Call 999: an emergency for Scotland's biodiversity

Summary and Assessment for Scotland

From

The UK Biodiversity Action Plan

2005 Reporting Round

Biodiversity Task Force

Scottish Environment LINK

Executive Summary

5 April 2007: 1000 days left to 2010, when the target to halt the loss of biodiversity in Scotland expires. How is Scotland doing in terms of progress towards this target?

This report has been produced to contribute to the evidence base on the state of Scotland's biodiversity. It is intended to stimulate production of solutions that can be incorporated into the current review of Scottish Biodiversity Strategy Implementation Plans. Its findings should also stimulate debate within the Scottish Biodiversity Committee where major policy and process change should be recommended if we are to make any significant progress towards meeting the 2010 target to halt the loss of biodiversity. Apart from the last section the report is based on the results of the 2005 UK BAP reporting round, using Scottish data disaggregated from the UK data set. The analysis can be verified by going to http://www.ukbap.org.uk/GenPageText.aspx?id=105. The species and habitat examples have been supplemented with information from Lead Partners.

The 2005 reporting round for Scottish priority species and habitats indicates that progress towards the 2010 target to halt the loss of biodiversity is not happening quickly enough:

60% of species and 68% of habitats are declining, lost or trend is unknown. This compares to 38% of species and 33% of habitats that are stable or increasing. Trends in 2005 were supported by adequate data for only 32% of species and 10% of habitats. **Overall trends for Scotland's priority species and habitats are not improving rapidly enough to halt the loss of biodiversity by 2010.**

45% of species enhancement targets and 57% of habitat enhancement targets were behind schedule or had no progress. This contrasts with 16% of species targets and 16% of habitat targets that had been achieved or were on schedule. For the maintenance of population range and size, 57% of species targets were not achieved or progress was unknown. 15% of habitat maintenance targets had not been achieved and for 72%, progress was unknown.

In meeting the current UKBAP targets on enhancement or maintenance in Scotland, for the majority of species and habitats, progress is either unknown or behind schedule.

The biggest threat to Scotland's biodiversity remains our land management practices, much of which is linked to unfavourable agricultural practices and loss of habitat.

The constraints to delivering UKBAP action plans in Scotland focus on the lack of survey / research and the lack of funding and incentives. Both these constraints were top for Lead Partners and for Local Biodiversity Action Plan Partnerships. **Solutions to these constraints focus therefore on the need for more funding, resources and incentive schemes as well as monitoring, survey and research.**

Successes reported in 2005 all describe process successes rather than successes linked to biological outcomes. For example, funding has been secured for a range of new species projects and for habitats, new management schemes had been put in place. Biological successes from these have yet to materialise.

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Introduction

On 5 April 2007, there will only be 1000 days left until 2010. 2010 marks the target to halt the loss of biodiversity. This report assesses information to date on well we are progressing towards that target in Scotland.

The UK Biodiversity Action Plan, published in 1994, was the UK government response to the Convention on Biological Diversity which emerged from the Rio Earth Summit. It set out a programme for the conservation of the UK's biodiversity and led to the production of action plans to achieve the recovery of many of our most threatened species and habitats. Across the UK, there are 391 species action plans, covering 475 separate species, and 45 Habitat Action Plans. Each plan has specific biological targets and a lead partner to coordinate plan implementation. 213 of these species and 40 of these habitats occur in Scotland and results from the 2005 reporting round for these species and habitats form the basis of this report. The full results are available from www.ukbap.org.uk

There are currently 25 Local Biodiversity Action Plans in Scotland, almost all of which are supported by a Local Biodiversity Officer, or a post with responsibility for the LBAP.

The UK government has committed itself to halt the loss of biodiversity by 2010 and the status of UKBAP species and habitats are among the draft headline indicators for this target. In Scotland, the Scottish Biodiversity Strategy commits to five objectives, including halting the loss of biodiversity and continuing to reverse previous losses through targeted action for species and habitats. One of the main mechanisms for achieving this in Scotland is delivering the actions and outcomes identified in the UK Biodiversity Action Plans relevant to Scotland.

Trends for Scottish Priority Species and Habitats

The reporting round asked Lead Partners to provide their best estimate of the current trend for each species or habitat in Scotland, unless there was absolutely no information on which to assess status.

Adequacy of monitoring data

Lead Partners were asked to indicate whether there are mechanisms in place to enable trends for the species/habitats to be adequately monitored. Of the species and habitats relevant to Scotland, 50 species (32%) and 4 habitats (10%) had monitoring data adequate to assess trends. Twenty-nine species (18%) and 14 habitats (35%) were likely to have adequate monitoring data by 2008. For 46 species (29%) and 15 habitats (38%) there was unlikely to be adequate monitoring data by 2008. For the remainder, the adequacy of data was not recorded.

Reported trends – single species and habitats

The trends reported for priority single species (total 157)[1] and habitats (total 40) in Scotland, including those with less adequate data, were:

Declining or lost:

- A total of 29 species (18%) and 13 habitats (33%) were reported to be declining or fluctuating (probably declining), or were species that had been lost before publication of the BAP report[2]. Of the declining species, about half were slowing in their decline and half were continuing or accelerating. All 12 declining habitats were reported as slowing in their decline.

Unknown or unclear trend:

- For 65 species (41%) and 14 habitats (35%), the trend was unclear or unknown.

Increasing:

- 11 species (7%) and 5 habitats (13%) were thought to be increasing, or to be fluctuating (probably increasing).

Stable:

- 49 species (31%) and 8 habitats (20%) were thought to be stable, or to be fluctuating (probably stable).

The trends are summarised in Figures 1 and 2. Trends for single species and habitats in Scotland are shown with those for England, Northern Ireland and Wales for comparison in Appendices 1 and 2.

Four of the 7 marine habitats and 9 of the 11 coastal habitats were reported as trend unclear or unknown. This compared with 1 of the 22 terrestrial habitats. All 4 marine species covered by single species plans were reported as trend unclear or unknown.

[1] These figures include single species action plans only; results for grouped species are on page 5.
[2] The species lost before BAP publication were two lichens, *Bryoria smithii* and *Cladonia peziziformis.*

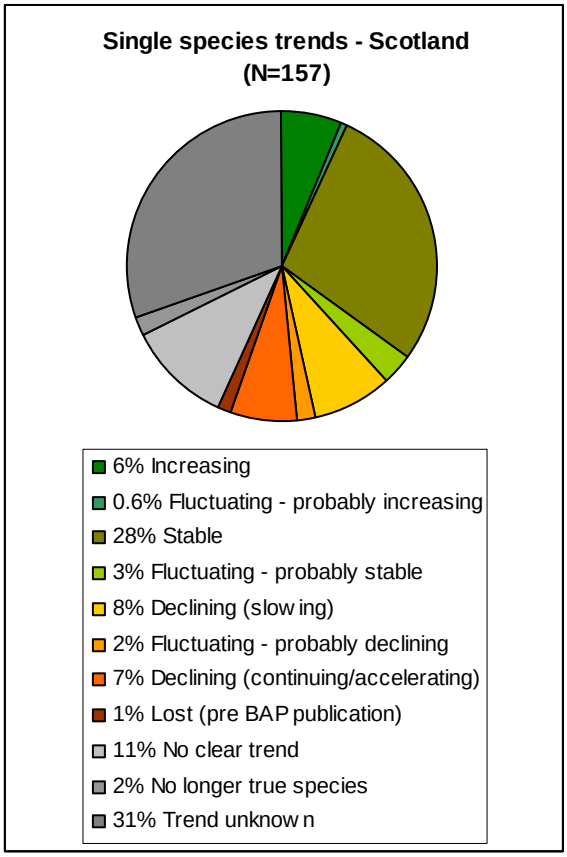


Figure 1: Scottish single species action plan trends (N=157)

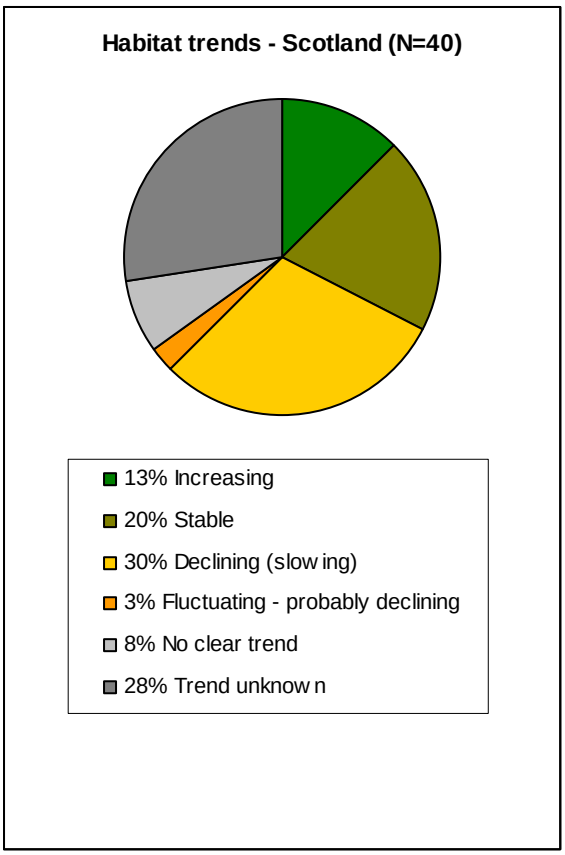


Figure 2: Scottish habitat trends (N=40)

Increasing species

The 11 species reported as increasing in Scotland in the period to the 2005 review include:

- **Corncrake (*Crex crex*)**: the population size of calling males has increased from 488 in 1993 to 1113 in 2005. There has also been progress on increasing the population range. The increase in population size has been achieved through initiatives including the Corncrake Initiative. This agri-environment scheme provides payments to farmers and crofters with calling corncrake on their land to carry out conservation management. Currently 80% of 1km squares in corncrake range in the UK have some form of corncrake-friendly management undertaken in them, a statistically significant increase since 1992.

- **Capercaillie *(Tetrao urogallus)*** numbers have increased in this reporting period. There were an estimated 1980 adult birds in the winter of 2003/4, which is approaching the population size of the early 1990's (2200 adult birds in 1992-4), following their decline in numbers in the late 1990's (1070 adult birds in 1998/9). This is still only a fraction of the population level of approximately 20,000 birds in 1970, and the numbers are still perilously low. The population increase is localised and has generally not involved range expansions, and in fact range contractions are occurring in some regions, such as Perthshire. Ongoing work includes deer management, habitat advice to estate managers, and awareness-raising.

- **Slender naiad *(Najas flexilis)***, a rooted aquatic macrophyte, is currently found in 39 sites in the UK, all Scottish lochs. There has been an increase in the number of confirmed lochs since the last reporting round, although also concern about loss from one site, Loch Tangy. Main threats to the species are eutrophication, acidification, and possibly also invading alien species.

Stable species

Examples of the 49 species classified as "stable" in Scotland in the 2005 review include:

- **Yellow marsh saxifrage *(Saxifraga hirculus)***: research and survey work have enabled this species to be managed better at its known populations.

- **Sword-Grass *(Xylena exsoleta)***: this upland/moorland moth was formerly widespread in the UK, but is now only regularly recorded in numbers in Scotland. Awareness of the species has been raised in Scotland, but its ecology is still poorly understood, meaning that management advice is difficult to give.

- **Great yellow bumblebee *(Bombus distinguendus)***: this species is found on herb-rich grasslands mainly in the north of Scotland, including the machair of the Outer Hebrides. Although the population trend is not known, the range of the species is now stable**.**

Declining species

The thirteen species reported as declining but slowing in their decline in Scotland include:

- **Great crested newt *(Triturus cristatus)***: this species is widespread but local in Scotland, and the population is less than 1000. Continuing decline of the species has been attributed to loss and fragmentation of habitat (both aquatic and terrestrial), and pollution.

- **Red squirrel *(Sciurus vulgaris)***: records show that the grey squirrel is continuing to spread into Scotland. However, losses of red squirrel numbers are not expected to be as great as in other parts of the UK, because large conifer woodlands likely to favour red squirrels exist in many areas.

Of most concern are the eleven species that are reported to be continuing or accelerating in their decline in the last reporting period. These include:

- **Juniper *(Juniperus communis)***: lack of regeneration of juniper populations is of concern in Scotland, as well as in English populations. Recent initiatives include a juniper survey, a management leaflet for upland juniper, and a 5-year management trial for juniper regeneration. Juniper is also now listed as a target species in the Scottish Forestry Grant Scheme, which has helped take work on the species forward.

- **Common skate *(Raja batis)***: this demersal species is widespread but very scarce throughout European waters, and is provisionally classified as Endangered on the IUCN Red List. Its slow rate of growth and reproduction makes it vulnerable to fishery pressure, which is its main threat (both targeted and bycatch). Conservation effort has focussed on

awareness-raising, and research into behaviour of the common skate. However without appropriate legislative protection there will be no positive future for this species.

- **Black grouse *(Tetrao tetrix)***: this species has declined in Scotland during the reporting period, although it has remained stable in England and increased in Wales. The many factors in its decline include forestry and moorland management, agricultural practice, predation, loss of open areas, and climate change. An important means of reversing the decline of the species will be implementation and long-term monitoring of trial forest management sites, in order to influence forestry policy effectively.

Grouped species

A total of 56 species relevant to Scotland are covered by grouped action plans. Of these, 5 species (9%) are declining (slowing), 7 (13%) are stable, one was lost prior to BAP publication, and for the remaining 43 (77%) the trend is unknown. Of the 43 species for which the trend is unknown, 22 are marine species.

The declining species and six of the seven stable species are all in the grouped plan for *Hieracium* section *Alpestria*. This endemic group consists of 14 apomictic species of hawkweed, presently recorded from 18 ten km squares in Shetland. They are threatened by changes in land use (pasture improvement, intense grazing and other). Because the Hieracia are taxonomically complex, progress (whether positive or negative) is likely to be very slow.

Habitats

Five habitats were reported to be increasing in Scotland:

- In the case of **lowland raised bogs**, progress has been made in Scotland during this reporting period in habitat restoration and public awareness. This was attributed principally to a LIFE Project covering 11 Special Areas of Conservation. However, it was also emphasised that if targets are to be achieved, agri-environment schemes need additional funds, and a focussed approach is needed to restore lowland raised bogs on non-designated sites. The trend for this habitat was based on a “best guess” by the Lead Partner.

- Other habitats reported as increasing in Scotland were **upland oakwood, wet woodland, native pine woodlands,** and **cereal field margins.** In all these cases except cereal field margins, the trend was estimated on the basis of partial surveys and limited data.

The twelve habitats currently declining (slowing in their decline) include a number of grassland habitats such as **lowland grassland** and **upland hay meadows**, together with others such as **upland heathland** and **blanket bog**.

- Habitat quality of **upland hay meadows** is a major concern, and underlying reasons for continuing decline in habitat quality are not altogether understood. Cutting, under-grazing and abandonment can cause problems, but some sites are still also affected by overgrazing and agricultural improvement. Underlying causes of under-management are still thought to be largely due to the demise of traditional farming practices resulting from current

agricultural economics and policies. The extent to which atmospheric nutrient deposition and climate change is affecting the composition of our upland meadows is a largely unknown quantity.

Progress on Targets for UKBAP species and habitats applicable to Scotland

Lead partners were asked to give a qualitative assessment of progress on targets, and also to enter quantitative data wherever possible, even if this was only a guess. Targets are divided into **maintenance targets** that aim to maintain the population or range of a species; or the extent or condition of a habitat; and **enhancement targets** that aim to increase the population or range of a species, or improve the condition of, restore or recreate habitats.

Enhancement targets

Enhancement targets for **species action plans** (total 185 targets) have been **achieved** or **exceeded** in 16 cases (9%), and are **on schedule** in a further 14 cases (8%). However, 17 targets (9%) are **behind schedule** and for 67 targets (36%) there has been **no progress**. Species enhancement targets are shown in Figure 3.

A total of 102 enhancement targets are included in 34 **habitat plans** (restoration, expansion or achievement of condition of the habitat). Of these 102 targets, 4 (4%) have been **achieved or exceeded** and a further 12 (12%) are **on or ahead of schedule.** The largest category of habitat enhancement targets (44, or 43%) is that of targets for which there has been **some progress, but behind schedule**. Habitat enhancement targets are shown in Figure 4.

Of the habitat enhancement targets, a total of 35 targets covering 22 habitat action plans involve **habitat restoration and expansion**. These are shown in Figure 5.

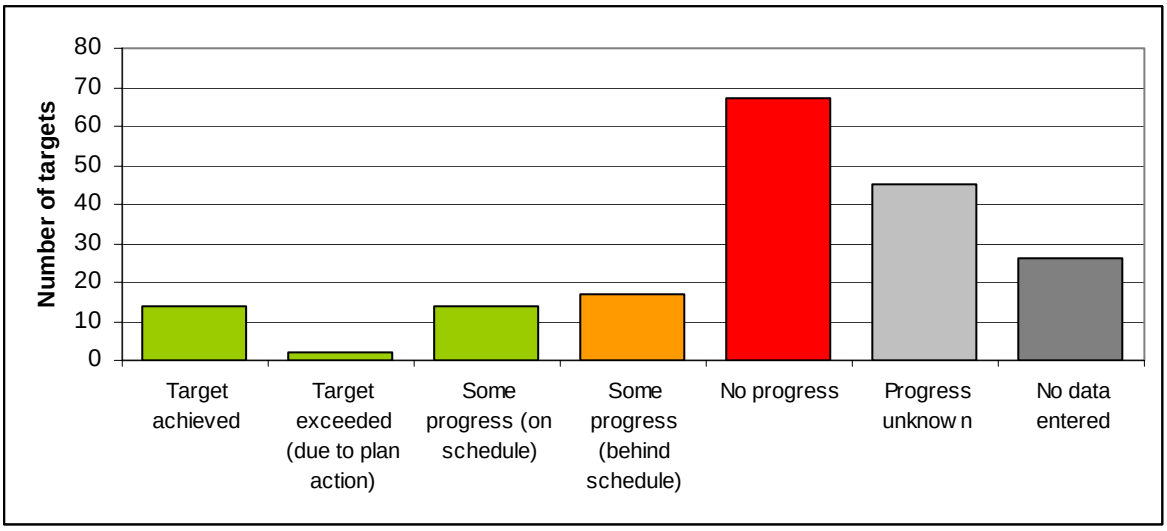


Figure 3: Species enhancement targets relevant to Scotland (N=185)

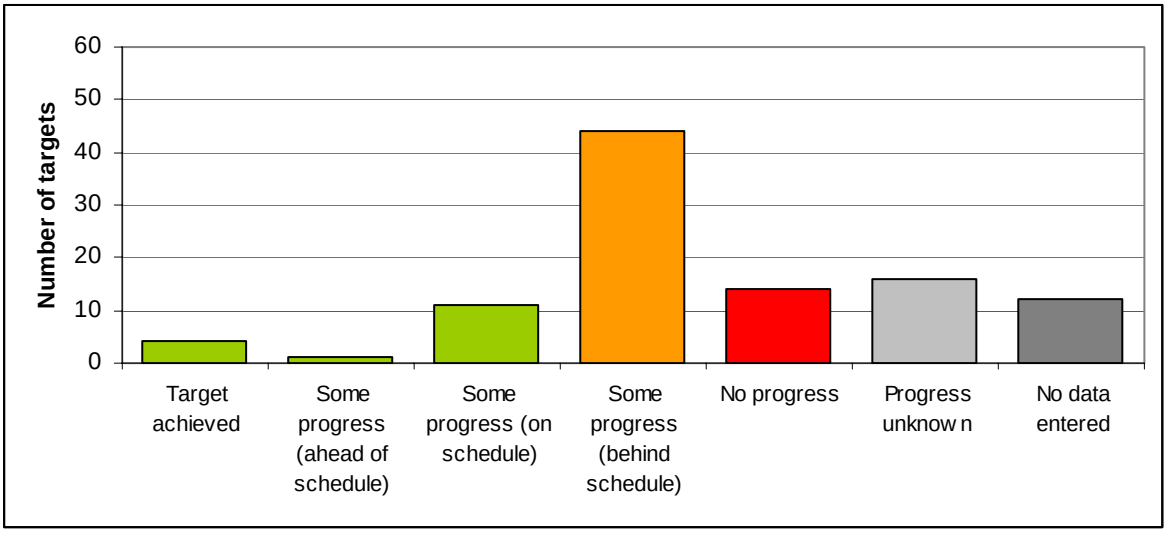


Figure 4: Habitat enhancement targets relevant to Scotland (N=102)

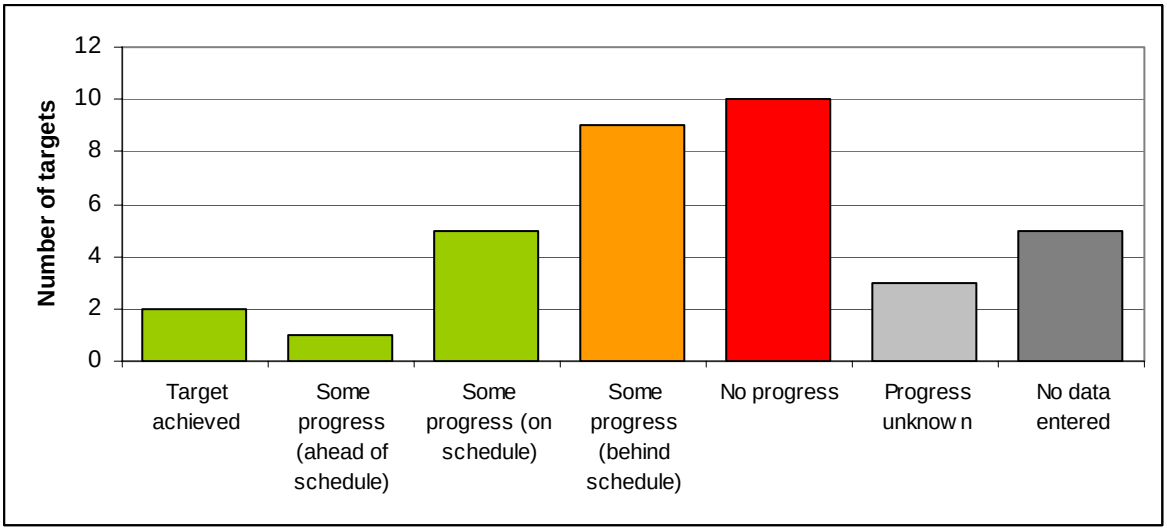


Figure 5: Progress on habitat expansion/restoration targets relevant to Scotland (N=35)

Maintenance targets

- There were 202 **species maintenance** targets, of which 87 (43%) have been met, 30 (15%) have not been achieved, and progress on the remaining 42% is either unknown or has not been reported.

- There were a total of 43 targets on **maintaining extent** in a total of 36 **habitats.** Of the 43 targets, 9 (21%) have been **achieved**, 6 (14%) of the targets have **not been achieved**, and for 28 (65%) of targets progress is **unreported or unknown.**

- For some of these targets, the species population/range, or the habitat extent, is being maintained at a small baseline level.

- There were 25 targets on **maintaining habitat condition** in a total of 18 habitats. For all 25 habitats, progress was either **not achieved** (16%) or **unknown** (84%).

Species enhancement targets - examples

Species enhancement targets reported to be **achieved** included:

- **Red-necked phalarope *(Phalaropus lobatus)***: the target of increasing the breeding population in the Hebrides to 10 breeding males on at least three sites by 2005 was achieved. There has also been some progress on increasing the north Shetland breeding population to 55-60 breeding males on Fetlar and Unst by 2003. The overall trend for this species over the reporting period has been an increase; however, the population in the UK may be partially determined by external factors, such as climatic conditions in the Arabian Gulf.

- For the **vendace *(Coregonus albula)***, the target of introducing a self-sustaining population to one Scottish loch by 2005 was achieved. The species had not been seen in either of its two native lochs in Scotland for some years, but it has now been successfully reintroduced to a new site in Loch Skene using eggs from Bassenthwaite Lake in the Lake District, and work is underway on establishing a second population in Scotland.

Some species enhancement targets achieved were for establishment of *ex-situ* conservation programmes; for example, **marsh clubmoss (*Lycopodiella inundata*)** is now in cultivation at Royal Botanic Garden Edinburgh as part of the Scottish Plants Project.

Among species enhancement targets for which **no progress** was made, the following are examples:

- For the **common scoter *(Melanitta nigra)***, it was reported that there had been no progress on increasing breeding population size. This was based on a “best guess” since no full population surveys have been conducted since 1995. The overall trend of this species during the reporting period is reported as decline (continuing/accelerating). The population in the Flow Country may be higher than in 1995 (although is still lower than the 1988 level), and an EU Life project has enabled habitat restoration here by removal of conifers from around key breeding sites. A full population survey will take place in 2007.

- For the **aspen hoverfly *(Hammerschmidtia ferruginea)***, no progress has been made on the target of increasing population size, and the overall trend for the species in Scotland is reported as declining (slowing). Currently, the results are awaited of an experiment to determine how to extend breeding conditions in cut aspen trees. It is hoped that this knowledge can be applied to increase the number of breeding sites in previously occupied aspen stands, and ultimately that the population range can be increased.

- **For the narrow-headed ant *(Formica exsecta)***, there was no progress on increasing the population size at Mar Lodge and Rannoch where population sizes remain critically low. The Lead Partner reported that translocating new colonies is not advisable at this stage because the source populations are not large enough and there would be a risk of losing nests in risky translocation procedures. The population trend is estimated to be stable in Scotland (based on a “best guess” but backed up with good survey data from the core populations in Glenmore, Rothiemurchus and Abernethy forests).

Species maintenance targets - examples

Targets relating to maintenance of population size or range were reported as **achieved** for species including:

- **Icy rock moss *(Andreaea frigida)***: the target of maintaining current population levels at all known and discovered sites has been achieved, with survey work confirming earlier records of the distribution of the species. The population in the Cairngorms is large, with more than 30,000 moss cushions, and detailed surveys of outlying populations in the Cairngorms are now needed. The overall population trend in Scotland is unknown.

- **Norwegian mugwort (*Artemisia norvegica*)**: this globally rare arctic alpine plant is found at only three sites in the UK, all mountain summits in Ross and Cromarty and Sutherland. The target of maintaining these three populations has been achieved during this reporting period. However, because there are so few sites in the UK, it is also hoped to establish what the trend is in the numbers of these plants within the populations, and whether regeneration rates balance mortality. Currently the remote location of the sites has frustrated this.

- ***Bacidia incompta***: this species of crustose lichen grows where there are pockets of surviving elm trees in Scotland, and no losses from these sites are believed to have occurred during the reporting period.

- The **chequered skipper (*Carterocephalus palaemon*)**: the range of this butterfly in Scotland has remained at 27 occupied 10km squares during the current period. However, although the range has remained static, there are concerns that colonies are declining due to inappropriate management, and the overall population trend for this species is reported as declining (slowing).

Maintenance targets which were **not achieved** included:

- The **Shetland pondweed *(Potamogeton rutilis)***. This species remains in thirteen lochs, but the recorded abundance has decreased in more of these lochs than it has increased, and the species is absent from two lochs where it was previously found. Based on these data the target of maintaining range was reported as not achieved.

- The **common skate *(Raja batis)*** (whose population trend is decline (slowing) - see page 4). The target of stabilising refuge populations in all key centres of abundance by 2004 was not achieved. The Lead Partner reported that without legislative protection this target will be impossible to meet, as the species is still targeted by fisheries. Refuge areas inaccessible to trawlers are still targeted by longliners for spurdog (and for the bycatch of skate, which feeds on juvenile spurdog).

Habitat enhancement targets - examples

Four habitat enhancement targets in Scotland were reported as **exceeded or achieved**.

- Achievement of condition was exceeded in the case of **lowland heathland** (although no progress was made on expansion of the habitat).
- Expansion targets were achieved in the case of **upland oakwood** and **saline lagoons.** In terms of overall trend, these two habitats were reported as increasing and stable, respectively.
- For **lowland raised bogs**, one of the targets relating to achievement of condition was achieved (in the case of the other three, progress was unknown).

Habitat enhancement targets for which **no progress** was reported included:

- **Mudflats:** the specific target was "create and restore enough intertidal area over the next 50 years to offset predicted losses to rising sea level in the same period". While there were difficulties in producing a reliable estimate of the extent to which this target had been met, it could be said with a degree of certainty that overall, there was a considerable shortfall in achieving a target of 500ha of new habitat a year. For the target of restoring estuarine water quality, some progress was made. The overall trend for the habitat is unknown.

Habitat maintenance targets - examples

Nine habitat maintenance targets were reported as **achieved**, for example:

- For **native pine woodlands**, the target of maintaining extent in the core areas was achieved, and some progress was also made on three expansion targets.
- For **machair**, the target of maintaining existing extent was achieved. For four enhancement targets relating to this habitat, no information was given on progress. A major report commissioned by SEERAD, on the management of machair, is due soon.

Habitat maintenance targets **not achieved** included:

- **Purple moor grass and rush pasture**: the target of arresting depletion throughout the UK was not achieved for Scotland (or for the UK as a whole). Under-grazing and abandonment are a problem with this habitat; scrub encroachment is the common result, sometimes together with invasive species problems. Purple moor-grass and rush pastures are also affected by overgrazing and nutrient enrichment.

Emerging threats to species and habitats

Information was provided on factors that were currently posing a significant threat to habitats and species, or were likely to do so over the next five years. The most frequently reported threats relevant to Scotland are shown in Figure 6, as percentages of all Habitat or Species Action Plans.

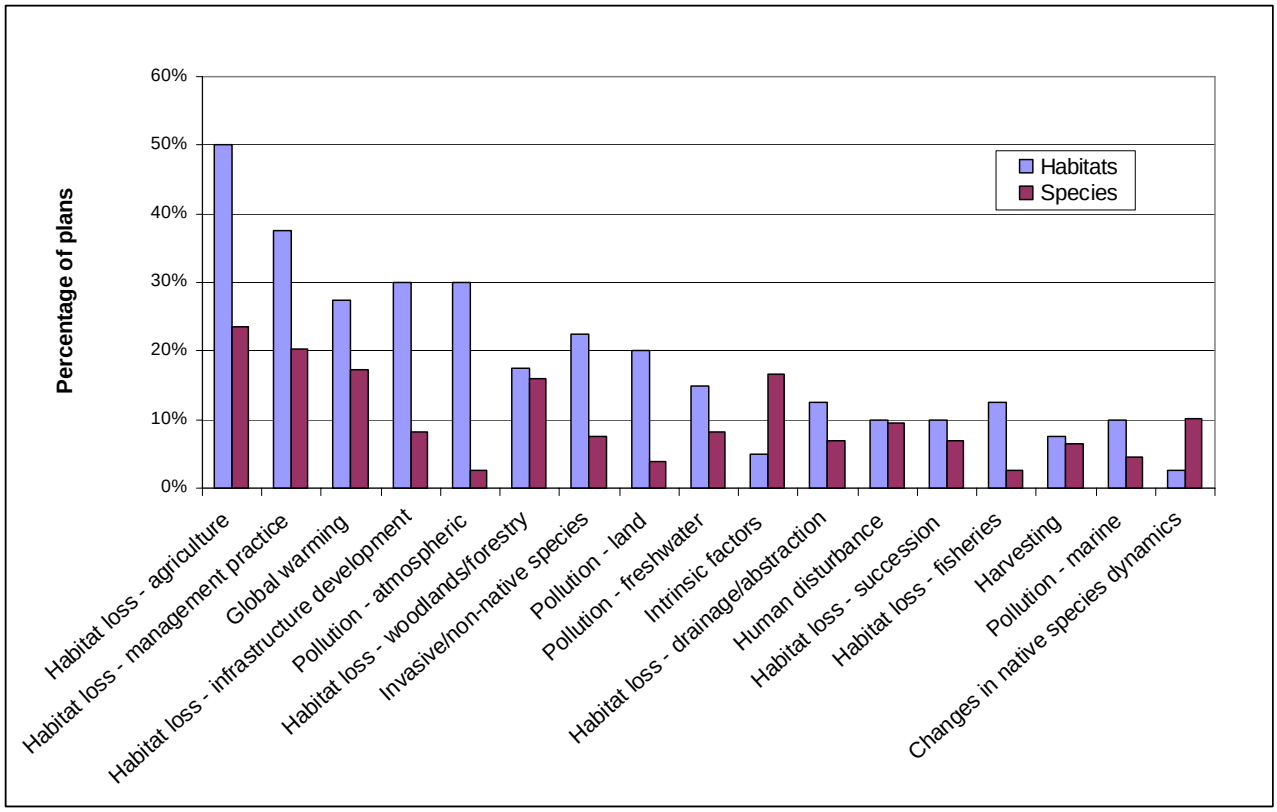


Figure 6: Percentage of all priority habitats and species in Scotland affected by different current or emerging threats. Threats for which the sum of percentages is less than 10% have been omitted from the graph. "Habitat loss" = habitat loss or degradation.

- Habitat loss or degradation due to **agriculture** is a significant threat, affecting 50% of habitats and 24% of species. In many of these cases the specific nature of the threat relates to grazing/grasslands: inappropriate grazing (20 habitats/species), undergrazing or overgrazing (16 and 14 habitats/species respectively), and intensive grassland management (19 habitats/species).

- Habitat loss or degradation relating to **management practice** is a threat to 38% of habitats and 20% of species. This is most commonly related to "demise of traditional practices" (affecting 18 habitats/species), followed by scrub encroachment (12 habitats/species).

- **Global warming** is considered an emerging threat for 28% of habitats and 17% of species; **infrastructure development** and **atmospheric pollution** were each considered a current or emerging threat to 30% of habitats.
- For 8 priority habitats (20%) and 39 priority species (25%), there were not considered to be any current or emerging threats.

Constraints to delivering action plans

Constraints to delivering habitat and species action plans were identified by lead partners. The percentages of plans affected by each category of constraint relevant to Scotland are shown in Figure 7.

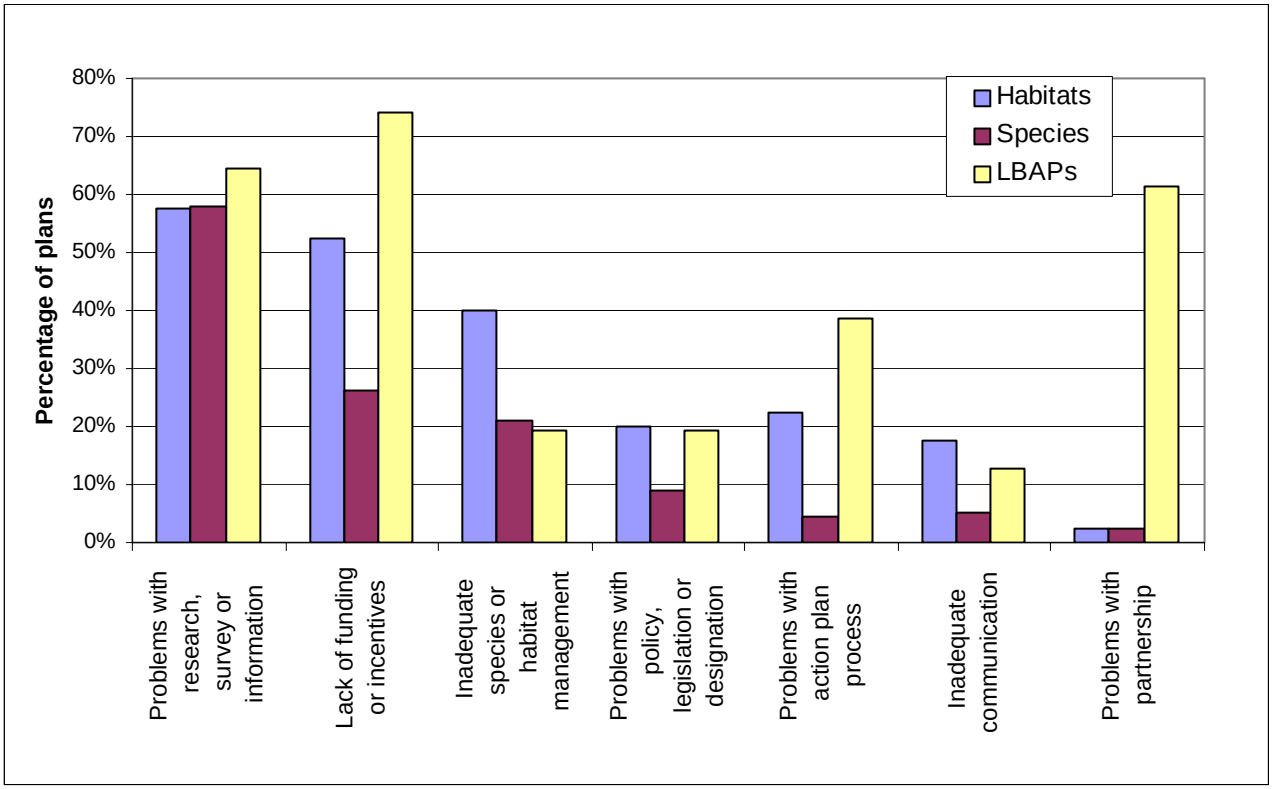


Figure 7: Constraints to meeting action plan targets. Graph shows number of habitats, species or LBAPs affected by each constraint, as a percentage of total species plans, habitat plans and LBAPs respectively.

- Lack of **research or survey information** was the constraint most commonly reported by habitat/species Lead Partners, affecting 58% of plans in both cases. Specific constraints in this category included poor knowledge of species autecology, and requirement for baseline and monitoring surveys.

- The constraint next most frequently reported by habitat/species Lead Partners was **lack of funding or incentives**, which affected 53% of habitat plans and 26% of species plans. This comprised, for example, general lack of resources (16% of species plans), and changes needed to structure of agricultural schemes (25% of habitat plans).

- In the case of six habitats (15%) and 43 species (27%), the reporting Lead Partners did not report any constraints to delivering the targets.

- The constraints most often reported by LBAPs were lack of funding or incentives (74%), problems with research or survey information (65%), and problems with partnership (61%). These percentages are out of all the LBAPs in Scotland, and of these, five (16%) did not report any constraints to delivery of their plans.

Solutions

Lead partners were asked to identify solutions to the constraints to action plan delivery, where it was possible to do so. The solutions were described for each habitat/species, and then assigned to categories, which are shown in Figure 8.

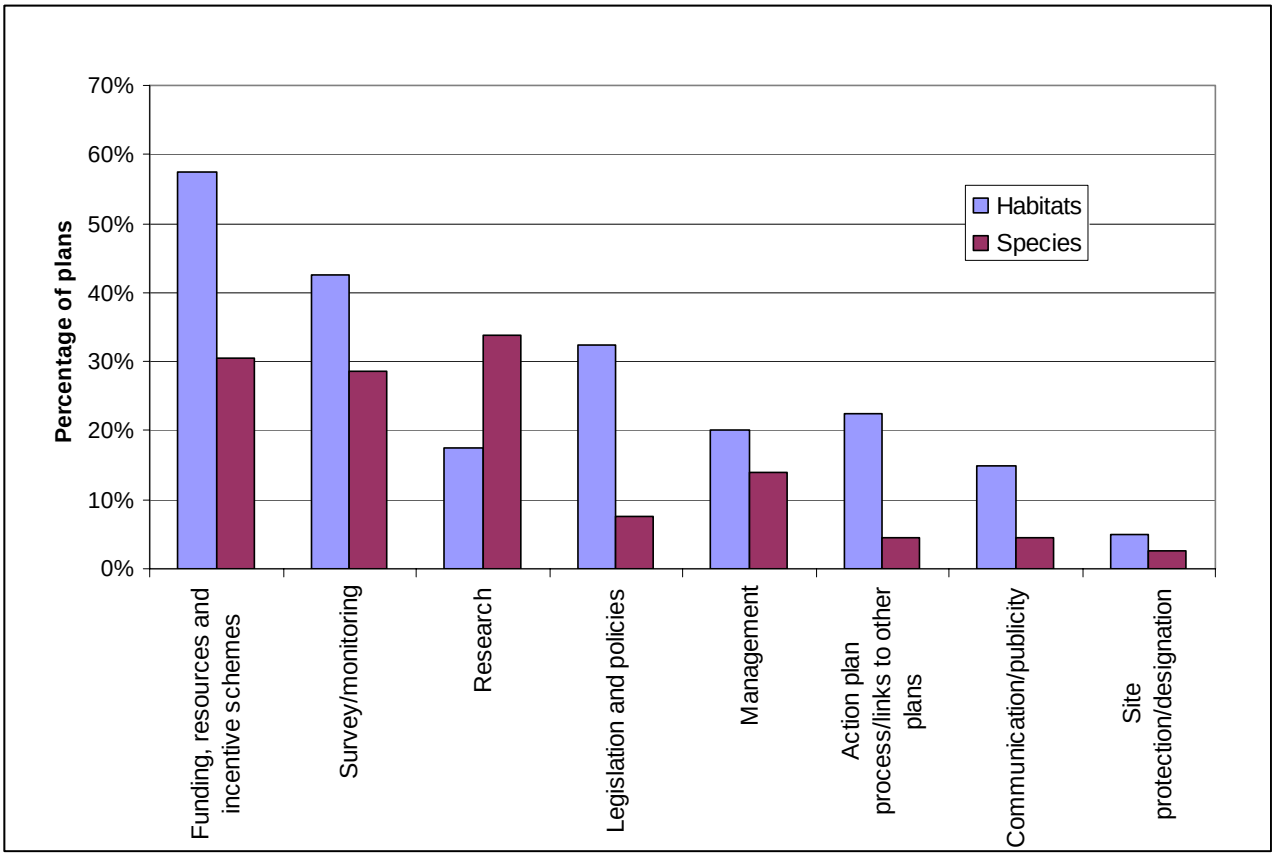


Figure 8: Types of solutions required in order to overcome constraints to meeting action plan targets. Graph shows number of habitats or species to which each solution applies, as a percentage of total species and habitat plans respectively.

As would be expected, the most frequent categories of solution correlate with the categories of constraint (funding, resources and incentives; surveys, monitoring and research; and legislation/policies).

Links between national and local plans

The 2002 Biodiversity Action Plan report indicated that information exchange and contact needed to be improved between national Lead Partners and Local Biodiversity Action Plan (LBAP) partnerships.

The data for the 2005 Lead Partner reporting round were not split by country, but the results for the UK as a whole were that for most habitats/species the Lead Partners felt that contact was “about the same” since 2002; for 48 habitat/species (11%), contact had been improved; and for just two species the Lead Partners felt that contact had deteriorated.

- Contact has improved for several **grassland habitats**. In Scotland, it was reported that the most important LBAP contribution was co-ordination of a joint approach to SEERAD (Scottish Executive Environment and Rural Affairs Department) to include a prescription for grassland restoration in the Rural Stewardship Scheme.

- An example of a species where LBAP contact was reported to be improved was the **slender naiad (*Najas flexilis*)**. For this species, it was commented by the Lead Partner that the most important contribution of LBAPs was awareness-raising with relevant local bodies/individuals, especially in relation to non-designated sites where *Najas* occurs. In addition, a one-day seminar at the Scottish Natural Heritage, Battleby, Perth, on the ecology and conservation of the species, was attended by a number of LBAP representatives.

Fourteen LBAPs in Scotland reported on contact with Lead Partners, with respect to a total of 133 species/habitat plans. For 48 plans (36%), contact with Lead Partners was new since 2002. For the 85 plans for which contact was ongoing since before 2002, contact was described as “good ongoing contact” in 66 cases (78%), and not good but improved since 2002 in the remaining 19 cases (22%).

Successes

Lead Partners were asked to describe specific successes in implementation of their action plans. These were "successes" in terms of processes, funding etc., although not necessarily in terms of biological outcomes. A few examples given that were relevant to Scotland were:

Species

- **Capercaillie *(Tetrao urogallus)***: £5million of EU LIFE funding secured for a capercaillie project which is now underway. Genetics study funded by Scottish Executive, carried out by Aberdeen University. The species is now on Schedule 1 Part 1 of the Wildlife and Countryside Act, and is also protected by specific legislation in Scotland. [Trend in Scotland: increasing].

- **Corncrake *(Crex crex)***: corncrake protection measures incorporated into agri-environment schemes. In addition, the Corncrake Initiative delivers direct payments to farmers and crofters with calling corncrakes on their land. [Trend: increasing].

- **Great yellow bumblebee *(Bombus distinguendus)***: major funding awards for a wide range of projects including survey, habitat management and community involvement. [Trend: stable].

- The **stonefly** species ***Brachyptera putata***: extensive survey in 2003 funded by Action for Invertebrates has resulted in improved knowledge of habitat and identification of new sites. Species dossier circulated to landowners, LBAPs and others. [Trend: stable].

- The **lichen *Alectoria ochroleuca***: Major monitoring project completed on largest known population at Meall a' Bhuachaille. Several new sites also located. [Trend: stable].

- **Narrow-headed ant (Formica exsecta)**: Project reviewing existing knowledge, and making recommendations, completed in 2005. Species steering group meets regularly in Scotland; information leaflet and management guidelines published and circulated widely. [Trend: stable].

Habitats

- **Mesotrophic lochs**: Environment Improvement Plan initiated for 12 important but degraded mesotrophic lochs. This will benefit UK BAP priority species the **slender naiad** and the **Shetland pondweed.** [Trend: stable].

- **Ancient/species-rich hedgerows**: introduction of new Land Management Contract Menu Scheme, which it is hoped will significantly extend the protection and maintenance of hedgerows on a wider scale across Scotland. [Trend: stable].

- **Upland hay meadows** and **purple moor grass/rush pastures**: East Scotland Grassland Management Scheme launched, aiming to reward farmers for management of grassland SSSIs in a way that will maintain and restore the habitats [Trend: declining/slowing].

Concluding LINK comments

1. The results of the 2005 reporting round are cause for serious concern. Significant changes to strategic policy and processes supporting biodiversity conservation are required if Scotland and the UK is to get anywhere near its 2010 target.

2. With climate change likely to become a key driver affecting the quality and composition of biodiversity in the next decades, we urgently need to build resilience into our fragmented ecosystems by creating extensive habitat networks and giving nature the room to adapt. **This means incentives for agricultural and land management practices must tackle the biggest threats to biodiversity by starting to deliver a wider landscape that supports biodiversity as a result of land use, and not despite it.**

3. Agriculture and land management practices remain the biggest threat to, and opportunity for, biodiversity. Scotland needs to make much more of a committed approach to embedding biodiversity conservation into all policy areas. **More effort needs to be concentrated on making sure agri environment and other land management schemes and practices deliver real benefits for biodiversity and are adequately funded.**

4. The majority of targets have either seen no progress or progress is unknown. While this is partly a reflection of the paucity of monitoring data, it also reflects problems for widespread and declining species, that are dependent on land management practices at an ecosystem scale. Progress is limited by the problems of extending and enhancing habitats in a highly managed landscape that is not managed for wildlife. **The successes reported are only for species with small populations at a very limited number of closely managed (mostly designated) sites. Widespread species continue to decline. The future of our biodiversity is dependent on the creation of robust, functioning ecosystems.**

5. Current levels of monitoring data available are inadequate with the majority of reported trends and targets based on best guesses from Lead Partners. Even by 2008 when monitoring data should be improved, 50% of species and 55% of habitats remain with inadequate monitoring data. If Scotland could identify the trend for the 41% of species and 35% of habitats for which trend is either unknown or unclear, and if this trend is positive, then Scotland stands a chance of meeting the 2010 target to halt the loss of biodiversity. Given the increase of resources necessary to support sufficient levels of monitoring, we consider it unlikely that Scotland can increase its rate of progress towards the targets sufficiently by 2010. This is in stark contrast to England and Wales where the percentage of trends that are unknown or unclear are significantly lower. **The importance of monitoring and survey to the UKBAP process in Scotland remains under resourced and undervalued.**

6. In Scotland, as in the rest of the UK, there is plenty of room for improvement in communications between lead partners and LBAPs. Coordination of communication lines between Lead Partners and LBAPs must be centralised, with

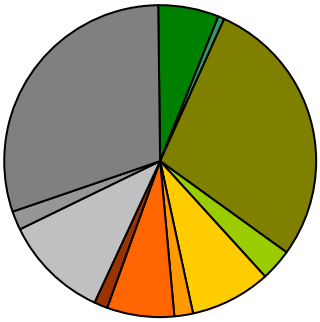
more mechanisms for regular opportunities to exchange information. Current work by APSG in identifying UKBAP species and habitats where LBAPS can make significant contributions will help both lead partners and LBAP partnerships prioritise work. **Lead Partners and LBAPs are too overstretched to be able to communicate with each other on an individual basis but the provision of regular opportunities to exchange information on plans would be extremely useful.**

7. Successes reported in 2005 were largely subjective and illustrate mainly progress in process successes, with no biological successes reported. This reflects on the UKBAP process as a whole and suggests that it may have fallen victim to Goodhart's Law (1975), which states that once an indicator is made a target for the purpose of conducting policy, then it will lose the information content that would qualify it to play such a role. **The majority of the successes are in indicators that are subjective or susceptible to manipulation, with little concrete success in the status of the species and habitats that they are designed to conserve.**

8. Taken together, the trends indicate that we will not meet the target of halting biodiversity loss by 2010 and, moreover, that on its own, the UKBAP does not have a realistic chance of achieving the target. It is at a stage now, where the UKBAP has to be sufficiently well joined up with other policy measures to be successful in conserving biodiversity. This means that it has to be fully integrated with the country biodiversity strategies and sustainable development strategies. **The UKBAP needs to equip the country biodiversity strategies with forward looking objectives, working towards a joined up approach that builds in the judgement and perspective from country, national and local perspectives as well as perspectives from other policy agendas including sustainable development.**

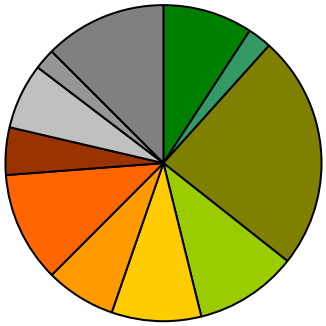
Appendix 1: Comparison of Scottish Single Species Trends with those in England, Northern Ireland and Wales

Single species trends - Scotland (N=157)



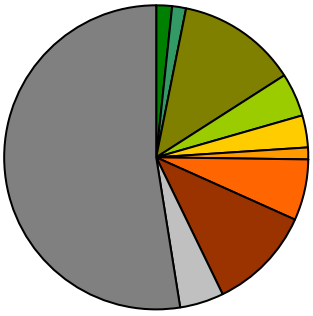
- 6% Increasing
- 0.6% Fluctuating - probably increasing
- 28% Stable
- 3% Fluctuating - probably stable
- 8% Declining (slow ing)
- 2% Fluctuating - probably declining
- 7% Declining (continuing/accelerating)
- 1% Lost (pre BAP publication)
- 11% No clear trend
- 2% No longer true species
- 31% Trend unknow n

Single species trends - England (N=327)



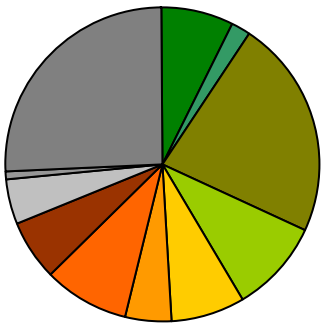
- 9% Increasing
- 2% Fluctuating - probably increasing
- 24% Stable
- 11% Fluctuating - probably stable
- 9% Declining (slow ing)
- 7% Fluctuating - probably declining
- 12% Declining (continuing/accelerating)
- 5% Lost (pre/post BAP publication)
- 7% No clear trend
- 2% No longer true species
- 13% Trend unknow n

Single species trends - N Ireland (N=63)



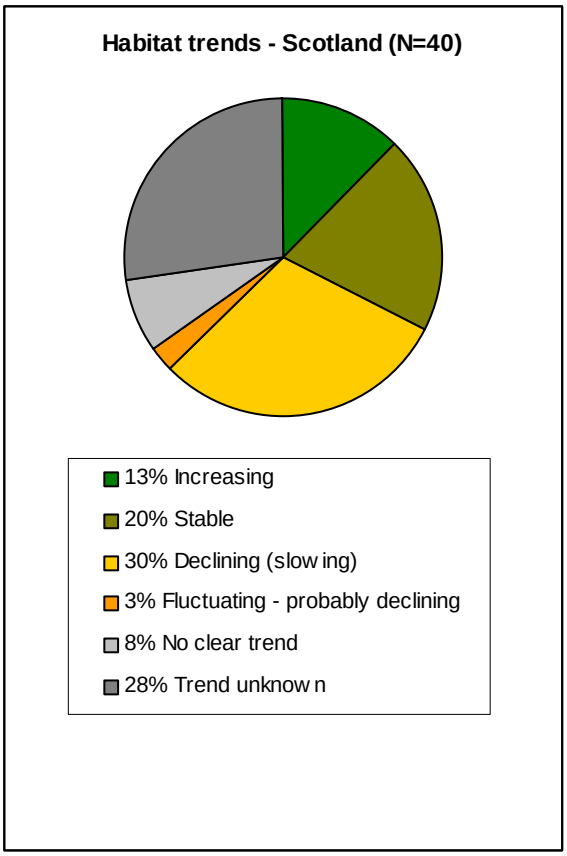
- 2% Increasing
- 2% Fluctuating - probably increasing
- 13% Stable
- 5% Fluctuating - probably stable
- 3% Declining (slow ing)
- 2% Fluctuating - probably declining
- 6% Declining (continuing/accelerating)
- 11% Lost (pre/post BAP publication)
- 5% No clear trend
- 52% Trend unknow n

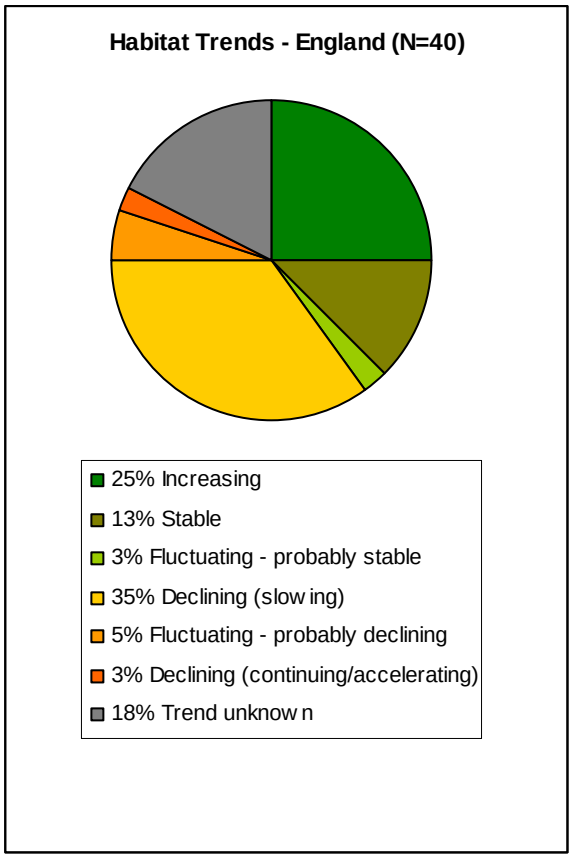
Single species trends - Wales (N=147)

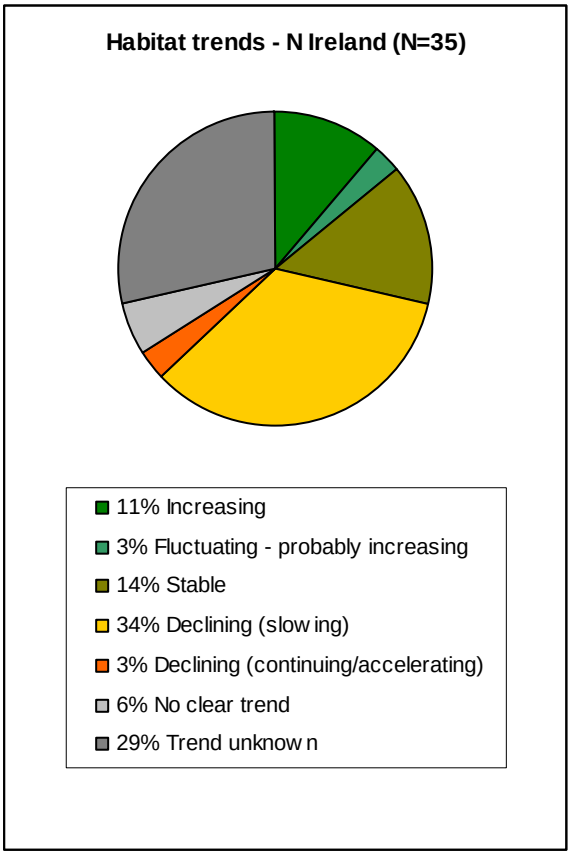


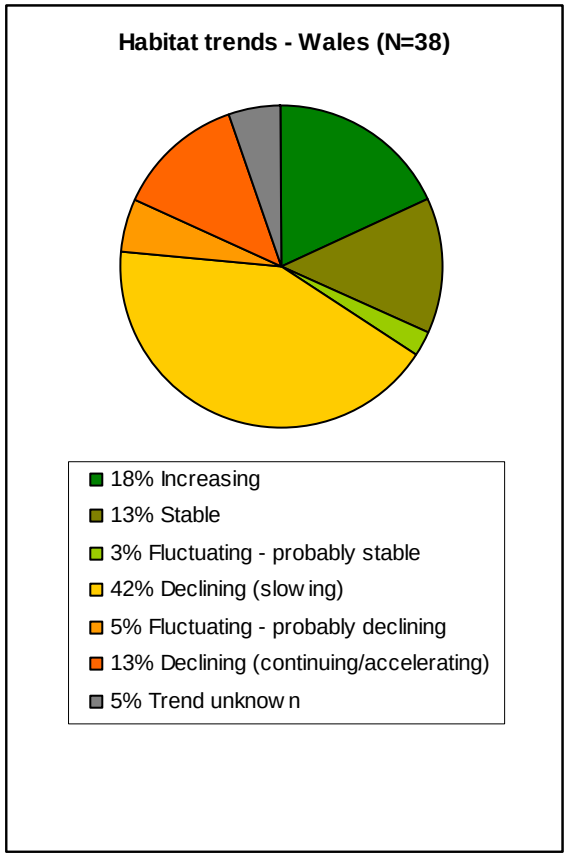
- 7% Increasing
- 2% Fluctuating - probably increasing
- 22% Stable
- 10% Fluctuating - probably stable
- 7% Declining (slow ing)
- 5% Fluctuating - probably declining
- 9% Declining (continuing/accelerating)
- 6% Lost (pre/post BAP publication)
- 5% No clear trend
- 0.7% No longer true species
- 26% Trend unknow n

Appendix 2: Comparison of Scottish Habitat Trends with those in England, Northern Ireland and Wales









Prepared by Jill Williams and Deborah Long (2007) with the Biodiversity Task Force of Scottish Environment Link, using data provided on the UK Biodiversity Action Plan website. Full data can be found at:

http://www.ukbap.org.uk/GenPageText.aspx?id=105 (Lead Partner Reporting 2005)
http://www.ukbap.org.uk/GenPageText.aspx?id=106 (LBAP Reporting 2005)

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