

PROJECT UPDATE: AUGUST 2023

Title: Human-elephant coexistence around Lukwati-piti Game Reserve, Tanzania: Organic smelly olfactory repellent to mitigate elephant crop-raiding and conservation of threatened *Loxodonta Africana*.



Project Summary

Lukwati-Piti Game Reserve is one of the ecosystems in Tanzania that supports a high abundance of the elephant population. The reserve is unfenced, facilitating elephant movement into human settlements and creating threats to human livelihoods and food security through crop raiding and trampling. Consequently, elephants become victims of retaliatory killings, poaching, and bush meat hunting. The project's main objective is to train the local community in the use of a novel olfactory method called "smelly elephant repellent" to mitigate elephant crop raiding. This method was initially formulated by Henry Latigo, a lecturer and farmer from northern Uganda. It involves a foul-smelling organic liquid designed to deter mammals using a combination of smell and taste. Specifically, the project aims to: (i) Create awareness among the community about wildlife conservation and coexistence; (ii) Train the communities on how to prepare and use the smelly elephant deterrent; (iii) Provide education on various ways of using the smelly elephant repellent; (iv) Assess the perception of farmers who have implemented the method on their farms. To achieve these goals, the project team closely collaborated with the communities surrounding the Lukwati-Piti Game Reserve. This was done by introducing the project to the communities of Gua and Ngwala after obtaining a permit from the Songwe District Council. After introducing the project, creating awareness on the human wildlife conflict and methods for coexisting with them was done to school children and community.

Project activities conducted from March to August 2023

After adjusting our project plan to accommodate unforeseen challenges beyond our capacity, our project officially began in March 2023. The initial step involved obtaining the research permit and informed consent to collaborate with the communities bordering the Lukwati-Piti Game Reserve. We acquired the permit from the Songwe District Council. We were granted authorization to work with the village communities in the study area. Subsequently, the project team organized inception meetings with the district wildlife officer and village council to thoroughly explain the project's goals, objectives, and planned activities for the entire project duration. Engaging these stakeholders was crucial to ensure their understanding and support for the project (Figure 1&2). By taking these preliminary measures, we established a strong foundation for the successful execution of planned activities in the study area.



Figure 1: Discussion with the district wildlife officer and village executive officer.



Figure 2: Discussion with village chairman.

After the successful launch of the project, the project team proceeded with the first objective, which aimed to raise awareness among the community about wildlife conservation, particularly focusing on elephant conservation and coexistence with them. The awareness activities targeted various age groups within the communities. The awareness was conducted to school children as well as range of community members from youth to elders, this was done to ensure the long-term retention of knowledge and experience sharing. (Figure 3).



Figure 3: Raising conservation awareness to Gua Secondary School students.

The project also involved engaging in discussions with villagers to discuss on various ways of coexistence with wildlife and introducing to them a local ways to repel elephants from their farms. The discussion included understanding their knowledge and ways they use to chase away elephants from their farms. The engagement involved introducing the community on the smelly elephant repellent method using a mixture of common farm ingredients, such as chilli, garlic, ginger, neem leaves, cooking oil, cow dung, and rotten eggs (Figure 4 & 5).



Figure 4: Discussion with villagers on ways of coexisting with wildlife



Figure 5: Discussion with villagers on ways of coexisting with wildlife

Ongoing project activities and future plan

The team is preparing for upcoming activities which will focus on training on preparation of smelly elephant repellent, providing education on various ways of using the smelly elephant repellent i.e. spray method and fence-line method for distributing the repellent on the plots of their crops during the elephants crop raiding season (January-March). Selection of farms which the repellent will be applied and setting of the repellent on the farms. Furthermore, we will assess the perception of farmers who have implemented the method on their farms.