

Final Evaluation Report

Your Details	
Full Name	Esther Nosazeogie
Project Title	Identifying Habitat Associations and Dependence on Urban Wetlands by Waterbirds in Lagos, Nigeria
Application ID	33895-1
Date of this Report	July 8, 2022

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Identify water-bird species and their habitat association				During our 12-month long fieldwork, using direct counting method from a vantage point at each urban wetland, we documented water bird species and how they used the wetlands. We recorded 31 species of resident and migratory water birds foraging, roosting, and breeding in the wetlands.
Determine the relationship between bird indices and environmental variables				We have collected plant and water data, but not all the sediment data. The sediment samples had to be air-dried before we could start analysing them to collect sediment data, and the analysis is not yet complete.
Raise awareness of the value of urban wetlands for birds				We carried out educational outreaches to five schools and one community. During these outreaches, we distributed 10 copies of a poster showing the names and photographs of some of the most common bird species in the city (poster copy attached)

2. Describe the three most important outcomes of your project.

We were able to quantify the biodiversity value of urban wetlands to the city of Lagos, primarily with birds. This has helped us with raising awareness for the value of urban wetlands. We can point to our data as evidence that wetlands are not dead zones when we are trying to convince officials to restore or preserve the remaining few wetlands in the city.

Also, about 9 months into our fieldwork, one of sites began to be modified (by removing mangrove vegetation) and we have been trying to get some of this modification reversed. However, we were able to quantify the birds at that site before the changes were made. So, our study will be a baseline for the future: to measure the extent of ecological change whether the modification is reversed.

a). We have given the first detailed description of the water bird community found in wetlands within the Lagos metropolis, in terms of the abundance and distribution of individual species. We also documented the purposes for which the water birds use these wetlands, thus establishing the value of this habitat for water birds.

b). We have also collected some environmental (plant, sediment and water) data which will shed some light on bird-habitat relationships and help us understand how changes in habitat structure and water quality in wetlands may potentially affect water bird communities.

c). We have raised awareness about the value of water birds. When we began the project, many of the people we interacted with were oblivious to the variety of species that lived just next door to them, but through the project, we were able to make them aware of not just the species present, but also their importance.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Insecurity was a problem we didn't foresee. It affected our site choice in that it limited the sites we were able to work in. We discovered that our gear, camera, binoculars and telescope, made us a target for hoodlums. So, we avoided unsafe places, and where we could, we attached ourselves to security officials, although that came at a little extra expense.

Also, community members, especially those at the only site with indigenous people (Bariga), were very suspicious of us because of previous government exploitation, and expected some financial benefits from the project. We tried to solve this by clarifying the nature of our project (research), and by paying one community member to work with us as a field guide on the project.

4. Describe the involvement of local communities and how they have benefited from the project.

Only one of our sites was attached to a local community that is native to the area, Bariga. Two of our sites (Ogudu and National Theatre) were surrounded by residents who are not indigenous to the site, and one was on a university campus (University of Lagos).

We had a field guide from the Bariga community. Also, we paid the entrance fee to access a jetty, as a vantage point for counting birds. That payment will contribute to the tourism revenue of the community.

At all the sites, we communicated our purpose before and our findings after the project. Also, through our work, residents/students of the communities where we worked, and a greater part of the Lagos population gained greater insight into the value of their environment through the conversations we had and the educational materials we produced.

5. Are there any plans to continue this work?

Yes, I will begin my PhD programme August 2022 at the School of Marine and Atmospheric Sciences of Stony Brook University, New York, USA, and I intend to study the feeding ecology of coastal water birds and offshore seabirds (hereafter, coastal birds). As part of my research program, I hope to return to study coastal birds on the Nigerian coast and do some conservation work among fishing communities.

My long-term goal is to establish key sites for coastal birds in Nigeria and create monitoring schemes within local communities. This monitoring scheme would involve the engagement of coastal communities in both citizen science and on-the-ground collection of bird data. This will ensure continuous wetland education, media engagement, and long-term data collection from the wetlands, and thus community buy-in for conservation. Many sub-urban and rural areas on Nigeria's coast, especially in Lagos, are likely be developed in future. We also need to reach such communities so that if development comes, it can be done sustainably.

6. How do you plan to share the results of your work with others?

I have shared the findings through community, school outreaches and a photo exhibition for the Lagos public so far. The photo exhibition was part of our efforts to lobby for the preservation of an iconic wetland (one of the study sites in this project) designated for destruction, and to ask for the creation of a wetland educational centre at the wetland in question. It was instrumental to creating awareness about the value of urban wetlands for biodiversity and people.

We will share a detailed report of this project with the Lagos State Ministry of Environment and preparing a manuscript for submission to a scientific journal.

7. Looking ahead, what do you feel are the important next steps?

I think the next step is to organise a waterfront clean-up programme and waste management workshop at the Bariga Community. In our interactions with the community, we observed that they don't have a waste bin, and so there is an ingrained habit of throwing trash directly into the water body. I hope that a waste disposal workshop that includes selling plastic to recycling companies will be an incentive to collect their waste. As part of this workshop, we will also introduce them (especially school clubs in the area) to bird watching and citizen science (BirdLasser) so that they can take responsibility for their wetland and the birds that use them.

I think that more media-driven events (like photo exhibitions and science fairs) will be useful for educating people on how to take better care of the nature left in urban areas. Also, a natural history club for kids, especially in UNILAG staff schools, to be expanded to other schools within Lagos is another important step. I think that this could foster a healthy connection with nature for individuals who will go on to influence society. It could also be a resource for collecting citizen science data.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

The foundation was publicised in our publicity materials such as banners, posters, t-shirts, and notebooks. I also used the foundation's logo on exhibition materials: banner and a video.

9. Provide a full list of all the members of your team and their role in the project.

Esther Nosazeogie (the grantee) coordinated the planning and execution of fieldwork, lab work (water and sediments analyses) and outreach programs and created the educational materials (slides and poster).

Omo Osagiede participated in field work (counting birds) and the educational outreach.

Bassey collected water, sediment and macroinvertebrate data on the field and in the lab. He also participated in the educational outreach and will be involved with data analysis and manuscript development.

Tiwalade Adeniyi carried out the plant surveys and will participate in manuscript development.

Soladoye Iwajomo participated in field work (counting birds) and the conservation educational outreach. He was especially key to the success of the community outreach (he speaks the local language). He will also participate in data analysis and manuscript development and conservation education.

10. Any other comments?