



The Lesser Flamingo – Saving an African Icon

TERMS OF REFERENCE

Background

An icon of Africa, the Lesser Flamingo (*Phoeniconaias minor*) continues to be under threat throughout its flyways. It is recognized as Near-Threatened on the IUCN Red List and is listed on Appendix II of the Convention on Migratory Species (CMS), Appendix II of CITES and in Column A of Table 1 of the African-Eurasian Migratory Waterbird Agreement (AEWA). Main threats to the species include habitat loss and degradation (through changed hydrology and water quality, as well as the extraction of soda ash from lakes inhabited by the species), disruption of nesting colonies, collision with man-made infrastructure, as well as poisoning and diseases.

The West African Lesser Flamingo population is the smallest and most vulnerable, currently numbering an estimated 25,000 to 30,000 birds. A key conservation challenge is that the migratory movements and critical sites – including the breeding colonies – of this population remain largely unknown.

Our lack of understanding of their breeding and other critical sites means that we have no means to afford the birds adequate protection throughout their life cycle – particularly during their critical breeding events, when disturbance, etc., can potentially lead to the loss of an entire generation of flamingos. Urgent action is also essential in light of the ongoing infrastructure development in Western Africa in terms of man-made structures (power lines, telephone masts, and other similar infrastructure), which can have a detrimental effect on the birds if situated in their flightpaths.

Rationale

The AEWA International Single Species Action Plan for the Conservation of the Lesser Flamingo was adopted at the 4th Meeting of the Parties in 2008 to address these threats and constitutes the internationally agreed conservation framework for the species. It covers all 12 Principal Range States identified for the species within the African-Eurasian and Central Asian flyways.

The AEWA Lesser Flamingo International Working Group was convened by the UNEP/AEWA Secretariat to guide and coordinate the implementation of the International Action Plan. AEWA Species Working groups are inter-governmental in nature and consist of designated government representatives and national species experts as well as representatives from relevant observer organizations. Unfortunately, due to lack of resources, the Working Group has remained largely dormant and implementation of urgent conservation action for the species is lacking.

This Project has the potential to boost implementation action for the species in Western Africa and wider in Africa, as well as to serve as a catalyst to re-start the International Working Group by generating new research and renewed collaboration amongst the species' range states.



Work under this application will also benefit from cooperation with the Avian Migration Aerial Surface Space (AMASS) project led by NASA. AMASS is an educational project that combines art and science, storytelling and dynamic imagery to understand and communicate the scope and scale of avian migratory pathways, through aerial, surface and space perspectives, for promoting the protection of safe, sustainable habitats for migrating birds. Imagery of the key sites across the range of the Lesser Flamingo obtained from the International Space Station will be used in communicating the results achieved.

Objectives

This Project will consist in three main components.

- i. Fitting Lesser Flamingos in Djoudj National Park (Senegal) with satellite-tags and leg-rings will allow the team to identify local and long-distance movements of the West African population as well as their key breeding and other sites used throughout the life cycle.
- ii. Providing knowledge transfer on satellite-tracking and catching techniques to national nature management authorities and other relevant national stakeholders in Senegal and Mauritania will address a current gap in in-country expertise and/or capacity regarding the satellite-tracking of birds.
- iii. Information thus obtained will provide Senegal as well as other relevant range states with recommendations regarding the conservation of critical sites for the species, as appropriate.

The immediate Project objectives are as follows:

- i. *Objective 1:* Identify and protect key breeding and other critical sites within the range of the Western African population of the Lesser Flamingo.
- ii. *Objective 2:* Minimise risk of mortality of Lesser Flamingos due to collision with man-made structures.

Expected Outcomes

The expected outcomes are as follows:

- i. *Outcome 1:* Key breeding sites and key non-breeding sites of the Western African population of the Lesser Flamingo have been identified and verified.
- ii. *Outcome 2:* Knowledge and understanding of local and long-distance movements of the Western African population of the Lesser Flamingo have been increased.

Main Activities to Deliver the Outcomes

The Project activities to be carried out with the support provided under this Small-Scale Funding Agreement are the following:

- i. *Activity 1:* Capture and satellite-tag three birds.
- ii. *Activity 2:* Train national staff in the capture, ringing, and satellite-tagging of Lesser Flamingos and other waterbirds following international best practice. The technical training workshop will be done back to back with the field work (i.e. in conjunction with the actual capturing, tagging and ringing of the birds in Activity 1), under the supervision of Tour du Valat experts.



- iii. *Activity 3:* Monitor satellite data describing the movements and locations of satellite-tagged birds and share data and outcomes of the analysis via the UNEP/AEWA Lesser Flamingo International Working Group (IWG) website, as well as with other relevant stakeholders. The training workshop in Activity 2 will initiate the knowledge transfer process that will permit local experts to collect data on tracked birds and monitor their movement. This activity will be conducted by the trained experts in Senegal, with support of the Tour du Valat experts. Given that Lesser Flamingos do not breed every year, effective monitoring the movements the Lesser Flamingos will ideally require a relatively longer period of time (e.g. at least two years), in order to increase the chance of collecting adequate and valuable data on breeding locations/sites for the species. The knowledge and expertise for collecting, analysing and interpreting data from the satellite-tagged birds and applying this to monitoring the use of sites by the species over time, will be passed on to local experts in the framework of this project. The local experts will in turn continue the monitoring of the species beyond the project duration, with further technical support as required.
- iv. *Activity 4:* Draft and disseminate a report on site usage by the species over time, based on the data obtained during the project time frame, including recommendations (in English and French) for conservation action and further research. Imagery of the key sites across the range of the Lesser Flamingo obtained from the International Space Station will be used in communicating the results achieved.

Technical and Scientific Cooperation

The activities of this Project are designed to fully involve institutions from Senegal and France, with additional inputs from international organizations. Cooperation will be carried out along the following lines:

- i. National Parks Directorate (DNP, Senegal) will manage the Project and coordinate between the different stakeholders. This will include logistical organisation on the ground.
- ii. Tour du Valat (France) will provide the technical know-how and expertise for execution of the satellite tagging field expedition and training of local experts on this, as well as on the collection and processing of data from tracked birds. The Tour du Valat experts will constitute the lead trainers for the technical and field training. The training will include a one-day workshop on satellite technology and other baseline information, followed by the field training on bird capture and fitting of transmitters and rings. This will then be concluded by another one-day workshop on data collection and monitoring of the movement of the satellite tagged birds. The overall purpose being to enhance knowledge and transfer skills on catching, ringing and satellite tagging of birds, for the benefit of at least eight (8) national staff from different institutions involved in monitoring of waterbirds in Senegal (including from the Biological Station of the Djoudj National Bird Park, which is a Critical Site for the survival of the specie), as well as from Mauritania (particularly from the neighbouring Diawling National Park, which is also of critical importance for the species).
- iii. The UNEP/AEWA Secretariat will provide the link to the wider conservation community and the network of experts and stakeholders from the UNEP/AEWA Lesser Flamingo International Working Group.
- iv. BirdLife International will further support implementation of activities on the ground. This will be in an advisory capacity through the local knowledge of their country-based staff, as well as



through benefitting from their expertise and presence in the ground for species and sites monitoring.

- v. The NASA-led Avian Migration Aerial Surface Space (AMASS) project, is an educational project that combines art and science, storytelling and dynamic imagery to understand and communicate the scope and scale of avian migratory pathways, through aerial, surface and space perspectives, for promoting the protection of safe, sustainable habitats for migrating birds. The AMASS project will provide imagery and expertise to communicate results of this Project.

Reporting

Tracking and Reporting: Mid-term progress and final output will be reported to BBI team. Participation to BBI meeting and presentation of output would be delivered upon request of BBI team.

Measurable Indicators: The project will be monitored using the following indicators:

- i. *Indicator 1*: Types and number of equipment for satellite tagging and ringing purchased
- ii. *Indicator 2*: Date confirmed for field expedition and technical workshop
- iii. *Indicator 3*: List of participants for training and field expedition
- iv. *Indicator 4*: List of locations confirmed for field expedition
- v. *Indicator 5*: Field expedition successfully conducted
- vi. *Indicator 6*: Workshop venue confirmed
- vii. *Indicator 7*: Workshop / field expedition report available
- viii. *Indicator 8*: Access to satellite data for transmitters
- ix. *Indicator 9*: Data on location of tagged birds downloaded and compiled
- x. *Indicator 10*: Results on data analysis
- xi. *Indicator 11*: Report on the spatial and temporal distribution of the Lesser Flamingo, including recommendations for possible conservation action to be conducted (e.g. new sites to be visited and confirmed)