**Progress report for the project "Monitoring Sokoke Scops owl and Usambara eagle owl, and awareness raising in the Eastern Arc Mountains, Tanzania"**

**Introduction**

The Sokoke Scops Owl (*Otus ireneae*) and Usambara Eagle Owl (*Ketupa poensis vosseleri*) are iconic owl species inhabiting the Eastern Arc Mountains of Tanzania, a region of immense ecological significance. This research aims to conduct a comprehensive population assessment of these two owls while concurrently raising awareness about their conservation needs. This study aims to quantify the population size and distribution of the Sokoke Scops Owl and Usambara Eagle Owl across various Eastern Arc Mountain ranges through extensive field surveys, acoustic monitoring, and habitat analysis. This study aims to protect these two iconic owl species from bad cultural misconceptions, and also, involving the local community in the restoration of degraded forest areas that serve as key habitats for Sokoke scops owls and Usambara eagle-owls.

**Achievements of the project's original objectives and the relevant comments on factors affecting them.**

| Objective | Not achieved | Partially achieved | Fully achieved | Comments |
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| To determine the distribution patterns and habitat preferences of Sokoke scops owls and Usambara eagle-owls within the East Usambara forests | | | ✓ | The project successfully identified the habitat preferences, with the findings indicating that these species prefer specific microhabitats, highlighting the need for targeted conservation efforts. |
| To estimate the population density of Sokoke scops owls (Otus ireneae) and Usambara eagle-owls (Bubo vosseleri) in the forests of the East Usambara | | ✓ | | While population density was estimated, the project revealed that these owls have a broader range than previously documented. This finding suggests that further surveys are needed to obtain a more comprehensive |

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| Mountains | | | | population estimate across different forest patches. |
| To identify and evaluate the major threats affecting the survival of these owl species and propose evidence-based conservation strategies. | | | ✓ | The key threats facing the two owl species include habitat loss due to deforestation, human encroachment, and direct persecution driven by deep-rooted superstitious beliefs. |
| To raise awareness among local community on the ecological significance of owls and address superstitions that contribute to their persecution. | | ✓ | | The project conducted awareness campaigns through village meetings, church gatherings, and school sessions. These initiatives helped educate local communities on the ecological importance of owls and encouraged local support for conservation efforts. |

**The three most important outcomes of this project to this point.**

**a). Expanded Understanding of Owl Persecution Beyond Superstition**

The project revealed that the persecution of owls in the East Usambara Mountains extends beyond the traditional belief that they bring bad luck. While killing owls due to superstition remains common, a more concerning trend was uncovered, where live owls and their eggs are being captured and sold to witch doctors. These practitioners believe that owl parts possess magical properties, either to bring good fortune or to provide protection against harm. This illegal wildlife trade adds another layer of threat to the already vulnerable owl populations.

**b). New Insights on Usambara Eagle-Owl Habitat Range**

The Usambara eagle-owl (Bubo vosseleri) was previously documented as inhabiting high montane forests between 900–2000 meters above sea level (amsl). However, during surveys targeting the Sokoke scops owl (Otus ireneae) in lowland forests, several Usambara eagle-owls were recorded making territorial calls at elevations between 250–400 amsl. Additionally, a live Usambara eagle-owl was rescued from poachers at an elevation of 300 amsl. These findings suggest a broader habitat range than previously recognized, emphasizing the need for conservation efforts in both montane and lowland forests.

**c). Increasing Threats to Critical Lowland Forest Habitats**

The project identified significant human encroachment threats to remote lowland forest reserves, which serve as critical habitats for both owl species. Expanding agricultural activities, commercial timber harvesting, and charcoal production are leading to extensive deforestation. Due to their remoteness, these forests receive minimal government patrols, making them highly vulnerable to illegal activities. Strengthening forest protection and increasing surveillance in these areas is crucial to safeguarding the habitats of these rare owl species, and other wildlife inhabiting the area.

**Some unforeseen difficulties that arose during the project and how these were tackled.**

**i. Community Reluctance Due to Negative Perceptions of Owls**

Initially, some local community members were hesitant to attend awareness meetings due to deep-rooted superstitions and negative beliefs about owls. To overcome this, the project first engaged primary school students by distributing well-designed brochures for them to share with their parents, which helped spark interest. Additionally, influential community figures such as religious leaders, village leaders, and teachers were educated first so they could spread the message and personally invite villagers to participate. The project also involved local guides from the community, making the initiative more relatable and accepted.

**ii. Extended Fieldwork Duration and Increased Costs**

The fieldwork took longer than initially planned due to the unexpectedly large range of the target owl species, which led to increased operational costs. To address this, the project trained local guides and willing community members to assist in monitoring owl activities and habitat range. This allowed for continuous data collection even with distant supervision from the project team, reducing the need for prolonged direct involvement from the whole research team.

**iii. Budget Shortages Due to Rising Costs**

Some project activities became financially challenging due to an increase in the cost of certain items and logistical expenses. To ensure smooth continuation, the project sought and secured additional financial support from the Mohammed Bin Zayed Species Conservation Fund. This funding helped cover the gaps, allowing the project to continue successfully.

**Current plans to continue this work**

The project remains ongoing in the East Usambara Mountains, with a primary focus of obtaining a comprehensive estimate of the population density of Sokoke scops owls and Usambara eagle-owls across their entire habitat range. This includes expanding surveys to additional forest reserves that serve as critical habitats for these species. By covering more areas, the project aims to develop a clearer map of owl distribution and population density within the East Usambara and Mkingu nature forest reserves.

Additionally, the project is seeking to engage the Tanzania Forest Services Agency (TFS) to communicate the conservation needs of these owl species. Recommendations include establishing well-defined buffer zones to protect the crucial forest habitats essential for the survival of these owls. Strengthening collaboration with authorities is key to ensuring long-term protection and management of these forest ecosystems.

Securing additional financial support is also a major priority. The project aims to facilitate forest restoration efforts in collaboration with the local community, focusing on reforesting degraded areas that serve as key owl habitats. To reduce pressure on forests, the initiative also plans to provide incentives such as cash crop seedlings to local farmers, helping to improve their financial stability and decrease dependence on forest resources for daily needs.

Furthermore, there is a need to extend awareness campaigns to more villages surrounding the Usambara forest reserves. Expanding outreach efforts will help educate communities bordering these forests, fostering a stronger local conservation network and increasing public support for protecting owls and their habitats. The project seeks to ensure a lasting impact on both species' conservation and local community livelihoods through these initiatives.

**Looking ahead, the following are the most important steps**

One of the most crucial next steps is the restoration of degraded forest areas that serve as key habitats for Sokoke scops owls and Usambara eagle-owls. However, before initiating restoration efforts, it is essential to first address the root causes of habitat destruction by strengthening measures to prevent illegal logging, land clearing, and unsustainable forest resource use. Stopping further degradation will create a stable foundation for effective habitat restoration.

The project has made significant progress in raising awareness and improving local perceptions of owls, reducing fears and misconceptions to a good extent. However, some community members remain unconvinced about owl conservation, primarily because they do not see a direct economic benefit from protecting these species. To address this, the next step will involve providing targeted incentives such as alternative livelihood support, cash crop seedlings, or ecotourism opportunities to encourage local participation in conservation efforts.

Maintaining consistent community engagement is vital. If local people continue receiving information about owls and their ecological importance, their attitudes can gradually shift toward full support for conservation. Expanding educational outreach, integrating conservation messages into cultural and religious discussions, and fostering long-term collaboration with local leaders will be key strategies in ensuring lasting impact.