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SENEGAL CRANE AND WETLAND ACTION PLAN¹

INTRODUCTION

Cranes

The Black Crowned Crane (*Balearica pavonina*) is the only crane species found in Senegal. They are now fully protected and not hunted. They have an aesthetic value, drawing tourists to National Parks. It is believed that when a chief keeps a captive crane in his or her garden, it helps the chief remain in power.

Cranes are threatened by wetland loss and degradation because they are very sensitive to environmental change. In this way, they are often considered to be good indicators of the health of wetland ecosystems.

Wetlands

Wetlands have long been considered as wastelands without any utility. However, we know now that wetlands are very important ecosystems with significant values for people and wildlife. Wetlands can provide flood regulation, water purification, groundwater recharge, fish spawning grounds, and breeding and feeding areas for birds.

Goals of the Action Plan

The goal of this Action Plan is to identify the most urgent needs for crane and wetland conservation in Senegal, and propose priority research on the population size, migratory movements, and habitat utilization of Black Crowned Cranes.

SPECIES ACCOUNT

The Black Crowned Crane occurs mainly in the Senegal Delta (northwest Senegal) and in the Casamance Delta (southwest Senegal), but also occurs in the Gambia and in southeast Senegal (Treca and Ndiaye *this proceedings*). Cranes are said to have decreased from 3,000 to 1,000 birds in Senegal during the last 30 years, but there is little evidence to support this. It seems that in recent years population numbers have remained quite stable, but it may well be that cranes are now more concentrated in and around Djoudj National Park than before. During the past two years, about 300-600 Black Crowned Cranes were censused in the Senegal Delta, with similar numbers in Casamance and fewer in the Niokolo-Koba National Park and along the Gambia River.

The main habitat for Black Crowned Cranes in Senegal is shallow wetland with some *Acacia* trees. Cranes also

feed in rice fields that are newly planted or already harvested and ploughed., and on dry lands and abandoned fields.

Cranes are fully protected in Senegal. Threats to Black-crowned Cranes are mainly the drought and the early drying-up of temporary ponds, and also the destruction of *Acacia nilotica* trees that Black Crowned Cranes use for roosting. Chemical spraying against locust may be a threat to cranes but there is no proof of this, and for several years spraying has been quite limited in Senegal.

The most urgent needs will be to conduct a complete census of sites that may be of interest for cranes in Senegal, in the Gambia, and in the South of Mauritania.

Then we will have to understand movements of cranes, and it could be useful to put some colored rings on.

Research on habitat utilization and the monitoring of the cranes population in the delta of the Senegal river should be undertaken as soon as possible

CRITICAL WETLAND ACCOUNTS

In Senegal, several types of wetlands occur, including:

- freshwater and brackish floodplains;
- lakeshores;
- mangroves;
- small coastal wetlands;
- artificial impoundments.

The key wetlands that cranes inhabit are the Senegal Delta and Casamance Delta.

Delta of the Senegal River

The Senegal Delta is situated partly in Mauritania and partly in Senegal. It is located at 15°44'-16°29'N/15°35'-16°29'W, and has a total area of 320,000 ha. (of which 200,000 ha. are in Senegal). The altitude is 0-4 m amsl.

The delta is a rich source of plant and insect life for freshwater fish, and is the wintering area of about 3 million birds. Fortunately, the famous Djoudj Bird National Park in Senegal and the new Diawling Park in Mauritania are situated in this zone and offer protection of 16,000 ha. and 15,000 ha. areas, respectively.

A hunting zone is situated West of Djoudj National Park, and the rest of the delta is managed for rice fields (30,000 ha.) and sugar cane fields (10,000 ha.).

Guiers Lake serves as a freshwater reservoir for Dakar. It is 35 km long and 7.5 km wide, with permanent standing water. In 1993, excess water from the Manantali Dam was discharged to Guiers Lake, extending the lake width

¹ Prepared by the Senegal delegation to the African Crane and Wetland Training Workshop: B. Treca and S. Ndiaye

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southwards to 60 km. This newly flooded area may favor cranes.

Several other smaller wetlands also filled up with the excess water, and may provide good habitat for cranes although they are hunting grounds for ducks and waders.

The Ndiaké Reserve, which has been dry for 30 years, is scheduled to be refilled with water in the next year, after some management work. This reserve, situated between Djoudj National Park and Guiers Lake, is 45,000 ha. in size, of which 15,000 ha may be flooded. The reserve, already protected, could provide good habitat for cranes.

The Casamance Delta

The Casamance Delta is located in southern Senegal at 12°21'-13°00'N/15°25'-16°50'W, and has a total area of 360,000 ha. (of which 25,000 ha. are mangroves). The altitude is 0m amsl.

The brackish seawater can flow upstream as far as 165 km. from the coast. A national park has been established to protect 5,000 ha. of the delta.

Other wetlands

In southeast Senegal, some small wetlands are included in the huge Niokolo-Koba National Park. These are mainly temporary ponds or marshes.

PRINCIPLE THREATS TO CRANES AND THEIR HABITATS.

The main threats to Black Crowned Cranes in Senegal include:

- the agricultural expansion of rice causing the loss of wetlands and destruction of *Acacia* trees, mainly in the Senegal Delta;
- the increased use of pesticides and fertilizers due to agricultural intensification, leading to a reduction in available food (locust and other insects) for cranes;
- the construction of two dams on the Senegal River (Manantali and Diama Dams), which have permitted the flooding of old wetland areas that were dry for the previous 30 years or longer (the effect of these on crane populations in Senegal is unknown).

The impact of pollution and toxins is unknown. Utility lines do not occur in crane habitat, and therefore do not pose a threat. There is no hunting of cranes and no live trapping for commercial trade (although a few are captured and domesticated). No deliberate poisonings have been reported. There is no known disturbance caused by people, warfare, or lack of law enforcement.

RECOMMENDED PROJECTS AT THE NATIONAL LEVEL

The following activities are needed to improve Black Crowned Crane conservation in Senegal:

1. Census and monitor important crane habitats (described above).
2. Protect buffer zones near the Djoudj National Park. Management of already protected areas should include the reforestation with *Acacia* trees.
3. Conduct research activities on the ecology of the Black Crowned Crane in Senegal (with the collaboration of ORSTOM and the National Park Service), including behavior, reproductive ecology, and feeding ecology. Cranes should be marked to facilitate research on population movements.
4. Produce a video film for education and training.

Project: Status of the Black Crowned Crane in Senegal

Target species and wetlands

Black Crowned Cranes in the Senegal Delta (including southern Mauritania), the Casamance delta, and Niokolo-Koba National Park.

Project justification

The status of the Black Crowned Crane is poorly known, and population trends are unknown. One complete census should be undertaken between December and March in the Senegal Delta, Casamance Delta, and Niokolo-Koba National Parks.

Project timetable

One week in the Senegal Delta, for 10 hours aerial surveys and 3 days ground surveys. One week in the Casamance Delta for ground surveys. One week in the Niokolo-Koba National Park for ground surveys.

Project budget (in \$US)

<u>Senegal Delta</u>	
Aerial surveys (10 hours)	\$1,700
Car fuel	200
Field expenses	280
<u>Casamance Delta</u>	
Car fuel	500

Niokolo-Koba National Park

Fuel/maintenance	250
Field expenses	280
Total	<u>\$3,210</u>

Project: Ecology of the Black Crowned Crane in the Senegal Delta

Project objective

Collect data about the ecology of the Black Crowned Crane in the Djoudj National Park.

Project methods

A field team will investigate:

- group size number;
- habitat for feeding, roosting, and resting, in and around Djoudj National Park;
- nest sites inside and outside the park

Project timetable

One week every month for 2 years, involving 5 persons.

Project budget (annual, in \$US)

Car fuel (vehicle from ORSTOM or National Park)	\$1,500
Field expenses	4,500
Total	<u>\$6,000</u>

Project: Public educational campaign, with cranes as a symbol for wetland conservation

Project objectives

Rural and urban communities must be educated about the importance of wetlands. Cranes will be utilized as a symbol of wetland health.

Project description

Produce a video film on benefits of, and threats to, wetlands. Produce slides, posters, and t-shirts. Show them in schools, nature clubs, and television, using the facilities of the office for environmental education already set up in the National Park Service, and ORSTOM's audio-visual department. The video film may be shown at the next Pan-African Ornithological Congress to be held in the Gambia in December 1996.

Project timetable

Two years to completion.

Project budget (in \$US)

Video film	\$ 8,500
Other materials	7,500
Total	<u>\$16,000</u>

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