JOINT NATURE CONSERVATION COMMITTEE

Common Standards Monitoring
for Designated Sites: First Six Year Report

Summary

Common Standards Monitoring for Designated Sites: First Six Year Report

Legislation in the United Kingdom makes provision for Sites of Special Scientific Interest (SSSIs) designated for their biological or geological features. By March 2005, there were 6,569 SSSIs in England, Scotland and Wales, and a further 225 Areas of Special Scientific Interest in Northern Ireland (ASSIs), covering between them over 2.4 million hectares.

The United Kingdom has also entered into international commitments to establish a network of protected sites under the Ramsar Convention. Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are required to be established under the EC Birds and Habitats Directives respectively. In many cases, the same area of land is protected by more than one designation; the basic building block is the SSSI or ASSI, which underpins the vast majority of the international site designations.

The basis of the common standards for site monitoring is that those special features for which the site was designated are assessed to determine whether they are in a satisfactory condition. The nature conservation component which is assessed is therefore not the site itself, but the feature (e.g. habitat, species, or earth science feature) for which it was designated. Sites may have one, two, or several interest features on them. Key attributes of the feature (e.g. extent, quality, supporting processes) are identified and targets set for each. Each attribute is then measured and compared against the target value set. If all the targets are met, the feature is in favourable condition. Human activities and other factors which are likely to be affecting the site adversely, and the conservation measures taken to maintain or restore the site, are also recorded.

The report is presented in four parts:

1. Summary
2. Geology
3. Species
4. Habitats

The first part is an introduction and executive summary which draws together results across the site networks as a whole. The subsequent three parts present the detailed data collated in 44 reporting categories. A standardised set of presentations and graphics have been created for each reporting category which portray the detailed results.

This information can also be found on the JNCC website at **www.jncc.gov.uk/page-3520**; these data will be updated at regular intervals.

Recommended citation:

Williams, J.M., ed. 2006. *Common Standards Monitoring for Designated Sites: First Six Year Report.* Peterborough, JNCC.

Foreword

The Joint Nature Conservation Committee was brought into being by the Environmental Protection Act 1990. Amongst its functions is a requirement to develop common standards throughout Great Britain for the monitoring of nature conservation and for the analysis of the resulting information. Developing common standards for monitoring designated nature conservation sites was a major task, but standards were piloted during 1998 and became operational in Great Britain from April 1999. By agreement with the Environment and Heritage Service, they were also adopted for use in Northern Ireland. The agreed common standards include the production of a report every six years.

This report fulfills that requirement. However, the value of common standards monitoring goes far beyond fulfilling a reporting requirement. Primarily, it is directed at informing site management by defining the state of the site that is required and identifying the need for any further conservation management action. JNCC and the country conservation agencies have learnt a lot by doing this work over the past six years, and still have more to do. Nevertheless, this is the first time it has been possible to draw together data on the condition of the features on sites. 57% of the total number of features in the United Kingdom designated for their nature conservation value have been reported on. While this falls short of the 100% intended, it nonetheless represents the most comprehensive assessment of the United Kingdom's designated features ever undertaken, and one of the most comprehensive assessments by any country in the European Union. This is therefore a landmark publication for UK nature conservation.

56% of features reported were assessed as being in one or other of the 'favourable' condition categories; 43% in one or other of the 'unfavourable' condition categories; with the remaining 1% assessed as being either partially or wholly destroyed. Within these figures, there is considerable variation, particularly for species and habitats. Of the 43% unfavourable features, 16% are in the unfavourable-recovering category, and 11% in the unfavourable-declining category. Thus, 72% of features reported on are either in a favourable condition, or are recovering towards favourable condition. This is probably better news than we could have anticipated when the programme of work was commenced. More remains to be done to improve the condition of features reported as being in unfavourable condition, and the findings of this report will help to direct conservation effort where it is most needed. Assessments do, of course, also need to be completed for all features.

This report is the result of a lot of work, by many people, over a considerable period of time. It would be invidious to single out individuals, but the breadth of involvement of staff in the country nature conservation agencies and the Joint Nature Conservation Committee, at all levels, should be noted. Without input from all of them, it would not have been possible to draw these results together; I thank them all for their efforts.

Adrian Darby
Chairman, Joint Nature Conservation Committee

summary

The condition of designated nature conservation areas in the United Kingdom

Introduction

2,431,000 hectares[1] have been notified as Sites of Special Scientific Interest (SSSI) in Great Britain, or Areas of Special Scientific Interest (ASSI) in Northern Ireland, in recognition of the wildlife, geological or geomorphological features they contain. This represents 10% of the land area of the United Kingdom.

Furthermore, areas of land and water have been designated as Special Areas of Conservation (SAC) under the EC Habitats Directive (2,504,000 ha[1]), Special Protection Areas (SPA) under the EC Birds Directive (1,482,000 ha[1]), and Ramsar sites under the (Ramsar) Convention on Wetlands of International Importance (759,000 ha[1]).

All these designated nature conservation areas have been selected in accordance with national selection guidelines, and are protected by national legislation[2]. For more information about the basis for these areas and why they are designated, see the protected sites part of the JNCC website[3].

What is Common Standards Monitoring?

The Joint Nature Conservation Committee is required by statute to develop common standards throughout Great Britain for the monitoring of nature conservation and for the analysis of the resulting information. In 1998, the Committee published *A Statement on Common Standards for Monitoring Designated Sites*[4] in compliance with this duty. These common standards were piloted during 1998 and became operational in Great Britain from April 1999. By agreement with the Environment and Heritage Service, they were also adopted for use in Northern Ireland.

The purpose of common standards monitoring is primarily threefold:

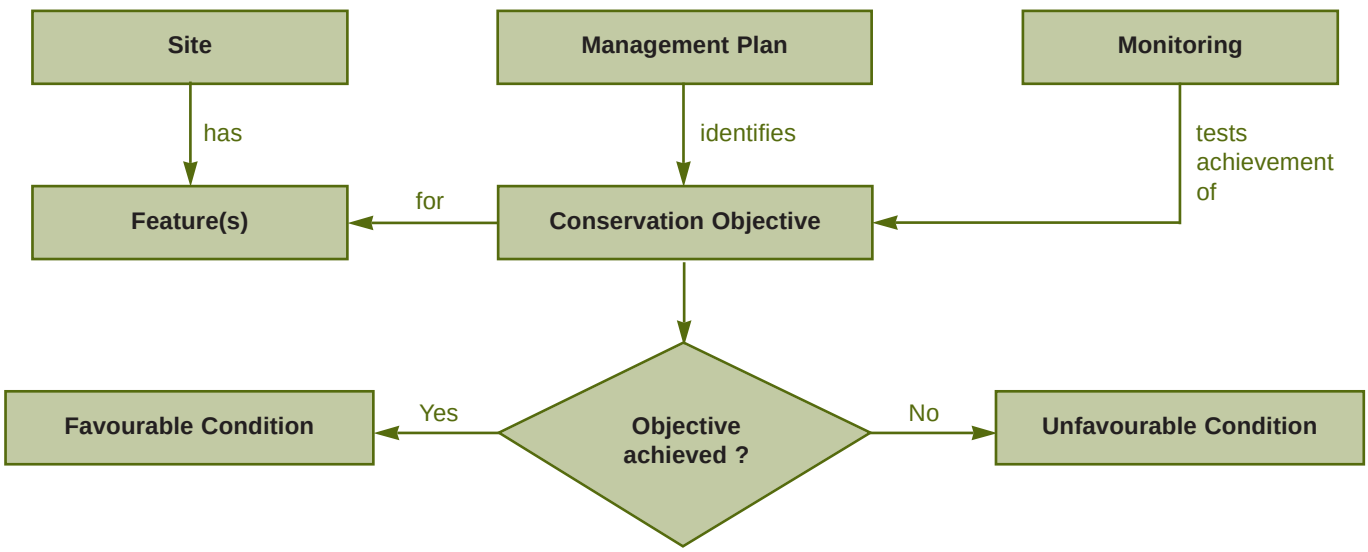
i. at the site level, it indicates the degree to which current conservation measures are proving effective in achieving the objectives of the designation, and identifies any need for further measures;

ii. at the country level, it indicates the effectiveness of current conservation action and investment, and identifies priorities for future action;

iii. at the United Kingdom level, it enables Government to undertake its national and international reporting commitments in relation to designated sites, and more widely, and helps identify any areas of shortfall in implementation.

The basis of the common standards for site monitoring is that the condition of the feature for which the site is designated is assessed against the conservation objective for that feature. The nature conservation component which is assessed is not the site itself, but the feature (e.g. habitat, species or earth science feature) for which it was designated. Sites may have one, two or several interest features on them, and each of these is assessed separately. Conservation objectives are developed by identifying the key attributes which make up or support the feature (e.g. extent, quality, supporting processes), and setting targets for them. Each attribute is then measured and compared against the target value set. If all the targets are met, the feature is in favourable condition. Human activities which are likely to be affecting the site adversely, and the conservation measures taken to maintain or restore the site, are also recorded.

Figure 1. A condensed overview of Common Standards Monitoring



[1]*As at 31 March 2005,* [2]*www.chm.org.uk/cats.asp?t=339,* [3]*www.jncc.gov.uk/page-4,* [4]*www.jncc.gov.uk/page-2198*

Essentially the basis of common standards monitoring is to identify the feature or features which are notified on each individual site. Each site will have a management plan or statement which identifies the conservation objective(s) for that site. Monitoring tests whether the objective has been met. Figure 1 shows how the system works in practice.

Guidance on setting conservation objectives

During the pilot year, it became apparent that detailed guidance was needed in the formulation of conservation objectives and a programme of work was instituted to provide this guidance. The guidance was developed and adopted progressively over the next few years and is published on *www.jncc.gov.uk/page-2199*. The introductory chapter[5] to the guidance provides an overview of Common Standards Monitoring. It covers the various concepts and terms, and provides the background to the guidance on setting conservation objectives, and assessing feature condition, covered in the later chapters.

Condition categories

The common standards require the condition of features to be assessed as falling into one of a number of categories; namely i) Favourable-maintained, ii) Favourable-recovered, iii) Unfavourable-recovering, iv) Unfavourable-no-change, v) Unfavourable-declining, vi) Partially-destroyed, and vii) Destroyed.

These categories describe the state of the feature at a particular point in time:

- *Favourable* condition – the objectives for that feature are being met.
- *Unfavourable* condition – the state of the feature is currently unsatisfactory.
- *Destroyed (partially or completely)* – the feature is no longer present and there is no prospect of being able to restore it.

Where the feature is *Favourable*, it is classed as:

- *Maintained*, i.e. it has remained favourable since the previous assessment.
- *Recovered*, i.e. it has changed from unfavourable since the last assessment.

Where the feature is *Unfavourable,* a further assessment is made as to whether the state of the feature is:

- *Recovering*, i.e moving towards the desired state.
- *Declining*, i.e moving away from the desired state.
- *No-change*, i.e. neither improving nor declining.

Carrying out the monitoring

In general, condition assessments should be capable of being undertaken by operational staff within the country conservation agencies. For some interest features, it may be necessary to have specialist input or to use data held by other organisations. Condition assessments will often be based on a structured walk across the site, but may also utilise other information (e.g. recent records or aerial photographs).

The intention is that every feature on every designated site in the United Kingdom should be assessed over a period of six years in a rolling monitoring cycle. Where more than one designation applies to a particular feature on a given site, a separate assessment should be made for each designation. This is because the reason for the designation, and the precise area covered, may vary between the different types of designation.

In addition to the assessment of the condition of the features, the common standards require the identification of those human activities or other factors considered to be adversely affecting the feature, and also those measures which have been taken which are considered to be beneficial towards achieving favourable condition.

Adverse activities and management measures

Human and natural impacts on a feature may assist the meeting of the conservation objectives, they may prevent them from being achieved, or they may be neutral. Human impacts may result from the management of feature or be independent of it; for example they may result from pollution originating from outside a site, or from the activities of the general public. Understanding the relationship between these impacts and the condition of features enables conclusions to be reached about what further conservation measures, or change in management, may be needed.

For this reason, Common Standards Monitoring requires information to be recorded for those impacts appearing to the assessor to be preventing the feature from achieving its conservation objectives (Adverse Activities), and those measures which are assisting the feature in reaching its objectives (Management Measures). Collating information on adverse activities and management measures helps to identify those types of activities which are having the greatest negative impact and those measures which are having the greatest benefit. This will help prioritise future conservation effort and use of resources.

A first six year cycle

Over the period 1999-2005, the Countryside Council for Wales, English Nature, Environment and Heritage Service and Scottish Natural Heritage have been systematically carrying out a programme of monitoring the designated features. This report sets out the results of this first six year monitoring cycle (plus data from the pilot year), summarising the condition of individual features under broad feature categories, and summarising also the nature of adverse activities and beneficial measures.

The Countryside Council for Wales (CCW) concentrated their effort on SACs, plus some assessments on SPAs. However, CCW did undertake a desk-based rapid assessment exercise of the condition of habitat features of SSSIs. While this did not follow the common standards methodology (and the results are, therefore, not included in any of the graphs or percentages presented in this report), it did allow for some cross-checks to be made between the condition of SSSI features in Wales with those recorded elsewhere. Broadly, the results of this CCW rapid assessment exercise for habitats showed a similar pattern to that produced for habitats through common standards monitoring.

[5] *www.jncc.gov.uk/page-2201*

Summary

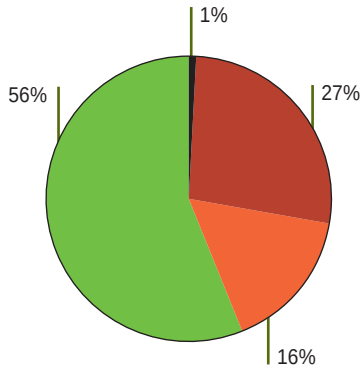
Assessments reported on

In total, 12,937 feature assessments carried out between April 1998 and March 2005 were reported. It is estimated that this number represents 57% of the total of features in the United Kingdom under the various designations (Table 1). While this falls short of the 100% intended, it nonetheless represents the most comprehensive assessment of the United Kingdom's designated features ever undertaken, and one of the most comprehensive assessments by any country in the European Union.

Table 1. Coverage by site type

	Number of assessments reported	Estimate of total to be assessed	% coverage achieved
A/SSSI	10,666	18,718	57%
SAC	1,570	2,218	71%
SPA	566	1,252	44%
Ramsar	135	526	26%
Total	**12,937**	**22,714**	**57%**

Figure 2. Condition of all features combined



Proportion of assessments falling into each of the condition categories. Note that the unfavourable category includes all reports of unfavourable condition except unfavourable-recovering, which is shown as a separate segment.

Key:

Favourable | Unfavourable-recovering | Unfavourable | Destroyed (whole or part)

Condition of features on sites

Of this total of 12,937 features, 56% were assessed as being in one or other of the 'favourable' condition categories; 43% in one or other of the 'unfavourable' condition categories; with the remaining 1% assessed as being either partially or wholly destroyed (Figure 2). Those assessing feature condition had less confidence in distinguishing features in unfavourable-declining condition than in the unfavourable-recovering condition. Because of this, the unfavourable-declining category has not been used in this first report, but has been combined with the unfavourable-no-change category and expressed as a combined 'unfavourable' category. All of the graphs below are based on numbers of assessments rather than areas of habitats, and include data up to the end of March 2005. Detailed information is presented in the report for 44 reporting categories, split across species, habitats and geological feature types.

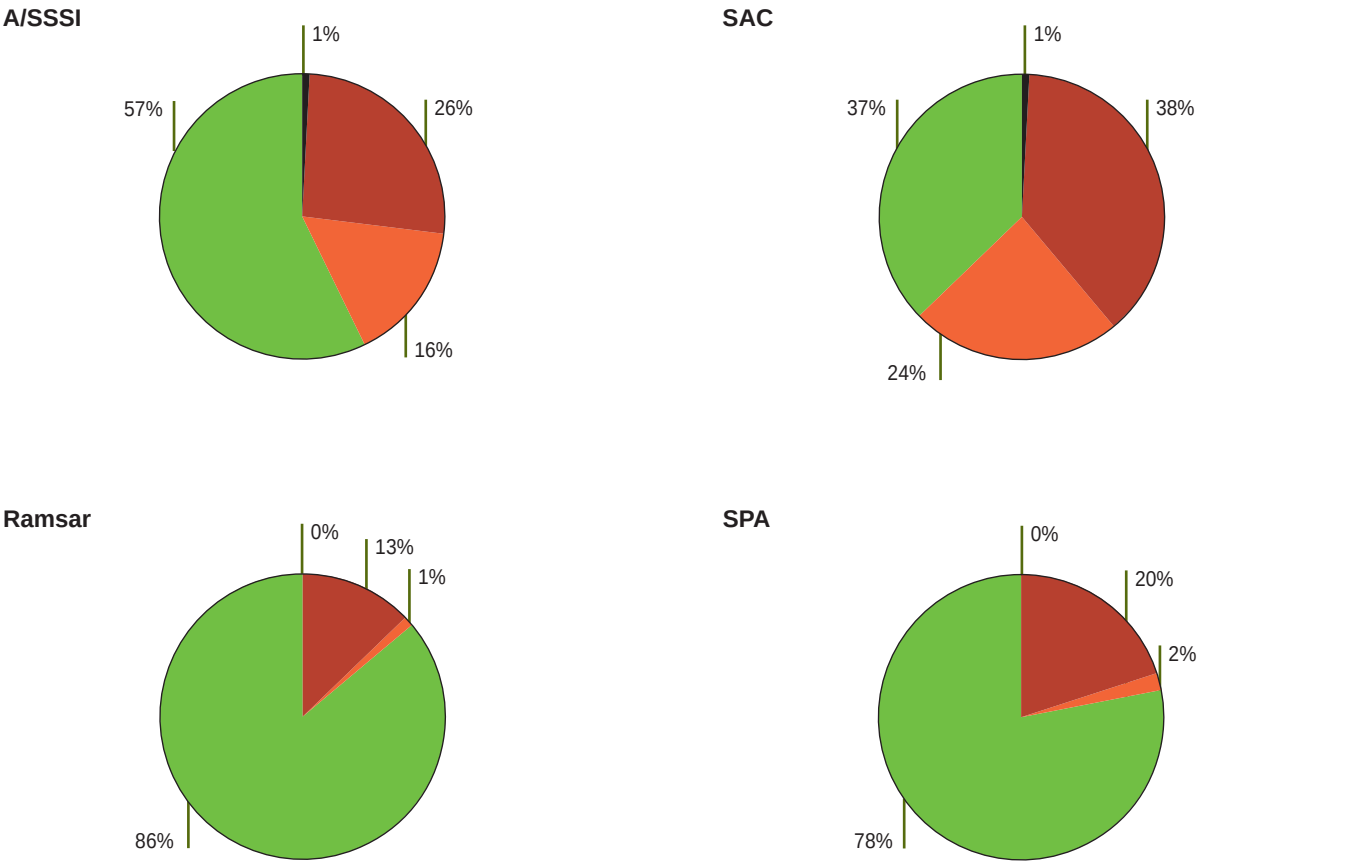
Of those features assessed as being in 'unfavourable' condition, 16% are in the unfavourable-recovering category; features in this category are expected to achieve favourable condition if sympathetic management is sustained. Features in the other 'unfavourable' categories will require additional measures to be taken if they are to achieve favourable condition in the future. Where a feature has been wholly destroyed the loss of the feature is considered irrecoverable; this is the case also for that part of a partially destroyed feature which is destroyed.

Table 2. Condition of broad groups of features reported

	Number of assessments reported	% destroyed or part destroyed	% unfavourable (except recovering)	% recovering	% favourable	% favourable + recovering
Species	2840	0.2%	25.2%	6.7%	67.9%	74.6%
Marine/coastal habitats	918	0.9%	29.2%	9.6%	60.3%	69.9%
Terrestrial habitats	6200	1.2%	33.3%	26.9%	38.6%	65.5%
Freshwater habitats	602	0.7%	39.7%	11.1%	48.5%	59.6%
All habitats	7720	1.1%	33.3%	23.6%	42.0%	65.6%
Geology	2242	1.3%	10.6%	1.7%	86.4%	88.1%
All features combined[6]	**12802**	**0.9%**	**27.5%**	**16.0%**	**55.5%**	**71.5%**

[6] *Excludes Ramsar features and a few assessments which do not fit into the reporting categories.*

Figure 3. Condition of features by site type



Proportion of assessments falling into each of the condition categories. Note that the unfavourable category includes all reports of unfavourable condition except unfavourable-recovering, which is shown as a separate segment.

Key:

Favourable | Unfavourable-recovering | Unfavourable | Destroyed (whole or part)

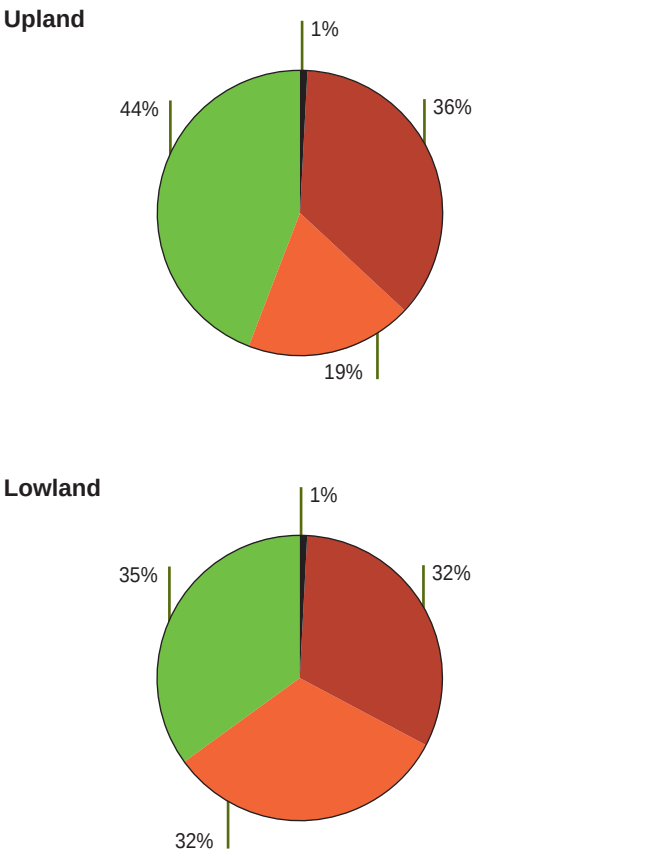
If the favourable percentages of the different designation types are compared across all features they vary substantially (Figure 3). Ramsar and SPA features are 86% and 78% favourable respectively. ASSI/SSSI features are 57% favourable as opposed to SAC features which are only 37% favourable. The favourable state of Ramsar and SPA features is a reflection of the favourable condition of bird features in general (circa 77%).

As can be seen in Table 2, across designated sites as a whole, geological features are the most favourable (86%), followed by species (68%). Terrestrial habitats seem to faring poorly with only 39% of assessments favourable. Marine and coastal habitats (60%) and freshwater habitats (49%) have fared somewhat better. There are a large number of features which are recovering from unfavourable condition. If these are combined with those which are favourable, terrestrial habitats are more on a par with marine habitats and species.

It is also possible to split some of the terrestrial habitat reporting categories into upland and lowland features (Figure 4). This indicates that upland features are more favourable (44%) than lowland (35%). However, more assessments fell in the unfavourable-recovering category in the lowlands (32%) than in the uplands (19%). The picture becomes quite complex if individual habitats are considered. If the unfavourable-recovering and favourable assessments are combined, the situation reverses, with the uplands (63%) in a slightly worse condition than the lowlands (66%). It may be that the lowlands are more amenable to management than the uplands.

The results of the condition assessment are given in Table 3, which is ordered, under broad feature category headings, according to the percentage achieving favourable condition. Shaded rows indicate those categories which are above the average percentage in favourable condition for all features combined. Note that Table 3 does not include Ramsar features.

Figure 4. Condition of upland and lowland habitats



Proportion of assessments falling into each of the condition categories. Note that the unfavourable category includes all reports of unfavourable condition except unfavourable-recovering, which is shown as a separate segment.

Key:

Favourable | Unfavourable-recovering | Unfavourable | Destroyed (whole or part)

The species assessments show considerable variability. Only four reptile assessments have been reported and it would not be sensible to place too much reliance on the high rank of this category. However, birds features are faring well, with between 73% and 81% in favourable condition. Mammals, invertebrate and plant features form an intermediate group between 52% and 68% in favourable condition, while, at the other end of the scale, fish (27%) have a worryingly low proportion of favourable assessments.

The condition of habitat features was also very variable. Upland assemblages, rocky shores and sea cliffs fell in the range 70%-87% in favourable condition, while an intermediate group of habitats, including a number of coastal habitats, blanket bog and woodland habitats, fell in the range 43%-69% in favourable condition. Below that were a group of habitats which fared relatively poorly, including upland and lowland heathlands and grasslands, lowland raised bogs, and rivers and streams, with lowland heathlands achieving the worst result at just under 18%. No assessments are available yet for estuaries, or for large shallow inlets and bays. This general pattern of results was reflected also in CCW's rapid-assessment results with intertidal and other coastal habitats faring relatively well, broadleaved woodlands in an intermediate category, and with neutral grasslands performing less well; lowland raised bogs scored worst in this assessment.

Geological features fared well with all reporting categories assessed as being between 83%-95% in favourable condition. A small number of features have been reported as partially or completely destroyed. The minerals category stands out as more susceptible to destruction, and this is partly a consequence of the localised nature of the features. In each of the cases where this is reported, it is the result of removal of the mineral specimens or mineral-bearing rock, such that the feature is no longer present at the site.

Many of the features which are in best condition are ones which are less easily damaged by human activities; this may be because they are relatively robust (e.g. geological features), or because they are relatively difficult to access (e.g. cliffs). The features which are least favourable are often being impacted by factors which operate outside the sites on which they are designated (e.g. drainage conditions for some isolated wetlands, fires on heaths adjacent to housing developments), or which require concerted effort by many agencies (e.g. water quality affecting fish).

Adverse Activities

The results of the assessment of those activities and factors considered to be adversely affecting feature condition, in relation to the total of features assessed, are summarised in Figure 5. See Annex 1 for a list of the categories agreed for reporting purposes at a UK level.

Table 3. Condition of features by reporting category

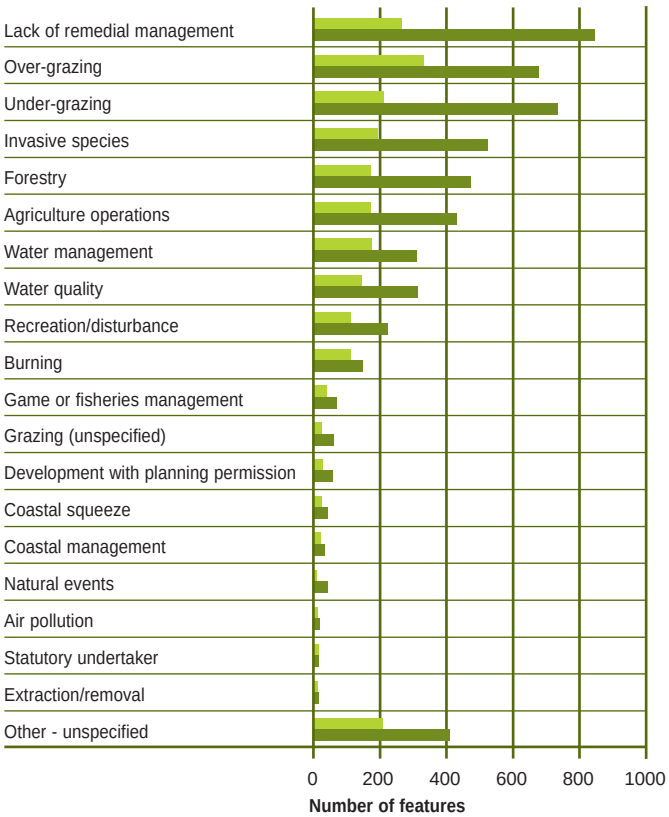
favourable rank	reporting category	number of assessments reported	% destroyed or part destroyed	% unfavourable except recovering	% recovering	% favourable
1	Reptiles	4	0.0%	0.0%	0.0%	100.0%
10	Aggregations of non-breeding birds	732	0.0%	18.7%	0.4%	80.9%
12	Aggregations of breeding birds	760	0.1%	23.9%	2.8%	73.2%
13	Assemblages of breeding birds	180	0.0%	21.1%	6.1%	72.8%
16	Dragonflies and damselflies	41	0.0%	14.6%	17.1%	68.3%
18	Mammals	144	0.7%	21.5%	10.4%	67.4%
20	Other invertebrates	298	0.0%	24.8%	13.1%	62.1%
21	Butterflies	91	2.2%	29.7%	9.9%	58.2%
26	Flowering plants and ferns	324	0.0%	32.7%	15.4%	51.9%
27	Non-flowering plants and fungi	131	0.8%	39.7%	7.6%	51.9%
30	Amphibians	49	0.0%	20.4%	32.7%	46.9%
39	Fish	86	2.3%	60.5%	10.5%	26.7%
	Species Total	**2840**	**0.2%**	**25.2%**	**6.7%**	**67.9%**
5	Upland assemblages	55	0.0%	10.9%	1.8%	87.3%
11	Rocky shores, reefs and caves	46	0.0%	17.4%	2.2%	80.4%
14	Sea cliffs	180	0.6%	23.3%	6.1%	70.0%
15	Intertidal sands and muds	148	2.7%	21.6%	6.8%	68.9%
17	Lagoons	47	0.0%	17.0%	14.9%	68.1%
19	Subtidal sandbanks	9	0.0%	33.3%	0.0%	66.7%
22	Saltmarsh	146	0.7%	36.3%	4.8%	58.2%
23	Limestone pavement, inland cliffs and screes	272	1.1%	25.0%	16.2%	57.7%
24	Blanket bogs	222	0.5%	30.6%	14.9%	54.1%
25	Standing water	513	0.6%	35.9%	11.5%	52.0%
28	Coniferous woodland	56	0.0%	42.9%	7.1%	50.0%
29	Dunes, shingle and machair	342	0.6%	35.7%	15.2%	48.5%
31	Fens and marshes - upland	114	0.9%	35.1%	18.4%	45.6%
32	Broadleaved and mixed woodland	1842	0.7%	33.0%	23.7%	42.6%
33	Neutral grassland	1074	1.2%	30.6%	25.8%	42.4%
34	Fens and marshes - lowland	789	0.9%	37.9%	22.9%	38.3%
35	Acid grassland - lowland	174	2.9%	27.0%	32.2%	37.9%
36	Montane grasslands and heaths	69	0.0%	56.5%	11.6%	31.9%
37	Calcareous grassland - lowland	625	1.3%	28.6%	41.0%	29.1%
38	Rivers and streams	89	1.1%	61.8%	9.0%	28.1%
40	Acid grassland - upland	56	1.8%	46.4%	28.6%	23.2%
41	Calcareous grassland - upland	84	2.4%	44.0%	31.0%	22.6%
42	Lowland raised bogs	199	1.0%	36.7%	41.7%	20.6%
43	Heathlands - upland	195	3.1%	50.8%	25.6%	20.5%
44	Heathlands - lowland	374	2.7%	32.9%	46.8%	17.6%
	Habitats Total	**7720**	**1.1%**	**33.3%**	**23.6%**	**42.0%**
2	Volcanic rocks	215	0.5%	4.2%	0.5%	94.9%
3	Folds, faults and rock movements	139	0.7%	5.8%	0.0%	93.5%
4	Ice Age landforms and sediments	410	0.7%	9.0%	2.7%	87.6%
6	Fossils	274	1.1%	11.3%	1.1%	86.5%
7	Active landforms	225	0.9%	9.8%	3.6%	85.8%
8	Minerals	120	7.5%	6.7%	0.0%	85.8%
9	Rock sequences	859	1.2%	14.3%	1.9%	82.7%
	Geology Total	**2242**	**1.3%**	**10.6%**	**1.7%**	**86.4%**
	Grand Total[7]	**12802**	**0.9%**	**27.5%**	**16.0%**	**55.5%**

[7]Excludes Ramsar features and a few assessments which do not fit into these categories.

Lack of remedial management is mentioned most often as the factor causing unfavourable condition. In many cases this relates to long-term neglect or gradual deterioration, and is a signal call that conservation management is required. Grazing (either under-grazing or over-grazing) is mentioned very commonly, for many feature types, as the activity causing unfavourable condition. It is perhaps the largest single cause for concern. It is, for example, the main factor suggested for the unfavourable condition of lowland heathland; the habitat in worst condition. There is a general trend toward over-grazing in upland habitats and under-grazing in the lowlands.

Over-grazing leads to loss of vegetation structure and the failure of more palatable or vulnerable species to reproduce and maintain themselves. It can also lead to the loss of plant species and associated fauna, and the spread of rank, unpalatable plant species. In extreme cases, very heavy grazing and trampling can lead to exposure of bare soil and erosion. Under-grazing commonly results in scrub encroachment, sometimes together with invasive species problems. There is a need, in many habitats, for grazing to be undertaken at the right time and with the right intensity.

Figure 5. Activities associated with unfavourable condition



The number of interest features where an activity has been reported as being implicated in the unfavourable condition of a feature. More than one adverse activity may be reported for each feature.

Key:

Natura 2000 features

SSSI features

Whilst the picture is quite complex and the key adverse activities vary between features, the clear message from this analysis is that more needs to be done to ensure that management of designated sites is appropriate to the features for which they are important.

It is often very difficult to determine the effects of air pollution on SSSIs, given the complex interactions between pollution impacts, management and abiotic influences. As a result, the impacts of air pollution, and the identification of air pollution as an adverse activity affecting condition, are considered to be substantially under-reported in this assessment.

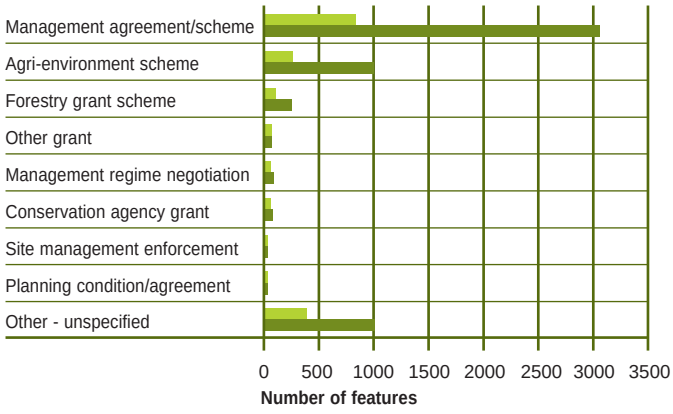
Management Measures

The results of the assessment of the measures which are considered to be beneficial to achieving or maintaining favourable feature condition are summarised in Figure 6.

Management agreements with owners or occupiers are the most common way of trying to bring sites into management and favourable condition. This situation may change from now on, with agri-environment schemes having a larger role to play. However, it is not yet known how long it may take to return many features to favourable condition, and some agri-environment schemes have not proven to be very successful at funding the restoration phase where capital costs are very high. Experience to date shows that restoration is best achieved through targeted projects.

Table 4 shows the effect of combining favourable assessments with those which are unfavourable-recovering. It is ordered, under broad feature category headings, according to the percentage achieving favourable and unfavourable-recovering conditions. Shaded rows are the same as those in Table 3 to facilitate comparison.

Figure 6. Management measures reported



The number of interest features where a measure has been taken on a site to improve or maintain the condition of an interest feature. More than one measure may be reported for each feature.

Key:

Natura 2000 features

SSSI features

Table 4. Effect of ranking assessments when favourable and recovering condition are combined

favourable rank	favourable + recovering rank	reporting category	number of assessments reported	% favourable + recovering
1	1	Reptiles	4	100.0%
16	9	Dragonflies and damselflies	41	85.4%
10	13	Aggregations of non-breeding birds	732	81.3%
30	14	Amphibians	49	79.6%
13	15	Assemblages of breeding birds	180	78.9%
18	16	Mammals	144	77.8%
12	18	Aggregations of breeding birds	760	75.9%
20	20	Other invertebrates	298	75.2%
21	26	Butterflies	91	68.1%
26	27	Flowering plants and ferns	324	67.3%
27	37	Non-flowering plants and fungi	131	59.5%
39	43	Fish	86	37.2%
		Species Total	**2840**	**74.6%**
5	6	Upland assemblages	55	89.1%
17	11	Lagoons	47	83.0%
11	12	Rocky shores, reefs and caves	46	82.6%
14	17	Sea cliffs	180	76.1%
15	19	Intertidal sands and muds	148	75.7%
23	21	Limestone pavement, inland cliffs and screes	272	73.9%
35	22	Acid grassland - lowland	174	70.1%
37	23	Calcareous grassland - lowland	625	70.1%
24	24	Blanket bogs	222	68.9%
33	25	Neutral grassland	1074	68.2%
19	28	Subtidal sandbanks	9	66.7%
32	29	Broadleaved and mixed woodland	1842	66.3%
44	30	Heathlands - lowland	374	64.4%
31	31	Fens and marshes - upland	114	64.0%
29	32	Dunes, shingle and machair	342	63.7%
25	33	Standing water	513	63.5%
22	34	Saltmarsh	146	63.0%
42	35	Lowland raised bogs	199	62.3%
34	36	Fens and marshes - lowland	789	61.2%
28	38	Coniferous woodland	56	57.1%
41	39	Calcareous grassland - upland	84	53.6%
40	40	Acid grassland - upland	56	51.8%
43	41	Heathlands - upland	195	46.2%
36	42	Montane grasslands and heaths	69	43.5%
38	44	Rivers and streams	89	37.1%
		Habitats Total	**7720**	**65.6%**
2	2	Volcanic rocks	215	95.3%
3	3	Folds, faults and rock movements	139	93.5%
4	4	Ice Age landforms and sediments	410	90.2%
7	5	Active landforms	225	89.3%
6	7	Fossils	274	87.6%
8	8	Minerals	120	85.8%
9	10	Rock sequences	859	84.5%
		Geology Total	**2242**	**88.1%**
		Grand Total [8]	**12802**	**71.5%**

[8] Excludes Ramsar features and a few assessments which do not fit into these categories.

This is the state that we should expect to see assuming the management that has been put in place is sustained and is successful (i.e. unfavourable-recovering condition is converted to favourable condition). However, time will be needed for actions taken to realise their benefit on the ground. The higher ranking of some features in Table 4 compared to Table 3, including amphibians, lowland heaths and grasslands, demonstrates the considerable efforts made by the conservation agencies to improve the condition of features in these vulnerable groups over recent years, and the potential value of continuing, and enhancing, this effort.

At the broad scale, tackling many of the problems of unfavourable condition of terrestrial features undoubtedly lies in the area of major policy changes to further encourage environmentally-friendly farming systems. The prevalence of grazing problems needs to be tackled urgently. Frequent site visits and regular contact between conservation staff and farmers are required to build relationships and ensure that the conservation vision for the site is understood.

Management agreements and agri-environment schemes are both important tools. Agri-environment schemes will increasingly become the main response mechanism to management problems. In England, where SSSIs are already being targeted, this will be supplemented by Wildlife Enhancement Schemes. The equivalent approach in Scotland and Northern Ireland are the Natural Care and Management of Sensitive Sites schemes. In Wales, management agreements are regarded as an essential means of topping-up what cannot be delivered through agri-environment agreements. Influencing livestock policy will be essential. Schemes such as the Grazing Animals Project in England, and Pori, Natur a Treftadaeth in Wales, are producing promising results, but need more secure financial backing.

Resources

The total cost of Common Standards Monitoring to date is estimated at just under £14 million. This includes staff costs and the start-up costs of training, guidance and standards development but has not been scaled up to cover the assessments that have yet to be made to complete 100% coverage. This contrasts with a site management cost of nearly £200 million over the same period. Monitoring costs, therefore, are currently running at about 7% of management costs.

Websites

The detailed results for each of the 44 reporting categories can be found on the JNCC website at *www.jncc.gov.uk/page-3520*. It is anticipated that these results will be updated periodically as further assessments are undertaken by the country agencies. The 'home page' for common standards monitoring on the JNCC website is at *www.jncc.gov.uk/page-2217*.

More detailed information about the species, habitats and geology protected by the SSSI, ASSI, SAC, SPA, and Ramsar sites can be found on the JNCC and UK Biodiversity Action Plan websites at *www.jncc.gov.uk/page-4*, *www.jncc.gov.uk/page-2947* and *www.ukbap.org.uk*. These references, together with the SSSI selection guidelines (*www.jncc.gov.uk/page-2303* for biological SSSIs and *www.jncc.gov.uk/page-2317* for Earth science SSSIs), were used as sources for the context sections of each reporting category.

Provisos

While these data represent the most comprehensive account of the condition of sites designated for nature conservation in the United Kingdom yet produced, a number of provisos need to be made.

Because the guidance on feature objectives was made available progressively during the six-year monitoring period, not all assessments were made against objectives formulated in accordance with this guidance. This issue will reduce in significance as the monitoring programme is rolled forward.

Ideally results would be presented both by numbers of features and by area of features. This would allow biases caused by large numbers of small features (such as tend to occur in the lowlands), or a few large features (the corollary in the uplands), to be avoided. Unfortunately, it is not possible at the current time to present data by area of feature, and all the graphs presented are therefore for numbers of features.

The four statutory nature conservation agencies carrying out the monitoring undertook this work in a manner determined by priorities in their various countries. For example, the Countryside Council for Wales (CCW) concentrated their effort on SACs, plus some assessments on SPAs. The reports from English Nature concentrated on habitat SSSIs and SACs; there are fewer reports relating to features on species SSSIs and few reports on SPA or Ramsar features. Such discrepancies between countries can be expected to reduce as the monitoring programme is rolled forward.

If a feature is reported in unfavourable condition it does not mean that the whole of that feature is degraded. The nature of the assessments made, and the use of several attributes for each feature, means that it may have failed on one attribute rather than several, and may have done so by a small margin rather than a large one. It is important, therefore, to understand that the threshold for unfavourable condition is set within guidelines on a site by site basis. This is essential to ensure that site management is focussed on the local circumstances in which a feature is found.

Quality assurance of procedures was undertaken by the individual nature conservation agencies in accordance with processes determined by the agency concerned. Further quality assurance to ensure comparability of assessments within and between agencies will be introduced shortly.

It is possible that the method treats SAC features more severely than SSSI features. SACs tend to be larger than SSSIs and are often an aggregation of SSSIs. Aggregation rules for data mean that parts of a feature assessed as unfavourable can cause the whole feature to be assessed as unfavourable. This is more likely to happen on aggregated or large sites. Another factor maybe that SAC features are selected because they are particularly in need of conservation across Europe. In addition, SAC features tend to be defined more tightly than A/SSSI features and therefore targets are set more precisely.

Annex 1. Adverse Activities

The categories agreed for reporting purposes at a UK level are as follows. An abbreviated form of these is used on the graphs. The 'other' category is intended to capture instances where an activity recorded for a feature on a site does not fit within the schema, and thereby allows revision as necessary.

- Agricultural operations (e.g. ploughing, fertiliser, pesticides)
- Burning (e.g. in an inappropriate place, or at the wrong intensity/time)
- Development carried out under planning permission (e.g. roads, housing development)
- Dumping/spreading/storage of materials (e.g. spoil deposition or large bale silage)
- Earth science feature obscured (e.g. overgrown), or removed (e.g. fossil collecting), or modified (e.g. shape of cave entrances)
- Flood defence or coastal defence works (e.g. to control erosion)
- Forestry (including neglect such as lack of coppicing)
- Game or fisheries management (e.g. introduction of stock at too high a level, over-zealous cutting of river banks, bait digging)
- Invasive species (including bracken or scrub)
- Lack of remedial management (e.g. stopping-up drains, scrub cutting, erecting deer fences)
- Over-grazing (including deer browsing)
- Recreation/disturbance (e.g. scrambling, off-road vehicle use, recreation pressure, disturbance of fauna)
- Statutory undertaker (i.e. works carried out by a statutory body which is not required to seek planning permission, including military operations)
- Under-grazing (e.g. leading to scrub invasion or rank vegetation)
- Water management (including drainage, dredging or alterations to the water table; could be too much water or too little)
- Water quality (e.g. siltation, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication)
- Other (to be used if none of the above apply, and if used, more detail provided to enable consideration of whether the schema needs to be revised)

Annex 2. Glossary/Acronyms/Abbreviations

This glossary defines the main terms used in the report. It includes a number of the specialist technical terms used by the conservation agencies. The glossary is not, however, exhaustive. A selection of commonly-used acronyms and abbreviations are also included.

ASSI:
Area of Special Scientific Interest – the equivalent to SSSI in Northern Ireland.
www.ehsni.gov.uk/natural/designated/science_survey.shtml
www.habitas.org.uk/escr/

A/SSSI:
A generic term refering to either SSSI or ASSI sites.

Attribute:
A characteristic of a habitat, biotope, community or population of a species which most economically provides an indication of the condition of the interest feature to which it applies.

Biodiversity broad habitats:
A framework classification of habitats contained in Biodiversity: *The UK Steering Group Report* (as amended by the Targets Group) which can be used to describe the whole land surface of the UK, and the surrounding sea to the edge of the continental shelf in the Atlantic ocean. See *www.ukbap.org.uk* for details.

Condition categories:
The generic term describing the categories used for judging and reporting on the condition of an interest feature.

Condition monitoring:
Monitoring to determine the conservation state of interest features on statutory sites and to determine whether the conservation objectives for particular sites are being met.

Conservation objective:
A statement of the nature conservation aspirations for the features of interest on a site, expressed in terms of the condition that we wish to attain for each interest feature.

Destroyed:
Recording of the condition of an interest feature as destroyed indicates that an entire interest feature has been affected to such an extent that there is no hope of recovery, perhaps because its supporting habitat or processes have been removed or irretrievably altered.

Favourable-maintained:
An interest feature is recorded under the condition category favourable-maintained when its conservation objectives were being met at the previous assessment, and are still being met.

Favourable-recovered:
An interest feature can be recorded in the condition category favourable recovered if it has regained 'favourable condition', having been recorded as 'unfavourable' on the previous assessment.

Favourable condition:
The target condition for an interest feature in terms of the abundance, distribution and/or quality of that feature within a site, that we aim the feature to attain, i.e. the conservation objective for the feature is being met.

Interest feature:
A habitat, habitat matrix, geomorphological or geological exposure, a species or species community or assemblage which is the reason for notification of the site under the appropriate selection guidelines or, in the case of Natura 2000 and Ramsar areas, the features for which the site has been designated.

Monitoring:
Surveillance undertaken to ensure that formulated standards are being achieved. The term is also applied to compliance monitoring against accepted standards to ensure that agreed or required measures are being followed.

Monitoring Cycle:
The period within which all designated sites and their interest features will be monitored. Set as 6 years.

Partially-destroyed:
Where sections or areas of certain interest features are destroyed or parts of sites are destroyed with no hope of reinstatement because the interest feature itself, or habitat or processes essential to support it, have been removed or irretrievably altered. Such cases would be recorded under the condition category partially-destroyed.

Ramsar:
Sites designated under the Convention for Wetlands of International Importance, signed in Ramsar, Iran in 1971. *www.ramsar.org/*

Reporting categories:
The generic term which refers to the categories that will be used to report the results of common standards monitoring at the GB/UK level.

SAC:
Special Area of Conservation. Sites designated for species and habitats listed under the EU Habitats Directive (92/43/EEC). *www.jncc.gov.uk/page-1374*

SPA:
Special Protection Area. Sites designated for birds listed under the EU Birds Directive (79/409/EEC). *www.jncc.gov.uk/page-1373*

SSSI:
Site of Special Scientific Interest – sites designated under the Wildlife and Countryside Act 1981 *www.jncc.gov.uk/page-1377* (as amended 1985, and superseded by the Countryside and Rights of Way Act 2000, and the Nature Conservation (Scotland) Act (2004). *www.jncc.gov.uk/page-2303 www.jncc.gov.uk/page-2317*

Target:
Statement to describe the state required from of the attributes of an interest feature under prevailing conditions. Because all features are subject to some change the targets may express how much change we would accept whilst still considering the feature to be in favourable condition. These will serve as a trigger mechanism so that when changes that fall outside the thresholds expressed are observed or measured some further investigation or remedial action is taken.

Unfavourable-declining:
Decline is another possible consequence of a damaging activity. In this case, recovery is possible and may occur either spontaneously or if suitable management input is made. This condition category can be recorded more than once for a particular interest feature in relation to a single damaging activity.

Unfavourable-no-change:
An interest feature may be retained in a more-or-less steady state by repeated or continuing damage; it is unfavourable but neither declining or recovering. In rare cases, an interest feature might not be able to regain its original condition following a damaging activity, but a new, stable state might be achieved.

Unfavourable-recovering:
An interest feature can be recorded under the condition category recovering after damage if it has begun to show, or is continuing to show, a trend towards favourable condition. This category can be recorded more than once for a particular feature in relation to a single damaging activity.

Data Preparation

Common Standards Monitoring was piloted in 1998 and implementation commenced in April 1999. This report is based on data for the period April 1998 - March 2005. The data were provided by the country agencies to JNCC in July and August 2005, using a standard proforma.

JNCC collated these four sets of data (one each for England, Scotland, Northern Ireland, and Wales) into a UK wide database of condition assessments for features on SSSIs (ASSIs in Northern Ireland), SACs, SPAs and Ramsar sites. The database contains a row for each feature reported on each designated site. A feature on a double-badged site (e.g. a site designated both as a SSSI *and* as a SAC) is recorded as two rows in the database - one row for each designation type. Any reader wishing access to the raw data on which this report is based should make their request to the relevant country agency monitoring contact (see www.jncc.gov.uk/page-3592 for details).

Data were split into 44 reporting categories based on Biodiversity Action Plan broad habitats, taxonomic groups, and broad divisions of earth science. Every assessment was assigned to a single reporting category. JNCC developed standard graphs, maps, and tabulations for each reporting category. For SACs and SPAs, JNCC are able to collate lists of qualifying features that have not yet been assessed. This cannot be done for SSSIs because there is not yet a UK-wide list of notified interest features.

In addition to the condition assessments, data were also collated on 'adverse activities' and 'management measures'. 'Adverse activities' are those factors which are thought to be leading the feature into unfavourable condition. 'Management measures' are the actions which are helping to maintain favourable condition, or return a feature from unfavourable to favourable condition. More than one activity or measure can be recorded for each assessment of the condition of a feature.

To facilitate map display on the website and hard copy report, it was decided to display the spatial locations of the assessments on a 10km square basis. For each and every monitoring assessment a 10km square is calculated based on the site centroid.

The condition maps use this 10km square to group all of the condition assessments within a reporting category - for example, ten different assessments are reported for lowland calcareous grassland on SSSIs within grid square ST45. As only one of these ten, i.e. 10%, is currently favourable, this square is coloured red on the 'current' SSSI condition map for lowland calcareous grassland. The 'future' map shows this square as green. This is because seven of the ten features are currently 'unfavourable-recovering'. Assuming that recovery is achieved for these seven features, at a point in the forseeable future, eight out of ten, i.e. 80%, of the lowland calcareous grassland features within square ST45 will be favourable. Note that no prediction is made on the timescale for recovery for any feature.

For large SACs (i.e. those falling into more than one 10km squares), condition assessments have been allocated to all the 10km square which, to the best of our knowledge, host the feature. This has been possible because for SACs there are 10km square distribution maps for each interest feature. JNCC do not hold equivalent spatial data for SPA, Ramsar or SSSI sites and have, therefore, only been able to use the site centroid to locate the interest features on these site types.

JOINT NATURE CONSERVATION COMMITTEE

Summary

The Joint Nature Conservation Committee (JNCC) is the forum through which the three country nature conservation agencies - English Nature, Scottish Natural Heritage (SNH), and the Countryside Council for Wales (CCW) - deliver their statutory responsibilities for Great Britain as a whole and internationally. The Committee consists of representatives of these agencies, as well as the Countryside Agency, independent members, and non-voting members appointed by the Department of the Environment, Northern Ireland.

JNCC's statutory responsibilities, known as the special functions, contribute to maintaining and enriching biological diversity, enhancing geological features and sustaining natural systems.

The special functions are principally to:

- advise ministers on the development of policies for, or affecting, nature conservation in Great Britain and internationally;
- provide advice and knowledge to anyone on nature conservation issues affecting Great Britain and internationally;
- establish common standards throughout Great Britain for the monitoring of nature conservation and for research into nature conservation and the analysis of results;
- commission or support research which the Committee deems relevant to the special functions.

Increasingly, JNCC is implementing its national advisory functions on a United Kingdom basis, and is working closely with the Environment and Heritage Service, Northern Ireland. JNCC was established under statute by the Environmental Protection Act 1990 and commenced its work in April 1991. In 2005, its support unit became a company limited by guarantee, allowing the organisation to, amongst other benefits, employ its own staff and let its own contracts.

Details of publications produced by JNCC are available from:
Communications Team, JNCC, Monkstone House,
City Road, Peterborough PE1 1JY, UK.
Telephone: +44 (0)1733 562626
Fax: +44 (0)1733 555948
Email: communications@jncc.gov.uk

Website: www.jncc.gov.uk/csm

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ENGLISH NATURE

SCOTTISH NATURAL HERITAGE

ENVIRONMENT AND HERITAGE SERVICE