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Surveillance and monitoring

Working with a wide range of partners, JNCC tracks trends in plant and animal populations and the condition of protected nature conservation sites to identify changes in UK biodiversity and geodiversity

JNCC collects data about the state of UK wildlife through a variety of surveillance and monitoring schemes, most of them organised in partnership with other organisations.

Surveillance and monitoring of UK biodiversity and geodiversity is needed to fulfil international reporting obligations, assess the state of UK nature, and evaluate the effectiveness of current management and conservation measures. During the reporting year, JNCC continued to develop a surveillance strategy aimed at meeting the UK's further needs and discussed this with Government departments and other key stakeholders. One need identified was a cost-effective means of carrying out regular surveillance of habitats. We are currently refining and costing the strategy.

In the marine environment, JNCC has been supporting Government in the development of a UK Marine Monitoring and Assessment Strategy. JNCC's Jane Hawkrige has been chairing one of the groups contributing to this strategy, the Healthy and Biodiverse Seas Evidence Group, with a view to determining, and planning to meet, the UK's future marine surveillance requirements.

Between 1999 and 2005 the country agencies undertook a major programme of monitoring species, habitats and geological features on protected sites in the UK, working to common standards

developed by JNCC. A landmark of the reporting year was our publication of the results of this monumental effort in *Common Standards Monitoring for Designated Sites: First Six-Year Report*. The report is a valuable tool for UK nature conservation as it will help direct effort and resources to where they are most needed.

We continued to support species surveillance projects with a range of partners, including the British Trust for Ornithology, the Wildfowl and Wetlands Trust, the Royal Society for the Protection of Birds and the Centre for Ecology and Hydrology. The 25-member Tracking Mammals Partnership entered its fifth year, providing annual

population trends for 35 terrestrial mammals – around 55% of the UK land mammal fauna. The various surveillance schemes supported by JNCC have proved invaluable in assessing species for inclusion on the UK Biodiversity Action Plan priority list, determining the conservation status of species listed on the annexes of the Habitats Directive, and reporting status and trends to international treaties.

Information on species status has been made available via a new area of the JNCC website. The new facility provides users with a downloadable spreadsheet that gives the conservation status of all UK plants and animals that have been assessed.



Marsh fritillary *Euphydryas aurinia*

(Far left) Butterflies are one type of species featured in *Common Standards Monitoring for Designated Sites: First Six-Year Report* (see page 39).

© Keith Porter/Natural England

Southern marsh orchid

(Top left) A southern marsh orchid in a base-rich spring-fed fen, Wye Valley, Monsal Dale, Derbyshire. Lowland fens like Wye Valley are one of 25 habitats covered by the Commons Standards Monitoring report (Bottom left) (see pages 38–39). Information on each habitat is presented using charts and maps. In the case of lowland fen, 789 Sites of Special Scientific Interest, Areas of Special Scientific Interest, and Special Areas of Conservation were reported on, and 38% were found to be in favourable condition. Where habitat condition was considered to be unfavourable lack of remedial management and lack of grazing were the most common factors. Interpreting the findings, the report says: "It is natural for open fens to change spontaneously into wooded fens, and management, such as scrub clearance and grazing, is required to prevent this."

Southern marsh orchid

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CSM report image

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Natterer's bat *Myotis nattereri*

The Tracking Mammals Partnership update for 2007 gives a positive report for 11 of our native mammals, including five bat species – the great and lesser horseshoe, Daubenton's, pipistrelle and Natterer's (pictured). Conservation status has to be assessed for all bat species under the Habitats Directive and the EUROBATS agreement.

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The listing is proving to be a useful resource for a wide range of users, including Government departments, local authorities and environmental consultants.

The international context for UK conservation action is crucially important, especially for migratory species, and data from UK surveillance schemes are shared with other organisations so that the status of international populations can be established. One aspect of this work was the publication of the fourth edition of *Waterbird Population Estimates* by Wetlands International, supported partly by JNCC. The estimates underpin much of our work on the conservation of migratory waterbirds and their habitats. Data from JNCC-supported surveys of wetland birds, geese and swans and seabirds also contributed to this effort.

Another significant achievement during the reporting year was the launch of Wetland Bird Survey Online, which is hosted by the British Trust for Ornithology and allows volunteer surveyors to enter their own data. It provides a powerful tool for accessing information, for example allowing staff in the country agencies to access Wetland Bird Survey data from their desktops.

The Rare Breeding Birds Panel collates data collected by volunteers on rare and vulnerable breeding birds, providing a secure national repository and making the often sensitive data available to the main conservation practitioners. The former secretary to the Panel, Dr Malcolm Ogilvie, retired in 2006 after 13 years of dedicated service and we wish him well for the future.

During the year, JNCC launched the UK's Seabird Monitoring Programme website www.jncc.gov.uk/smp. Users can view maps of every seabird colony in the UK, view the latest counts as well as past data, and enter their own count data online. Future enhancements to the site will include uploading 38 years of monitoring data and making the site more interactive by enabling users to make spatial searches for data and produce their own summaries and plots.

Common Standards Monitoring (CSM)

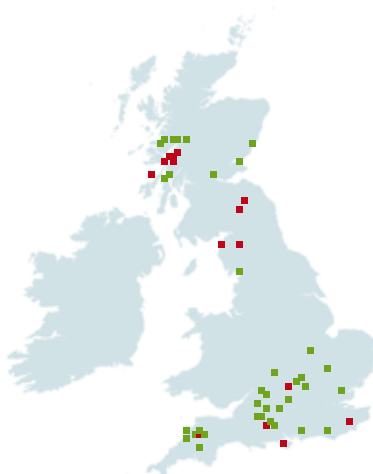
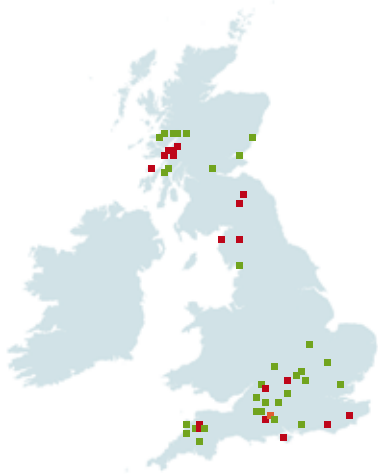
Special Areas of Conservation (SACs) designated under the Habitats Directive, and Special Protection Areas (SPAs) designated under the Birds Directive, are collectively known as Natura 2000 sites. In these examples, the pie charts show separately the features on SSSIs and SACs. SSSIs can be

designated for more species than SACs, and thus the Natura 2000 pie chart for butterflies refers to the condition of a subset of the SSSI features. For fens and marshes, more features are in unfavourable-recovering condition on SACs, reflecting the focus of conservation effort on sites of international importance.

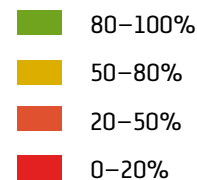
Butterflies: Sites of Special Scientific Interest/Areas of Special Scientific Interest (SSSIs/ASSIs)

Current condition of SSSI/ASSI features

Condition of SSSI/ASSI features, with those currently reported as unfavourable-recovering shown as 'favourable'



Proportion of assessed features on 10 km squares that are favourable:



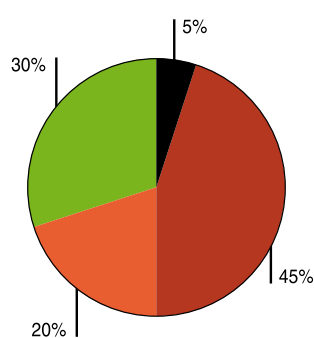
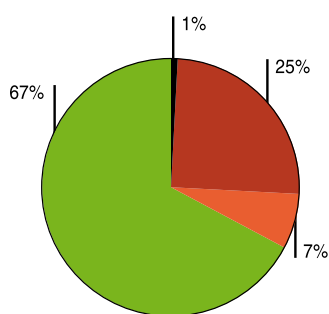
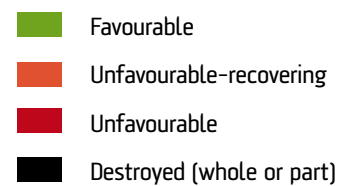
Sample species – butterflies

Condition assessment – SSSI features

Condition assessment – Natura 2000 features

CSM – species

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.



Sample habitat – fens and marshes (lowland)

Condition assessment – SSSI features

Condition assessment – Natura 2000 features

CSM – 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.

