

UK SPA SCIENTIFIC WORKING GROUP

17 January 2002

National and international waterbird population estimates

The selection of SPAs relies on the assessment of numbers of birds on a site against either national 1% thresholds (for Annex I species) or international 1% thresholds (for non-Annex I migratory species). The background to the derivation of 1% thresholds is given in section A5.3 of the SPA Review.

These thresholds derive from estimates of populations. There are different processes for assessing the size of national and international populations of birds. These are summarised below:

International population estimates

Background on the process

Although in the mid 1970s the Ramsar Convention adopted the 1% Criterion as a basic criterion for assessing internationally important sites for aggregating waterbirds, there was no agreed process by which such information would be collated. The process was clarified in the early 1990s¹, following a JNCC-led initiative that resulted in Ramsar CoP6 adopting the UK-sponsored Resolution C.6.4.

In essence, there are two cycles of population review undertaken:

- a three year cycle of revision of population estimates for Western Palearctic waterbirds (for every Ramsar Conference); and
- a nine year cycle of revision of 1% thresholds for Western Palearctic waterbirds (every third Ramsar meeting), unless major population change occurs.

In undertaking these reviews, a two-stage model was proposed:

- first, published taxa-related reviews (produced e.g. by Wetlands International's Specialist Groups/Database co-ordinators and others to an agreed forward plan); and
- second, a global summary report drawing on review papers (produced by Wetlands International).

Accordingly, the Ramsar Convention and Wetlands International have agreed a parallel programme of scientific dissemination of population estimates (detailed taxa reviews e.g. for geese, waders, seabirds) slightly ahead of the timetable for the global summary report. These reviews are thus published *in advance* of their use in the global summary (*Waterbird Population Estimates* produced by Wetlands International).

Such dual dissemination (published review papers and global report) not only show how data were derived (the review papers for particular taxa), but at the same time give a global vehicle for presenting 'best-estimate' information where these are the only sources (much of the world). The international workshops that considered this process in the mid 1990s planned not only how such planning might take place, but also how it should be integrated with other groups (e.g. those concerned with seabirds) for maximum effectiveness.

The result is a system which gives a scientifically sound international benchmark, especially inasmuch as this ensures that all international data ultimately used to underpin site selection at a national level are clear, published and open to critical inspection by third parties.

All involved in this process for Ramsar have noted the great importance of ensuring that one internationally-agreed set of officially reported population levels (and 1% thresholds) are available for use by the Ramsar and Bonn Conventions, as well as other international treaties (e.g. Birds Directive). JNCC has played an important role in maintaining a focus on this issue and ensuring that one common currency for site assessment is used between conventions and treaties such as the Birds Directive. In support of this, approaches have been made to the European Commission to provide at least some of the core funding needed by Wetlands International to support the International Waterbird Census and to produce *Waterbird Population Estimates*.

Current and planned activity

Wetlands International have now produced two editions of the global summary report *Waterbird Population Estimates* (*WPE1* in 1994ⁱⁱ and *WPE2* 1997ⁱⁱⁱ). Owing to a variety of circumstances, the third edition was not published following CoP7 in 1999, but with UK funding, will now be produced by Wetlands International for CoP9 in November 2002. It is anticipated that there will be wide international consultation on the *WPE3* draft prior to CoP9 with the published version available at the Conference.

Future editions are due for publication in 2002 (*WPE3* for Ramsar CoP8), in 2005 (*WPE4* for Ramsar CoP9) and in 2007 (*WPE5* for Ramsar CoP10). In order to deliver a final product in these years, Wetlands International's Specialist Groups will need to make earlier input to the process, *i.e.* in 2000 and 2001 for *WPE3*, in 2003 and 2004 for *WPE4*, and in 2005 and 2006 for *WPE5*.

Implications for the future development of the UK SPA network

The process of deriving international population estimates is important for the identification of UK SPAs. JNCC has invested much time in developing the international process through close engagement with Wetlands International and the Ramsar Convention.

The third edition of *Waterbird Population Estimates* will contain the outputs from a major revision of population estimates for migratory waders in African and Eurasia. This derives from a major review coordinated by the International Wader Study Group^{iv}. As there has been no revision of wader estimates and 1% thresholds since the mid 1980s, there will be significant changes to estimates and thresholds for many UK-wintering/breeding wader populations. This will have implications for the qualification of some UK SPAs.

WPE4 will contain re-assessment of North Atlantic seabird population sizes following the publication of the results from Seabirds 2000 surveys.

National population estimates

Background on the process

The process for estimating national population totals for waterbirds has parallels with the international process outlined above. The WeBS Partnership has agreed a three year cycle of update of national populations (*i.e.* Great Britain and All-Ireland) of waterbirds. In reality, the first cycle has taken a little longer and a periodicity of four or five years may prove to be more realistic. National (GB) population estimates for waders were published in 1987^v and 1996^{vi}, and for wildfowl in 1995^{vii}.

The background to the review and update of non-waterbird taxa is given in the paper related to the work of the Avian Population Estimates Panel.

Current and planned activity

The 1999/00 WeBS workplan included the revision of GB population estimates for wildfowl^{viii} and waders^{ix}. The resulting papers from this process have been submitted for publication and are anticipated to be published in 2002. Revised All-Ireland estimates for wildfowl and waders are also being produced, but this process is not currently so far advanced.

Pending acceptance of these papers, the WeBS annual report for the count season 2001/02 (published in spring 2003) will use these new national (GB, and if available All-Ireland) 1% thresholds to revise the lists of sites of national importance for relevant species.

Implications for the future development of the UK SPA network

For a number of species, the revised 1% thresholds for some waterbird species are significantly different from those currently in use. In a future review of SPAs, this will have implications for the identification of sites for Annex I species (using guideline 1.1) as well as important components of waterbird assemblages identified using guideline 1.3.

Recommendations

In the light of the national and international activity outlined above, it is recommended that the UK SPA Scientific Working Group:

- **Encourage** JNCC to continue to work with the Ramsar Convention, Wetlands International and others to further develop the system of assessing waterbird populations at international scales, and to publish estimates and 1% thresholds to a defined timetable.
- **Encourage** the development of involvement by JNCC (resources permitting) in the development of international systems of assessment and regular publication of population sizes for non-waterbird taxa (e.g. for seabirds and birds of prey), so that these may be used for the assessment of key sites within Europe.
- **Endorse** the guiding principle adopted by JNCC that such national and international population estimates and 1% thresholds should have a clear audit trail regarding the data used and that they should be subject to peer-review and publication in the scientific literature before being used in ways that have policy implications.

Forward plan of activity relating to international estimation of waterfowl population levels, and reporting to Ramsar Convention (from Rose & Stroud 1994).

Year	Activity for Ramsar Convention and Ramsar Bureau	Actions for individual countries	Action for IWRB, its Research Groups, database co-ordinators, and others	Action for IWRB* HQ (with AWB & WA)
1994			Full taxa reviews for Western Palearctic prepared by IWRB Research Groups	Kushiro report published.
1995	September/October: circulate draft global report to Contracting Parties as Conference paper	Provide advice and data as required. Meeting of Steering Group - summer/early autumn 1995	Full taxa reviews finalised: deadline for submission to IWRB HQ - May 1995	May-August: prepare second global report and transmit to Ramsar Bureau in September (for Western Palearctic: first full nine yearly review of population levels and 1% thresholds)
1996	March: endorse global report at 6th Ramsar meeting and disseminate 'official' 1% levels	Implement revised 1% thresholds in selection of Ramsar sites for all species		
1997		Provide advice and data as required	Limited taxa reviews for Western Palearctic prepared	
1998			Taxa updates finalised and published	Prepare third global report and transmit to Ramsar Bureau (for Western Palearctic: only population levels changed)
1999	Circulate draft global report to Contracting Parties as Conference paper Endorse global report at 7th Ramsar meeting and disseminate 'official' 1% levels	Implement any revised 1% thresholds in the selection of Ramsar sites		
2000		Provide advice and data as required	Limited taxa reviews for Western Palearctic prepared	
2001			Taxa updates finalised and published	Prepare fourth global report and transmit to Ramsar Bureau (for Western Palearctic: only population levels changed)
2002	Circulate draft global report to Contracting Parties as Conference paper Endorse global report at 8th Ramsar meeting and disseminate 'official' 1% levels	Implement any revised 1% thresholds in selection of Ramsar sites		
2002-3		Ensure co-ordination of adequate species/geographic coverage e.g. single species surveys, seabird surveys, seabird colony counts, rocky shore counts etc.	Co-ordination of period for major survey work to ensure complete international coverage of flyway populations for the Research Group reviews (e.g. expeditions to Western Sahara for waders), and also occasional extensive surveys (e.g. some seabird studies/rocky shorebird counts etc.)	
2003			Full taxa reviews for Western Palearctic prepared by IWRB Research Groups	
2004		Provide advice and data as required	Full taxa reviews finalised and published	Prepare fifth global report and transmit to Ramsar Bureau (for Western Palearctic: second full nine yearly review of population levels and 1% thresholds)

2005	Circulate draft global report to Contracting Parties as Conference paper Endorse global report at 9th Ramsar meeting and disseminate 'official' 1% levels	Implement revised 1% thresholds in selection of Ramsar sites for all species		
-------------	--	--	--	--

-
- i Rose, P.M. & Stroud, D.A. 1994. Estimating international waterfowl populations: current activity and future directions. *Wader Study Group Bulletin* 73: 19-26.
- Stroud, D.A. 1996. Estimating international waterbird populations: use of Criterion 3(c). Pp. 37-44. In: *Proceedings of the 6th Meeting of the Conference of the Contracting Parties to the Convention on Wetlands. Brisbane, Australia, 19-27 March 1996. Technical Sessions E and F.* Ramsar Bureau, Switzerland.
- ii Rose, P.M. & Scott, D.A. 1994. *Waterfowl population estimates.* IWRB Special Publication 29. 102 pp.
- iii Rose, P.M. & Scott, D.A. 1997. *Waterfowl population estimates.* Second Edition. IWRB Special Publication 44. 106 pp.
- iv Davidson, N.C., West, R., Scott, D., Stroud, D.A., Hanstra, L., Ganter, B. & Delany, S. (compilers) on behalf of the International Wader Study Group [in prep.]. Estimates of migratory wader populations wintering in the African-Eurasian region in the 1990s. [*Bird Conservation International*]
- v Moser, M.E. 1987. Revision of population estimates for waders (Charadrii) wintering on the coastline of Britain. *Biological Conservation* 29: 153-164.
- vi Cayford, J.T. & Waters, R.J. 1996. Population estimates for waders Charadrii wintering in Great Britain, 1987/88-1991/92. *Biological Conservation* 77: 7-17.
- vii Kirby, J.S. 1995. Winter population estimates for selected waterfowl species in Britain. *Biological Conservation* 73: 189-198.
- viii Kershaw, M. & Cranswick, P.A. [2002.] Numbers of wildfowl and selected waterbirds wintering in Great Britain.
- ix Rehfisch, M.M. *et al.* [2002]. New approaches to estimating population sizes of wintering waterbirds: population estimates for waders (Charadrii) in Great Britain (and the Isle of Man), 1994/95-1998/99 in relation to long-term population changes.

^x Now Wetlands International