Waterbirds around the world

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

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Conservation action plans for the Black Crowned Crane *Balearica pavonina* and Black Stork *Ciconia nigra* in Africa

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**ABSTRACT**

Conservation action plans have been drawn up for the Black Crowned Crane *Balearica pavonina* and Black Stork *Ciconia nigra* in Africa. The action plans present overviews of the species and their different populations, with a particular emphasis on status and threats. Key components of the plans are recommended actions for implementation. The conservation action plan for the Black Crowned Crane has already led to follow-on actions that contribute to implementation of the plan. Participation is essential in the action planning process.

**INTRODUCTION**

The Black Crowned Crane *Balearica pavonina* is a resident of the Sahel and Sudan Savannah regions of Africa, ranging from the Senegal basin and Guinea-Bissau drainage in West Africa to the western Ethiopian Highlands and south-west Rift Valley in East Africa. The West African Crowned Crane *B. p. pavonina* occupies the western part of this range, from Senegal to Chad. The Sudan Crowned Crane *B. p. ceciliae* occurs in eastern Africa, with its largest concentration in Sudan (Walkinshaw 1964, 1973, Johnsgaard 1983). It is classified as Near Threatened (BirdLife International 2005). Current population estimates are 15 000 for *B. p. pavonina* (Dodman 2002) and 43 000-55 000 for *B. p. ceciliae* (Beilfuss et al. in press). Due to the rapid decrease of populations in certain areas and a lack of knowledge about status in other areas, the International Crane Foundation (ICF) and Wetlands International launched the Black Crowned Crane Programme in 1999 in order to determine the species’ conservation status and to prepare an action plan for its conservation.

The Black Stork *Ciconia nigra* is a fairly widespread but generally scarce bird in Africa, where it occurs in three separate populations (Rose & Scott 1994). The estimate of the population breeding in south-west Europe and spending the northern winter in West Africa is the lowest of these, at 1 300-1 370 individuals (Wetlands International 2002). Whilst various projects and conservation programmes are underway for this population in western Europe, its conservation status is much less clear in West Africa, where awareness of the stork is also rather low. Results from recent initiatives, including some pioneering satellite-tracking programmes, have helped identify preferred migration routes and important sites in West Africa (Jadoul et al. 2003). The much larger population that breeds in central and eastern Europe and spends the northern winter in south-west Asia and sub-Saharan Africa north of the equator numbers around 19 500-28 000 individuals (Wetlands International 2002). Birds from this population cross into Africa at both the Straits of Gibraltar and the Sinai. Of 10 birds fitted with transmitters in the Czech Republic between 1995 and 1999, six followed the south-west migratory route and four followed the south-east flyway into Africa (Bobek et al. 2001). There is also a resident population of Black Storks in southern Africa with an estimated population of 1 560-4 050 individuals, key countries being Zimbabwe, Zambia and South Africa (Dodman 2002). With the support of the Ramsar Convention Secretariat, Wetlands International has developed a preliminary conservation action plan for the Black Stork in Africa, focusing largely on West Africa.

**METHODS**

**Black Crowned Crane**

Using resources from diverse sources, Wetlands International and ICF supported a range of activities aimed at ascertaining the status of the Black Crowned Crane across its range, and employed a full-time Black Crowned Crane Programme Co-ordinator in December 1999, based at the Wetlands International office in Dakar, Senegal. Preliminary activities included an analysis of gaps in information and a detailed questionnaire survey, whilst a wide range of field surveys were supported in twenty countries across the range. Over a two-year period, a total of 187 of 226 target sites were covered by field surveys or questionnaires, or both (Williams et al. 2003). Target sites included all sites known or suspected to harbour cranes, as identified from the African Waterbird Census database, previous reports and publications, and personal communication with survey participants.

The questionnaire surveys aimed to supplement and expand on the fields surveys, and the questionnaires were widely distributed. Questions were asked on distribution, population size, status and movements, diet, breeding activity, threats, local attitudes, and legal protection concerning the Black Crowned Crane. Field and questionnaire survey data were analysed to develop population estimates for discrete “sub-populations” or “Crane Areas”. The survey results were also used as the basis for developing the Conservation Action Plan, which was reviewed during a Round Table Discussion at the 10th Pan African Ornithological Congress in Uganda in 2000 (Williams et al. 2001). The action plan was published in 2003, whilst a technical poster and an awareness-raising poster (labelling the crane as the “Jewel of the Sahel”) were also produced.

**BLACK STORK**

The aim of the “Conservation Action for Black Storks in Africa” project was to determine the status of, and threats to, Black Storks in (West) Africa, initiate actions for their conservation, and build awareness of this charismatic migratory species in Africa. The...
main objectives were: to determine the conservation status of the Black Stork in (West) Africa; to identify key sites for, and threats to, the species in (West) Africa; to develop a conservation strategy (action plan) for (West) Africa; and to increase awareness of the Black Stork and importance of wetlands in West Africa.

As in the Black Crowned Crane programme, questionnaires were also used for developing the preliminary action plan, although no specific surveys were organized. Field data were mainly drawn from existing data held in the African Waterbird Census database, whilst information on migration and other aspects was obtained via parallel projects (e.g. Bobek et al. 2001, Jadoul et al. 2003). The preliminary study was carried out in 2002, priority actions were identified in 2003, and a preliminary action plan (consultation review) was produced in 2005. A poster was produced and presented at the Waterbirds around the world Conference in Edinburgh, UK, in 2004. A technical poster was also produced, and both posters are being distributed in Africa.

RESULTS
Black Crowned Crane
New population estimates were produced based on the surveys of 2000-2001, with 14 500 B. p. pavonina and >27 500 B. p. ceciliae yielding a global species estimate of >42 000 individuals (Williams et al. 2003). Population estimates have subsequently been revised and now stand at 15 000 B. p. pavonina and 28 000-55 000 B. p. ceciliae (Table 1; Beilfuss et al. in press, Wetlands International in press). These figures are significantly lower than previous estimates of Urban (1987), Urban (1996) and Meine & Archibald (1996), mainly due to a substantial revision in the estimated population of the Sudan Crowned Crane (Table 1). Both populations were found to be in decline, with significant declines noted in Nigeria and Mali, whilst a hitherto largely undetected sub-population was discovered in Guinea-Bissau. A distribution map was drawn up, in which the discrete Crane Areas were identified. The action plan also detailed information on crane breeding ecology, habitat, feeding ecology, protection status, threats and local attitudes, and used this information to develop a set of recommended conservation actions, as detailed below.

Recommended conservation actions for the Black Crowned Crane (from Williams et al. 2003)

1 Launch public awareness programmes for the Black Crowned Crane as a flagship species for wetland conservation.
2 Initiate case studies to find solutions to key threats facing the Black Crowned Crane.
3 Develop integrated management programmes for critical wetlands and catchments that support Black Crowned Cranes.
4 Advocate the designation of Black Crowned Crane sites as Wetlands of International Importance and the implementation of the Ramsar Convention on Wetlands.
5 Transfer the Black Crowned Crane from CITES Appendix II to Appendix I.
6 Strengthen the Black Crowned Crane network and working group to promote further research, monitoring and exchange of information.
7 Convene international and range-wide workshops to plan future conservation measures for the Black Crowned Crane.

Further specific actions were developed for each subspecies (Williams et al. 2003). Since the action plan was developed (in 2001, printed in 2003), Wetlands International and ICF have continued to work together to address the main recommendations of the plan. In particular, a number of specific case studies have been achieved and/or are still underway. These include:

- investigating the status of cranes and factors behind the live crane trade in Mali;
- investigating factors affecting breeding and movements of cranes in an area where wetlands have been converted to agricultural land in Senegal;
- surveys and conservation of cranes in the rice-growing zone of coastal West Africa from the Casamance of Senegal to Guinea, with a special focus on Guinea-Bissau;
- a survey and Participatory Rural Appraisal in selected communities in the crane’s range in Nigeria.

**Black Stork**

Key sites for Black Storks in West Africa were identified, including potential Wetlands of International Importance (sites that meet the Ramsar Convention’s 1% criterion for the Black Stork), as well as other key (non-wetland) stopover sites. The main threats to Black Storks in Africa were also identified, and their conservation requirements determined. Awareness of the Black Stork was built into the African Waterbird Census network and other networks in Africa.

The Black Stork Conservation Action Plan is currently under technical review prior to publication. It presents information on the status of the three populations, their distribution and migration strategies, count data from the African Waterbird Census, habitat and ecology, breeding, threats and current conservation measures and legislation. In Africa, the main threats identified are the loss and degradation of habitat, hunting, and factors relating to inadequate legislation. Habitat degradation in West Africa is due to desertification, changing landscapes with agricultural intensification, and related factors such as pollution caused by the concentration of pesticides and other chemicals in wetlands. In eastern Mauritania, an important staging area for Black Storks, natural wetlands have been lost due to the building of dams and clearing land for agriculture, a trend that is likely to continue given current national policies directed towards food security (Shine 2003).

The main aim of the preliminary action plan is to prevent, in the short term, further degradation of wintering sites in West Africa through local community-based conservation initiatives, and in the long term, to augment the populations wintering in...
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Specific objectives of the preliminary Black Stork Conservation Action Plan

1. Promote the restoration and conservation of suitable wintering habitat for Black Storks in West Africa.
2. Encourage the application of national and international legislation in favour of the protection of the Black Stork and its habitat, notably its wintering habitat in Sahelian Africa.
3. Regularly monitor the populations of Black Storks in Africa.
4. Initiate case studies to define threats to Black Storks in their winter quarters in Sahelian Africa and identify solutions to minimize threats.
5. Develop and launch a public awareness and education programme on storks in general and the need to protect their fragile habitats in Africa.
6. Strengthen co-operation between breeding and non-breeding zones (staging and wintering zones) of the Black Stork, especially through a network of managers of key sites for storks across their flyways.
7. Strengthen communication of the network.

The action plan further provides management options and measurable indicators for each objective and a series of “sub-objectives”, and describes mechanisms for putting the plan into practice. The plan details specific recommendations for each of the main wintering zones in West Africa, namely the western zone (Mauritania, Senegal and western Mali), the central zone (Mali), and the eastern zone (Burkina Faso, Niger, Benin, Nigeria, Togo and Ghana), as well as a buffer zone for staging areas in Mauritania.

DISCUSSION

There have been significant outputs from the follow-on projects launched since the development of the Black Crowned Crane Conservation Action Plan. These have included community awareness and training activities and related outputs; conservation awareness materials produced and locally distributed; site guardians appointed; site conservation agreements developed with local communities; and local training materials produced in Creole and other languages. Training has mainly focused on informing local communities about the importance and values of wetlands and about cranes and other waterbirds. The plan thus remains as a useful living conservation tool that is still under implementation. It has certainly acted as a stimulus for focusing and prioritizing further conservation action and for raising funds for these actions.

By contrast, the Black Stork Conservation Action Plan has not yet been completed, due to a prolonged review process, and no new specific follow-up actions have been developed. There is also a need to integrate further information and conservation priorities for the discrete population in southern Africa, for which further communications are also required. Nevertheless, the plan promises to be a useful document for prioritizing future conservation actions for this species, and for potentially expanding some components to embrace other storks in the region. Significant research is conducted on Black Storks in Europe, where this is widely regarded as a high priority species for conservation. There is much to be gained through a strengthened network for Black Stork conservation and exchange between partners in Europe and Sahelian countries of Africa. The series of international conferences on the Black Stork and the Stork, Ibis and Spoonbill Specialist Group of Wetlands International are positive vehicles for achieving this.

Conservation action plans are useful planning tools for focusing and prioritizing attention on species, in particular threatened species, for which concerted and co-ordinated action is often needed for their successful conservation. It may arguably be easier to raise funds and enthusiasm for the implementation of plans for charismatic or well-known species than for less-known or drab species. However, whatever the success in raising funds, clear and prioritized recommended actions are extremely useful, and will be widely respected if appropriate networks have been involved in drawing them up. The African-Eurasian Migratory Waterbird Agreement (AEWA) advocates the development of Species Action Plans, and has produced a number of plans under its technical series, e.g. UNEP/AEWA (2004). There are also specific national action plans in some countries, such as the Botswana Wattled Crane Action Plan (Motsumi et al. 2003). The BirdLife African Species Working Group and the Royal Society for the Protection of Birds (RSPB) have established a project to enhance the conservation of key bird species in Africa through the development and implementation of Species Action Plans. A key step in the BirdLife Species Action Plan approach is the organization of participative species action planning workshops (BirdLife International, no date). Participation is certainly a key
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REFERENCES


