. In the future, other mechanisms of achieving 'appropriate management' will also be included. For details on the Environmental Stewardship Scheme (i.e. HLS) and the CS scheme, refer to indicator 22, 'Agricultural and forest area in environmental management schemes'.

Figure 2a.4: Percentage of individual priority habitat types in target condition, March 2020

England

Habitat	Percentage in target condition
All Priority BAP	63%
Coastal saltmarsh	90%
Upland flushes, fens and swamps	87%
Upland heathland	85%
Blanket bog	83%
Lowland heathland	83%
Limestone pavement	82%
Upland calcareous grassland	82%
Coastal vegetated shingle	81%
Lowland calcareous grassland	79%
Upland hay meadow	77%
Lowland raised bog	77%
Mudflats	76%
Coastal sand dunes	74%
Maritime cliff and slope	72%
Mountain heaths and willow scrub	71%
Reedbeds	69%
Lowland dry acid grassland	69%
Lowland fens	65%
Saline lagoons	61%
Purple moor grass and rush pastures	60%
Lowland meadows	55%
Deciduous woodland	51%
Coastal and floodplain grazing marsh	32%
Traditional orchard	11%

Note: The 'favourable SSSI', 'unfavourable recovering SSSI' and 'non SSSI but under HLS, CS or FC' categories have been combined to more clearly display the percentage of that habitat in target condition.

Source: Natural England.

Web links for further information

Forest Research: National Forestry Inventory

Joint Nature Conservation Committee: UK Priority Habitats

Joint Nature Conservation Committee: Common Standards Monitoring Programme

Joint Nature Conservation Committee: Common Standards Monitoring Guidance

Natural England: Habitats of 'principal importance' for the conservation of biological diversity in England

Natural England: River and lake information and maps; River and lake information and maps

Last updated: October 2020

Latest data available: March 2020