

# ECOLOGY, ANTHROPOGENIC THREATS, PEOPLE’S PERCEPTION AND CONSERVATION STATUS OF GREY CROWNED CRANE (BALEARICA REGULORUM) IN LUTEMBE BAY WETLAND, WAKISO DISTRICT UGANDA



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## Introduction

This study addresses urgent knowledge gaps on the Grey Crowned Crane's status and threats in Lutembe Bay Wetland, a Ramsar site facing habitat loss from industrial and residential developments. While prior studies on Lutembe's biodiversity exist, none focus on cranes. This research uniquely examines crane distribution, ecology, threats, and community perceptions. Using a community-based approach, it aligns with IFC Performance Standard 6 on biodiversity conservation, emphasizing habitat protection and sustainable management. Findings will inform conservation strategies to mitigate anthropogenic threats, ensuring the species' survival and fostering positive local engagement in wetland preservation.

## Materials and methods

The study employed field surveys and community engagement to assess the distribution, ecology, and threats to the Grey Crowned Crane in Lutembe Bay Wetland. Direct observations were conducted at different times of the day to document crane presence and behavior. Key informant interviews and structured questionnaires gathered insights from local communities on habitat changes and human-induced pressures. Habitat assessment involved evaluating land use changes, wetland degradation, and industrial expansion. Data collection aligned with biodiversity conservation standards, ensuring comprehensive analysis of ecological dynamics. The mixed-methods approach provided critical insights for conservation planning and sustainable wetland management.

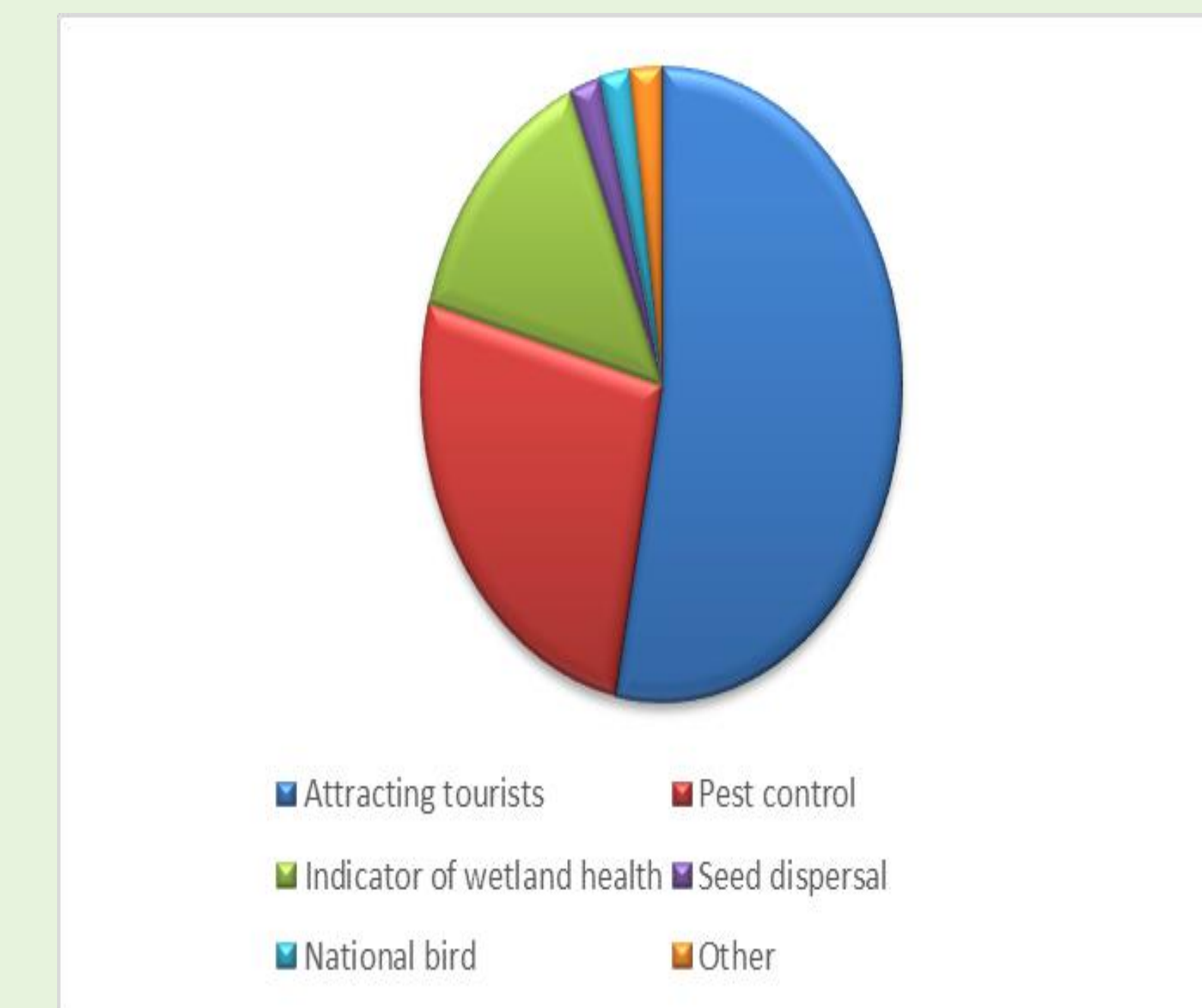
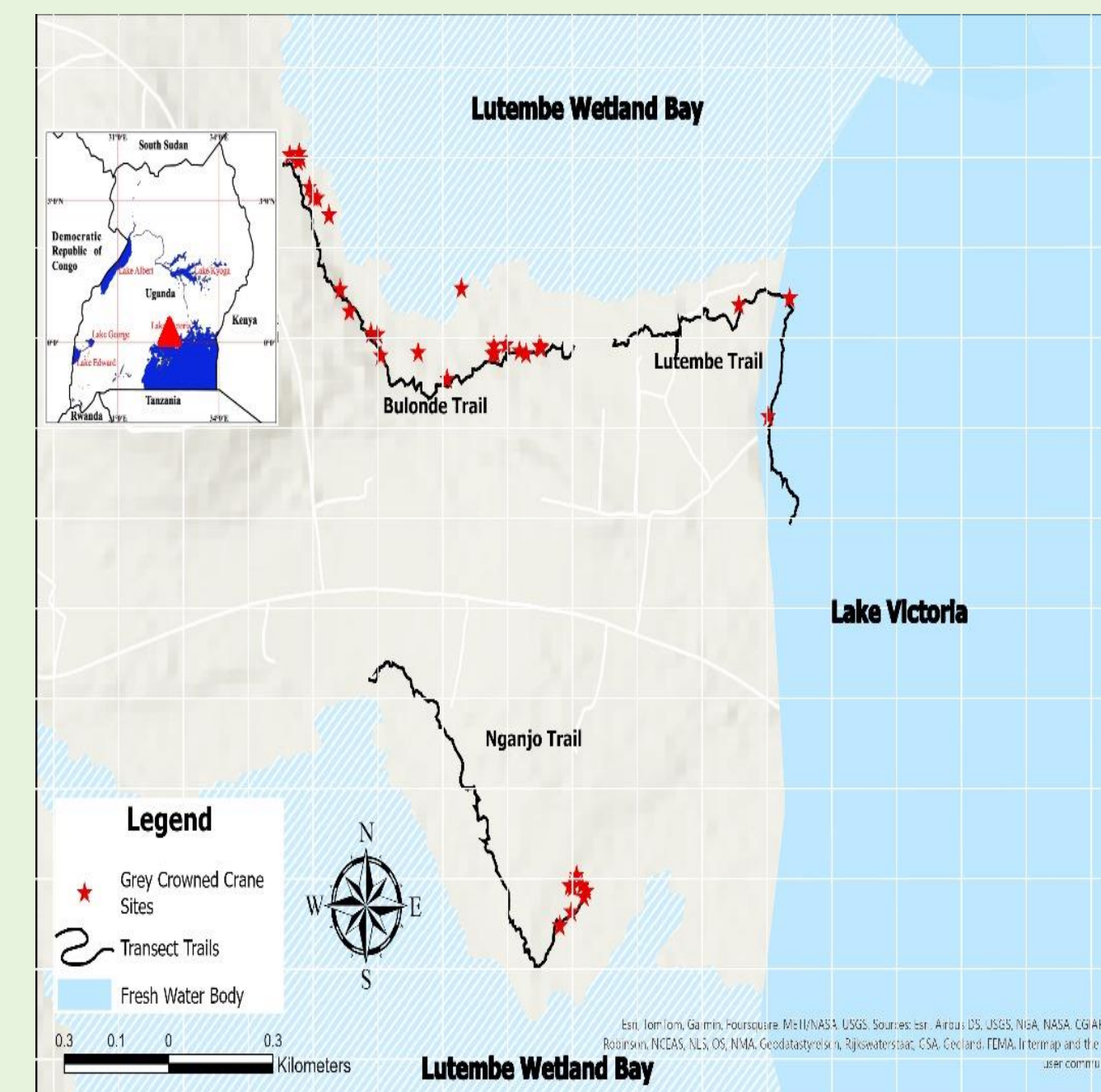
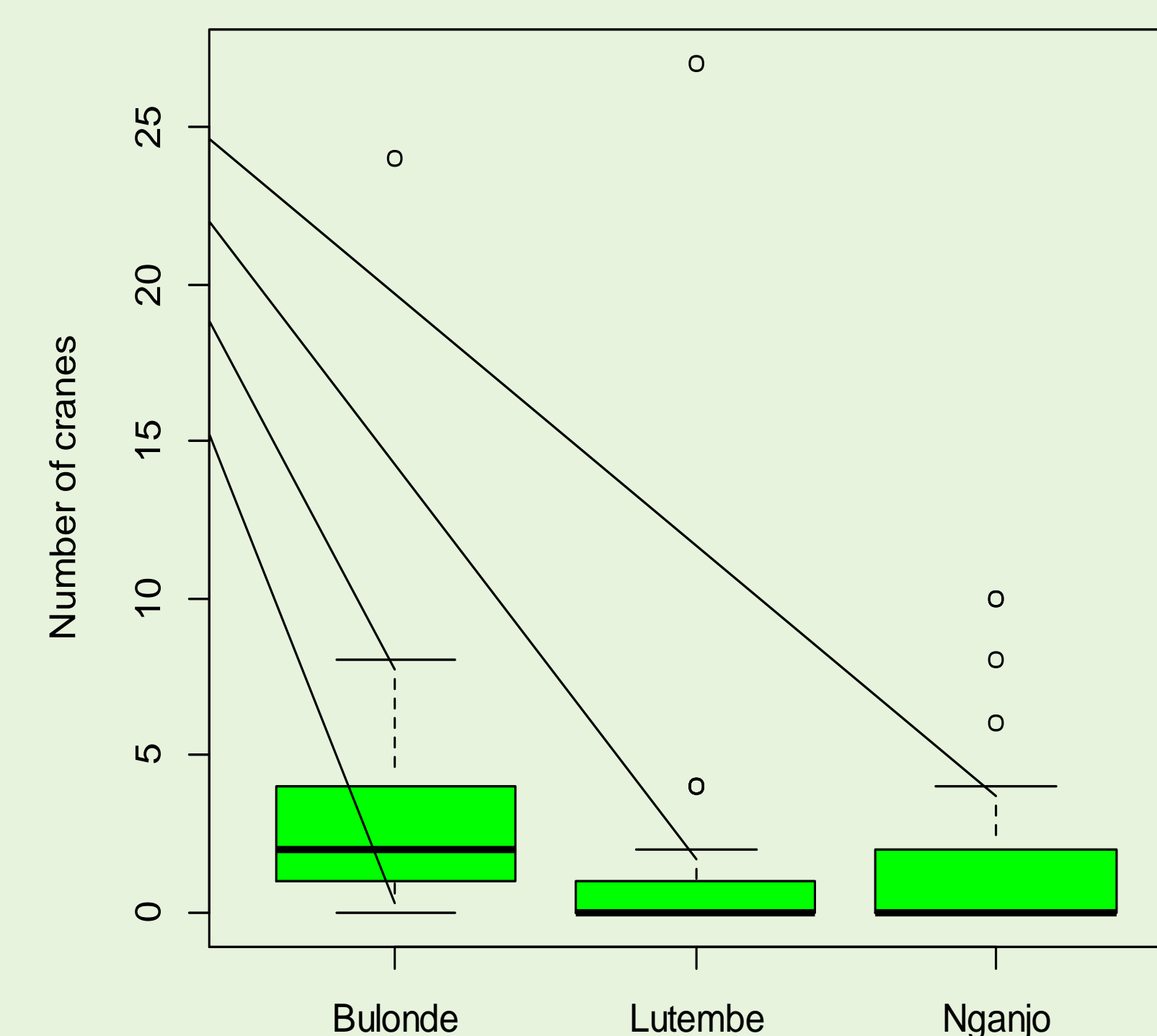
## Results

The study revealed significant threats to the Grey Crowned Crane population in Lutembe Bay Wetland, primarily due to habitat loss from industrial development, urban expansion, and increased demand for wetland resources. Observations confirmed the presence of the species, but numbers were lower than expected, suggesting population decline. Cranes were mostly sighted in the morning and evening, indicating a preference for undisturbed periods. Habitat assessment showed extensive degradation, with papyrus harvesting, pollution, and land conversion disrupting critical nesting and feeding grounds.

Community surveys highlighted mixed perceptions regarding wetland conservation. While some locals recognized the importance of cranes and wetlands, economic pressures drove unsustainable activities like farming and sand mining. A significant portion of respondents were unaware of conservation policies, emphasizing the need for awareness programs.

Key informant interviews revealed that past conservation efforts were limited, with inadequate enforcement of environmental regulations. Additionally, increased human disturbance was linked to changes in crane behavior, reducing breeding success.

The findings underscore the urgency of implementing conservation interventions, including habitat restoration, stricter environmental regulations, and community-led conservation initiatives. Integrating local knowledge into conservation strategies and promoting sustainable wetland use could improve outcomes for both cranes and human livelihoods. The study's results provide a foundation for further research and conservation planning, ensuring the long-term survival of the Grey Crowned Crane in Lutembe Bay Wetland.



## Conclusions

The Lutembe Bay Wetland System, with its biodiversity and human activities, requires a monitoring program to assess Grey Crowned Crane populations and habitat quality, considering spatial-temporal variations across seasons. Water quality parameters should be monitored, as they directly impact habitat and species presence. Sensitization efforts are crucial to raise awareness about the value of conserving cranes and their habitats. Strategies should include protecting wetlands, creating buffer zones, and planting trees to support roosting. Collaborative efforts among local communities, government, academia, and conservation organizations are essential to ensure long-term sustainability of the wetland ecosystem.



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## Further information

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