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BUILDING A BETTER TOMORROW: YOUTH INITIATIVES FOR AGRIBUSINESS (BBT-YIA)

NDOGOWE BLOCK FARM WILDLIFE MANAGEMENT PLAN 2024 -2030

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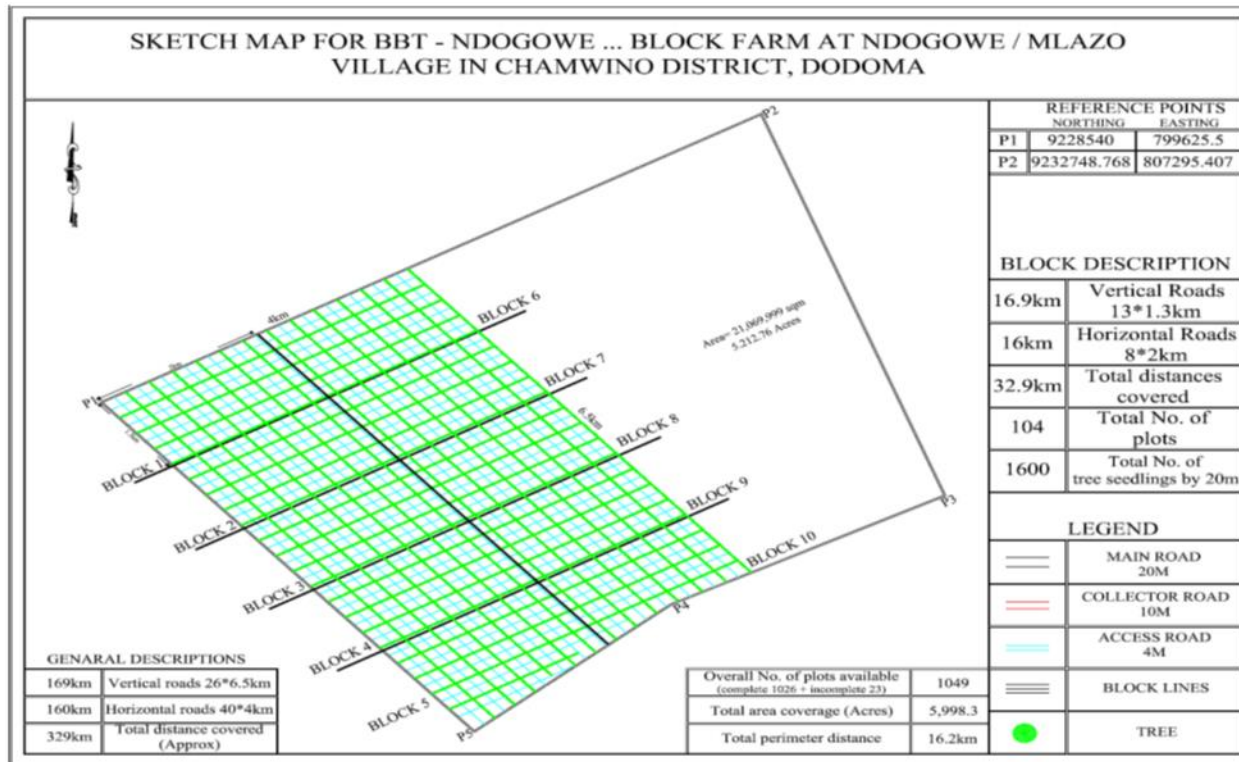


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PREFACE

The project shall implement comprehensive wildlife conservation measures to ensure the protection of wildlife. Adequate precautions will be taken to prevent any harm to wildlife. Robust risk assessment and mitigation plans will be in place to address potential hazards that may arise during project operations. Additionally, the project design and water source selection will prioritize sustainability, ensuring they do not negatively impact the wetlands and other water resources surrounding the project area.

The success of the project hinges on its commitment to wildlife conservation and sustainable practices. By prioritizing the protection of wildlife, implementing effective risk management, and ensuring responsible water source selection, the project will contribute positively to the preservation of Wildlife. Through collaboration and compliance with environmental regulations, the project will serve as a model for environmentally conscious development, showcasing the compatibility between human progress and nature conservation.

EXECUTIVE SUMMARY

The Ministry of Agricultural (MOA) has embarked on implementing Building Better Tomorrow (BBT) program with main goal to enhance the engagement of youth in the Agricultural sector for sustainable and improved livelihoods. With that program taking effective implementation, Mlazo and Ndogowe villages which are in Ng'hambaku ward in Chamwino District were chosen as ideal and strategic areas for implementation of the respective program.

Within the respective area about 11453 acres were designated as an area for farming of cereal crops. With the ongoing work of developing the site infrastructures through building residential house for youth and workers, road networks and water reservoirs dams, Marauding elephants were observed to move in and utilized the areas and therefore posing a currently threat to the lives of workers as well as both future threat to BBT beneficiaries and uncertainty on the crops which are about to be cultivated on the area. Although the Environmental impact assessment conducted by MOA has indicated that the respective area has being used as Elephant refuge and dispersal areas, ousting elephant away from the project area is currently demand driven need if the program objectives are to be met.

Therefore, the MOA through the letter with Reference number MA.12/114/01 dated on 08/04/2024 consulted the Ministry of Natural Resource and Tourism to availed Problem Animal control experts from Wildlife Division (WD), Tanzania Wildlife Research Institute (TAWIRI), Tanzania Wildlife Management Authority (TAWA-Central zone) and Tanzania National Parks (TANAPA) to collaborated with other experts from Local government Authority (LGA) from Chamwino District Council and Ruaha-Katavi Landscape to explore and building an understanding on how best the HEC scenario in the Mlazo and Ndogowe Block farm could effectively be addressed.

Knowledge of elephant (wildlife) behavior is a prerequisite in developing effective mitigation measures which include use of beehive fences with outriggers, torches with high light intensity during the night to chase away elephants, fence made of cloths infused with chili oil that deters elephants to enter farms, making noise by hitting metals like iron sheets which produce noise and using alternative income generating activities to successfully mitigate the impact of wildlife damage to crops.

1.0 INTRODUCTION

Wildlife management is a science and art of maintaining/changing the characteristics and interactions of habitats, wild animal populations and activities of people in order to achieve specific goals of conservation. Wildlife management in Tanzania is integral to mainstream protected area management, yet, as a resource needing scientific management. Management of wild life is essentially multidisciplinary and the success of strategies lies in ensuring multidisciplinary inputs to the extent needed.

Wildlife conservation aims to prevent the loss in the earth's by taking into consideration ecological principles such as carrying capacity, disturbance, succession and environmental conditions such as physiological geography, pedology and hydrology with the aim of balancing the needs of wildlife with the needs of people

1.1 SITE DESCRIPTION

The site is located at Mlazo and Ndogowe Villages in Nghambaku ward, Chamwino district in Dodoma region. The project is 17km away from Ndogowe village Office and 84km from the Dodoma-Iringa highway. The project will comprise of blocks for crop production, area for 100 Shamba houses construction, drilling of 10 borehole and Construction of 8 water storage reservoirs and 329km of farm roads. A total area of 4700 acres will be used to accommodate items mentioned.

1.2 PURPOSE/OBJECTIVES AND SCOPE

The intent of this plan is to ensure that the work conducted by Ndogowe Block Farm (NBF). (NBF) is carried out in such a way that it will not cause unnecessary negative impacts to crops and wildlife in the area. This plan provides strategies and mitigation measures for reducing or avoiding human-wildlife conflicts in the project area, and is based on the guiding principles outlined in the *Species at Risk Act*, *Migratory Birds Convention Act*, the *Wildlife Act*, and the *Forest and Range Practices Act* in addition to a number of Best Management Practices (BMPs) for specific species (e.g., Elephant, Hippo, Greater and lesser Kudu, Baboon, duiker, dikdik, Bush pig, grain borers and quelea quelea birds).

The plan is designed to provide feasible guidance for wildlife management plan.

The performance objectives of the plan are to:

1. Enhance research and monitoring of wildlife incidences and mitigation.
2. Expand the use of mitigation methods/techniques to the projects
3. Follow the wildlife regulations as per new Wildlife Conservation Act No. 5 of 2009 RE. 2022.
4. Application of Non-lethal mitigation strategies and techniques for ousting crop raiding elephant away from farm.
5. Cultivation of unpalatable crops to elephant as farm based wildlife mitigation

2.0 WILDLIFE MANAGEMENT

The objective of managing wildlife and their habitats in the Project area is to minimize potential effects associated with wild animals. Management priorities will focus on reducing the risk of direct and indirect wild animal, mitigating the potential for human-wildlife conflicts, and minimizing the level of disturbance to wildlife in the Project.

Minimizing disturbance will prioritize staged management measures to reduce the impact to sensitive areas. These measures include use torch with high light intensity during the night to chase away elephants from the fields ,the use of chilli crackers, roman candles, air horns, use fence made of cloths infused with chili oil that deters elephants to enter farms but is not harmful, use alternative income generating activities to successfully mitigate the impact of wildlife damage to crops and enhance human-wildlife coexistence, Establish bubbled wires or electric fence/ solar-powered electric fencing around the farm and use of bee hive fences.

2.1 WILDLIFE-HUMAN CONFLICTS

The proposed Mlazo-Ndogowe Block Farm in the South-western region is adjacent to the Kizigo-Rungwa-Muhesi game reserve, Ruaha National park and proposed Chamwino Wildlife Management Area (WMA), which are home to various wild animals including elephants, elands, hippopotamus, roaming antelopes and zebras that migrate from the above protected areas into the village land . During stakeholder consultation meetings, local villagers have raised concerns about human-wildlife conflicts, particularly during the dry

season (from April to November). Large mammals frequently observed by the local communities and acknowledged by the District Wildlife Officer include species such as elephants, roaming antelope, baboon, hippopotamus and zebras. Elephants originating from Ruaha National Park are known to undertake migrations through the Rungwa-Kizigo-Muhesi, proposed Chamwino Wildlife Management Area, proceeding northwards towards the Kizigo River, and extending up to the areas around Mlazo and Ndogowe village.

The Wildlife Management Area (WMA) extends across the Kizigo River, encompassing nearly the entire expanse of the Rungwa-Kizigo-Muhesi region and extending into the Southern Hills to the west. At the national level, Tanzania's Wildlife Policy of 2007 and the recently revised Wildlife Conservation Act of 2022 acknowledge the existence of established Wildlife Management Areas. These areas serve as platforms for community-based conservation efforts on village lands, allowing for multiple uses that include controlled grazing, fishing, and agriculture.

The Ruaha National Park has to date been the main off-site sufferer from the decreased dry season flows in the Great Ruaha. This challenge has become increasingly pronounced in recent years, with the river experiencing more prolonged periods of drying up. Consequently, both terrestrial and aquatic animals are facing mounting stress due to water scarcity. In addition, the scenic attraction of a running Kizigo River, however, small the flow, outweigh those of a dried riverbed and thus cause wildlife to move further and further away from the drier Ruaha River to find water further to North-West towards Kizigo River and hence in village land and agricultural plots at Ndogowe and Mlazo.

The Tanzania Wildlife Management Authority organized about 32 Village Game Scouts from Ndogowe and Mlazo villages who were trained on wildlife management techniques so that they can help the community in management and protection of their areas including farms. Discussion with TAWA staff revealed that establishment of the Ndogowe farm is an opportunity for investors to establish the hunting block close to Ndogowe block farm also it will provide an opportunity for youth game scouts to establish an office close to the farm for

easy control of wildlife.

The community have been living and growing crops in their villages in spite of destructives animals like elephants. The EIA Team is aware of the crop losses, food insecurity and livelihood by human-elephant conflicts at Mlazo and Ndogowe village lands. The community has been thriving to use various techniques to keep the wildlife away from their fields. Furthermore, the farmers have been using alternative income generating activities to successfully mitigate the impact of wildlife damage to crops and enhance human-wildlife coexistence. The BBT program will explore some of the experiences in control of wildlife and liaise with the Ministry of Natural Resources and Tourism for designing of effective mitigation measures against invasive animals. Apart from crop destruction, there may also be a risk of poaching by the Community in Mlazo and Ndogowe village lands and aslo the incoming people that will be working at Ndogowe Block farm.

A variety of wildlife species are involved in human-wildlife conflicts at Mlazo and Ndogowe village land. Although birds are also involved in causing crop losses, management of wildlife disperse at Ndogowe block farm is unlikely to help manage bird movement. While birds and other insects may help to increase pollination services, they could potentially also increase the risk of crop losses.

Table 1. The impacts of human-wildlife conflicts at Mlazo and Ndogowe village land.

S/N	Species	Impacts
	African Elephants	<ul style="list-style-type: none"> • Consume agricultural crops, damage water sources (pipes, reservoirs etc) • Cause human injury/dearth
	Hippopotamus	<ul style="list-style-type: none"> • Consume agricultural crops, damage water sources (pipes, reservoirs etc) • Cause human injury/dearth

Bush pigs	Consume agricultural crops
Bamboos (Yellow,Vervet and Sykes)	Consume agricultural crops
Spotted Hyena	Kill livestock
Lion	Kill livestock, can cause human injury/dearth
Rats	Consume agricultural crops

3.0 LEGAL FRAMEWORK

3.1 Wildlife Policy 2007

The Wildlife Conservation Policy of 2007 holds great significance as it defines and protects Tanzania's unique natural heritage, including its wildlife and wetlands. This policy recognizes the vital role of wildlife in contributing to both the nation's biological diversity and its economic well-being, as well as its global importance. Moreover, it emphasizes the importance of sustainable development in Tanzania, balancing conservation efforts with the needs of local communities and economic growth. Additionally, the policy classifies protected areas into three main groups: National Parks, Game Reserves, and game-controlled areas.

The policy acknowledges the intrinsic value of Tanzania's wildlife and wetlands, recognizing them as vital components of the country's natural heritage. This recognition fosters a sense of responsibility towards their preservation, ensuring that they remain protected for current and future generations. The policy underscores the dual significance of wildlife, both ecologically and economically. Ecologically, wildlife plays a crucial role in maintaining ecological balance, preserving biodiversity, and supporting ecosystem services. Economically, wildlife-based tourism is a significant contributor to Tanzania's economy, attracting visitors from across the globe and generating revenue for

conservation efforts and communities. The Wildlife Conservation Policy emphasizes the principle of sustainable development, ensuring that conservation efforts do not come at the expense of the country's economic growth or local communities' well-being. It strikes a balance between conserving wildlife and supporting responsible land use practices, allowing communities to benefit from natural resources while safeguarding their long-term viability.

The wildlife sector in Tanzania plays a vital role in preserving the country's natural heritage, but it confronts several challenges that require urgent attention including competition with other land uses, low awareness among decision makers and the public, illegal wildlife trade, inadequate wildlife use right for village communities, lack of gender consideration in conservation management. Moreover, the effective wildlife conservation in Tanzania relies on the collaboration and involvement of diverse institutions. The roles of the central government, local government authorities, private sector, NGOs, and the public are interlinked, working together to safeguard Tanzania's unique natural heritage and ensure the sustainable management and utilization of wildlife resources. By fulfilling their respective roles, these institutions can collectively contribute to the preservation of Tanzania's rich biodiversity for current and future generations.

3.2 Environmental Management Act, 2004

The Environmental Management Act 2004 is the principal legislation governing environmental management in the country. The Environmental Management Act (EMA) recognizes the right of every citizen to a clean, safe and healthy environment, and the right of access to environmental resources for recreational, educational, health, spiritual, cultural and economic purposes.” Thus, the EMA “provides a legal framework for coordinating harmonious and conflicting activities by integrating those activities into overall sustainable environmental management systems by providing key technical support to Sector Ministries.”

Section 81, subsection 1 in Part VI of the EMA requires a project proponent or developer to undertake an Environmental Impact Assessment (EIA) at his/her own cost before commencement or financing of a project or undertaking. The EMA prohibits any development to be initiated without an Environmental Impact Assessment (EIA) Certificate. *The MoA through undertaking Environmental Impact Assessment complies with the requirement of the law.*

EMA outlines principles for management, impact and risk assessment, the prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement; to provide the basis for the implementation of international instruments on the environment; to provide of implementation of the National Environmental Policy; to provide for establishment of the National Environmental Fund and to provide for other related matters.

The Act and its Regulations provide guidance to MoA as described below:

- i) MoA should ensure that environmental concerns are adequately taken into consideration at all phases of the proposed project;*
- ii) Enabling public participation and contributions as regards environmental concerns during the preparation and implementation of this project; and*
- iii) Establishing clear, transparent and effective procedures for enforcement, monitoring and implementation of mitigation measures as regards all environmental issues.*

3.3 The Land Act No. 4 of 1999 and the Village Land Act No. 5 of (1999)

Section 19 states that.-(l) The rights to occupy land which a citizen, a group of two or more citizens whether formed together in an association under this Act or any other law or not, a partnership or a corporate body, in this Act called right holders may enjoy under this Act are hereby declared to be

- a) Granted right of occupancy;
- b) A right derivative of a granted right of occupancy, in this Act is called a derivative right.

The land allocated for Ndogowe Block farms was initially owned by the village government and demarcated for agricultural activities (Refer Land Title deed and Village Land use plan) The Ministry of Land Housing and Settlement Development The MoA is in line with this Act as it followed all the procedures for land acquisition hence the land is legally owned, in this case the project will be obeying to part V of the act that elaborate on Rights and Incidents of Land Occupation.

3.4 The Land Use Planning Act, No. 6 of 2007

An act to provide for procedures for the preparation, administration and enforcement of land use plans, to repeal the National Land Use Planning Commission Act and to provide for related matters. The objectives of land use planning to which all persons and authorities exercising powers under, applying or interpreting this act shall be:

- Facilitate efficient and orderly management of land use;
- Empower landholders and users to make better and more productive use of their land;
- Promote sustainable land use practices.
- Facilitate the establishment of a framework for the prevention of land use conflicts.

4.0 SITE-SPECIFIC MITIGATION MEASURES

The site-specific mitigation measures for the Project area are detailed below. In general, the following site-specific mitigation measures will be implemented:

- i. Establish bubbled wires or electric fence/ solar-powered electric fencing around the farm (27km long) with automatic sport lights ;
- ii. Use of bee hive fences with outriggers
- iii. Knowledge on elephant (wildlife) behavior is very important
- iv. Use torch with high light intensity during the night to chase away elephants

- v. Use fence made of cloths infused with chili oil, that deters elephants to enter farms
- vi. Make noise through hitting metals like iron sheets which produce noise;
- vii. Use alternative income generating activities to successfully mitigate the impact of wildlife damage to crops and enhance human-wildlife coexistence

5.0 ADAPTIVE MANAGEMENT

The Wildlife Management Plan is an adaptive document that will evolve in response to wildlife monitoring results, additional field work, changes in site development, conditions or plans, and discussions with various stakeholders, including indigenous groups. This plan will be reviewed annually to determine if the plan is being correctly implemented and to identify any improvements that can be made to ensure effective management of wildlife and their habitats in the Project area. These improvements will also be made to reflect any changes to best management practices or relevant regulations. The plan may be revised if reviews, inspections or monitoring data indicate that wildlife management practices do not meet objectives or regulatory requirements. Other potential updates to the plan may reflect any changes that result from unforeseen circumstances or the implementation of alternative mitigation measures.

The wildlife Consultant will investigate improvements in any trend and assess whether the practices responsible for the improvements can be applied to other areas of the site. Deteriorating trends will be studied to determine the root cause. When the cause is identified, the wildlife Consultant will propose a suitable corrective action to the Farm Manager. Corrective actions may include:

- Increased signage, improved line-of-sight, reduction of attractants in problematic areas;
- Additional training of employees on human wildlife conflict
- More frequent reviews of the plan and ongoing reporting; and/or
- Additional supervisory oversight.

Data presented in this plan is preliminary and, although provides valuable information regarding wildlife and wildlife habitat use, is not intended to be a final summary of wildlife in the area. Ongoing monitoring and data collection will only help to broaden our knowledge of wildlife and increase efficacy of mitigation measures.

6.0 REFERENCES

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