Description of Approach, Methodology, and Work Plan in Response to the Study

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TITLE: Assessing Human-wildlife Conflicts and Coexistence in Mlele District, Katavi Region

Objective and Scope of Work

The study aims to evaluate the co-existence of human-wildlife in the Mlele District of the Katavi Region, focusing on assessing the wildlife and extent of conflicts and proposing sustainable solutions. This work will identify and analyze the conflicts and severity, review existing policies, and understand community perceptions regarding wildlife and co-existence at Mlele. The study will develop practical mitigation strategies and explore benefit-sharing models that incentivize local communities to understand and actively participate in conservation efforts. Data will be collected through interviews, surveys, focus group discussions, and policy reviews, engaging stakeholders such as local communities (farmers and pastoralists), wildlife officers, and VGS. This study will, therefore, develop conflict mitigation strategies and benefit-sharing models that promote coexistence and enhance community well-being.

Background

Human-wildlife conflict is a growing concern that poses a significant threat to both wildlife conservation and the livelihoods of communities living near protected areas. As human populations continue to expand and global climate change, interactions between humans and wildlife have significantly increased due to the inversion of people to wildlife and wild animals expanding their range searching for food and water. This often results in competition for resources, crop destruction, livestock predation, and, in some cases, loss of human life. These conflicts not only threaten the survival of many wildlife species but also exacerbate poverty and hinder sustainable development in rural communities (Dickman, 2010).

Mlele district is one of the five districts in the Katavi region with a population of 118,818 according to the census of 2022, which makes Mlele a prime example of where human-wildlife interactions are frequent and, at times, challenging. Mlele is adjacent to Katavi National Park, one of Tanzania's largest and most remote national parks, which is home to elephants, buffaloes, hippos, lions, and leopards. The district's proximity to protected areas makes it particularly vulnerable to incidents of human-wildlife interaction which includes invades of farmlands, preying on livestock, and damaging crops, which leads to significant economic losses for the

local communities. This has created a need for effective strategies to manage these conflicts, ensuring both wildlife conservation and the well-being of human populations in Mlele.

In addition to the impact on human livelihoods, wildlife is also negatively affected. As communities expand into wildlife habitats, animals experience habitat loss and fragmentation, restricting their movement and access to resources. In response to crop damage or livestock predation, some communities resort to retaliatory actions, such as hunting or poisoning, resulting in injuries, deaths, population declines among wildlife species, and loss of biodiversity (Treves et al., 2006).

Coexistence between humans and wildlife is crucial for achieving conservation goals and promoting sustainable livelihoods. Recent studies emphasize the importance of incorporating traditional knowledge with modern conservation practices to develop effective, culturally appropriate mitigation strategies (Ogada et al., 2003). Local communities possess valuable insights into the behavior and ecology of wildlife, which, when integrated with scientific knowledge, can significantly enhance efforts to reduce conflict and promote coexistence.

The development of a robust management plan that addresses human-wildlife conflict is vital for areas like Mlele, where a variety of wildlife species frequently interact with human activities. This plan will not only contribute to reducing conflicts but also support conservation objectives by fostering positive attitudes towards wildlife among local communities. Moreover, it will create opportunities for alternative livelihoods that reduce dependence on activities that bring humans into direct conflict with wildlife, such as the adoption of wildlife-friendly farming practices or ecotourism initiatives (Woodroffe, Thirgood & Rabinowitz, 2005).

The proposed study aims to evaluate the extent and nature of human-wildlife conflict in the Mlele district, identify the factors contributing to these conflicts, and develop sustainable, community-driven solutions that promote coexistence. The outcomes of this study will inform the formulation of strategies and policies that enhance the protection of both wildlife and human interests, ensuring a harmonious and sustainable relationship between the two. Additionally, the results of this study can be adapted to other regions facing similar challenges, providing a baseline for solving related issues elsewhere. Addressing human-wildlife conflict is not just a matter of conserving wildlife; it is also about safeguarding the livelihoods, safety, and well-being of communities that share their environments with these animals. A comprehensive approach that combines scientific research, traditional knowledge, and community engagement is essential to achieve long-term coexistence and conservation success.

Deliverables

Task	Activity	Description	Deliverable	Assumptions
Baseline Assessment and Conflict Mitigation Strategies	Conduct interviews, Focused Group Discussions, surveys, and field observations. Develop conflict mitigation strategies	Collect comprehensive data on human-wildlife conflicts, community perceptions, and contributing factors in the Mlele district. Identify and propose practical measures to reduce human-wildlife conflicts	Baseline Assessment Report. Conflict Mitigation Strategies Report	Active participation from local communities and authorities. Corporation from local communities in piloting mitigation measures
Benefit-Sharing Model Development	Investigate benefit-sharing models	Explore potential models that incentivize community participation in wildlife conservation efforts	Benefit-Sharing Models Proposal	Stakeholder willingness to share information on current initiatives.
Final Technical Report and Presentation	Compile the final technical report	Consolidate all findings, proposed mitigation strategies, and benefit-sharing models into a comprehensive	Final Technical Report	Adequate time to analyze and consolidate data collected.

		report.		

Description of Proposed Study Methodology

Activity 1: Development of Data Collection Tools

The study will use both quantitative and qualitative research techniques. The survey questionnaire, checklists, and guides will be designed to collect both quantitative and qualitative data from project stakeholders to cover all objectives of this assignment as per the study. The questionnaire, checklists, and guides designed will be different for Focused Group Discussions (FGDs), Key Informant Interviews, and field surveys and observations. This will enable the project executant to gather relevant information from each group of stakeholders or data collection approaches. The tools will be prepared, reviewed, and approved by the ADAP project team before going to the field.

Activity 2: Comprehensive Desktop Review

A comprehensive review of existing literature, reports, policies, and research studies will be conducted to establish a baseline understanding of human-wildlife conflicts in the Mlele district and the Katavi region. This review will focus on;

- Previous studies on human-wildlife conflicts in Tanzania and similar regions.
- Existing policies, regulations, and frameworks related to wildlife conservation, community engagement, and conflict mitigation.
- Reports from government agencies, NGOs, and academic institutions on human-wildlife coexistence and conservation strategies.

This desktop review will help identify knowledge gaps and provide a solid foundation for understanding the current context of human-wildlife conflicts in the Mlele District.

Activity 3: Stakeholder Mapping and Analysis:

In this phase, the project executant will conduct a thorough stakeholder mapping and analysis to identify all relevant individuals, groups, and organizations involved in or affected by human-wildlife conflicts in the Mlele district. This process will include;

- Identifying stakeholders such as local communities, farmers, pastoralists, government agencies, and wildlife conservation authorities.
- Analyzing their roles, interests, levels of influence, and potential contributions to the study and its outcomes.

- Engaging stakeholders through consultations to gather their insights, concerns, and expectations regarding human-wildlife coexistence.

Activity 4: Stakeholder Engagement and Data Collection

The data collection phase will employ a mix of qualitative and quantitative methods to ensure a comprehensive understanding of human-wildlife conflicts

(i) Key Informant Interviews (KIIs)

Individual interviews will be conducted with selected stakeholders who possess in-depth knowledge or experience regarding human-wildlife conflicts. These may include; Government officials such as Tanzania Wildlife Management Authority (TAWA) and Tanzania Forest Services (TFS), wildlife officers, Tourist officers, and conservation experts who understand policy frameworks and conflict mitigation strategies. Representatives from farmers, and animal keepers who have firsthand experience with wildlife interactions. The interviews will be semi-structured, allowing for open-ended discussions to gather detailed information on conflict causes, impacts, and potential solutions.

(ii) Focused Group Discussion (FDGs)

The project executant will widely engage the local community through FGDs not only to gather data but also to win their acceptance and ensure their participation in the project. FGDs will involve 50 individuals from the villages that are directly and indirectly impacted by the human-wildlife co-existence in the Mlele District, who will be representatives of the farmers, pastoralists, Village Game Scouts (VGS), and respective village governments. The small group size will help participants to feel more comfortable expressing their views and opinions. In addition, the FGDs will be implemented in two sub-groups (one for men and one for women) to reduce the risk of gendered power dynamics controlling the content of discussions and to provide a supportive environment for open and honest dialogue. Within each group, there will be at least one elderly, one youth, and, where present, a person living with a disability. Care will be taken to ensure that the FGDs are held in accessible locations and will be scheduled appropriately to reduce the burden on the participants. Advice and guidance will be sought from the District Community Development Officer in each location to ensure a broad representation of perspectives.

(iii) Field Survey and Observation

Surveys: Structured questionnaires will be administered to a representative sample of households in the Mlele district to collect quantitative data on the frequency, severity, and types of human-wildlife conflicts. The survey will cover topics such as crop damage, livestock predation, economic losses, and community responses to wildlife incursions.
Direct Observations: Field observations will be conducted to document wildlife behavior, habitat usage, and the nature of damage caused to crops or livestock. Observers will also record the presence of existing mitigation measures, such as fencing or deterrents, and their effectiveness.

Activity 5: Data cleaning and analysis

After the data collection exercise, the raw data will first be cleaned to check for missing data, incorrectly entered data, and outliers. Data from the surveys will be analyzed using statistical software such as SPSS, R, or Excel to generate descriptive statistics (e.g., frequencies, percentages, means) and identify trends in human-wildlife conflicts. Inferential statistics (e.g., chi-square tests, and correlation analysis) will be used to explore relationships between variables such as conflict frequency and community characteristics. Qualitative data from KIIs and FGDs will be analyzed using NVivo or similar software, employing thematic analysis to identify recurring themes, perceptions, and suggested mitigation strategies.

Activity 6: Preparation of baseline assessment report

The baseline assessment report will be prepared to provide a comprehensive overview of the current state of human-wildlife conflicts in the Mlele district, including the types, frequency, and severity of conflicts, as well as the perceptions and experiences of local communities. The report will identify key conflict hotspots, contributing factors, and existing mitigation measures, serving as a foundational document for developing targeted conflict mitigation strategies.

Activity 7: Developing the Conflict Mitigation Strategies

Based on the findings from the baseline assessment, this activity will focus on identifying and developing practical, community-driven strategies to mitigate human-wildlife conflicts. These strategies may include physical barriers (e.g., fences), wildlife deterrents, improved livestock management practices, and community education programs. The aim is to design solutions that are sustainable, cost-effective, and tailored to the specific challenges faced by the communities in the Mlele district. The proposed strategies will be developed in consultation with stakeholders, ensuring they are realistic and applicable.

Activity 8: Developing a benefit-sharing model

A benefit-sharing model will be developed to create incentives for local communities to participate actively in wildlife conservation efforts. The model will explore initiatives such as biodiversity credits, ecotourism opportunities, compensation schemes, or revenue-sharing arrangements that allow communities to benefit from the presence of wildlife. The proposed model will be designed to ensure fair and equitable distribution of benefits, encouraging coexistence and reducing negative attitudes toward wildlife in the Mlele district.

Activity 9: Preparing the Final Report

The final activity involves compiling all findings, analyses, and proposed strategies into a comprehensive final report. This report will summarize the entire study process, including methodologies, results, conflict mitigation strategies, and the proposed benefit-sharing model. It will include recommendations for ADAP and other stakeholders on how to implement the suggested strategies and models for improving human-wildlife coexistence. The final report will be presented to ADAP, providing a clear roadmap for addressing human-wildlife conflicts in the Mlele district.

Table 1:

Key Principles of the Proposed Approach

Key Principles	Management Strategy
Participatory approach, experience-sharing and transfer of knowledge	o A participatory approach will be adopted throughout in performing the assignment o Experiences will be shared and knowledge transferred to the ADAP's staff members and local authorities through training.
Broader consultations and collaboration with key stakeholders	o Face to face interviews including FGD will be conducted with the target key stakeholders; o Additional consultations with government officials (from line ministries and agencies) will be undertaken to gain additional context and reaction to recommendations o Participation of all stakeholders concerned will be encouraged as an effective means of enhancing a sense of ownership of assignment results; ownership will guarantee sustainability.

Key Principles	Management Strategy
Confidentiality and data ownership	o All data and information produced from the assignment about the participating stakeholders and individuals will be treated with the strict confidentiality and will NOT be released to third parties without approval of the ADAP o These data and information are the sole property of the ADAP

References

- Dickman, A. J. (2010). Complexities of conflict: the importance of considering social factors for effectively resolving human–wildlife conflict. *Animal Conservation*, 13(5), 458-466.
- Treves, A., Wallace, R. B., Naughton-Treves, L., & Morales, A. (2006). Co-managing human–wildlife conflicts: a review. Human dimensions of wildlife, 11(6), 383-396.
- Ogada, M. O., Woodroffe, R., Oguge, N. O., & Frank, L. G. (2003). Limiting Depredation by African Carnivores: the Role of Livestock Husbandry. *Conservation Biology*, 17(6), 1521-1530.
- Woodroffe, R., Thirgood, S., & Rabinowitz, A. (2005). *People and Wildlife, Conflict or Co-existence?* Cambridge University Press.

WORKPLAN

		Months		
Activity	**Deliverables**	February 2025	March 2025	April 2025
Baseline Assessment and Data Collection Phase				
Development of data collection tools	Data collection tools			
Comprehensive Desktop Review	Reviewed literatures			
Stakeholder Mapping	Mapped stakeholders			
Stakeholder Engagement and data collection	Stakeholder consulted and data collected			
Data cleaning and analysis	Cleaned and analyzed data			
Reporting and Presentation Phase				
Preparation of baseline assessment report	A baseline assessment report			
Developing Conflict Mitigation Strategies	Conflict Mitigation Strategies			
Developing Benefit-Sharing Model	Benefit-Sharing Model			
Preparing the Final Report and Presentation	Final Report			