

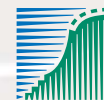
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Waterbirds around the world

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

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The African Waterbird Census (1991-2004): fourteen years of waterbird surveys in Africa

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ABSTRACT

The African Waterbird Census (AfWC) is one of several co-ordinated international waterbird censuses carried out under the umbrella of the International Waterbird Census (IWC). The census was initiated in 1991, and since 1998 has been managed from the Wetlands International office in Dakar, Senegal. To date, over 900 sites in 36 countries have been counted at least once during the census, and thousands of volunteers and professionals have participated in the counts. Over 9.2 million waterbirds were counted in the census of January 2000. This paper provides a brief history of the AfWC, and reviews some of the problems and challenges that it faces. A strategy for the development of the AfWC during the period 2004-2006 is discussed, and a number of priorities are identified.

INTRODUCTION

The African Waterbird Census (AfWC) runs parallel to other international waterbird censuses in Asia, the Western Palearctic and the Neotropics under the umbrella of the International Waterbird Census (IWC). The AfWC, which concerns sub-Saharan Africa, was initiated in 1991, when 15 countries participated. Gradually, the AfWC has extended its coverage to reach most parts of the continent and Africa's outlying islands, particularly in the Indian Ocean, such as Madagascar. The main objectives of the AfWC are to:

- establish a monitoring programme for African wetlands;
- determine distribution and migratory strategies of waterbirds in Africa;
- develop estimates of the populations of waterbirds in Africa;
- create a network grouping persons involved in the survey, management and use of waterbirds and wetlands; and
- promote education and public awareness concerning wetlands and waterbirds.

During its implementation, Wetlands International has benefited from the financial support of several partners for the AfWC, including the Government of The Netherlands, the Swiss Agency for Environment and Forests, the Ramsar Convention Bureau, and the Secretariat of the African-Eurasian Migratory Waterbird Agreement (AEWA), whilst other partners have contributed to the programme directly through parallel initiatives, including the Office National de la Chasse et de la Faune Sauvage (ONCFS) in West Africa and the Wildfowl and Wetlands Trust (WWT) in Eastern Africa.

Participation, coverage and national co-ordination

After the opening of Wetlands International's Africa Programme Office in Dakar, Senegal, in 1998, the database was transferred

to Dakar and is managed there, whilst regular contact is maintained with the IWC database at the headquarters of Wetlands International in The Netherlands. To date, the database holds data from more than 900 sites in 36 countries, and thousands of volunteers and professionals have participated in the waterbird census in one way or another.

There is an on-going effort to strengthen national co-ordination of the AfWC, especially through the nomination of National Co-ordinators; so far 38 have been nominated. There are also voluntary Regional Co-ordinators for the five identified sub-regions of West Africa, Central Africa, Eastern Africa, Southern Africa, and Madagascar and the Indian Ocean islands.

Network development

In 1997, *A Preliminary Waterbird Monitoring Strategy for Africa* (Dodman 1997) was published. This used the results of an international workshop, questionnaires and other sources to propose a strategy for applied programmes of waterbird monitoring in Africa. An African Waterbird Census Steering Committee was formed on the recommendation of the AfWC network, and this met for the first time in November 1998, when a number of action points were developed. Just before the 10th Pan-African Ornithological Congress in Kampala Uganda, in 2000, Wetlands International organized an AfWC development workshop. The main theme "from census to conservation" translates the desire to link the AfWC closely to the conservation of waterbirds and wetlands in Africa. About fifty resource persons attended the workshop including many AfWC National Co-ordinators. This provided a good basis for the development of the AfWC in the coming years. Regional recommendations were formulated, lending a new dynamism to this pioneering conservation network.

Some results from the AfWC programme

The results of the census from 1991 to 2001 demonstrate that tremendous efforts have been made by the network to cover a wide range of sites. The total counts have varied considerably from year to year (Fig. 1), often reflecting the coverage more than actual decreases or increases in birds at individual sites. The high count in 2000 can be explained by the coverage of some sites of high productivity where birds concentrate, such as the Banc d'Arguin (Mauritania), Lake Bogoria (Kenya), and some large breeding colonies such as Bird Island (Seychelles). Indeed, these sites alone accounted for more than 50% of the numbers of birds counted in January 2000.

The number of participating countries has generally increased since the initiation of the census, with around 30 countries now regularly participating in the programme (Fig. 2). However, there are often difficulties in maintaining the census in certain countries,

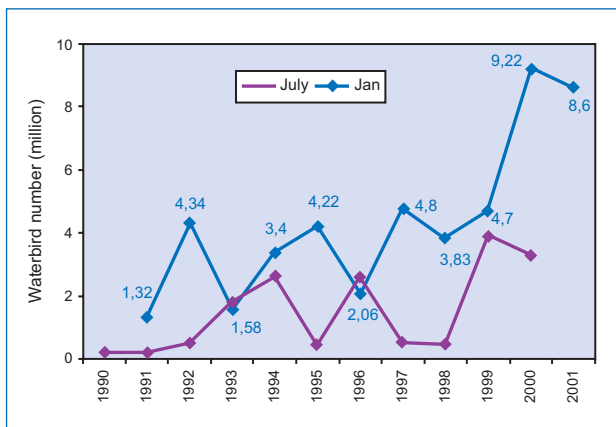


Fig. 1. Number of waterbirds counted under the African Waterbird Census: 1991-2001.

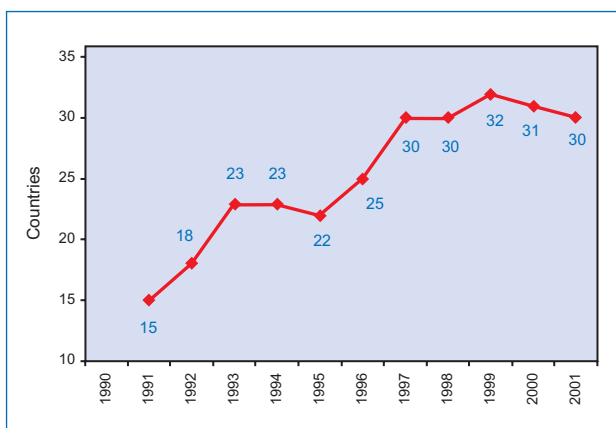


Fig. 2. Number of countries counted under the African Waterbird Census: 1991-2001.

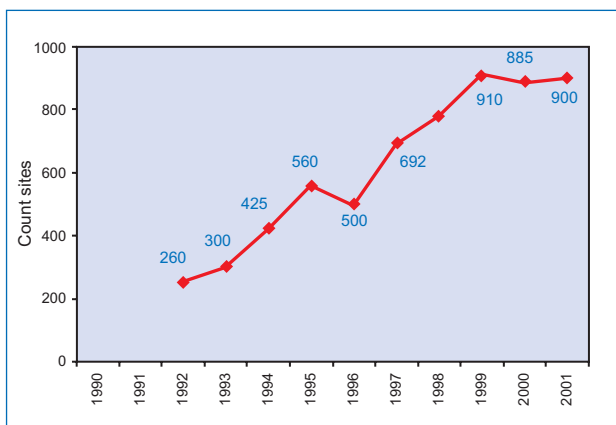


Fig. 3. Number of sites participating in the African Waterbird Census: 1992-2001.

due to insecurity, lack of financial resources, lack of commitment, changes in national co-ordination and other reasons. The availability of a small grants programme for the AfWC managed by Wetlands International has assisted greatly in assuring the participation of a number of countries, and extending the census to new countries. In addition, the inclusion of AfWC surveys within some regional projects has significantly helped to strengthen networks, especially in West and Eastern Africa.

The number of sites covered by the programme increased significantly from 1991 to 1999, a period which saw many new

countries joining the AfWC network, but this has tailed off since then (Fig. 3). This is to be expected, and a key challenge for the AfWC, if it is to function as a monitoring programme, is to maintain the regular coverage of key sites.

The outputs of the AfWC are multiple. Of particular significance, the AfWC has provided an excellent platform for capacity building of national networks, through training, exchanges, provision of equipment and by simply enabling people to get involved in fieldwork on a regular basis. The census also benefits from participation of a wide range of partners at all levels. This has helped strengthen partnerships between organizations.

Use of AfWC information

The main data collected under the AfWC are the numbers of birds counted at different wetlands. However, additional information is requested through the compilation of census forms, which include sections for site condition, weather and other variables. Site forms are also requested to be completed for each site, where standard information may be recorded and a site map provided. However, the quality of these additional data are often poor, and the level of data inadequate. Another challenge for the census is to improve the site data and the regular monitoring of site conditions, including threats. These may help, in the long run, to improve analysis and thereby usefulness of the data.

Some of the main current uses of the AfWC data are:-

- Increasing knowledge of waterbird populations, their migratory strategies and conservation status. Data have been used extensively in the development of Waterbird Population Estimates (Rose & Scott 1994, Rose & Scott 1997, Wetlands International 2002) and waterbird atlases (Scott & Rose 1996, Delany *et al.* in prep.), and in developing strategic analyses of waterbirds (e.g. Perennou 1991, Scott 1999, Dodman 2002). Data have been used for the identification of Important Bird Areas (IBAs) in Africa (Fishpool & Evans 2001). Data are also used for assessments of the status of particular species, such as the Cape Teal *Anas capensis* (Baker 2005).
- Development of Species Action Plans. AfWC data were used in particular for developing a conservation action plan for the Black Crowned Crane *Balearica pavonina* (Williams *et al.* 2002).



Long-toed Lapwing *Vanellus crassirostris*, Lake Naivasha, Kenya. Photo: Ian Francis

- Monitoring the ecological character and productivity of wetlands. Regular repeated surveys can contribute to quantifying changes in wetland character and measuring the impacts of developments. This is achieved through measuring basic site characteristics as well as through recording waterbirds numbers and distribution.
- Provide baseline data that may be referred to if a wetland is threatened by land use developments, such as draining or conversion to irrigation. Data may thus be used in contributing to Environmental Impact Assessments (EIAs) and in highlighting important and/or sensitive areas.
- Support development and implementation of the Convention on Wetlands (Ramsar, Iran 1971) and the AEWAs in Africa. Data have been used in particular for the identification of new and potential Sites of International Importance under the Ramsar Convention (Ramsar sites) and of key site networks under the AEWAs.

Constraints for the development of the AfWC

There are many and diverse challenges facing the AfWC at different levels. Some of the common constraints are given below:

Weak financial and organizational support for the AfWC.

Surveys cost money, and many African organizations lack the financial means to execute surveys on a regular basis. Wetlands International does provide small grants and sometimes more substantial funds for surveys and related activities, but such funds are generally limited, whilst provision of external funds on a regular basis cannot be seen as a sustainable means of support. Countries are encouraged to build the AfWC into more regular conservation or monitoring programmes, but this is often difficult to achieve, and most nature management organizations in Africa depend to a large extent on external funds for specific short-term projects. National Co-ordinators themselves are often not in a position to dedicate much time to the AfWC, and the material means at their disposal are derisory for achieving good results on a regular basis.

Inadequate communication and commitment.

Good communication is an essential component of an effective functioning network. Whilst recent technological developments have facilitated communication in Africa, there is still limited communication between most members of the network. This is partly due to the fact that the network is rather dynamic, outputs are irregular and there have been no means of late to permit National Co-ordinators to meet together at a regional or continental level. Poor communication generally leads to lowered commitment to the census, especially if feedback is not provided often enough.

Limited expertise and data quality control.

At the national level, there is generally only limited expertise in the AfWC, from planning surveys to identification of waders to collection and input of data. There is also a limited ability to check data carefully and thoroughly, for instance, before submission to Wetlands International. This situation can result in errors in the database, published reports and resulting analyses.



Goliath Heron *Ardea goliath* at Lake Baringo, Kenya. Photo: Colin Galbraith.

Priorities for the future

Although the AfWC remains one of the few regional monitoring schemes in Africa and enjoys a wide participation of countries and network members, constant attention needs to be paid to its execution and development. Five key practical requirements for the coming years are as follows:

Enhance communication within the AfWC network.

National Co-ordinators in particular need time and resources (availability of computers, e-mail etc.) for effective communication within the network. Organization of regular workshops, creation and regular updating of an AfWC web-site and production of a biannual newsletter would also be useful. These and other actions could be included in an AfWC communication strategy.

Institutional strengthening of the AfWC network.

To help build the census into national planning schemes, National and Regional Co-ordinators need organizational support to enable them to carry out census activities, and in particular, for national co-ordination and data collation. They and managers of key sites also need field equipment to enable their national networks to carry out wetland surveys, including binoculars, telescopes, identification guides, GPS, digital cameras etc.

Develop a fundraising strategy for operation and development of the AfWC.

There are requirements to meet the core running costs of the AfWC, such as network support, data entry, regular reporting and database management. Additional funds are needed so that action can be taken on the basis of the results of the AfWC, for instance conservation of species that are (or appear to be) in decline.

Improve the data quality of the AfWC.

The quality of the data needs to be improved at site, national and international levels. There is scope for involving the Wetlands International Specialist Group network in checking data and reports.

Develop a training and public awareness programme.

The AfWC network is large and dynamic, with many new recruits each year. Training is needed widely at different levels, whilst awareness needs to be raised, especially concerning the value and application of the AfWC, linked to the importance of conservation of wetlands.

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Waterbird counters in Sudan. Photo: Tim Dodman.