



University of Nairobi
Wangari Maathai Institute for Peace
and Environmental Studies



Post-Doctoral Research Assistant (one fellowship)
Wangari Maathai Institute for Peace and Environmental
Studies, University of Nairobi

(RE-ADVERTISEMENT)

funded by:
The Wyss Academy for Nature.

Wildlife Dispersal Areas and Migratory Corridors
in a Pastoralist Landscape: Wildlife, Human and
Livestock Trajectories through to the year 2100.

Introduction

The [Wyss Academy for Nature](#) Hub East Africa is strengthening its research arm in Nanyuki, Kenya, and seeks to appoint one Post-doctoral Research Assistant (PDRA) in exploring the impact of global warming on the regional climate, water resources, biodiversity and human livelihoods within the wider Ewaso Ng'iro basin, as part of the country-wide mapping of corridors as per Kenya's Vision 2030. Specifically, the PDRA will explicitly engage with the advisors to the Kenyan Government on the Wildlife Corridors and Migratory Routes Initiative, which is one of Kenya's Vision 2030 [Flagship Projects for the Environment](#). This post is funded by the Wyss Academy for Nature (Hub East Africa), and in association with [Save the Elephants](#) and the [Wangari Maathai Institute for Peace and Environmental Studies](#) (WMI) at the [University of Nairobi](#) (UoN) where the PDRA will also be attached. Collaboration and mentoring will be provided by all three organizations, including the Climate Scenarios for Sustainable Development group led by Prof. Dr. Edouard Davin at the Wyss Academy for Nature at the University of Bern (<https://www.wyssacademy.org/research-innovation>) and Prof. Dr. Margaret Owuor, leader of the Biodiversity Conservation Science group, also at the University of Bern. Leading Kenyan conservation research scientists will also provide advice and input, including Dr. Festus Ihwagi, Senior Scientist & Research Policy Lead at Save the Elephants; Dr. Benson Okita-Ouma, Director, Wyss Academy for Nature Hub East Africa & co-chair of IUCN SSC African Elephants Specialist Group; and Dr. Mohammed Said Yahya of IUCN currently advising on ecosystems mapping input to the Kenya Government committee charged with providing scientific evidence for developing a conservation policy for Kenya. These three scientists are co-authors of the GOK 2017 Wildlife Migratory Corridors and Dispersal Areas: Kenya Rangelands and Coastal Terrestrial Ecosystems. Support from the Wangari Maathai Institute for Peace and Environmental Studies (WMI) will be provided through its Director, Professor Thuita Thenya. The post is available for one year in the first instance, although funding will be sought for a further year.

Justification

Over 60% of Kenya's wildlife live outside of National Parks. To ensure the ongoing conservation of Kenya's wildlife heritage, it is essential that the traditional movement of wildlife through the landscape is facilitated by establishing "Wildlife Movement Corridors" (WMCs) that enable wildlife to reach traditional foraging areas whilst minimizing Human-Wildlife Conflict. Clearly, it is important that these WMCs are ecologically viable into the future, and that they have the buy-in of relevant stakeholders. Global warming is a major determinant of the future landscape, therefore the design and location of these WMCs need to take account of changes to the environment that might occur under climate change. Human change to the environment through to 2100 also needs to be factored into the design and location of these corridors.

Approach

In collaboration with researchers from the Wyss Academy for Nature at the University of Bern, we will use the IPCC Representative Concentration Pathways (RCPs) in combination with appropriate Shared Socio-economic Pathways (SSPs) to explore how key climate variables and predicted human population growth will impact the planned WMCs through to 2100. Three approaches will be used:

(1) Statistical modelling of [plant or animal] species distribution in relation to the

spatially gridded temperatures and rainfall predicted in 2050, 2070, and 2100; (2) Species Distribution Modelling (SDM) using a form of maximum entropy modelling (MAXENT); and (3) Some form of adaptive Dynamic Global Vegetation Model (aDGVM) will be used to explore vegetational changes in response to the gridded temperature and rainfall projections through to 2100. This last approach will inform potential changes in wildlife movement into the future and will be analyzed in collaboration with a PhD student under the supervision of Professor Davin. The outputs from these differing approaches, in association with predicted human impacts over this period (human population growth, differential urban-rural migration, changes in agriculture and infrastructure) will be used to examine the viability and resilience of the wildlife movement corridors into the future.

Eligibility Criteria

Appropriate candidates must already hold a PhD, preferably with at least two peer reviewed scientific publications based on their research. He/she will be expected to have a strong background in ecology and conservation, and be able to demonstrate prior competence in using appropriate RS and GIS packages, alongside reasonable coding skills linked to the R statistical and graphical environment.

Interested candidates should submit a detailed CV, plus a covering letter outlining their relevant skills and interests, and provide evidence that they can work independently with minimal supervision. Further, in no more than 500 words, candidates must indicate the:

- (i) various techniques that could be used to prioritize differing routes for the corridors by accounting for the likely impacts of climate and anthropogenic change on the distribution of wildlife through to the year 2100, and
- (ii) the kind of outputs that would be useful to local and national government advisors assessing the Wildlife Movement Corridors.

Additionally, interested candidates should provide:

1. Certified MSc and PhD certificates from awarding universities;
2. Translated certificates for graduates from Universities outside Kenya;
3. Proof of registration to any professional organization, and standing status;
4. The names and contact details of two referees, one of whom must be familiar with their academic ability, and the other on field experience.

Additional Requirements

1. Must have excellent interpersonal skills, as research activities will involve community and multi-stakeholder engagement;
2. Must have excellent written and oral communication skills;
3. Must have the ability to work independently and as part of a group;
4. Willingness to undertake research in remote areas;
5. Willingness to participate in activities of the WMI, Wyss Academy, and Save the Elephants;
6. Ability to be a full-time researcher for the duration of the post-doc fellowship;
7. Willingness to support post-graduate mentorship at WMI.

How to Apply

Please send your applications to wmi@uonbi.ac.ke and copy in hub.eaf@wyssacademy.org.

Thank you for your interest and we look forward to receiving your application (covering letter, CV, employment, and education references) by midnight July 15, 2024, East Africa time.

Hard copy applications will not be considered. Interviews will be held in person or online for shortlisted candidates. Incomplete applications will not be considered. For enquiries, please contact Director, Wyss Academy, Hub East Africa at hub.eaf@wyssacademy.org with a copy to wmi@uonbi.ac.ke.

Commencement dates of the Postdoc will be September 2024.