

Final Evaluation Report

Your Details	
Full Name	Placide Masengesho
Project Title	Perception, Attitude and Knowledge of Road Users to the Wildlife Road Kill - in Nyungwe National Park
Application ID	36794-1
Date of this Report	October, 2024

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

The study aim was to have better understanding on the perception, attitude and knowledge of road users to the wildlife road kill in Nyungwe National Park which will help park management in developing strategies to promote responsible road use and reduce the negative impact associated with wildlife road killing on animal populations.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Assess the knowledge and awareness of road users (drivers and motorcyclists) about wildlife in Nyungwe National Park and the impact of traffic on animals			Fully achieved	This objective was successfully achieved by administering structured questionnaires to road users, allowing for an assessment of their awareness regarding wildlife and the risks associated with roadkill. The collected responses provided insights into knowledge gaps, which can inform future conservation education and awareness initiative
Investigate the perceptions of road users regarding factors contributing to animal-vehicle collisions within the park			Fully achieved	Through interviews and surveys, road users' perspectives on the causes of wildlife-vehicle collisions were effectively documented. The findings highlight key factors such as vehicle speed, road design, and driver behaviour, which can guide park management in implementing mitigation strategies.
Analyze the responses and behaviors of road users when encountering wildlife			Fully achieved	The study successfully captured the various reactions of drivers and motorcyclists when encountering wildlife, revealing differences in attitudes toward

on the road, including their perception of the conservation value of different species.				different species. This information is valuable for designing tailored awareness campaigns that emphasize the conservation importance of all wildlife, including slow-moving species like reptiles
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2. Describe the three most important outcomes of your project.

a) Identification of Knowledge Gaps and Awareness Levels Among Road Users

The study revealed that many road users lacked awareness of how their driving behavior contributes to wildlife mortality, with slow-moving animals being the most vulnerable. More than 80% of respondents perceived mammals and larger animals as valuable, while slow-moving species were considered to have no significant value. This highlights a critical knowledge gap in biodiversity conservation and the need for targeted awareness campaigns to emphasize the ecological importance of all species, not just large mammals.

b) Understanding of Key Factors Contributing to Wildlife-Vehicle Collisions.

The research identified major factors influencing wildlife-vehicle collisions, including vehicle speed, poor visibility, and a lack of warning signage. The bias toward larger animals further suggest that road users may be less cautious when encountering smaller, slow-moving species, making them more vulnerable. These insights emphasize the need for improved road signage, awareness programs, and speed reduction measures to mitigate roadkill incidents.

c) Insights into Road Users' Attitudes and Perceptions of National Parks.

When asked about the role of Nyungwe National Park, 60% of respondents said it exists primarily for tourism, while only 10% recognized its importance for wildlife conservation and job creation. This perception underscores the need for stronger education and outreach programs to broaden public understanding of national parks as critical conservation areas. Encouragingly, the majority of respondents recommended awareness campaigns as the most effective solution to reducing wildlife roadkill, reinforcing the importance of public engagement in conservation efforts.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

One of the main challenges encountered during the project was the difficulty in approaching public transport drivers at bus stations within Nyungwe National Park. These drivers only stop for 3 to 4 minutes to pick up and drop off passengers, making it difficult to conduct interviews or administer questionnaires effectively.

To address this issue, we adopted a strategic approach by identifying locations where different categories of drivers could be more easily engaged:

- **Public Transport Drivers:** Since these drivers could not spare time for interviews at Nyungwe, we approached their offices in Kamembe and Huye, where they had more availability. Knowing the transport agencies operating in the park helped us effectively locate them.
- **Tour Guide Drivers:** These drivers were more accessible as they typically park at Nyungwe National Park offices while waiting for tourists. This allowed for more in-depth conversations without interrupting their work.
- **Truck Drivers:** We identified two key points where trucks stop—Kitabi (before entering the park) and Gisakura (after exiting the park). These locations provided an opportunity to engage with truck drivers in a more relaxed setting.
- **Motorcyclists:** For motorcyclists operating in Nyungwe National Park, we conducted interviews at Pindura, a location frequently used by passengers traveling to and from Bweyeye to take buses to and from Kigali, and Rusizi. This allowed us to reach motorcyclists in a place where they naturally congregate.

By adapting our data collection strategy to the working conditions and movement patterns of different road users, we successfully mitigated these challenges and ensured that we obtained comprehensive responses for the study.

4. Describe the involvement of local communities and how they have benefitted from the project.

The local communities around Nyungwe National Park played a crucial role in the success of this project, particularly in providing insights into road use and wildlife interactions. Their involvement came in various ways, and they also gained important benefits from the project:

1. Participation in Surveys and Interviews

Local road users, including public transport drivers, motorcyclists, and tour guides, actively participated in surveys and interviews. Their first-hand experiences and perceptions helped identify key factors contributing to wildlife-vehicle collisions and the level of awareness about wildlife conservation.

2. Increased Awareness of Wildlife Conservation

Through engagement in discussions and surveys, participants gained a better understanding of the importance of wildlife conservation and the impact of roadkill on biodiversity. Many road users, especially motorcyclists and truck drivers, acknowledged learning about the vulnerability of slow-moving animals and the role they can play in reducing wildlife mortality.

3. Encouraging Community-Based Solutions

One of the key findings was that the majority of respondents recommended awareness campaigns as a solution to reducing roadkill. This aligns with a

broader effort to involve local communities in conservation strategies, ensuring they play an active role in protecting the park's biodiversity.

4. Economic and Social Benefits

While the primary focus of the study was conservation, it also highlighted how local communities benefit from Nyungwe National Park through tourism, employment, and transport services. The study found that 60% of respondents viewed the park mainly as a tourism site, while only 10% recognized its role in conservation and job creation. This result underscores the need to promote the park's value beyond tourism, helping communities see the long-term economic and ecological benefits of conservation efforts.

5. Strengthening Collaboration Between Communities and Park Management

By engaging local drivers and motorcyclists, the project helped bridge the gap between Nyungwe National Park management and road users, fostering a more cooperative approach to addressing wildlife roadkill issues. The insights from this study can inform future community-based conservation programs, road safety initiatives, and park management strategies.

Through their direct involvement, local communities not only contributed to the research but also gained knowledge and a stronger sense of responsibility toward wildlife conservation. Their recommendations and feedback provide a foundation for future conservation awareness campaigns and infrastructure improvements that benefit both people and wildlife.

5. Are there any plans to continue this work?

Yes, there are plans to continue this work beyond the initial study. One of the key findings from the project was that the majority of road users recommended awareness campaigns as the most effective solution to reducing wildlife roadkill in Nyungwe National Park. To build on this momentum, we plan to request additional funding to implement targeted awareness campaigns and workshops.

Proposed Next Steps:

Conduct Awareness Campaigns – Organize community-driven awareness campaigns in at least two key locations surrounding Nyungwe National Park. These campaigns will focus on educating road users about the impact of roadkill, responsible driving behavior, and the ecological importance of all wildlife, including slow-moving species.

Host Workshops for Key Stakeholders – Arrange workshops involving public transport drivers, truck drivers, motorcyclists, tour guides, and park staff. These workshops will provide an opportunity to discuss road safety measures, signage improvements, and possible policy recommendations to mitigate wildlife-vehicle collisions.

Develop Educational Materials – Create posters, brochures, and road safety guides to distribute to road users, transport agencies, and local communities. These materials will reinforce key messages from the awareness campaigns and workshops.

Collaborate with Park Management and Local Authorities – Work closely with Nyungwe Management Company (NMC), local government officials, and transport

agencies to ensure long-term integration of conservation messaging into road use policies.

By securing additional funding, these initiatives will help translate the study's findings into practical conservation actions, ensuring lasting benefits for both wildlife and local communities.

6. How do you plan to share the results of your work with others?

The results of this project will be shared through multiple platforms to maximize impact and reach key stakeholders, including conservation practitioners, policymakers, researchers, and local communities. The main dissemination methods include:

1. Workshops (Primary Method)

Organizing workshops in key locations around Nyungwe National Park.

Engaging public transport drivers, truck drivers, motorcyclists, park staff, and local community leaders to discuss findings and promote road safety awareness.

Encouraging participants to share their experiences and propose solutions for reducing wildlife-vehicle collisions.

2. Scientific Publication (Primary Method)

Preparing a research paper for submission to a peer-reviewed journal in wildlife conservation or road ecology.

Ensuring the findings contribute to global discussions on human-wildlife interactions and roadkill mitigation strategies.

3. Presentation at Conferences & Conservation Meetings

Sharing key findings at national and international conservation conferences, such as the International Congress for Conservation Biology (ICCB) and at Center of Excellence in Biodiversity and Natural Resource Management (CoEB) in their weekly seminar series and engaging with researchers, conservation organizations, and policymakers to discuss best practices and potential interventions.

4. Policy Brief for Park Management and Local Authorities

Developing a policy brief summarizing key findings and recommendations for Nyungwe National Park management, the Rwanda Development Board (RDB), and local government officials.

Advocating for improved road signage, awareness campaigns, and road-use regulations in and around the park.

5. Social Media and Online Platforms

Sharing infographics, key findings, and awareness messages on platforms like Facebook, Twitter, LinkedIn, and conservation websites to reach a broader audience.

Engaging with local news outlets and online blogs to spread awareness about the importance of reducing wildlife roadkill.

6. Collaboration with Transport Agencies

Working with bus companies, trucking associations, and motorcycle cooperatives to distribute educational materials (e.g., brochures, posters) at bus terminals, transport offices, and roadside stops.

7. Looking ahead, what do you feel are the important next steps?

Building on the success of this project, the next steps will focus on implementing awareness initiatives, strengthening stakeholder engagement, and advocating for long-term conservation measures to strengthen the transition from research to action-oriented conservation efforts, ensuring long-term benefits for both wildlife and communities. The key priorities include:

1. Securing Funding for Awareness Campaigns and Workshops

Submit a funding request to conduct at least two awareness campaigns and stakeholder workshops in key locations around Nyungwe National Park.

Develop educational materials (brochures, posters, and road safety guides) to distribute to road users.

Collaborate with Nyungwe Management Company to ensure the sustainability of these efforts.

2. Strengthening Collaboration with Stakeholders

Work closely with Nyungwe National Park management, local government authorities, and transport agencies to implement road safety and conservation awareness programs.

Engage bus companies, truck associations, and motorcycle cooperatives to integrate wildlife safety messaging into their operations.

Advocate for the inclusion of wildlife conservation awareness in driver training programs.

3. Implementing Road Safety Measures

Advocate for improved road signage in high-risk areas for wildlife-vehicle collisions.

Work with park authorities to assess the feasibility of speed reduction measures or designated wildlife crossing zones.

Encourage the use of reflective signs, rumble strips, or other deterrents to alert drivers to wildlife presence.

4. Publishing and Presenting Findings

Prepare a scientific publication for submission to a peer-reviewed journal.

Share results at conservation conferences (e.g., ICCB, SCB Africa Chapter).

Develop a policy brief for Nyungwe National Park management and government agencies to influence conservation policies.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

No, The Rufford Foundation logo was not used in any materials produced in relation to this project. Additionally, the Foundation did not receive direct publicity during the course of the work. However, the funding provided by The Rufford Foundation was instrumental in successfully implementing the project, and appropriate acknowledgment will be given in future reports, presentations, and publications resulting from this study.

Moving forward, any awareness campaigns, workshops, or publications stemming from this work will include proper recognition of The Rufford Foundation's support, ensuring visibility for its contribution to conservation efforts in Nyungwe National Park.

9. Provide a full list of all the members of your team and their role in the project.

1. Placide MASENGESHO – Principal Investigator

Led the research design, data collection, analysis, and reporting.
Coordinated fieldwork logistics and stakeholder engagement.
Prepared the final project report and funding applications.

2. Prof. Beth Ann Kaplin – Academic Supervisor

Provided guidance on research methodology and data analysis.
Reviewed research findings and assisted with scientific reporting.

3. Michel MASOZERA – External Adviser

Provided technical support on wildlife conservation and park management.
Assisted in aligning research outcomes with conservation priorities.

4. Protais NIYIGABA – Partner from Nyungwe Management Company (NMC)

Facilitated research permit acquisition.
Assisted in coordinating stakeholder meetings with park authorities.

5. Simon MUHAYIMANA – Field Assistant

Assisted in data collection, particularly with road users.
Conducted interviews and surveys with truck drivers, motorcyclists, and park staff.

6. Jacques NIYOMWUNGERI – Field Assistant

Assisted in data collection and entry.
Conducted interviews with public transport and tour guide drivers.

7. Drew BANTLIN & Felix MULINDAHABI – Experts from Nyungwe Management Company (NMC)

Provided technical insights into roadkill monitoring efforts.
Assisted in identifying key locations for data collection.

10. Any other comments?

I would like to express my sincere appreciation to The Rufford Foundation for providing the grant that enabled me to implement this important research project. This support has not only contributed to the conservation of Nyungwe National Park, one of the newest UNESCO World Heritage Sites, but has also played a significant role in enhancing my career and sharpening my skills in wildlife conservation.

Although I faced challenges, particularly delays in obtaining the research permit due to conflicts in the approval process—leading me to revise my proposal from scratch—the successful completion of this project has been deeply rewarding. The findings provide crucial baseline data that will support Nyungwe Management Company (NMC) in developing strategies to mitigate wildlife roadkill and enhance conservation efforts.

I am proud that this research will benefit many species in Nyungwe by guiding awareness campaigns, improving road safety measures, and fostering collaboration between road users and conservation stakeholders. Moving forward, I hope to build upon this work through further research and community engagement initiatives.

Once again, I extend my gratitude to The Rufford Foundation for its unwavering support in advancing conservation efforts and empowering young researchers.