



7-months Postdoctoral position on African waterbird monitoring data analyses.

Context

Large Sahelian wetlands support important economical, agricultural and animal husbandry activities. They are home to a rich biodiversity, notably millions of migratory or resident waterbirds, some of them contributing to financial or food security of some local communities.

Climate change, hydrological and agricultural development and the intensive exploitation of natural resources are threats to these wetland ecosystems and therefore to their populations of waterbirds.

A major objective of the RESSOURCE Programme ("[Strengthening expertise in Sub-Saharan Africa on birds and their rational use for communities and their environment](#)"), is to improve knowledge on waterbird population in wetlands of Chad, Egypt, Mali, Senegal, Sudan during the dry season.

As part of this RESSOURCE program, the Technical Support Unit to the AEWA African Initiative conducted or coordinated waterbird surveys in Sahel with two objectives :

- a) Design or evaluate protected areas in Chad and / or Sudan on the basis of aerial and / or terrestrial multi-annual counts of wintering waterbirds using quantitative methodologies for the definition and zoning of conservation areas. Land use of these ornithologically very poorly known areas is currently evolving very quickly under a double demographic and agricultural pressure. Designing protected areas as robustly as possible can only contribute to the conservation of the still little degraded ecosystems of these regions and to the credibility of local managers.
- b) estimate the numbers of waterbirds for the species exploited by local communities on certain sites of the RESSOURCE program in order to compare them to hunting bags and thus to assess harvest sustainability using methodologies based on demographic invariants and Potential Biological Removal.

- Niel & Lebreton 2005, Using demographic invariants to detect overharvested bird populations from incomplete data. *Conservation Biology*, 19(3), 826-835.
- Madsen, J., Guillemain, M., Nagy, S., Defos du Rau, P., Mondain-Monval, J.-Y., Griffin, C., William, J.H., Bunnefeld, N., Czajkowski, A., Hearn, R., Grauer, A., Alhainen, M., Middleton, A., 2015. Toward sustainable management of huntable migratory waterbird in Europe.
- Koneff et al. 2017, Evaluation of harvest and information needs for North American sea ducks. *PloS one*, 12(4)

Objectives

We are looking for a motivated candidate to contribute to the RESSOURCE Program by analyzing and modeling count data of waterbirds collected in Africa. He / she will be part of the Technical Support Unit for the African initiative of AEWA, a mixed team from the French Agency for Biodiversity / Tour du Valat, based at the Tour du Valat in the Camargue (Arles area).

Involved partners

- Technical and/or scientific French and international partners, notably from the RESSOURCE program
- AEWA Secretariat and countries involved in the RESSOURCE program
- Wetlands International
- Tour du Valat and OFB researchers in charge of population dynamics studies

Main tasks

Support the UST / AEWA for the analysis and publication of waterbird count data in Africa within the framework of the RESSOURCE program, and in particular:

- analyze in combination the aerial and terrestrial counts in Chad and Sudan in order to evaluate and design current or future protected areas,
- analyze all of the aerial count data obtained by distance sampling for one or more sites with both count and harvest data in order to assess the sustainability of these harvests,
- write two scientific articles on these themes,
- if necessary, participate in the drafting of team reports intended for donors.

Required qualifications

Know how :

- Ability to implement the most recent population dynamics models.
- Ability to adapt to various interlocutors, and being able to work in a team, during physical meetings or at a distance.
- Scientific curiosity so as to keep up to date and train in constantly evolving analysis techniques.
- Ability to interact socially, listen and dialogue.
- Intellectual rigor, practice of the ethical rules of the scientific community.

Work experience :

- A PhD in quantitative ecology or biology with a strong component in population dynamics and demography.
- Excellent command of the different methodologies and frequentist and bayesian models of wildlife monitoring, notably « distance sampling », « N-mixture » and « state-space » models.
- proven ability of writing manuscripts for publication in peer-reviewed scientific journals.
- Working experience in scientific research up to the level of reporting and publishing, preferably in African wildlife management/conservation.
- Ability to work collaboratively with internal and international experts networks.
- Excellent written and verbal communication skills in English and ability to communicate internationally, good command of French an advantage.
- Basic knowledge in database management (postgreSQL) an advantage.

Position details

The position is initially for **7 months**, starting 1 June 2020, based in the Species Conservation Department of Tour du Valat. It is under supervision of both the project leader of the AEWA Technical Support Unit in Tour du Valat and the international waterbird monitoring team leader of the French Agency for Biodiversity.

This is an office position (no field work involved), but located in a remote natural area (full driving license recommended).

Typical gross monthly salary for this position is 2500€ - 2600€ commensurate with experience and qualifications.

How to apply ?

Please send an application before **01/05/2020** - à deschamps@tourduvalat.org including :

- Cover letter ;
- resume/curriculum vitae ;
- Contact details for two professional references.
- Two representative publications of your work in .pdf format

Preselected candidates will be interviewed on site or online.

Contact

Jean-Yves MONDAIN-MONVAL/Pierre DEFOS DU RAU – migratory bird unit – French Agency for Biodiversity, by phone +33.4.90.97.63.72 or by email to jean-yves.mondain-monval@ofb.gouv.fr

Jocelyn CHAMPAGNON, researcher, Tour du Valat by phone +33.4.90.97.06.80 or by email to champagnon@tourduvalat.org



The Tour du Valat is a private foundation working for the research and conservation of Mediterranean wetlands. Founded in 1954 by Dr Luc Hoffmann and based in the Camargue, it is at the cutting edge of multidisciplinary fields of research, building bridges between science, management and public policies. The main objective for the Tour du Valat is to change the behavior and decisions made by governments and the wider society in the Mediterranean basin to achieve that wetlands are conserved and sustainably managed towards the future.

The Tour du Valat has internationally recognized scientific expertise, and provides practical responses to problems regarding the conservation and sustainable management of natural resources. The Tour du Valat's projects are carried out in the Camargue and around the Mediterranean basin.

For further information: <http://www.tourduvalat.org/en>