Farisayi E Dakwa
Statement of Purpose

22 November 2023

Dear selection committee:

"Simple answers are often the best solution to obviously complex questions" l was doing my undergraduate in conservation biology when l first heard this quote from one of my lecturers who would often say this while out on our many fieldtrips together. Thinking on this quote years later trying to decide what to do after my honour's degree l was inspired to commit to a future in conservation and this has since shaped how I approach my career. I want to write and publish simple yet insightful conservation stories using complex ecological data. I have always found scientific writing to satisfy my intellectual curiosity and provide a meaningful methodological foundation to my education. During my masters at the University of Cape Town l was able to publish my first paper as the first author on some of my findings in a peer reviewed journal, the African journal of Marine Science, Dakwa et al. 2021, DOI:10.2989/1814232X.2021.1901248. It focussed on the change in diet of two closely related top marine predators during breeding and also how they compete for resource while utilising the same foraging grounds and breeding sympatrically on the same Island. The article underwent a strict external review process where I was able to refine my argument carefully before it was published. This paper became one of my research chapters for my thesis and it also became the cover for the African journal of Marine Science Volume 43, issues 2 in 2021. While writing l found exhilarating joy in the process of using my analytical research skills to make sense of complex data in a literary form, and in that, bring conservation concerns to the forefront. Most researchers l have met are either good at data analyses or they are good at scientific writing, I want to be good at both. I want to present my finding and paint literary pictures, using quantitative research to inform the world of the state of our natural resources. Relay it in a way that not only reaches the ears and eyes of the scientific community but goes beyond and provides simple explanations and solutions to obviously complex ecosystem processes. This is why l am writing to express my interest in furthering my studies by pursuing a Dphil at the University of Oxford focussing on the foraging and navigation in pelagic seabirds.

During my MSc, I was also a field assistant for the Top predator research team with the Department of Forestry Fisheries and Environment, South Africa, observing endangered marine species, specifically seabirds. l was involved in seabird survey counts, monitored and reported on the abundance of endangered seabird species along the western coast of South Africa and adjacent Islands. l worked on numerous marine projects including, tagging numerous species and analysing tracking data (GPS trackers), presence absence data to determine the foraging grounds of seabirds and marine mammals using kernel density estimations. As a student, I found myself consistently wanting to engage with remotely sensed data, geospatial computation coupled with oceanography data.

Following the completion of my MSc in 2022, I have been working as a consultant on a project for a research institute in South Africa called the Bay world centre for research and education funded by the Antarctic and Southern Ocean Coalition. My role is coordinating and analysing at-sea observation records to determine the distribution of seabird species and community level assemblages within the eastern sub-Antarctic region. This will be a multidisciplinary and multinational collaborative effort in the creation of spatial frameworks that identify priority conservation areas, under the Convention for the Conservation of Antarctic Marine Living Resources. The work l am currently doing intersects with

the current PhD on a lot of levels and it is from this perspective and with background experience as a scholar that I wish to pursue this particular Ph.D. l am interested in improving my quantitative skills in identifying key sites of marine biodiversity especially in the face of a rapidly human induced change in climate.

I believe that blue ocean sciences are essential for the planet's future and the department of biology that focusses on behaviour & biomechanics at the University of Oxford prioritises world-class science and uses novel technologies to understand animal behaviours that can be used as sentinels of climate change. A PhD within your department would allow me the opportunity to utilise my experience in spatial marine ecology gained through my masters and work experience at the professional level. I aspire to be a scientist on the forefront of using advanced novel analytical techniques, to better our understanding of marine ecosystem processes. I am drawn to data driven, quantitative and long-term research. I would enjoy the multi-disciplinary approach that this PhD offers because it will offer greater opportunities for me to advance my skills in geospatial computation, predator prey relationships and community ecology. The PhD project is aligned with my Masters project, handling multivariate long-term information on endangered marine species. The skills I aim to acquire through this graduate training are crucial to the evolution of my practice. Because analytical research and writing are my most well-developed academic strengths, l believe this gives me an advantage in undertaking this PhD and will make me a great assert to your team.

This PhD is supervised by great researchers using innovative statistical tools to tackle complex ecological problems in understanding seabird species and community level distribution. Under the tutelage of such reputable advisors my research may one day be of equal importance. By allowing me to map seabird behaviour and distribution. l will be a step closer to becoming a well-rounded marine data scientist who can create efficient spatial conservation management frameworks that establish solid foundations for marine protected area networks all around the world. It would, therefore, be a privilege to pursue my PhD at the University of Oxford and discover the inner workings of marine ecosystems. And, given my own scholarly background, academic achievements, drive to succeed and exposure, I believe I am an ideal candidate for this program.

Thank you very much for your time and consideration. I greatly appreciate the opportunity to become a part of the outstanding Department of Biology at the University of Oxford.