

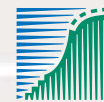
Extract only - complete publication at www.jncc.gov.uk/worldwaterbirds

Waterbirds around the world

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

Edited by G.C. Boere, C.A. Galbraith and D.A. Stroud

*Assisted by L.K. Bridge, I. Colquhoun, D.A. Scott,
D.B.A. Thompson and L.G. Underhill*



landbouw, natuur en
voedselkwaliteit



SCOTTISH EXECUTIVE



EDINBURGH, UK: THE STATIONERY OFFICE

© Scottish Natural Heritage 2006

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.

Names used for geographical entities do not imply recognition, by the organisers of the *Waterbirds around the world* conference or other supporting organisations or governments, of the political status or boundaries of any particular territory. Names of territories used (and any alternatives) are included solely to help users of this publication apply information contained within this volume for waterbird conservation purposes. The views expressed in papers included within this volume do not necessarily represent views of the editors or the organisations and governments that supported the conference and this publication.

Cover photography: Whooper Swans *Cygnus cygnus* arriving at Martin Mere, England. Photo: Paul Marshall.
(www.paulmarshallphotography.com)

Copyright of all photographs used in this publication resides with the named photographers.

Saving Europe's most endangered birds: lessons to be learned from implementing European Species Action Plans

Szabolcs Nagy¹ & Ian Burfield²

¹Wetlands International, Droevendaalsesteeg 3, Wageningen 6700 AC, The Netherlands. (email: Szabolcs.Nagy@wetlands.org)

²BirdLife International, Droevendaalsesteeg 3, Wageningen 6700 AC, The Netherlands. (email: ian.burfield@birdlife-europe.nl)

Nagy, S. & Burfield, I. 2006. Saving Europe's most endangered birds: lessons to be learned from implementing European Species Action Plans. *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. pp. 602-607.

ABSTRACT

In 1993, BirdLife International started the development of European species action plans in collaboration with Wetlands International. These action plans were endorsed in 1996 by the Ornis Committee of the European Union's Directive on the conservation of wild birds and by the Standing Committee of the Bern Convention. In 2003, the European Commission commissioned BirdLife International to review the implementation of the plans in the 25 Member States of the European Union. This paper summarizes the results with special reference to waterbirds.

INTRODUCTION

The concept of international species action plans was developed in the 1970s to protect threatened populations of certain North American waterbird species with special economic and social importance. The format for these plans was developed under the framework of the North American Waterfowl Management Plan (Heredia *et al.* 1996). The preparation of species action plans was also triggered by the U.S. Endangered Species Act. These plans were used as a basis for recovery efforts in the UK, Australia, New Zealand and several other countries. The requirement of the Convention on Biological Diversity to prepare biodiversity action plans provided further impetus for the preparation of species action plans.

In 1993, BirdLife International and Wetlands International drew up action plans for 23 species then considered to be globally threatened or near-threatened (Collar *et al.* 1994), with support from the European Commission and the Royal Society for the Protection of Birds (RSPB, BirdLife Partner in the UK). For each species, a workshop of experts and interested parties from range states was held to ensure that the latest scientific and practical information was available. Each workshop also provided an opportunity to discuss the merits of different conservation strategies and to develop recommendations based on the outcome of the discussion. In order to secure high-level stakeholder commitment, several drafts were circulated to experts and government agencies under the auspices of international conservation bodies.

In 1996, the first set of 23 plans was endorsed by the Ornis Committee of the European Union's Directive on the conservation of wild birds, and by the Standing Committee of the Bern Convention. The plans were published in 1996 (Heredia *et al.* 1996). Almost one third of the species covered by action plans in this book were waterbirds, namely the Pygmy Cormorant *Phalacrocorax pygmeus*, Dalmatian Pelican *Pelecanus crispus*, Lesser White-fronted Goose *Anser erythropus*, Red-breasted Goose *Branta ruficollis*, Marbled Teal *Marmaronetta angustirostris*, White-headed Duck *Oxyura leucocephala* and Slender-billed Curlew *Numenius tenuirostris*.

Since then, many more action plans have been produced under the auspices of the Ornis Committee, the Bern

Convention, and the relevant Memoranda of Understanding of the Convention on Migratory Species of Wild Animals as well as the African-Eurasian Waterbird Agreement (see Table 1).

In October 2003, the European Commission commissioned BirdLife International to review the implementation of the first 23 action plans in the 25 countries that are now Member States of the EU. In 2000, BirdLife International carried out a pan-European assessment of progress in the implementation of these action plans, based solely on the information provided by its Partner organizations (Gallo-Orsi 2001). This earlier report therefore provided some basis for comparison with the more recent EU-level assessment.

MATERIALS AND METHODS

Data collection

The latest review of the implementation of species action plans broadly followed the methodology already used in *Saving Europe's most threatened birds* (Gallo-Orsi 2001), in order to obtain indices which could be aggregated across the EU. The review took place in three stages. First, available information was collected for provision to national contacts (usually national BirdLife Partners). The main data sources at this stage were:

- BirdLife International's *Birds in Europe 2* database, which provided information on the current population size and trend of each species over the period of 1990–2000;
- BirdLife International's World Bird Database, which provided information on Important Bird Areas (IBAs) of global importance already identified for the species;
- the European Commission's Natura 2000 database, which provided information on Special Protection Areas (SPAs); and
- the EU LIFE Project Database, which provided information on LIFE projects.

In the second stage, the available information was sent to the national contacts, together with a questionnaire for each species relevant to their country. These questionnaires were based on the recommendations in the relevant action plans. The actions in each plan were converted into target statements, to enable measurement of progress in implementation. The correspondents were asked to:

- review and if necessary correct the available information (i.e. information on population size, population in IBAs and protected areas, existence of management plans, LIFE and other Community funding);
- report on measures taken in relation to each action;
- evaluate distance to target by assigning an implementation score;

Table 1. Species with international species action plans.

Species	Year of action plan approval	EU25 Threat Status	European Threat Status	Global IUCN Red List Category	1990-2000 EU25 breeding population trend	1990-2000 EU25 winter population trend	Which targets are achieved?	Revision / new plan in preparation
<i>Pterodroma madeira</i>	1995	Critically Endangered	(GR)	CR	Stable	-	Long	
<i>Pterodroma feae</i>	1995	Vulnerable	VU	NT	Stable	-	Short	
<i>Phalacrocorax pygmeus</i>	1995	Rare	S	NT	Moderate increase	Stable	Long	
<i>Pelecanus crispus</i>	1995	Rare	R	VU	Moderate increase	-	Long	
<i>Anser erythropus</i>	1995	Critically Endangered	EN	VU	Large decline	Stable	None	AEWA, Ornis
<i>Branta ruficollis</i>	1995	Localized	VU	VU	-	Stable	Medium	
<i>Marmaronetta angustirostris</i>	1995	Endangered	(VU)	VU	Stable	Large increase	None ¹	
<i>Oxyura leucocephala</i>	1995	Vulnerable	VU	EN	Large increase	Large increase	Medium	Ornis, AEWA, Bonn
<i>Aegypius monachus</i>	1995	Rare	R	NT	Large increase	-	Long	
<i>Aquila heliaca</i>	1995	Rare	R	VU	Large increase	-	Long	
<i>Aquila adalberti</i>	1995	Endangered	(EN)	EN	Stable	-	Medium	
<i>Falco naumanni</i>	1995	Depleted	H	VU	Stable	-	Short	
<i>Crex crex</i>	1995	Depleted	H	NT	Large increase	-	Medium	Ornis, AEWA, Bonn
<i>Chlamydotis undulata fuerteventura</i>	1995	Vulnerable	(VU)	VU	Unknown	-	Unknown	
<i>Otis tarda</i>	1995	Vulnerable	VU	VU	Stable	-	None	
<i>Numenius tenuirostris</i>	1995	-	NE	CR	-	-	None	
<i>Larus audouinii</i>	1995	Localized	L	NT	Large increase	-	Long	
<i>Columba trocaz</i>	1995	Rare	(R)	NT	Stable	-	Medium	
<i>Columba bollii</i>	1995	Rare	(R)	NT	Stable	-	Short	
<i>Columba junoniae</i>	1995	Endangered	EN	EN	Unknown	-	Unknown	
<i>Acrocephalus paludicola</i>	1995	Vulnerable	(VU)	VU	Large decline	-	None	
<i>Fringilla teydea</i>	1995	Rare	R	NT	Stable	-	Short	
<i>Pyrrhula murina</i>	1995	Endangered	(EN)	EN	Stable	-	None	
<i>Botaurus stellaris</i>	1999	Depleted	H		Stable	-		
<i>Aythya nyroca</i>	1999	Vulnerable	(VU)	NT	Moderate decline	Stable		AEWA
<i>Polysticta stelleri</i>	1999	Localized	L		-	Stable		
<i>Gypaetus barbatus</i>	1999	Vulnerable	(VU)		Large increase	-		
<i>Aquila pomarina</i>	1999	Declining	(D)		Moderate decline	-		
<i>Aquila clanga</i>	1999	Endangered	EN	VU	Stable	-		
<i>Hieraaetus fasciatus</i>	1999	Endangered	EN		Large decline	-		
<i>Tetrax tetrax</i>	1999	Vulnerable	VU	NT	Large decline	-		
<i>Puffinus mauretanicus</i>	2000	Critically Endangered	CR	CR	Large decline	-		
<i>Phalacrocorax aristotelis desmarestii</i>	2000	Not evaluated ²						
<i>Accipiter gentilis arrigonii</i>	2000	Not evaluated						
<i>Accipiter nisus granti</i>	2000	Not evaluated						
<i>Falco eleonora</i>	2000	Declining	D		Moderate decline	-		
<i>Falco biarmicus</i>	2000	Vulnerable	VU		Moderate decline	-		
<i>Falco rusticolus</i>	2000	Rare	(R)		Stable	-		
<i>Alectoris graeca whitakeri</i>	2000	Not evaluated						
<i>Perdix perdix italica</i>	2000	Not evaluated						
<i>Porphyrio porphyrio</i>	2000	Localized	L		Large increase	-		
<i>Fulica cristata</i>	2000	Critically Endangered	CR		Moderate decline	Moderate decline		
<i>Cursorius cursor</i>	2000	Endangered	(EN)		Unknown	-		
<i>Sterna dougallii</i>	2000	Rare	R		Stable	-		
<i>Dendrocopos major canariensis & thanneri</i>	2000	Not evaluated						
<i>Loxia scotica</i>	2000	Data Deficient	DD	DD	Unknown			

¹ Based on range contraction reported from Spain.² Subspecies were not evaluated separately by BirdLife International.

- estimate the size of the population affected by the measure; and
- estimate the response of the population.

Implementation scores ranged from 0-4 according to the level of progress towards the target:

- 0 Action not needed/not relevant;
- 1 Little or no work (0-10%) carried out (only piecemeal actions, without being part of a strategic approach);
- 2 Some work started (11-50%), but no significant progress yet;
- 3 Significant progress (51-75%), but target still not reached; and
- 4 Action fully implemented; no further work required except continuation of ongoing work (e.g. monitoring).

In the third stage, the information returned by these national correspondents was sent to the respective members of the Ornithological Committee's Scientific Working Group for checking (copies were also sent to the national representative on the Ornithological Committee).

The final responses were then returned to BirdLife for checking and analysis. Some scores were corrected if there were inconsistencies between the answer and the score, or if the action was not relevant for the particular country. When in doubt, replies were checked by consulting the compilers individually.

EVALUATION

The evaluation of the action plans was based on two questions:

- To what extent have the recommendations of the action plan been implemented?
- Have the short-, medium- or long-term biological aims of the action plan been achieved?

Implementation

Implementation was evaluated from the Implementation Scores assigned in the previous process. As explained above, these scores measure the distance to target. The overall level of implementation at national level was characterized by the National Implementation Score (NIS), which combines for each country the priority of the actions with the level of implementation. The NIS ranges between 1 and 4, where 1 represents little or no progress while 4 represents full implementation.

The overall implementation of the action plan was evaluated by calculating an Average Implementation Score (AIS) from the National Implementation Scores. In order to obtain a rough idea of the overall level of implementation of the action plans in a given country, an Average of National Implementation Scores (ANIS) was calculated for each Member State, based on the NIS of all the species occurring in the country.

Effectiveness

The outcome of the implementation of the action plans was measured in relation to the short-, medium- and long-term aims set in the action plan (Table 2). On this basis, the following categories were distinguished:

- None of the aims was achieved;
- Short-term aims achieved;
- Medium-term aims achieved;

- Long-term aims achieved; and
- Status unknown.

RESULTS

Implementation

The level of implementation of the action plans varied markedly between Member States, with NIS ranging between 0 (for endemic species) and 2.69 (for White-headed Duck).

The highest efforts were directed towards Critically Endangered species such as Zino's Petrel *Pterodroma madeira* and Slender-billed Curlew, but no clear tendency was observed in other Red List categories (Table 3). The AIS for Vulnerable species was slightly higher than that for Near Threatened species. Interestingly, the AIS for the Endangered species was somewhat lower than for other Red List categories. Furthermore, a tendency towards higher level of implementation for waterbirds can be observed compared to other species.

The UK achieved the highest level of implementation, indicating the benefits of the UK Biodiversity Action Plan process. It was followed by some other countries where species are the subject of targeted actions, such as The Netherlands, Hungary, Portugal, Austria, France and Sweden. Although some regions of Spain also carry out excellent species conservation work, this is not reflected in the ANIS of Spain because the country's overall score was often reduced due to more limited actions in other regions.

The level of implementation in the ten new Member States was generally lower than in the existing fifteen Member States. This was probably due to the lack of EU funding instruments, such as LIFE-Nature, Interreg and agri-environmental programmes, during the decade preceding their accession to the EU. It also shows that much more assistance is needed in eastern European and African countries if a higher level of implementation of the action plans is to be achieved there.

An analysis of the distribution of LIFE-Nature funding revealed that this funding played a major role in the implementation of the action plans, especially in the Mediterranean Member States. Regarding waterbirds, LIFE-Nature funding played an especially important role in Greece (Pygmy Cormorant, Dalmatian Pelican, Lesser White-fronted Goose, White-headed Duck and Slender-billed Curlew) and Spain (White-headed Duck and Marbled Teal).

The European Union also played an important role in the implementation of the action plans through its conservation Directives. Article 5 of the Birds Directive provides a strong legal framework and guidelines for the Member States to give adequate legal protection to the action plan species, all of which are listed on Annex I of the Directive. However, it was reported in several cases (especially for raptors and waterbirds) that the enforcement of legal protection is still insufficient (e.g. Pygmy Cormorant and Dalmatian Pelican in Greece, and raptors in Portugal, Spain and Greece).

The obligations arising from Article 4 of the Birds Directive have also played an important role in the conservation of the action plan species. For most species, most or all of the IBAs are covered to some extent by SPAs, and the accession process has also accelerated the protection of key sites in the new Member States (*Z. Waliczky in litt.*). However, the results of this analysis also showed that the extent of SPAs and nationally protected areas tend to be much smaller than that of IBAs.

Table 2. Recovery targets set in the international species action plans.

Species Name	Aim of Action Plan
Zino's Petrel <i>Pterodroma madeira</i>	To increase the breeding population to at least 40 pairs by the year 2000.
Slender-billed Curlew <i>Numenius tenuirostris</i>	S: to prevent the extinction of the Slender-billed Curlew. M: to prevent any further decrease in the Slender-billed Curlew population. L: to secure a significant increase in the number of Slender-billed Curlews.
White-headed Duck <i>Oxyura leucocephala</i>	S: to maintain the current population and area of occupancy of the White-headed Duck throughout its range. M: to promote population increase within its current range. L: to promote expansion of the breeding population to other suitable areas. To prevent hybridization of the White-headed Duck by eradicating the introduced North American Ruddy Duck <i>Oxyura jamaicensis</i> in the Western Palearctic.
Spanish Imperial Eagle <i>Aquila adalberti</i>	To increase the numbers and distribution of the Spanish Imperial Eagle to a degree that will allow its reclassification as a species of least concern.
White-tailed Laurel Pigeon <i>Columba junoniae</i>	S: to conserve the population at no less than its 1985 level. M-L: to promote the expansion of its range.
Azores Bullfinch <i>Pyrhula murina</i>	To increase the Azores Bullfinch population to 150-200 pairs by 2010. To extend the area of the laurel forest by 80 ha, reversing its continuing large-scale deterioration through the invasion of exotic flora.
Dalmatian Pelican <i>Pelecanus crispus</i>	S: to prevent any further declines below 1994 levels in the population size and distribution of the Dalmatian Pelican. M-L: to increase the population size of the Dalmatian Pelican to a level at which it no longer qualifies as a globally threatened species.
Lesser White-fronted Goose <i>Anser erythropus</i>	S: to maintain the current population in known areas throughout its range. M-L: to ensure an increase in the Lesser White-fronted Goose population.
Red-breasted Goose <i>Branta ruficollis</i>	S: to maintain Red-breasted Goose numbers at no less than 70 000 birds.
Marbled Teal <i>Marmaronetta angustirostris</i>	S: to maintain the current population and area of occupancy of the Marbled Teal throughout its range (based on 1985-94 figures). M: to promote population increase of the species within its current range. L: to promote expansion of the breeding population to other suitable areas.
Imperial Eagle <i>Aquila heliaca</i>	S: to maintain the numbers of Imperial Eagle throughout its present range. M-L: to ensure range expansion.
Lesser Kestrel <i>Falco naumanni</i>	S: to maintain all known breeding colonies at 1994 levels or larger. M-L: to increase the population size so that it no longer qualifies as a globally threatened species.
Great Bustard <i>Otis tarda</i>	S: to maintain the populations of the Great Bustard throughout its range. M-L: to enable population growth and range expansion.
Aquatic Warbler <i>Acrocephalus paludicola</i>	S: to maintain the current population throughout its range. M-L: to promote expansion of the breeding population to other suitable areas.
Fea's Petrel <i>Pterodroma feae</i>	S: to protect and maintain the breeding population of Fea's Petrel. M: to promote its expansion to all available habitat on the island of Bugio. L: to promote its expansion to all available habitat on Deserta Grande.
Pygmy Cormorant <i>Phalacrocorax pygmeus</i>	S: to prevent declines below 1994 levels of population size and distribution. M-L: to increase the population size to a level at which it no longer qualifies as near threatened.
Cinereous Vulture <i>Aegypius monachus</i>	S: to maintain and enhance the existing populations in Europe. L: to encourage the re-colonization of the former range.
Corncrake <i>Crex crex</i>	S: to prevent declines below 1994 levels in the population size and distribution of the Corncrake to enable it to be removed from the list of globally threatened birds. M: to ensure recovery of small breeding populations at risk of extinction.
Houbara Bustard <i>Chlamydotis undulata</i>	S: to maintain the range and population of the Canary Islands' Houbara Bustard at no less than the 1994 levels. M-L: to promote an increase in the population and range expansion.
Audouin's Gull <i>Larus audouinii</i>	S: to maintain the current population throughout its range. M-L: to ensure expansion of the species' range and numbers particularly in smaller colonies.
Dark-tailed Laurel Pigeon <i>Columba bollii</i>	S: to conserve the population at no less than its 1993 level. M: to promote the expansion of its range.
Madeira Laurel Pigeon <i>Columba trocaz</i>	S: to maintain the population at no fewer than 3 500 individuals. M: to ensure its continued increase towards occupying all suitable habitats. L: to enable re-colonization of areas of its former range through habitat restoration.
Blue Chaffinch <i>Fringilla teydea</i>	S: to conserve the range and populations at no less than the present level. M-L: to increase the Gran Canaria population to a level at which it is no longer classified as a near threatened species.

Table 3. Implementation of the international species action plans in decreasing order of Average Implementation Scores (AIS).

Species name	AIS
Zino's Petrel <i>Pterodroma madeira</i>	3.31
Slender-billed Curlew <i>Numenius tenuirostris</i>	3.21
Dalmatian Pelican <i>Pelecanus crispus</i>	3.05
Madeira Laurel Pigeon <i>Columba trocaz</i>	2.94
Lesser White-fronted Goose <i>Anser erythropus</i>	2.81
Cinereous Vulture <i>Aegypius monachus</i>	2.80
Marbled Teal <i>Marmaronetta angustirostris</i>	2.75
Great Bustard <i>Otis tarda</i>	2.55
Blue Chaffinch <i>Fringilla teydea</i>	2.51
Red-breasted Goose <i>Branta ruficollis</i>	2.47
Pygmy Cormorant <i>Phalacrocorax pygmeus</i>	2.44
Imperial Eagle <i>Aquila heliaca</i>	2.39
Aquatic Warbler <i>Acrocephalus paludicola</i>	2.39
White-tailed Laurel Pigeon <i>Columba junoniae</i>	2.38
Dark-tailed Laurel Pigeon <i>Columba bollii</i>	2.38
Fea's Petrel <i>Pterodroma feae</i>	2.27
Spanish Imperial Eagle <i>Aquila adalberti</i>	2.19
Corncrake <i>Crex crex</i>	2.14
Houbara Bustard <i>Chlamydotis undulata</i>	2.04
Audouin's Gull <i>Larus audouinii</i>	2.01
Azores Bullfinch <i>Pyrrhula murina</i>	2.00
White-headed Duck <i>Oxyura leucocephala</i>	1.87
Lesser Kestrel <i>Falco naumanni</i>	1.84

In most cases, there was not a large difference between the population recorded within IBAs and that within SPAs, although the data in the Natura 2000 database and the World Bird Database are not readily comparable. Some major gaps in the coverage of IBAs by SPAs were identified for some species, especially farmland birds, whereas the coverage for globally threatened waterbirds was found to be almost complete for the breeding populations. Coverage of the key stopover sites would require further investigation.

Although significant progress has been made in designating the key sites for globally threatened waterbirds as SPAs, much less progress has been made in preparing and implementing management plans. On the basis of the available information, only a small fraction of the sites was covered by management plans.

Effectiveness

Assessing the population size, distribution and trends (BirdLife International 2004a) in relation to the short- (1-3 years), medium- (1-5 years) and long-term (1-10 years) aims set out in the action plans suggested that the status of the action plan species has generally improved since the drafting of the plans. For 15 species, at least the short-term targets have been achieved. For 11 of these, the medium-term targets have also been met, and in six cases even the long-term targets have been reached. It is also encouraging that a separate analysis found that Annex I species with species action plans did better than Annex I species without an action plan, based on their population trends (BirdLife International 2004b).

The group of species where the long-term targets were achieved includes two waterbirds with fairly concentrated populations: Pygmy Cormorant and Dalmatian Pelican. On the other hand, the group where even the short-term objectives of the action plan were not achieved also includes three waterbirds: Slender-billed Curlew, Lesser White-fronted Goose and Marbled Teal. The first two of these species are long-distance migrants, and the development of their populations is likely to be heavily influenced by factors operating on their breeding or wintering grounds outside the European Union.

Despite these results, it was not possible to detect any association between the AIS and the level of recovery. This is partly because AIS scoring was a qualitative measure that focused at the level of implementation of all actions relevant in a given country, and did not take into account the size of the population in that country. An example is White-headed Duck, where the AIS is fairly low because of poor measures in many potential White-headed Duck range states, even though effective measures in certain regions of Spain have contributed significantly to the increase of the population. In the case of Great Bustard *Otis tarda*, however, the positive effects of many ongoing conservation measures were reduced by the ongoing range contraction. Another factor contributing to the lack of association relates to differences in the species' biology and their reaction to changes induced by political and economic changes. For example, Corncrake *Crex crex* has responded positively to the reduced intensity of farming in the new Member States, despite the fact that little progress has been made towards targeted agri-environmental measures for it.

International action plans were drawn up to build consensus amongst the individuals and organizations involved in the conservation of the species. Therefore, an analysis was made to show whether species with a "champion" did better than those without. Of the 23 species, 16 had an organization leading on the species' conservation (e.g. species specialist groups, conservation teams or dedicated NGOs, such as the Black Vulture Conservation Foundation). In general, species with a "champion" reached a higher level of recovery target than species without one, although this difference was not significant.

CONCLUSIONS AND RECOMMENDATIONS

This evaluation shows that the species action plans have played a positive role in improving the conservation status of Europe's most threatened birds, because Annex I species with action plans did better than Annex I species without action plans (BirdLife International 2004b).

In almost two-thirds of the action plan species (15 species), further population decline or range contraction in the EU has been stopped. In the case of 11 species, medium-term targets were also reached, and in six cases even the long-term recovery target was met.

The recovery of action plan species can be explained partly by the generally higher level of site protection, but also by their priority status for LIFE-Nature funding. LIFE-Nature was a major instrument in promoting the implementation of the action plans. Unfortunately, LIFE-Nature provided only project funding, and activities often ceased after the funding ended.

Apart from LIFE-Nature funding, species 'champions' have played a major role in promoting the implementation of the action plans. Their activities were supported partly by LIFE-Nature funds, but substantial amounts of private and corporate

funding were also mobilized through NGOs. However, the lack of a significant difference in the performance of species with and without “champions” suggests that government commitment to regulations, law enforcement, site designation and management is essential.

Research and monitoring to fill gaps in knowledge and to provide feedback about the effectiveness of measures also require stable funding. Collaborative arrangements at national level, involving different stakeholders, based on national action plans and supported by adequate funding, are necessary for effective species recovery. At international level, the European Union has played a major role, but for migratory species it is essential to expand the scope of the plans to cover the entire range of the species.

ACKNOWLEDGEMENTS

We thank Wetlands International and in particular Baz Hughes (WWT) for inviting us to present the preliminary results of our study in Edinburgh, and Gerard Boere for his encouragement and patience during the process of preparing the manuscript.

Micheál O’Briain (DG Environment) played an instrumental role in initiating this study and promoting the action planning process in the European Union. Our BirdLife colleagues Umberto Gallo-Orsi, Nicola Crockford, Canan Orhun, Marianne de Rijk, Stuart Butchart and Frans van Bommel all provided invaluable help in collecting and analysing the data.

REFERENCES

- BirdLife International** 2004a. Birds in Europe: population estimates, trends and conservation status. BirdLife International, Cambridge, UK.
- BirdLife International** 2004b. Birds in the European Union: a status assessment. BirdLife International, Wageningen, The Netherlands.
- Collar, N., Crosby, M. & Stattersfield, A.** 1994. Birds to Watch 2. BirdLife International, Cambridge, UK.
- Gallo-Orsi, U.** 2001. Saving Europe’s most threatened birds. BirdLife International, Wageningen, The Netherlands.
- Heredia, B., Rose, L. & Painter, M.** 1996. Globally threatened birds in Europe. Council of Europe, Strasbourg.



Considerable effort has been expended to locate the breeding grounds in Russia of the Critically Threatened Slender-billed Curlew *Numenius tenuirostris*. Dr Sasha Yurlov, Novosibirsk, discussing with local farmers the difference between the three curlew species. Photo: Gerard Boere.