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JOINT NATURE CONSERVATION COMMITTEE

NATIONAL BIRD POPULATION ESTIMATES: APPROVAL PROCEDURES FOR STATUTORY PURPOSES

Paper by David Stroud, JNCC, Andy Douse, SNH, Siân Whitehead, CCW, Andy Brown, EN and Ian Enlander, EHS

1. Introduction

- 1.1 The selection of SSSIs/ASSIs, Ramsar sites and SPAs relies on the assessment of numbers of birds on a site against defined thresholds derived from population estimates (the 1% criterion). These are either *national* 1% thresholds (for SSSIs/ASSIs and for Annex I species in the case of SPAs), or *international* 1% thresholds (for non-Annex I migratory species). These are defined, respectively, as 1% of the national population (either Great Britain or, in the case of Northern Ireland, as All-Ireland) or 1% of the relevant biogeographical (international) population.
- 1.2 The process that has been developed internationally for waterbirds gives a scientifically sound 'benchmark', and aims to ensure that those data and information used to underpin estimates (used subsequently for the selection of internationally important sites) are explicit as to source, and published normally in the scientific literature.
- 1.3 Within the UK however, there is currently no formal 'sign-off' process through which the statutory agencies collectively adopt any particular national estimate (or threshold) for statutory use. The publication by JNCC of the 2001 SPA Review attempted to formalise data usage, but there are already instances of the use of different data from those adopted by the review. This opens the risk of challenge on the grounds of inconsistency.
- 1.4 There is a need for JNCC to provide guidance for staff working in the statutory agencies regarding which population estimates should be used for statutory purposes. Such clarity is apparent for international waterbird estimates and 1% thresholds but not nationally, and is not apparent for any other species group.
- 1.5 Accordingly, there is a need to move closer to a system akin to that adopted internationally where data are formally approved for use on regular update cycles. There is a need for:
 - i. A formal sign-off process by the statutory agencies of the three-yearly Avian Population Estimates Panel¹ compilation.
 - ii. Agreement of rounding conventions for derivation of national 1% thresholds from national population estimates.

¹ APEP is a technical panel comprising JNCC (on behalf of the country agencies), RSPB, the Game Conservancy Trust, British Trust for Ornithology and the Wildfowl & Wetlands Trust. It was first convened by JNCC in 1988 to compile and publish a collation of 'best available' national (GB and UK) population estimates for birds. The first review was published in 1999. The Panel has recently reconvened and is working on an updated second compilation, due for finalisation in autumn 2002.

- iii. Explicit publication by JNCC of national 1% thresholds for relevant species. These are not currently published by APEP – only the underlying national estimate.

2. Recommendations: process

- 2.1 In the light of the issues outlined above, it is recommended that JNCC establish a formal sign-off procedure to assess and agree the results of APEP compilations every three years. (Such a statutory sign-off could not formally be undertaken by APEP itself in the light of NGO representation). It is anticipated that the JNCC sign-off would consider the results of the APEP process at a subsequent stage (prior to publication). The sign-off should be undertaken by the Chief Scientist's Group acting on the technical advice of Inter-Agency Ornithology Liaison Group.
- 2.2 Estimates (and national 1% thresholds) that are signed off should then be used for statutory purposes for the following triennium and be published on JNCC's web-site, as well as being available through the National Biodiversity Network. Information becoming available through each three year period would be used for statutory or policy purposes only at the following review. This would give public clarity as to which thresholds were 'definitive' at any one time and thus be analogous to the current system adopted internationally for waterbirds.
- 2.3 There may therefore be up to two years when a recently published estimate would not be adopted for use because it had just 'missed' a cycle of endorsement. This is no different for the current situation for waterbirds internationally. These data could be used for research purposes during this period as long as this did not have policy (*e.g.* status reviews) or statutory (*e.g.* site designation) implications.

3. Recommendations: audit issues

- 3.1 Before being used in ways that have policy implications or for statutory uses, national population estimates and 1% thresholds should have a clear audit trail regarding the data used. They should also be subject to independent peer-review. Ideally this would be through publication in peer-reviewed scientific literature, but there may be a few cases when this is not feasible. Then, the minimum standard would be to seek independent review of the data/estimate (as for a journal publication) with that assessment kept on file in the event of challenge.
 - i. Standard independent refereeing procedures need to be established for JNCC and country agency publications that derive population estimates (*e.g.* Wetland Bird Survey annual report, Breeding Bird Survey annual report, write-up of Seabird 2000 surveys *etc.*).
 - ii. 'Grey literature' outputs (unpublished contract reports) from surveys will generally be unacceptable if they result in population estimates that may be used for policy or statutory purposes. This needs to be made clear to contractors at an early stage in planning work (within research specifications) and time to produce peer-reviewed journal paper outputs budgeted into costs.
- 3.2 The process above relates only to the timetable for approval of data that have already been collected. There is of course, different survey periodicity for different taxa related to conservation status and the complexity of national surveys (*e.g.* a twenty-year cycle of re-assessment for seabirds, decadal surveys for some raptors, 4-5 years

for non-breeding waterbirds and annual assessment for very rare species such as Bitterns and Corncrakes). It is not proposed that this process would result in changed frequency of these surveys.

4. Recommendations: rounding conventions

- 4.1 A wide range of different rounding conventions have previously been used to derive 1% thresholds, with little consistency even within a source. The International Wader Study Group² have strongly urged that all future population size estimates and derived 1% thresholds follow a globally standard convention (Table 1).

Table 1. A suggested global convention proposed by International Wader Study Group for rounding population estimates and derived 1% thresholds.

Population size estimate	Population estimate rounded to the nearest:	1% of population rounded to the nearest:	Range of derived 1% thresholds
1-1,000	Not rounded	1	1-10
1,001-10,000	Not rounded	5	10-100
10,001-100,000	1,000	10	100-1,000
>100,000	10,000	100	>1000

- 4.2 It is proposed to adopt this convention for the derivation of population estimates and 1% thresholds in the UK.

5. Timetable

- 5.1 The following proposed timetable is based on considerations above. With the adoption of Wetlands International's *Waterbird Population Estimates 3* at Ramsar CoP8 in November 2002, and with the finalisation of APEP2 planned for autumn 2002, there is the potential for both international and national cycles of estimate publication/endorsement to run parallel to each other.

6. Developing contexts and processes internationally

- 6.1 Whilst the international process for deriving 1% thresholds is well developed for waterbirds, there is no analogous international process for any other group of birds. Given the statutory implications for the UK of these data, it is strategically important for JNCC to influence the development of international standards and processes for other bird groups. The production of standard listings and references sources would be a major benefit to conservation activity at European and wider scales. Particular opportunities are as follows:

- i. **Wintering waterbirds** — As noted, an international process exists for the review of waterbird population estimates. There remains, however, scope for improvements, particularly in seeking better survey of components of waterbird populations not currently subject to regular monitoring. JNCC is assisting the development of this work through long-term contractual support to Wetlands International.

² Stroud, D.A., Davidson, N.C., West, R., Scott, D., Haanstra, L., Thorup, O., Ganter, B. & Delany, S. (compilers) on behalf of the International Wader Study Group 2002. Status of migratory wader populations in Africa and Western Eurasia in the 1990s. *Bird Conservation International* XX: xxx-xxx. - (not yet published)

- ii. **European raptors** — SNH are aiding the development of an international process that aims to establish a mechanism for the regular collation and review of national population estimates at European scale.
 - iii. **Seabirds** — there is no clear process at present, but the forthcoming publication of the results of the Britain and Ireland *Seabirds 2000* survey provides a major opportunity to work with the Seabird Group and others to establish better processes for the international collation of seabird population estimates and trends.
 - iv. **Breeding waders** — JNCC is currently supporting the publication of the International Wader Study Group's review of breeding wader populations in Europe (*Breeding Waders in Europe 2000*). There is much potential follow-up in order to derive better and more frequent information on status of breeding wader populations in Europe.
 - v. **Other species** — There is significant potential to work with the European Bird Census Committee (whose activities are largely voluntary) to establish better data and information systems to provide population overviews for other bird species in Europe.
- 6.2 There are major potential opportunities in all these areas that would have wide benefits not only in the UK, but internationally. It is probable however, that JNCC's ability to develop these initiatives will continue to be constrained by limited resources.

7. Effect of changes to 1% levels on site designations

- 7.1 While *national* 1% levels are used as a guideline in the selection of avian SSSIs/ASSSIs and SPAs for Annex 1 bird species, constant adjustment of the designated site list in response to short-term population fluctuations has previously been accepted as being inappropriate by JNCC and the country agencies. No change in this policy is advocated. If, in the longer-term, however, significant changes to populations of particular species are seen to occur, the implication of this will be assessed, and any necessary adjustments to the site list identified.