

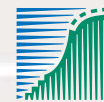
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Waterbirds around the world

A global overview of the conservation,
management and research of the
world's waterbird flyways

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voedselkwaliteit



SCOTTISH EXECUTIVE



EDINBURGH, UK: THE STATIONERY OFFICE

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First published in 2006 by The Stationery Office Limited
71 Lothian Road, Edinburgh EH3 9AZ, UK.

Applications for reproduction should be made to Scottish Natural Heritage,
Great Glen House, Leachkin Road, Inverness IV3 8NW, UK.

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN 0 11 497333 4

Recommended citation:

Boere, G.C., Galbraith, C.A. & Stroud, D.A. (eds). 2006.
Waterbirds around the world. The Stationery Office, Edinburgh, UK. 960 pp.

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Cover photography: Whooper Swans *Cygnus cygnus* arriving at Martin Mere, England. Photo: Paul Marshall.
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4.3 Flyway monitoring – rising to the challenge. Workshop Introduction

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Hagemeijer, W. & Bennun, L. 2006. Flyway monitoring – rising to the challenge. Workshop Introduction. *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. p. 447.



Monitoring waterbirds in Sudan. Photo: Niels Gilissen - MIRATIO.

Counts of migratory waterbirds in their breeding, staging and non-breeding areas have taken place for many decades. For non-breeding birds, the International Waterbird Census (IWC) organised by Wetlands International, has developed into a systematic global programme since its introduction in the 1960s. Summaries of national monitoring programmes were presented for a number of countries, including for North America (Blohm *et al.*), Sweden (Nilsson), the Netherlands (van Roomen *et al.*), the Czech Republic (Musilova *et al.*), and Slovakia (Ridzon). Long-term monitoring of breeding birds is also well-established at particular sites (such as the Bulgarian Bourgas wetlands reported by Profirov *et al.*) as well as for single species. However, it is clear that many gaps remain and there are many challenges in obtaining and using the data needed for more effective flyway management.

At a flyway scale, the symposium aimed to provide an overview of present monitoring approaches and programmes, identifying important gaps, and discussing ways to improve coverage and effectiveness. It suggested ways to link monitoring and results more closely to waterbird conservation and management.

It concluded that monitoring under the IWC is a strong contribution to the current knowledge of the status and trends of waterbird flyway populations; and also that there are many

challenges ahead to improve monitoring so as to effectively address data needs in relation to flyway management.

The following five recommendations were made:-

1. The expansion of spatial and temporal coverage of the IWC, and improvement in the quality of data obtained, through capacity building and the training of observers in data deficient regions, as well as the monitoring of sites during migration and breeding seasons.
2. Strengthening the monitoring of demographic parameters. An integrated approach to the monitoring of waterbirds gives cost-effective identification of the reasons for waterbird population changes. There are good examples of the collection of demographic information and its integration with census data. Further such national and especially international schemes should be strongly encouraged and funded.
3. Incorporating data obtained by various methods including hunting bag statistics, ringing and other marking methods.
4. Development of monitoring site characteristics and threats to sites using methods including remote sensing.
5. Improvement in co-operation between Wetlands International, BirdLife International and other organisations so as to ensure optimum efficiency.