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GOVERNMENT OF ZIMBABWE

MINISTRY OF LANDS, AGRICULTURE, FISHERIES, WATER AND RURAL DEVELOPMENT

THE ZIMBABWE AGRICULTURAL VALUE CHAIN ENHANCEMENT PROJECT (ZAVaCEP) MASVINGO.

Support to the Beef and Leather Value Chain Technical Assistance (TA) Pilot Project (SBLVCP) in Masvingo Province (MSP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Project Name: THE ZIMBABWE AGRICULTURAL VALUE CHAIN DEVELOPMENTPROGRAMME (ZAVaCEP)
Project Title: Project Number: P-ZW-AAG-008
Country: ZIMBABWE
Division: **Environment and Social Categorization: II**
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ACRONYMS

ACBF	Africa Capacity Building Foundation (ACBF)
AfDB	African Development Bank
AGRITEX	Agriculture Technical and Extension Services
AIDS	Acquired Immunity Deficiency Syndrome
CAP	Chapter (in ACTs)
CBD	Convention on Biodiversity
CEDAW	Convention on Elimination of All Forms Of Discrimination Against Women
CFC	Chlorofluorocarbons
CITES	Convention on International Trade Against Endangered Species
CLFPA	Communal Lands Forest Produce Act
DPIU	District Project Implementation Unit
EA	Executing Agency
EIA	Environment Impact Assessment
EMA	Environmental Management Act/Agency
EMP	Environmental Management Plan
ESAP	Environmental and Social Assessment Procedures
ESIA	Environment and Social Impact Assessment
ESMP	Environment and Social Management Plan
ESS	Environment and Social Safeguards
GBV	Gender Based Violence
GBVAP	Gender Based Violence Action Plan
GCHP	Grievance Complaints Handling Procedure
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GESI	Gender Equality and Social Inclusion
GHG	Greenhouse Gas
GMB	Grain Marketing Board
GRCs	Grievance Redress Committees
GRM	Grievance Redress Mechanism
H&S	Health and safety
HIV	Human Immunodeficiency Virus
IA	Implementing Agency
IAS	Invasive Alien Species
ILO	International Labour Organization
IPCC	Inter-governmental Panel on Climate Change
IPMP	Integrated Pest Management Plan
ISS	AfDB Integrated Safeguards System
M&E	Monitoring and Evaluation
MIC	Ministry of Industry and Commerce
MoFED	Ministry of Finance and Economic Development
MLAFWRD	Ministry of Land, Agriculture, Fisheries, Water and Rural Development
MWACSMED	Ministry of Women Affairs, Community, Small and Medium Enterprises Development
NAPF	National Agriculture Policy Framework
NDS1	Zimbabwe's National Development Strategy 1
PCU	Project Coordinating Unit
RIDA	Rural Infrastructure Development Agency (Former DDF)
RDC	Rural District Council

SADC	Southern Africa Development Community
SBLVCP	Beef and Leather Value Chain Technical Assistance Pilot Project
SMSE	Small and Medium Enterprises
ZAVaCEP	Zimbabwe Agricultural Value Chain Enhancement Project
ZINWA	Zimbabwe National Water Authority
ZRBF	Zimbabwe Resilient Building Fund

1. EXCUTIVE SUMMARY

This document serves as the executive summary of the Environmental and Social Management Plan for the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP), for Masvingo Province, where the project will be implemented in Chivi and Chiredzi Districts.

As background, the Zimbabwean government is seeking a grant of UA 4.000 million (USD 5.310 million) from the African Development Bank Fund to support the development of the beef and leather value chain through the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP). Additionally, the government will contribute AU 0.537 million (USD 0.713 million), with beneficiaries contributing a small 1.5%.

Agriculture is crucial to Zimbabwe's economy, contributing around 16% to the overall output, but it remains underdeveloped in terms of value addition. The sector, which includes crops, livestock, and fisheries & aquaculture, is vital for employment, income generation, livelihoods, and poverty reduction. Agriculture accounts for 12-18% of GDP, provides jobs and income to 60-70% of the population, supplies 60% of raw materials for industry, and generates nearly 40% of export earnings. With 67% of Zimbabwe's population living in rural areas and primarily engaged in smallholder farming, improving agricultural productivity is essential for reducing poverty, hunger, and malnutrition. The Agriculture Transformation Strategy (2019) aims to create a robust sector to help Zimbabwe achieve Vision 2030, addressing issues like population growth, low productivity, and climate change. The National Agriculture Policy Framework (2018-2030) outlines a plan for sustainable investments to enhance agricultural productivity and competitiveness.

The ZAVaCEP seeks to replicate and expand the successful elements of the Support to the Beef and Leather Value Chain Technical Assistance Pilot Project (SBLVCP) across Matabeleland South, Masvingo, and Bulawayo Provinces. This project will emphasize capacity building, providing potable water, enhancing livestock productivity, value addition, and private sector development. It aligns with Zimbabwe's National Development Strategy 1 (NDS1: 2021-2025), Vision 2030, and the Zimbabwe Leather Sector Strategy (2021-2030). The ESMP was developed in consultation with the Zimbabwe Environment Management Agency (EMA) to ensure compliance with national environmental legislation and AfDB's environmental and social obligations. This ESMP will outline specific mitigation measures designed to address potential environmental impacts, and once approved by the AfDB, it will be submitted to the EMA for review and approval, followed by effective implementation and continuous monitoring.

The primary objectives of the ESMP are to identify and assess the potential environmental, climate change, and social impacts associated with the proposed development projects, propose measures to avoid, minimize, mitigate, compensate for, offset, and monitor these adverse impacts while maximizing development benefits, and ensure compliance with national and international standards. The scope of work for developing the ESMPs includes conducting thorough environmental and social analyses, reviewing documentation and conducting site visits, evaluating potential impacts, defining institutional arrangements, conducting gender analyses, developing a Grievance Redress Mechanism, and preparing a comprehensive ESMP report.

1.1 Baseline information

Chivi District

Chivi District has a population of 172,979 as per the 2022 Zimbabwe Census. It is predominantly rural and relies heavily on subsistence agriculture. The district faces significant challenges, including high poverty levels, unemployment, and limited access to education and healthcare. Water and sanitation access is inadequate, with many households relying on unimproved water sources, leading to health risks. The region's semi-arid climate and poor soil fertility make agriculture difficult, exacerbated by erratic rainfall and frequent droughts. The district is characterized by a youthful population with many households headed by elderly individuals. Economic activities include small-scale farming, livestock rearing, and informal trade, though opportunities for formal employment are scarce. Gender issues, such as domestic violence and child marriage, persist, with many cases going unreported. Environmental challenges include soil erosion, deforestation, and water resource depletion, impacting biodiversity and the overall ecosystem.

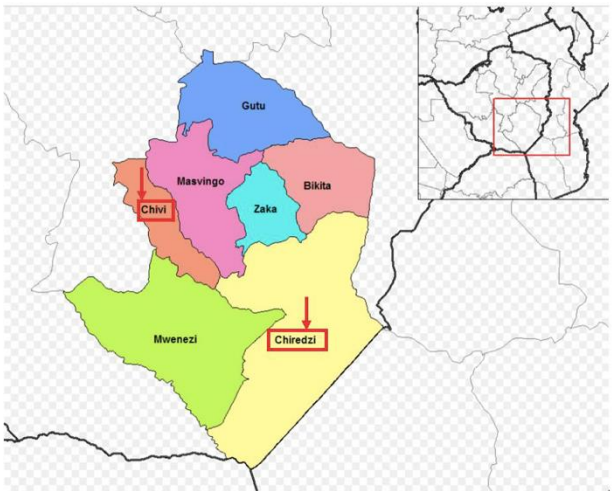

Figure 1. Map of Chivi & Chiredzi Districts

Chiredzi District

Chiredzi District, situated in the semi-arid south-eastern region of Zimbabwe, has a population of 343,960, predominantly rural and ethnically diverse. The district's economy is largely agrarian, with significant contributions from sugarcane farming, livestock rearing, and small-scale agriculture. The Save and Runde rivers are crucial water sources, but the region faces persistent water scarcity, especially during droughts. Access to improved water and sanitation has seen some improvement, but challenges remain, with many households practicing open defecation. The district's cultural heritage is deeply rooted in Shangaan traditions. The extent of gender issues could not be ascertained as very few cases of physical and emotional abuse are reported.. Chiredzi's vulnerabilities are exacerbated by climate change, leading to food insecurity and economic instability. Health challenges, poor infrastructure, and market accessibility further hinder development in the district.

1.2 POLICY LEGAL AND ADMINISTRATIVE FRAMEWORK

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) must navigate a comprehensive legal landscape, encompassing numerous national and local laws, regulations, and policies relevant to the beef and leather value chains. The Constitution of Zimbabwe, 2013, serves as the overarching legal framework, emphasizing environmental rights, good governance, transparency, accountability, and sustainable development. This is complemented by the Environmental Management Act (EMA), Chapter 20:27, which mandates environmental impact assessments (EIAs) and enforces regulations to mitigate environmental impacts. The Animal Health Act, Chapter 19:01, focuses on preventing and controlling animal diseases, while the Water Act, Chapter 20:24, governs the use and management of water resources. Additionally, the Forestry Act (Chapter 19:05) and the Communal Lands Forestry Produce Act (Chapter 19:07) regulate forest resources and communal land use, ensuring sustainable practices in timber and leather processing.

ZAVaCEP must also align with various sector-specific regulations and policies. The Hazardous Substances and Articles Control Act (Chapter 15:05) oversees the handling of hazardous materials, essential for compliance during leather processing. The Parks and Wildlife Management Act (Chapter 20:14) protects wildlife, crucial for community and environmental health. The Labour Act, Chapter 28:01, and the Public Health Act, Chapter 15:09, ensure fair labour practices and community health

standards. The Factory and Works Act, Chapter 14:08, regulates workplace safety in processing facilities, while the Rural District Councils Act (29:13) and the Communal Lands Act (Chapter 20:28) govern local land use and community involvement. ZAVaCEP must also adhere to international treaties such as the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC) to ensure sustainable agricultural practices and climate resilience. Additionally, alignment with the World Health Organization (WHO) guidelines and International Labour Organization (ILO) conventions is essential for maintaining public health standards and fair labour practices in the value chains.

The African Development Bank (AfDB) has established Operational Safeguards (OS) to ensure the environmental and social sustainability of its financed projects. For the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP), focusing on the beef and leather value chain, several safeguards are applicable. OS 1 requires comprehensive environmental and social impact assessments to address potential risks. OS 3 emphasizes the protection of biodiversity and sustainable resource management. OS 4 focuses on pollution prevention, efficient resource use, and managing hazardous materials. OS 5 ensures fair labour practices and safe working conditions. These safeguards aim to mitigate risks and promote sustainable development within the project's scope.

Zimbabwe's existing environmental and social management framework, while robust, has notable differences when compared to the African Development Bank's (AfDB) Operational Safeguards (OS) requirements. Both Zimbabwe's EMA Act and AfDB OS 1 prioritize sustainable development and public participation, but OS 1 places a stronger emphasis on stakeholder engagement and adaptive management throughout the project cycle. OS 4, addressing pollution prevention, greenhouse gases, and hazardous materials, contrasts with Zimbabwe's EMA Act by adopting a broader, project-based approach that focuses on Integrated Pest Management (IPM) and international best practices. Additionally, while both OS 5 and Zimbabwe's Labour Act prioritize worker rights, OS 5 includes more specific requirements for development projects, such as rigorous health and safety standards and detailed grievance mechanisms. For the ZAVaCEP ESMP to be effective, it must align with both national and international standards, integrating AfDB's stringent OS requirements to support sustainable development in Zimbabwe's beef and leather value chains and advance the country's economic and social objectives.

1.3 ANALYSIS OF ALTERNATIVES

This ESMP evaluated several alternatives for the proposed beef and leather value chain development project in Chivi and Chiredzi districts, Zimbabwe. Alternatives considered included the "No Project" alternative, alternative locations, and alternative designs. The "No Project" alternative would maintain the current state, preserving environmental resources but forfeiting significant social and economic benefits such as improved cattle husbandry, pasture development, fodder production, and hide processing. This alternative would perpetuate existing challenges like inadequate cattle health management and poor pasture quality, making it unfavourable despite avoiding immediate environmental impacts.

Alternative locations were assessed, but the current sites in Chivi and Chiredzi districts were deemed most suitable due to their strategic advantages and existing infrastructure. The feasibility studies highlighted the need for interventions in these areas due to limited rainfall, poor infrastructure, and climate change impacts. Various design alternatives focusing on site, technology, materials, and chemicals were also analysed, prioritizing effectiveness, cost-efficiency, and minimal environmental and social impacts. The mitigation hierarchy, which emphasizes avoidance, minimization, restoration, and compensation, was applied to ensure sustainable project implementation. The chosen designs aim to enhance livestock health, productivity, and value addition in the beef and leather value chain, making them the most viable options for the project.

1.4 BRIEF PROJECT DESCRIPTION AND KEY COMPONENTS

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) aims to tackle key challenges in the livestock sub-sector by building on the Support to the Beef and Leather Value Chain Technical Assistance (SBLVCP). It focuses on improving livestock productivity through better farming practices and support systems, enhancing animal genetics, and ensuring reliable water supply for livestock needs. The project also addresses climate change impacts, such as increased animal disease outbreaks, droughts, and cyclones, by implementing robust disease control measures. Additionally, ZAVaCEP promotes value addition in the beef and leather sectors, trains farmers in animal husbandry to improve hides and skins, and supports leather product manufacturers with start-up tools. By coordinating stakeholders for efficient operations and encouraging private sector involvement, the project aims to boost economic growth and job creation. Furthermore, it emphasizes environmental and social management to ensure compliance with regulations and mitigate social impacts.

The ZAVACEP consists of four main components: (, (i) Climate Smart Agricultural Productivity and Value Chain Enhancement (ii) Supporting Climate Resilient and community Level -Driven Infrastructure Development iii) Knowledge Management, Policy Development, Monitoring and Evaluation, and (iv) Project Management.

Component 1: Climate Smart Agricultural Productivity and Value Chain Enhancement

Component 1 focuses on improving beef production through disease control, infrastructure enhancement, rangeland development, and breeding stock improvement. Sub-**component 1.1(Sustainable Livestock Production and Productivity)** rehabilitates dip tanks, drills boreholes, and implements climate-smart rangeland management. **Sub-component 1.2 (Agri-Business and Value Chain Enhancement)** strengthens the leather value chain through training, market linkages, and development of community feedlots and an online market platform. **Sub-component 1.3 (Support to Women and Youth MSME in Agro-processing and Market Access),** supports women and youth in agro-processing and market access with capacity building and equipment acquisition

Component 2-Bulding Rural Communities Resilience to Climate Change

2.1 Supporting Climate Resilient and Community level-driven Infrastructure Development): Component 2 enhances capacities of smallholder livestock farmers, promotes social inclusion, and supports policy development and knowledge management. **Sub-component. 2.2 Focuses on** Reinforcing inclusive and diversified climate resilient livelihoods support. This component aims to empower communities by providing sustainable agricultural practices and alternative income-generating activities. These efforts are designed to enhance food security and economic resilience in the face of climate change impacts.

Component 3 (Knowledge Management, Policy Development, Monitoring and Evaluation Project Management: This encompasses trainings and skills development and review and development of policies that are relevant to the value chains.

Component 4 (Project Management) involves managing operational costs for the Project Management Unit and Sector Project Coordination Units, supporting annual audits, licensing accounting software, and maintaining project vehicles. It ensures effective financial and procurement management and facilitates various project functions.

1.5 MAJOR ENVIRONMENTAL AND SOCIAL RISKS

1.6.1 Positive Environmental Impacts

i **Water Availability for Livestock and Humans**
The project addresses water scarcity for dipping purposes by rehabilitating and constructing 8 multipurpose solar-powered boreholes and water troughs in the 2 districts. This will reduce the distance to water sources from 6-10 km to nearby facilities, and enhance water accessibility for the dip and other human needs.

ii **Enhance Rangeland Management and Biodiversity Conservation**
Climate-smart agricultural practices will focus on improving rangeland management by developing 300 hectares of pastureland and rehabilitation and conservation of 100ha of the rangeland through construction of conservation works such as gully reclamation, contour ridges and storm drains including sustainable practices such as rotational grazing to prevent overgrazing, soil degradation, and mitigate environmental degradation while water conservation measures optimize water use.

iii **Improved Animal Health and Productivity**
Rehabilitation of 8 dip tanks and drilling of solar-powered boreholes ensure disease control and a consistent water supply, enhancing livestock health and productivity. Regular cattle dipping controls tick-borne diseases, and reliable access to clean water reduces waterborne illnesses.

iv **Genetic Improvement**
Distributing 16 bulls of superior genetics enhances livestock quality, leading to better meat and milk production. The program aims to improve cattle productivity and resilience by introducing superior breeding stock form local breeds.

v **Fodder Availability**
Developing 40 hectares of pasture land on exiting unproductive fields and feed processing hubs , one per each district, emphasises fodder conservation ensure livestock nutrition year-round. These supports will increase productivity and resilience to climate variability, promoting sustainable land use practices.

vi **Community Environmental Stewardship**
Training communities in appropriate conservation practices and technologies, coupled with fodder and pasture production increases awareness and implementation of sustainable practices, benefiting both the environment and livestock. This training fosters environmental stewardship and sustainable development.

vii **Environmental Benefits:** Conservation efforts include biodiversity preservation and carbon sequestration, enhancing environmental health.

1.6.2 Positive Social Impacts

i **Economic Development and Livelihoods**
Improved cattle husbandry productivity contributes to food security and increases household incomes, reducing poverty and improving living standards. Enhanced beef and leather value chains have potential to boost local economies and create job opportunities thus reducing dependency on subsistence agriculture.

ii **Inclusivity**
The project prioritizes gender equality and youth empowerment, ensuring that at least 35% of beneficiaries are female-headed households and 50% of training efforts target women and

youth. This promotes social inclusion and community development by ensuring that women are not left behind.

iii **Investment and Employment Opportunities**
Community-level feedlots and aggregation centres create employment and foster local entrepreneurship. An online market platform for leather products improves market access and competitiveness for SMMEs. The project attracts sustainable investment, ensuring financial viability and impact measurement.

iv **Infrastructure Development**
Rehabilitation of dip tanks, construction of water troughs, and installation of solar-powered boreholes improve local infrastructure, benefiting livestock management and water access for communities.

v **Knowledge Transfer and Skills Development**
Training programs empower local communities with skills in sustainable agricultural practices, agri-business management, and product quality standards. This strengthens local capacities and fosters innovation. Establishing knowledge management systems promotes best practices and supports national scaling.

vi **Enhanced Beef and Leather Value Chain**
Training on quality standards and market linkage improves leather product quality and market competitiveness. Developing feedlots fosters better cattle management, supporting sustainable economic growth.

vii **Market Expansion**
Supporting exhibitions and knowledge-exchange visits expose local producers to new markets and best practices, expanding business opportunities. An online platform for leather products increases revenues for producers.

viii **Improved Efficiency and Profitability of Cattle Husbandry**
Developing feedlots and aggregation centres streamlines livestock management and market access, improving efficiency and profitability for farmers.

ix **Improved Dairy Production**
Supporting dairy farmer groups improves dairy product quality and production processes, benefiting women and youth involved in these activities.

x **Community Engagement:** Local involvement in project activities fosters ownership and empowerment, strengthening social cohesion and resilience.

xi **Cross-Sector Collaboration and policy influence**: Collaboration among government departments and stakeholders fosters holistic solutions. Successful implementation could influence national policies, integrating sustainable approaches into broader frameworks.

1.7 Environmental Negative Impacts

i **Loss of Biodiversity**
If not properly managed Construction works for the ZAVaCEP (although limited to feed processing hubs and dip tank rehabilitation) can result in land clearing leading to loss of

vegetation and habitat for fauna. For 8 dip tanks that are already existing clearing will be minimal.

ii **Soil and Chemical Pollution**
Development of fodder production will use inorganic fertilisers and pesticides, chemical inputs, that may lead to soil degradation and contamination. Increased fodder production and cattle dipping could introduce chemical residues into the soil and water bodies.

iii **Air Quality**
Increased livestock farming can increase emissions of ammonia, methane, and other gases, from dung production contributing to air pollution and greenhouse gas emissions.

iv **Environmental Degradation**
Intensive agricultural practices can potentially cause soil erosion, biodiversity loss, and chemical pollution. Inadequate waste disposal and pollution control may exacerbate these impacts.

v **Depletion of Groundwater**
Increased water demand from livestock and human needs resulting from accessible boreholes can strain local groundwater potentially leading to depletion of the aquifer.

vi **Waste Generation**
Large-scale hide processing and feedlot operations generate significant organic waste, leading to odour issues, soil contamination, and greenhouse gas emissions if not properly managed.

vii **Loss of Flora and Fauna**
Construction activities and increased agricultural activities can lead to habitat loss or fragmentation, impacting local flora and fauna. Intensive cattle dipping and improper waste disposal can further disrupt ecosystems.

viii **Animal Health and Genetic Loss**
While genetic enhancement improves animal health, it can reduce genetic diversity, increasing vulnerability to diseases and environmental changes.

1.7.1 Negative Social Impacts

i **Social Exclusion and Marginalization**
The project may inadvertently exacerbate social inequalities, leaving marginalized groups without access to project benefits and increasing social stratification.

ii **Health and Safety Risks**
Exposure to agrochemicals, inadequate sanitation, and poor hygiene practices can lead to health issues. Construction activities pose physical harm risks, feed processing hubs, agro-industries and hiding processing centres can increase environmental pollution (air, soils and water).

iii **Occupational Health & Safety**
Livestock farmers and construction workers face occupational health risks, including exposure to agrochemicals, noise, dust, and machinery-related hazards.

iv **Aid Dependence**

Reliance on external aid and market fluctuations can affect local economies and livelihoods, leading to sustainability challenges and dependency.

- **HIV/AIDS and Social Dynamics**
  The project can inadvertently contribute to the spread of HIV/AIDS in communities as mobility will increase due to creation of beef, leather and agro-products markets. An influx of outsiders may occur as people will be attracted by potential work opportunities in the SMMEs. Increased social interactions and mobility may facilitate disease transmission. GBV/SEAH incidences may also increase as interactions in the communities and outsiders increase.

Overall, the environmental impacts of ZAVaCEP include soil erosion, habitat fragmentation, and pollution resulting from construction and agricultural activities. Social changes include conflicts arising from the project, gender exclusion, and health and safety issues. Additionally, challenges such as gender-based violence (GBV), sexual exploitation and abuse/sexual harassment (SEAH), HIV/AIDS, child labour, and aid dependency threaten the project's sustainability.

Climate change impacts Chiredzi and Chivi Districts

Climate change in Chivi and Chiredzi districts is worsening the already variable and insufficient rainfall, leading to increased temperatures and reduced water availability, which significantly impact livestock and agriculture. The rising frequency and severity of droughts reduce water levels, crucial for irrigation and livestock, while higher temperatures cause heat stress in cattle, decreasing their productivity and survival rates. These challenges directly threaten the beef value chain and the livelihoods of local farmers, as they struggle to maintain consistent crop yields and healthy livestock.

Cumulative impacts

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) may experience cumulative effects from ongoing activities in Chivi and Beitbridge. Key areas of focus include current agricultural practices that impact soil health and water resources, alignment with Zimbabwe's climate change policies, the environmental impact of local economic activities like small-scale mining. Some on-going projects being implemented by NGOs and other agencies in the project area may have complementary effects, which enhance ZAVaCEP's overall sustainability.

1.8 ENHANCEMENT/MITIGATION MEASURES AND COMPLEMENTARY INITIATIVES

The ZAVaCEP's Environmental and Social Management Plan (ESMP) outlines a detailed framework to enhance positive impacts and mitigate potential adversities across Chivi and Chiredzi districts. These measures are designed not only to foster economic growth but also to ensure sustainable development and social inclusivity within the project's scope.

Beneficial Impact Enhancement Measures

The project aims to bolster economic growth by modernizing infrastructure crucial to the beef and leather value chain. This includes upgrading and rehabilitating dip tanks, constructing feed hub and hide processing facilities. By establishing cooperatives and producer associations, the project seeks to empower smallholder farmers, enhancing their market access and bargaining power. Project support mechanisms, such as fodder packages and supply of genetic breeds are set to facilitate the purchase of quality livestock and inputs, thereby boosting production standards. Collaboration with private

sector aims to align products with high quality standards, enabling export opportunities and increased revenue for local communities.

To increase ZAVaCEP effectiveness, targeted training programs will equip smallholder farmers and rural communities with essential skills in sustainable animal husbandry. Market training and information sharing will enhance market linkages and ensure fair prices for agricultural products.

Skill development forms a cornerstone of the project's strategy, with partnerships established with vocational institutions to provide practical training in farming techniques, hide/leather processing, and business management. Certification programs will validate acquired skills, enhancing employability and encouraging entrepreneurship among local residents.

Environmental conservation efforts are prioritized through the promotion of sustainable farming practices such as rotational grazing and agroforestry. Community-based management committees will oversee the implementation of these practices, ensuring sustainable land use and biodiversity preservation. Awareness campaigns on biodiversity conservation will engage local communities, fostering a shared commitment to environmental stewardship.

Mitigation Measures for Adverse Environmental Impacts

In addressing potential environmental impacts, the project emphasizes proactive measures to mitigate risks. Measures to protect **flora and fauna** include vegetation replanting post-clearing and strict adherence to non-mechanized construction methods to minimize habitat disturbance. **Soil erosion** and rangeland degradation are managed through comprehensive soil and water management training, alongside the installation of sediment traps and promotion of rotational grazing practices.

To minimize **habitat fragmentation**, strategic planning and the use of native species in restoration efforts are employed, guided by thorough environmental impact assessments and adaptive management practices. Comprehensive **waste management** plans ensure proper disposal and recycling of construction waste, reducing environmental footprint.

Water pollution risks are mitigated through the establishment of buffer zones and riparian area management practices, coupled with erosion control measures to prevent sedimentation and agricultural runoff. Regular water quality monitoring ensures early detection and mitigation of potential pollution sources, safeguarding aquatic ecosystems.

Mitigating adverse impacts includes stringent measures against **biodiversity loss**, advocating habitat restoration and compliance with zoning regulations to preserve sensitive ecosystems.

Soil chemical pollution is curtailed through organic farming and integrated pest management, alongside rigorous regulation of agrochemicals to prevent contamination. The Pest Management Plan (PMP) will guide the management of pesticides and acaricides.

Air quality degradation is addressed via emission standards and dust suppression measures, while water pollution risks are minimized through buffer zones, erosion control, and proper waste management practices.

Animal health and genetic diversity are safeguarded through robust disease control measures and indigenous breed promotion, ensuring resilience against environmental pressures. Economic sustainability initiatives aim to reduce aid dependency through capacity-building and livelihood diversification within the beef and leather value chain.

Mitigation Measures for Social Impacts

Social impacts are addressed through inclusive stakeholder engagement and transparent decision-making processes, aimed at preventing exclusion and marginalization within project activities. Gender-sensitive policies promote equal participation, while platforms are provided for marginalized groups to voice their concerns and contribute to decision-making processes. The Stakeholder Engagement Plan has been developed as part of the ESMP to ensure strategic engagements with communities and all stakeholders.

Efforts to mitigate **social conflicts** include the establishment of village-level conflict resolution mechanisms and training programs on mediation and negotiation skills. The project Grievance Redress Mechanism, an associated document of the ESMP, will facilitate conflict resolution. Livelihood diversification and climate-smart agricultural practices mitigate community dependency on single income sources, promoting long-term economic resilience.

Socially, inclusive stakeholder engagement and transparent decision-making processes prevent exclusion and marginalization, supported by conflict resolution mechanisms and participatory decision-making. Health and safety protocols safeguard communities and workers, addressing occupational health risks and promoting disease prevention measures.

Efforts to reduce aid dependency focus on sustainable economic development and skills training, while comprehensive **HIV/AIDS programs** ensure health awareness and support, reducing stigma and promoting gender-sensitive approaches.

Overall, the ZAVaCEP's ESMP represents integrated effort to mitigate the project's impact, integrating economic growth with environmental stewardship and social equity. By prioritizing resilience-building measures and community empowerment, the project aims to create lasting benefits for Chivi and Chiredzi districts while mitigating potential environmental and social challenges.

1.9 ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

The monitoring and mitigation measures for the ZAVaCEP in Chivi and Chiredzi districts are stated in the ESMP. In summary the Project Implementation Unit (PCU) at the MLAFWRD will oversee this process, working closely with district environmental implementation units DPIUs and the EMA, while the MWACSMED will handle the monitoring of gender and social inclusion elements. The African Development Bank (AfDB) will also ensure adherence to environmental and social safeguards through supervision missions.Monitoring activities will include compliance checks, worksite management, execution of specific environmental and social tasks, and addressing emerging issues. Regular reporting will be conducted on a monthly, quarterly, biennial, or annual basis, depending on the monitored aspects. The program will review contractors' environmental and social management plans, mitigate negative impacts, assess the effectiveness of measures, and propose remedies for major impacts. A final environmental assessment will be conducted at the project's end to ensure all standards are met. Table 1 outlines the monitoring plan, detailing mitigation measures, indicators, monitoring frequency, and responsible parties. This plan aims to minimize the project's environmental and social footprint, promoting sustainable development in the Matabeleland South districts

Table 1. Project Impacts, Mitigation Measures And Monitoring Schedule					
Anticipated Environmental and Social Impacts	**Proposed Action/Measures and Objective of Management Measures**	**Monitoring and Reporting Indicators**	**Frequency of Monitoring (Timing)**	**Implementation Plan & Institutional Responsibilities**	**Cost Estimates (US$)**
PRE-CONSTRUCTION (PLANNING/DESIGN) PHASE					
Compliance with National environmental land and all applicable AfDB Environment and Social Safeguards Policies (PC1)	• Identify and assess the environmental and social impacts and risks including those related to gender, climate change and vulnerability (PC1MI) • Identify and address all pollution, biodiversity and occupational health and safety issues. (PC1M2)	- ESMPs prepared for each ZAVACEP Province with appropriate safeguards document developed and implemented	Once	Consultants/ EMA)	$20,000
Environment and Social Safeguards Training (PC2)	Safeguards training including AfDB operational safeguards for all District Agritex officers, Vet Services Department, District EMA Officers and MLAFWRD project implementing unit (PCU) PC22M1)	Project staff and district officers trained	Once	E & S Specialist EMA	Costs covered in Capacity building Table 8.
Community mobilization and consultation (PC3)	Prepare and implement a stakeholder engagement plan (SEP), inform all communities affected by the project implementation schedule and their involvement (PC3M1)	No of farmers/community groups engaged/sensitized	Once-Before commencement of construction	District EMA	Cost included in SEP
Health and Safety Issues (PC4)	Preparation of a health and safety plan for workers and impacted communities addressing issues including education of workers and impacted communities on measures to prevent the spread of HIV/AIDs through awareness campaigns, provision of safety equipment for workers (PC4M1), Child labour prohibited (PC4M2)	-Health and Safety plan prepared - Workshop on HIV/AIDs held for workers and community	Monthly	Contractor, District EMA	$10,000
Anticipated Environmental and Social Impacts	**Proposed Action/Measures and Objective of Management Measures**	**Monitoring and Reporting Indicators**	**Frequency of Monitoring (Timing)**	**Implementation Plan & Institutional Responsibilities**	**Cost Estimates (US$)**
CONSTRUCTION PHASE					

Vegetation, habitat and biodiversity losses (may occur during re-grassing in pasture development and construction of meeting sheds and pasture nursery sheds) for each rangeland (C1)	• Clearing of vegetation should be done only where necessary.(C1M1) • Use of ripper tine to minimise clearing in grasslands (Total estimated clearing about 70 hectares (20% of 350 hectares) non continuous open ground (C1M2) • At least 50% of any indigenous trees removed during clearing will be replaced (C1M3). • Ensure clearing is undertaken with minimal disturbance to the surrounding environment within the approved work sites. (C1M4)	Area re-vegetated or restored. Conservation of at least 50% of indigenous trees.	Monthly during construction period and pasture development	Contractor (E&S , M&E -PCUs) and respective District Environmental Officers)	Provided in contractor bids
Soil erosion (may occur after clearing vegetation) (C2)	• Prompt backfilling and refrain from trenching in rain season. (C2M1) • Progressive rehabilitation will be done so that no trenches are left uncovered for more than 48 hours. (C2M2) • Stockpiles will be made not to exceed a height 1 metre. (C2M3) • Utilize excavated material for construction and restoration works (C2M4)	Excavated soil banked and backfilled. In pasture fields trenching by ripper tine interspaced with existing grass vegetation minimising soi loss	Monthly during construction period	Contractor, E& S Specialist, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids
Soil Contamination (from leakages from machinery) (C3)	• Machinery that will be used for the project will be properly serviced to minimize fuel leaks to the environment. (C3M1) • In cases of spillages, in-situ bio-remediation will be done. (C3M2)	Daily and weekly checklists completed. Machinery services as per specification of manufacturer	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids Oil spillage remediation Small area affected $2,000
Solid Wastes (C4)	• Provide waste collection receptacles (C4M1) • Acquire approvals/permits for waste disposal sites/utilize (C4M2) • Sensitization of workers on waste management practices. (C4M3) • Conduct waste segregation, recycle (C4M4)	Number of waste bins at camp sites Permit for waste disposal sites. No litter left at work site	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids Litter collection receivers *12 for Mat South - $6,000
Water Pollution (C5)	• Avoid improper disposal of empty containers of pesticides and acaricides into river channels (C5M1) • Treat the waste water from dips before disposal (C5M2) • Limit of fertilisers on rainy days (C5M3)	Water pollution prevention measures in place		Contractor, M&E -PCUs and respective District Environmental Officers	Provided in contractor bids

Air pollution (C6)	• Sprinkle water in construction yards, on dusty roads and soil heaps to keep down the dust produced. (C6M1) • The on-site burning of cleared vegetation will be mitigated by making it available to local communities for use as firewood. This will prevent burning large quantities of cleared vegetation during single events. (C6M2)	Air quality monitored. No complaints from affected parties	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in contactor bids Provision of 2 air quality meters $2,000
Occupational Health and Safety (C7)	• Develop, implement and disseminate occupational health and safety guidelines (C7M1) • First aid kits to be available on construction site for use by the workers (C7M2) • Provide Personal Protective Equipment (PPE) to employees. (C7M3) • Sensitize community about ongoing works through notice boards, reflective liners and detours (C8M4)	OHS guideline in place (% of contractor staff aware of OHS measures and trained - Documented qualifications of first aider and safety officer - PPE usage -Informed public and employees -Gender and HIV/AIDs mainstreamed	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids OHS guide printing PPE $5,000
Noise Pollution (C8)	• Installation of noise mufflers on equipment (C8M1) • Periodic measuring of noise levels (C8M2)	Equipment with noise reduction provision Noise levels kept at less than 65 decibels during the day and 55 decibels during the night (*EMA regulations*)	Monthly	Contractor, M&E -PCUs, respective District Environ mental Officers	Provided in Contractor bids Provision of 2 sound level meters purchased for $200
Dust (C9)	• Reduced speeds in dusty roads (C9M1) • Vehicles transporting raw materials especially soil should be covered or avoid overloading to reduce dust emissions (C9M2) • Use of wet excavations/damping of roads (C9M3) • Wearing of masks when ripping the ground or digging construction trenches (C9M4) • Avoiding using of ripper tine on windy days (C9M5)	Measured levels of dust particles (air pollution levels) No complaints from affected parties	Monthly	Contractor, M&E -PCUs and District Environmental Officers	Provided in Contractor bids

Employment Opportunities (C10)	• Implementing clear and transparent procedures for recruitment of labour and sourcing of goods and services will enhance the positive impact. (C10M1) • Preference will be given to residents of local communities, in the case of unskilled labour, and preference given to local suppliers in the case of goods and services (C10M2).	Number of local communities' employed and/or procured as part of project interventions	Once during construction phase (construction is short and temporal)	Contractor, M&E -PCUs, District Environmental Officers	Provided in Contractor bids
Strained social infrastructure due to increased population (C11)	Construction of public toilets and washing facilities at construction sites (C11M1)	- Number of public toilets and washing at each construction camp facilities constructed	Three month intervals	Contractor, M&E -PCUs and respective District Environmental Officers	Contractor's cost
Conflicts due to differences in social, cultural norms/values (C12)	• Sensitization of workers on respect for cultural norms and values (C12M1) • Develop grievance mechanisms to handle related grievances (C12M2)	Number of workers sensitized Grievance mechanism in place	Three month intervals	Contractor, M&E -PCUs, District Environmental Officers	Costs Covered in GRM
Spread of HIV/AIDS (C13)	• To complement existing initiatives in the community, HIV/AIDS awareness and sensitization will be provided to personnel as part of health and safety awareness. (C13M1) • Development of brochures and other materials that will convey information about diseases and infections, regular provision of adequate prevention measures such as condoms; (C13M2)	HIV/AIDS is included in regular Health, Safety and Environment awareness No of condoms distributed	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Costs for awareness Covered in SEP Condom provision $3,000
Increased traffic related impacts including strain on existing roads infrastructure and traffic accidents and congestion (C14)	(Type of infrastructure is small and should be completed at each site between a week to a month.) (C14M1) • Develop and implement a traffic management plan (C14M2) • Erect road safety features (C14M3) • Limit speed around shops and other public places/institutions(C14M4)	Traffic management plan prepared Safety signage Speed limits set	Weekly during construction	Contractor, M&E PCU	Provided in contractor bids
Temporary loss of livelihoods, social disruption and unrest amongst farming communities (C15)	• Sensitization of communities on how to cope with changes. (C15M1) • Scheduling/phasing of works to minimize disruption- e.g. when pasture lands will be ploughed. Appropriate time to rehabilitate dip tanks (C15M2) • Use of alternative dip methods such as pour-on during rehabilitation and construction(C15M3)	Number of farmers sensitized Schedule of works agreed with community	Monthly	Contractor, M&E -PCUs	Engagement costs covered in SEP Cost of pour-on dip acaricides $10,000

Anticipated Environmental and Social Impacts	Proposed Action/Measures and Objective of Management Measures	Monitoring and Reporting Indicators	Frequency of Monitoring (Timing)	Implementation Plan & Institutional Responsibilities	Cost Estimates (US$)
OPERATION AND MAINTENANCE PHASE					
Improved water Supply for productive uses (OM1)	This positive impact will be enhanced by developing or strengthening Dip tank and water committees in the communities and raising awareness on water conservation and efficiency (OM1M1)	Water User Association developed. Training on water conservation and water use efficiency	Annually	DPIUs, M&E -PCUs, respective District Environmental Officers	$20,000
Employment Opportunities from pasture development, cattle restocking, Hide collection and processing (OM2)	This positive impact although limited in scope will be enhanced by: • Implementing clear and transparent procedures for recruitment of labour and sourcing of goods and services. (OM2M1) • Giving Preference to residents of local communities, in the case of unskilled labour, and preference given to local suppliers in the case of goods and services. (OM2M2)	Number of local communities' employed and/or procured as part of project interventions.	Three month interval	M&E -PCUs and respective District Officers	No direct cost to project
Improved Communication and enhanced capacity for livestock market (OM3)	This is positive impact will be enhanced by • Linking many farmers to the stock market platform (OM3) • Regular dissemination of market information by Agritex (OM3M1) • Training staff and farmers on communication skills (OM3M3)	• Number of farmers trained • Level of market information available to farmers • Level of communication competence among staff and farmers	Annual	District Agric Officer, M&E -PCUs, and respective District Environmental Officers, Local Leaders	Training $10,000 Information dissemination covered in SEP
Improved Farmers access to cattle breeds (OM4)	This positive impact will be enhanced by: • Accrediting distribution agents for seedlings and breeds (OM4M1) • Create awareness among farmers (OM4M2) • Multiply enough seedling and breeds for farmers use (OM4M3)	• Number of accredited distributors • % level of awareness in communities • Number of nurseries and improved seedlings and breeds • Number of farmers using improved species	Annual report and when needed	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$10,000

Increased production/yield of cattle, fodder and Income (OM5)	This positive impact will be enhanced by: • Wide dissemination of improved seedling and breeds (OM5M1) • Securing good improved breeding stocks (OM5M2) • Training of farmers and extension workers production and use of organic fertilisers (OM5M3)	•No of secured breed stock • Quantity of yield of carcass for cattle • Level of Improvement in income of farmers • Level of sales of organic fertilizers from cattle production system	Annual reports	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$10,000
Increased market access through export and Improved Food Quality in beef Value Chain (OM6)	• Increased market information and targeting premium prices (OM6M1)	• Level of market information among stakeholders • No of farmers accessing new markets (benefiting from market)	Annual	DPIUs, M&E -PCUs, and respective District VET officer	$15,000
Reduction in Diseases, Improved Nutritional Security and Reduced threat to public Health (OM7)	• Increase in distribution and use of improved cattle breeds (OM7M1) • Strengthening of existing biosecurity (OM7M2) • Training of vet practitioners (OM7M3) • Regular vaccination of cattle and application of preventive measures (OM7M4) • Regular disease surveillances (OM7M5) • Establish more quarantine centres (OM7M6) • Create more awareness (OM7M7)	• number of farmers owning improved cattle breeds • Number of trainings for vet personnel on new skills • Record of vaccinations and frequency of surveillance per year • Number of quarantine centres • Reduction in cattle disease incidences	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Dipping committees and rangeland committees	$20,000
Pollution of Air and Bad odour (from cattle production) (OM8)	• Prompt evacuation of waste and cleaning pens (OM8M1) • Train farmers on use of appropriate stocking density (OM8M2) • Recycle waste to organic fertilizer (OM8M3) • Training of personnel on handling animal waste (OM8M4) • Monitoring by vet and district environmental technicians (OM8M5)	• Number of farmers trained • Schedule of monitoring provided	Annually	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$10,000
Solid waste at rangelands and dip tanks (OM9)	Provide waste collection receptacles (OM9M1)	• Number of waste bins at camp sites and dip tanks • No litter left at work site	Monthly	M&E -PCUs and respective District Environmental Officers	$4,000

Degradation of land due to poor agronomic practices (OM10)	• Sensitise farmers on adoption of improved livestock technologies. (OM10M1) • Promote soil conservation practices and labour saving technologies (OM10M2)	• Number of farmers trained in improved livestock practices • Soil conservation practices implemented	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$20,000
Soil and Water Pollution From feedlots also effluent water from dips tanks (OM11)	• Encourage use of environmentally friendly pesticides and Acaricides. Use PMP. (OM11M1) • Regulate use of fertilizers, pesticides and herbicides (OM11M2) • IPM training farmers on safe use and handling of agrochemicals (PMP). (OM11M3) • Recycle water (OM11M4) • Monitor surrounding water quality monitoring (OM11M4)	• Approved dip chemicals used • Byelaws on Agro-chemicals documented and disseminated • IPM Manual developed for farmers Number of IMP training conducted	Quarterly	DPIUs, E&S, M&E - PCUs, and respective District Environmental Officers, Local Leaders	Covered in PMP
Decline in volume of ground water because of over abstraction and Impact on water Users and Rivers, reservoirs (OM12)	• Establish and strengthen Water User Associations (OM12M1) • Train association on water conservation (OM12M2) • Monitor levels of borehole water (OM12M3)	• Number of Dip committees established and strengthened • Functional water scheduling protocol • Records of borehole water levels	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders, Farmers	$10,000
Accelerated or frequent breakdown of infrastructure and equipment (OM13)	•Training of farmers on maintenance and operation of water structures. (OM13M1) •Provision of equipment, tools and manuals. OM13M2) •Provision of incentives to maintain infrastructures OM13M3)	% Farmers trained on maintenance. Training manuals for Dip management; borehole maintenance, , O&M, equipment and tools maintenance.	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders, Farmers	$5,000 training $5,000 for tools and manuals
Genetic Losses in livestock due to external breeds	• Monitor calving performance • Change bulls every two years to avowing inbreeding • Collaborate and share information with breeding centre	Number Calving success Records of abnormalities Frequency of bull changes undertaken	Yearly	Animal Health Specialists, Farmers Researchers	$4000

Spread of HIV/AIDS (OM14)	• To complement existing initiatives in the community, HIV/AIDS awareness and sensitization will be provided to personnel as part of other health and safety awareness. (OM14M1) • Development of brochures and other materials that will convey information about diseases and infections, (OM14M2) • Regular provision of adequate prevention measures such as condoms; (OM14M3)	HIV/AIDS is included in regular Health, Safety and Environment awareness	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Costs covered in SEP
Occupational Health and Safety (OM15)	• Develop, implement and disseminate occupational health and safety guidelines (OM15M1) • First aid kits to be available on site for use by the farmers , (OM15M2) • Provide Personal Protective Equipment (PPE) to farmers at dip tank sites and at rangelands . (OM15M3) • Sensitize community about ongoing works through notice boards, reflective liners and detours (OM15M4)	OHS guideline in place Documented qualifications of first aider and safety officer PPE usage -Informed public and employees Gender and HIV/AIDs mainstreamed	Monthly	M&E -PCUs and respective District Environmental Officers	$6,000
TOTAL amount for MONITORING					**$209,200**

1.9.1 CONSULTATIONS & ENGAGEMENT WITH STAKEHOLDERS

The ZAVaCEP places a strong emphasis on engaging stakeholders throughout its lifecycle to ensure transparency, inclusivity, and effective mitigation of environmental and social impacts. Stakeholder consultations are integral to identifying key issues, gathering community feedback, and ensuring broad support for proposed mitigation measures.

1.9.2 Rationale for Consultation and Disclosure

Consultations are fundamental to addressing environmental concerns and ensuring public participation in development projects. From the outset of preparing the ESMP, extensive consultations were conducted and will continue during subsequent phases. These efforts aim to inform stakeholders about project objectives, potential impacts, and mitigation strategies while incorporating their perspectives into decision-making processes.

The objectives of stakeholder engagement include providing clear, accurate information about the project, gathering community views and concerns, and incorporating stakeholder input into project planning. This process not only enhances transparency but also helps in resolving conflicts, reconciling interests, and fostering community ownership.

1.9.3 Methodology of Engaging Stakeholders

Stakeholders will be engaged through diverse methods tailored to ensure inclusivity and effective communication. Public consultative meetings will bring together communities and technical officials from relevant government ministries, providing a platform for detailed discussions and feedback. Key informant interviews with local leaders and stakeholders will provide additional insights, while physical site visits facilitated direct interactions and understanding of local contexts.

Inclusive participation will be made a priority, considering gender dynamics and diverse age groups to ensure equitable representation and participation in decision-making processes.

1.9.3.1 Consultative Meetings Held During the Preparation of ESMP

Several consultative meetings (Table 2) were conducted during the project's preparation phase across targeted communities in Chivi and Chiredzi districts. These meetings adhered to strict guidelines for consultation and participation, ensuring that stakeholders were well-informed and actively engaged. Meetings were conducted in local languages—Shona, Ndebele, and English—to ensure comprehension and participation from all community members.

Table 2. Stakeholder Engagements Held In Masvingo Province

Date	**Place visited**	**Number attended (Males , Females)**		**Issues raised /Raised**
		F	**M**	
29th May 2024	Kubatana	7	17	• Water challenges, the nearby dam dries up and go to fetch water an alternative water sources which is 11km away • The dip tank structures need rehabilitation
29th May 2024	Madamombe	3	2	• A weir which used to supply water had collapsed, the go to collect water from alternative water source which is about 7km • Livestock handling facilities need rehabilitation
29th May 2024	Chivi district Local Government	3	4	

30th May 2024	Chiredzi district Local Government	3	4	• Outbreak of diseases, • High livestock mortalities • Water shortage for livestock
30th May 2024	Allium Hides	0	5	• Low prices of hides • Low quality hides from abattoirs • High prices of hide processing chemicals
29th May 2024	Chitowa	41	33	• Water for both dipping and drinking for livestock, and human use is inadequate and is collected from a distance of 8km. There grazing area supply inadequate feed and pastures for livestock production

Each consultation session began with comprehensive disclosure of project information, including environmental and social considerations, to facilitate informed participation. This inclusive approach will continue throughout the project lifecycle, adapting as needed to address emerging issues and incorporate community feedback.

1.9.3.2 Key Issues Considered During Stakeholder Engagements

Stakeholder engagements identified several critical issues that informed the development of the ESMP. These included ecological sensitivities, such as protected areas and cultural sites, ensuring minimal impact on these areas. Environmental impacts, socio-economic considerations, and socio-cultural dynamics were also thoroughly discussed to propose appropriate mitigation measures.

The consultations highlighted the importance of occupational health and safety, trans-boundary impacts, and cumulative effects, underscoring the project's commitment to holistic impact assessment and management.

The ZAVaCEP developed a project stakeholder engagement plan (SEP) to demonstrate its commitment to engage and consult communities and all stakeholders effectively for the sustainability of the project. Ongoing consultations will remain integral to adapting strategies, ensuring stakeholder satisfaction, and achieving long-term environmental and social stewardship.

1.9.4 INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

The responsibilities and institutional arrangements for the implementation of the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) are described below.

The Borrower (Zimbabwe government) is primarily responsible for monitoring and reporting project results. The project involves collaboration between various organizations, including the Ministry of Finance and Economic Development (MoFED) as the Executing Agency, and other ministries like Industry and Commerce, Ministry of Lands, Agriculture, Fisheries, Water and Rural Development, MWACSMED, for implementation.

Project Management Structure: The project will be managed by a Program Management Unit (PMU) within MoFED, with support from Implementing Agencies (IAs) like Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD), each having their own Project Coordinating Units (PCUs). At provincial and district levels inter-ministerial or departmental unit , the District Project Implementation units (DPIUs) will be responsible for the on-the ground interventions (see Figure 2).

District Project Implementing Units (DPIU)

Inter-Departmental Focal persons

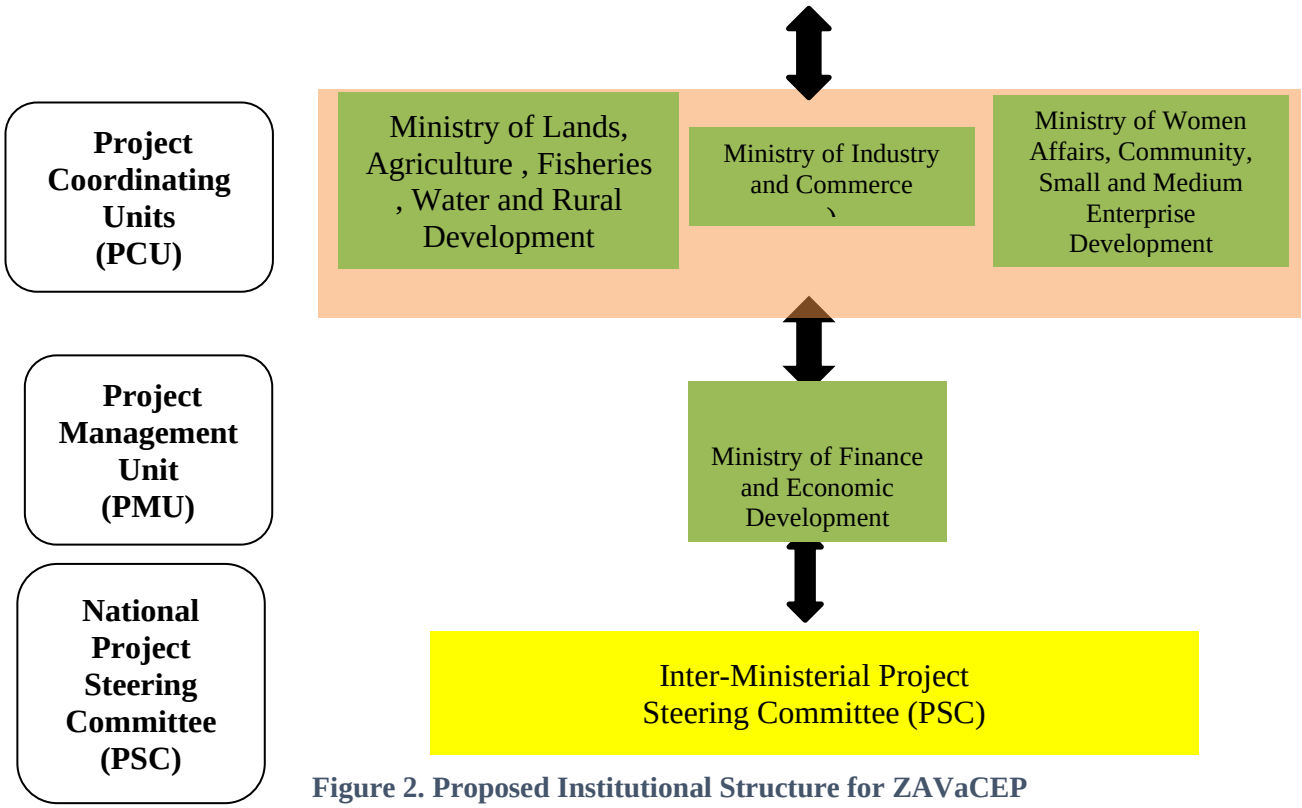

Figure 2. Proposed Institutional Structure for ZAVaCEP

Each PCU will have the following positions:

Positions in the Project Coordinating Units at National Level

- Project Coordinator; (PC-PCU)
- Procurement specialist (PS-PCU);
- Technical specialist (TS – PCU):
- Project Accountant (PA – PCU):
- Monitoring and Evaluation specialist (M&E-PCU):
- Social and Environmental Specialist (E&S- MLAFWRD PCU).

Procurement Arrangements: Procurement activities will follow Bank Group guidelines and will be coordinated by the PMU, with involvement from procurement officers in the implementing ministries. Memoranda of Understanding (MoUs) will be used for engaging services of project partners and institutions.

Financial Management: Financial management will be handled by the PMU using the PASTEL financial management system. The African Capacity Building Foundation (ACBF) will manage the project's Special Account, and disbursements will follow Bank rules.

Monitoring and Evaluation: A comprehensive Monitoring and Evaluation (M&E) framework will be implemented, overseen by M&E specialists at the national and district levels, ensuring compliance with Environmental and Social Management Plans (ESMPs) and reporting on project progress.

Overall, the structure ensures clear roles and responsibilities among stakeholders, robust procurement and financial management practices, and effective monitoring and evaluation mechanisms for project oversight and compliance. Table 3 highlights the respective responsibilities during the project phases.

Table 3. Project Phases and Responsibilities

Project stages	Activities	Responsible	Collaboration with	Service Provider
Pre-Implementation	**Mobilization and planning** - Formation of implementation unit - allocation of budgets resources, personnel	PMU PSC IAs	AfDB local	
	Training and Capacity building - Training staff and stakeholder on ESMP objectives and best practices - Capacity for monitoring	PCUs PMU E&S	RDCs DPIUs Community leaders	Envi and Social safeguard consultant or EMA
	Stakeholder engagement - Informing and Consultations - Finalize grievance mechanism	E&SDPIUs	Community leaders	Consultant for GRM
Implementation Stage	**Compliance and enforcement** - ensuring compliance with E & S regulations - Independent Performance audits - Implementing Mitigation measures	E&S TS- DPIUs	EMA M&E- PMU	Contractors and Sub-contractors And if needed consultant
	Monitoring and reporting - Regular monitoring - Documentation and reporting - Annual Performance audits	M&E-PCU TS- DPIUs	EMA M&E- PMU	Independent E&S auditor for the annual performance audit.
	Corrective actions - Identifying non-compliance or unexpected impacts - Adjusting mitigation measures	E&S	PC-PCU	E&S Consultant if required
Operational	**Ongoing monitoring and evaluation** - Continuous monitoring - Maintenance of env and social safeguards	E&S M&E-PCU TS- DPIUs	EMA M&E- PMU	
	Stakeholder communication - Keeping stakeholders informed - Addressing stakeholder concerns	E&S M&E-PCU TS- DPIUs	Local Leadership PC- PCU	Community Liaison officers
Evaluation and feedback	**Performance evaluation** - Periodic Evaluation of ESMP outcomes - Comparing actual and predicted impacts	E&S M&E-PCU M&E -PMU TS-DPIU	PC-PCU PM-PMU	External reviewers/ Consultants
	Feedback and improvement - Incorporating feedback from evaluation - Revising ESMP as needed	E&S M&E- PCU M&E-PMU	PC-PCU PM-PMU	Consultant if needed
Closure Stage	**Final reporting** - Prepare final ESMP compliance report	PC-PCU PM-PCU	AfDB Local office	PCU teams PMU team

	- Document lessons and best practices - Completion Audit			Consultant for audit
Post-Closure Stage	**Post implementation Monitoring** - Post closure monitoring to ensure long-term stability - Address any residual impacts	E&S	PC-PCU PM-PMU	PCU teams PMU team
	Stakeholder Engagements - Engage stakeholders to confirm satisfaction with project's closure - Maintain open communication for any future issues	E&S	Local leadership	PCU teams PMU team

1.9.5 ESTIMATED COSTS

The ESMP implementation budget covers all costs for executing the Environmental and Social Management Plan (ESMP) requirements and recommendations. The ESMP's implementation costs are estimated at US$0.652 million (Table 4).

Table 4. The Cost for Implementing ESMP in Masvingo Province

Phase	Year 1	Year 2	Year 3	Year 4	Total
Preconstruction Phase mitigation measures	$ 28,000.00				$ 28,000.00
Construction phase Measures	$ 24,200.00				$ 24,200.00
Operation and maintenance phase awareness and Monitoring activities	$ 26 000,00	$33 000,00	$33 000,00	$27 000,00	$119 000,00
Capacity Building	$ 29 000,00	$ 9 000,00	$ -	$ 8 000,00	$ 46 000,00
Stakeholder Management plan	$ 20 000,00	$20 000,00	$20 000,00	$10 000,00	$ 70 000,00
Grievance redress Mechanism	$ 20 000,00	$10 000,00	$10 000,00	$10 000,00	$ 50 000,00
Pest management	$ 30 000,00	$20 000,00	$20 000,00	$20 000,00	$120 000,00
Decommissioning					$129 000,00
SUB total					$ 586 200,00
Contingency 5%					$ 29 310,00
GRAND TOTAL					**$ 615 510,00**

1.9.6 IMPLEMENTATION SCHEDULE

The ESMP ensures the project incorporates environmental and social considerations, promoting sustainability across its components and sub-components. Key areas include implementing and managing the ESMP, preparing site-specific plans, training staff and farmers, supervising ESMP activities, and establishing review and monitoring mechanisms (Table 5) .

Training staff involved in project implementation is essential to enhance their skills in handling environmental and social issues. Building the capacity of staff from various units, departments, and sections—especially those directly involved in the project—will enable effective review and monitoring of environmental issues. This ensures compliance with national policies, laws, regulations, and African Development Bank (AfDB) safeguard policies.

Table 5. ZAVaCEP Implementing Schedule

	ACTIVITY	Timeframe	Responsibility
1	Preparation of site-specific ESMPs	First 3 months of inception phase	PCU, EMA

2	Capacity Building -staff- ESMP components	Year 1 first 6 months	PMU, PMU, EMA
3	Capacity building farmers – ESMP components	Year 1 – 4th-12 month	M&E-PCU
4	ESMP monitoring – Regular Supervision	Through Project Life	PCUs, PMU, DPIUs.
5	ESMP Monitoring Control Missions	Annually during Project period	PCU, AfDB
6	Institutional Capacity Strengthening	When needed	PCU, PMU
7	Stakeholder consultations and public awareness	Throughout project life and as when needed	PCU, DPIUs
8	GESI mainstreaming	Bi-annually workshops	MWACSMED
9	HIV/AIDS mainstreaming	Quarterly campaigns	Ministry of Health & Child Welfare

1.9.7 DECOMMISIONING

The decommissioning phase of the Zimbabwe Value Chain Enhancement Project (ZAVaCEP) will focus on dismantling and removing non-functional infrastructure while preserving and repurposing functional assets for community use. This process will involve minimal demolition, with an emphasis on assessing and addressing environmental impacts through soil and water testing, as well as rehabilitation of disturbed land. Proper disposal, recycling, and repurposing of materials will be prioritized to minimize waste and environmental contamination. Social considerations will include engaging local stakeholders to address concerns and ensure their needs are met, with a focus on developing a sustainable exit strategy that promotes long-term community resilience and environmental sustainability. Transparent documentation and reporting will ensure compliance with legal requirements and reinforce the project's positive legacy.

1.9.8 CONCLUSION

The Environmental and Social Management Plan (ESMP) for the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) is designed to meet the African Development Bank's (AfDB) safeguard requirements. It identifies the project's main environmental and social impacts and outlines measures to mitigate these impacts, promoting sustainable development and compliance with standards. The project's environmental impacts include land degradation, water depletion, pollution, and increased greenhouse gas emissions. To address these, the ESMP promotes sustainable practices like crop rotation, integrated pest management, wastewater treatment, reforestation, and energy-efficient technologies. Regular monitoring and stakeholder capacity building will ensure compliance and minimize negative impacts.

Socially, the project is expected to generate employment, improve infrastructure, and enhance market access, benefiting local farmers, youth, and women, thereby fostering economic empowerment and social stability. The ESMP includes stakeholder engagement and capacity-building programs to ensure inclusive participation and address social inequalities. It also establishes grievance redress mechanisms to address community concerns promptly. To enhance positive impacts, the ESMP emphasizes continuous training, community consultations, and a robust monitoring framework. Overall, by implementing the ESMP, the ZAVaCEP aims to promote sustainable development, protect natural resources, and improve local communities' well-being, ensuring long-term prosperity for Zimbabwe's agricultural sector.

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2. INTRODUCTION

The Zimbabwean government is requesting a grant of UA 4.000 million (USD 5.310 million) from the African Development Bank Fund to support the development of the beef and leather value chain through the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP). Additionally, the government will contribute AU 0.537 million (USD 0.713 million), with beneficiaries contributing a small 1.5%. This document outlines the Environmental and Social Management Plan (ESMP) for the ZAVaCEP project in the Masvingo Province, specifically targeting the Chivi and Chiredzi Districts.

The ESMP ensures that the ZAVaCEP aligns with national environmental and social regulations and the African Development Bank's safeguards policies. Its primary goal is to comply with all relevant environmental and social standards, mitigating potential negative impacts while enhancing positive outcomes. The ESMP also outlines necessary mitigation, enhancement, monitoring, consultative, and institutional measures to address adverse environmental and social impacts and enhance the project's benefits. Additionally, the ESMP includes capacity-building measures to strengthen the grantee's ability to effectively manage these safeguards throughout the project's lifecycle.

2.1 Background & Context

Agriculture plays a crucial role in Zimbabwe’s economy, contributing around 16% to the overall output, but it remains underdeveloped in terms of value addition. This sector, which includes crops, livestock, and fisheries & aquaculture, is vital for employment, income generation, livelihoods, and poverty reduction. Agriculture accounts for 12-18% of GDP, provides jobs and income to 60-70% of the population, supplies 60% of raw materials for industry, and generates nearly 40% of export earnings. Key crops include maize, tobacco, wheat, and sugarcane. With 67% of Zimbabwe's population living in rural areas and primarily engaged in smallholder farming, improving agricultural productivity is essential for reducing poverty, hunger, and malnutrition.

The Agriculture Transformation Strategy (2019) aims to create a robust sector to help Zimbabwe achieve Vision 2030, addressing issues like population growth, low productivity, and climate change. The National Agriculture Policy Framework (2018-2030) outlines a plan for sustainable investments to enhance agricultural productivity and competitiveness, covering crop and livestock production, marketing, and trade.

Livestock production is a significant part of Zimbabwe’s agriculture, contributing about 30% of the agricultural GDP, primarily from small-scale communal farmers. It is critical for livelihoods and inclusive growth, providing high-quality protein and essential nutrients for food and nutrition security. However, challenges such as low productivity, poor genetics, water scarcity, and climate-induced animal diseases require strategic interventions to improve productivity and ensure safe trade.

To address these challenges, the Government of Zimbabwe implemented the AfDB-funded Support to the Beef and Leather Value Chain Technical Assistance Pilot Project (SBLVCP) in Matabeleland North and Bulawayo Provinces. This project aimed to stimulate economic growth through value addition in the beef and leather sectors, addressing bottlenecks and involving all stakeholders for a comprehensive approach. The success of the SBLVCP led the Government to seek a similar project for wider implementation.

The ZAVaCEP seeks to replicate and expand the successful elements of the SBLVCP across Matabeleland South, Masvingo, and Bulawayo Provinces. The project will emphasize capacity building, providing potable water, enhancing livestock productivity, value addition, and private sector

development. It aligns with Zimbabwe's National Development Strategy 1 (NDS1: 2021-2025), Vision 2030, and the Zimbabwe Leather Sector Strategy (2021-2030).

To ensure compliance with national environmental legislation and AfDB's environmental and social obligations, this ESMP was developed in consultation with the Zimbabwe Environment Management Agency (EMA). In accordance with the Environment Management Act 20:27 Section 98, a prospectus outlining potential project impacts and mitigation measures was submitted to EMA's Director-General for consideration prior to the development of this Social and Environmental Management Plan.

2.2 Project Category

The ZAVaCEP is designated as a Schedule 2 project under Zimbabwe's Environmental Management Act (EMA), which aligns with the African Development Bank's (AfDB) Environmental and Social Assessment Procedures (ESAP) category 2. This categorization indicates that the project is anticipated to have localized environmental and/or social impacts that are less severe than those associated with Schedule 1 projects. Such impacts can be effectively managed through appropriate mitigation measures or by adhering to internationally recognized design criteria and standards.

In accordance with the Bank's ESAP, Category 2 projects are expected to follow a more streamlined process compared to Category 1 projects, typically requiring an Environmental and Social Management Plan (ESMP) rather than a comprehensive Environmental Impact Assessment (EIA). This approach ensures that any potential environmental impacts are adequately addressed and managed, aligning with Zimbabwe's regulatory framework for Schedule 2 projects under the EMA, which also involve site-specific impacts that can be mitigated through proper management plans.

To ensure compliance with the Zimbabwe Environmental Management Act for projects classified as AfDB Category 2, the process starts with a screening phase to determine whether the project falls under Schedule 1 or Schedule 2 of the EMA. Given the acceptance of the prospectus by EMA, which confirmed that ZAVaCEP aligns with Schedule 2, an ESMP is required. This ESMP will outline specific mitigation measures designed to address potential environmental impacts. Once developed and approved by the AfDB, the ESMP will be submitted to the Environmental Management Agency (EMA) for review and approval. After receiving EMA's approval, the next step is the effective implementation of the ESMP, ensuring that all prescribed mitigation measures are executed. Continuous monitoring throughout the project lifecycle is essential to maintain compliance with environmental management requirements, thus protecting the environment and adhering to regulatory standards.

2.3 Project Justification

Livestock production is a vital part of Zimbabwe's agricultural sector, accounting for approximately 30% of the agricultural GDP and generating a substantial portion of the cash flow for small-scale communal farmers. The Zimbabwe Livestock Growth Plan underscores the sector's importance to household and national food and nutrition security, foreign currency earnings, and rural livelihoods. Despite its significance, the sector faces challenges such as low productivity, limited water supply for dip tanks, and climate change-related issues that must be addressed to improve livestock productivity and ensure safe trade.

The ZAVaCEP will aid Zimbabwe's efforts by building capacity, providing potable water, enhancing plunge dipping infrastructure, boosting livestock productivity, adding value, and promoting private sector development. This support aims to contribute to macroeconomic stability, job creation, and poverty reduction. The project seeks to replicate and scale up successful activities from the SBLVCP

and introduce new interventions focused on sustainable, climate-resilient livestock production. Activities will include controlling livestock diseases, drilling community-level boreholes for potable water, rehabilitating dip tanks, training leather product manufacturers, and supporting farmers in animal husbandry.

2.4 Need and objectives of ESMP

To revitalize the leather sub-sector, the Zimbabwean government has launched the Zimbabwe Leather Sector Strategy (2021-2030), a detailed plan aimed at improving the competitiveness of the leather value chain. This strategy envisions substantial investments to support small-scale farmers within the livestock sub-sector. Key to the success of these initiatives are Environmental and Social Management Plans (ESMPs), which guide the sustainable execution of projects under the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP).

The primary objectives of the ESMP are to:

- Identify and assess the potential environmental, climate change, and social impacts associated with the proposed development projects. This ensures a comprehensive understanding and addressing of any adverse effects.

- Propose measures to avoid, minimize, mitigate, compensate for, offset, and monitor these adverse impacts while maximizing development benefits. This includes providing clear guidelines and strategies to integrate environmental and social due diligence into every aspect of project implementation.

- Ensure that all project activities comply with national environmental legislation and adhere to international standards, including the African Development Bank's operational safeguards policies.

By meeting these objectives, the ESMP serves as a vital framework for managing adverse impacts of project and enhancing positive ones during the project life cycle and ensuring sustainable and responsible development within Zimbabwe's beef and leather sector.

2.5 Scope of Work

The scope of work for developing the ESMPs encompasses the following tasks:

- Conducting thorough environmental and social analyses of the project portfolio and priority investments.
- Reviewing pertinent documentation and conducting site visits to assess the environmental and social conditions of the project locations.
- Evaluating the potential direct, indirect, and cumulative impacts of project activities.
- Defining the institutional arrangements, roles, and responsibilities necessary for the adoption and implementation of the ESMP.
- Conducting gender analyses to identify and address gender gaps and opportunities within the project.
- Developing a Grievance Redress Mechanism and recommending design adjustments to enhance positive impacts and mitigate negative ones.
- Estimating the budgetary requirements for implementing the ESMP throughout the project execution phase.

- Preparing a comprehensive ESMP report that complies with Zimbabwean regulatory requirements and the African Development Bank's guidelines.

This consultancy is designed to ensure that the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) aligns with national development strategies, fosters sustainable livelihoods, and contributes to economic stability, job creation, and poverty reduction in the targeted provinces.

2.6 Methodology

The development of the SBLVCP ESMP followed a methodical approach, starting from the initial document review to the final report compilation. This process began with a desktop study, reviewing relevant project documents such as the African Development Bank (AfDB) safeguard instruments, project proposals, baseline reports, and documentation from similar projects within Zimbabwe. This was followed by an in-depth examination of various legal and policy documents, including national policies, regulations, legislation, and pertinent international instruments and conventions.

Additionally, a team comprising government experts and the consultant conducted site visits to selected intervention areas to observe and assess the existing environmental conditions. These visits informed the creation of the environmental baseline for the Environmental and Social Management Plan (ESMP). During the impact assessment phase, an extensive literature review was carried out to identify baseline receptors and understand the socio-economic and environmental characteristics of the project areas. Potential interactions between the project and current or future site conditions were then evaluated, predicting the likely environmental impacts. This analysis included direct, indirect, secondary, cumulative, short-term, long-term, permanent, temporary, positive, and negative impacts. Mitigation measures were identified to avoid, reduce, or offset adverse impacts.

The significance of potential impacts was assessed using professional judgment, field assessments, stakeholder consultations, and desktop analysis, considering the interaction between biophysical and socio-economic environments and the characteristics of the affected environment. The ESMP proposes specific mitigation measures to ensure environmental protection throughout the project lifecycle. Stakeholder consultations were integral to the process, with community engagement meetings held to explain the project, gather concerns, and incorporate local inputs into the ESMP. The final ESMP includes the identification of potential impacts, proposals for mitigation or enhancement measures, assignment of responsibilities, an implementation timeline, and a monitoring strategy to ensure effective implementation, complete with cost estimations for the monitoring plan.

3. DESCRIPTION

3.1 Introduction and context

The ZAVaCEP project aims to enhance the beef and leather value chain in Zimbabwe as a way to reduce poverty and increase income for the targeted communities. This aligns with the economic development goals of the country. Specifically, the National Agriculture Policy Framework (NAPF) 2018-2030 envisions transforming the Agriculture sector in Zimbabwe into a prosperous, productive, and sustainable industry that enhances food security and economic resilience through modernizing farming practices, promoting value addition, and integrating smallholder farmers into the mainstream economy.

The Sustainable Beef and Leather Value Chain Project (SBLVCP) aim to realise these goals and also address challenges such as disease outbreaks, infrastructure deficiencies, limited market access, and technological gaps. By embracing opportunities for growth such as expanding export markets, enhancing value addition, embracing technological innovations, and fostering public-private partnerships the project can increasing the sector's contribution to GDP and creating sustainable economic growth.

3.2 The Project Components and Activities

The SBLVC project consists of 4 components proposed to achieve the project objectives (Annex 2). The components are, (i) **Component 1 –** Climate Smart Agricultural Productivity and Value Chain Enhancement, **(ii) Component 2 –** Supporting Climate Resilient and Community Level-driven Infrastructure Development **(iii) Component 3 –** Knowledge Management, Policy Development, Monitoring and Evaluation, **(iv) Component 4-** Project Management. Environmental, Climate Change and Green Growth issues have been incorporated in the Project design. This section summarizes the four Project components, sub-components, major activities.

Component 1: Climate Smart Agricultural Productivity and Value Chain Enhancement

The ZAVaCEP Project's Component 1 focuses on enhancing agricultural productivity and value chains through climate-smart practices. This component is divided into three sub-components, each targeting specific areas of improvement to support sustainable livestock production, agri-business development, and MSME agro-processing.

Sub-component 1.1: Support to Sustainable Livestock Production and Productivity

The project aims to enhance sustainable livestock production through comprehensive measures. These include rehabilitating 8 plunge pool dip tanks in the province to ensure year-round functionality and installing 8 solar-powered boreholes with overhead tanks and reticulation systems to provide reliable water sources. Water troughs near boreholes will be constructed to improve livestock access to water, crucial for their health. Climate-smart rangeland management practices will cover designated hectares, featuring water and soil conservation structures and integrated catchment management. Pasture development will be promoted across 300 hectares (150 hectares for each district) through the cultivation of legumes and grasses. Additionally, livestock productivity will be supported by distributing bulls with superior genetics and providing feed formulation equipment for two feed processing hubs to enhance feed quality. This component will have a project a budget allocation of UA 0.869 million (25.7%).

Sub-component 1.2: Support to Agri-Business and Value Chain Enhancement

In enhancing the agri-business and value chain, this project integrates various strategies. It includes conducting training courses focused on quality standards, market linkage, and product development within the leather value chain, aimed at enhancing the competitiveness of SMEs and clusters engaged in leather processing. The initiative supports local and regional exhibitions to showcase products, fostering market access and networking opportunities. Knowledge exchange visits to countries with established beef production and leather industries provide valuable insights into industry best practices. Community-level feedlots will be established to meet local demand, complemented by aggregation centres equipped with essential infrastructure and training to ensure sustainable operations. Furthermore, the project will develop an online market platform connecting leather product manufacturers with national and international markets, thereby promoting their products globally. This sub-component, funded with UA 0.834 million (24.6%), seeks to enhance the leather value chain and broader agri-business activities comprehensively.

Sub-component 1.3: Support to Women and Youth MSME Agro-Processing and Market Access

Managed by the Ministry of Women Affairs, Community, Small and Medium Enterprises Development, this sub-component focuses on empowering women and youth in agro-processing. It begins with community mobilization workshops to engage stakeholders and raise awareness through mass media campaigns and promotional materials. Technical training workshops will be conducted periodically to equip MSMEs with production, processing, packaging, and quality assurance skills, supplemented by onsite visits for practical support. Business management training will empower beneficiaries in planning, marketing, and cooperative building to enhance enterprise management. The project will invest in agro-processing machinery, preservation facilities, and drill solar-powered boreholes to strengthen the value chain. Additionally, it will facilitate market access through certification and participation in local, regional, and international trade platforms, supported by technical assistance, equipment provision, and a learning visit to a country with a robust agro-processing sector.

Component 2 Building Rural Communities Resilience to Climate Change: Component 2 enhances capacities and resilience of smallholder livestock farmers.

Sub-component 2.1 Supporting Climate Resilient and Community level-driven Infrastructure Development) emphasizes the empowerment of smallholder livestock farmers through comprehensive training sessions. These sessions cover livestock identification, traceability, and product development across various clusters including beef, horns, hides, skins, and leather crafts. Equipment for leather value addition is procured and distributed to support these efforts. Additionally, a pass-on scheme for small stock (goats) benefits women and youth groups. Training is also provided on low carbon livestock production and eco-friendly sustainable leather tanning, promoting resilience, methane reduction, and environmental sustainability. Capacity building activities are central to social inclusion and smallholder empowerment, ensuring equitable access to training and economic opportunities. These initiatives strengthen community resilience by fostering sustainable livelihoods and enhancing income generation within the beef and leather value chains.

Sub-component 2.2 **Reinforcing inclusive and diversified climate resilient livelihoods support.** This component focuses on empowering communities by providing sustainable agricultural practices and alternative income-generating activities. These efforts are designed to enhance food security and economic resilience in the face of climate change impacts.

Component 3-Knowledge Management, Policy Development, Monitoring and Evaluation Project Management, This component aims to enhance the regulatory framework supporting the beef and leather value chains. This includes updating legislation such as the Animal Health Act and the Livestock

Growth and Recovery Plan, fostering a conducive environment. The project promotes best practices through policy briefs and climate action standardization, while facilitating annual work plans, budgets, and procurement strategies. Stakeholder engagement is sustained through various platforms, fostering dialogue between public and private sectors. Monitoring and evaluation activities ensure progress and impact assessment through field visits and review meetings, enabling adaptive management for responsive interventions.

Component 4: Project Management

Effective project management is essential for ensuring the seamless implementation of activities across all project components. This involves strategic planning, budgeting, and resource allocation to achieve project objectives within specified timelines. Regular coordination meetings and transparent reporting mechanisms uphold accountability. Capacity building initiatives enhance the technical expertise and leadership skills of project personnel, facilitating efficient project delivery and maximizing impact on target beneficiaries.

This component aims to support the operational needs of the Ministry of Finance and Economic Development's (MoFED) Project Management Unit and Sector Project Coordination Units. It covers essential expenses such as office supplies and courier services. The funding includes support for the AU-African Capacity Building Foundation to manage the Project Special Account, annual staff costs for a Project Officer, and combined annual financial and procurement audits. Additionally, it encompasses expenses for Pastel Accounting Software licensing, bank missions, financial management functions, and the operation and maintenance of a PMU-MoFED vehicle.

3.3 Description of Project Technologies and Works

Dip Tanks

The project aims to rehabilitate existing plunge pool dip tanks, which are narrow, deep channels (see picture) designed for animals to walk through, gradually immersing them in liquid containing pesticides or acaricides. The channel starts shallow, deepens to fully immerse the animal, and then gradually becomes shallow again as the animal exits. This method efficiently delivers treatments to large herds as multiple animals can pass through consecutively.

Figure 2. An Example of A Plunge Pool Dip Tank

Periodically, the water is emptied and replaced with fresh water containing new pesticides. Many dipping structures in the visited areas require repairs to their concrete structures to reduce seepage. Additionally, improvements such as installing or repairing inlet and outlet pipes and constructing sheds to minimize evaporation are needed.

Furthermore, the pens or stables where animals gather for dipping require fence repairs, particularly replacing wood poles that frequently need maintenance. Requests also include the provision of toilets and meeting sheds for cattle owners at the dipping sites.

The rehabilitation of 9 dip tanks aims to enhance livestock health by reducing tick-borne diseases. The primary product of this activity will be fully rehabilitated and functional dip tanks. During this process, various by-products will emerge, such as debris from the old structures and remnants of old paint and coatings. Old fence poles and barbed wire will contribute to the waste generated when replacing the fence. Waste management will involve handling demolition chemicals if the old structures are torn

down, managing asbestos waste if it is present in the structures, and dealing with concrete waste from broken or removed concrete sections. Any waste that is non- hazardous and can be recycled or repurposed, such as wooden poles and wire, will be reused or given to communities for other uses.

Drilling and Installing a Solar-Powered Borehole and Drinking Water Troughs for a Community

The conventional methods of borehole siting and drilling will be employed, utilizing hired drilling rigs sourced for the purpose. Once drilled, the next phase involves installing overhead storage tanks and establishing the solar power system. A control system for managing pump operations is then integrated. Solar panels are mounted in a sunny location, typically on a raised platform, with an inverter and batteries installed to ensure continuous power supply, even during periods of low sunlight. Electrical wiring will connect the solar panels to the borehole submersible pump control system.

Concrete drinking water troughs will be constructed with a sturdy foundation to prevent sinking or tilting, and to maintain hygiene standards. Pipes will be laid from the storage tanks to the troughs, equipped with valves for controlling water flow. Additionally, repairs are needed for the fencing around the pens at the dip tanks where animals gather for dipping. Wood poles, which require frequent replacement, will be upgraded. There is also a request for toilets and meeting sheds for cattle owners at the dip sites.

The construction of 8 water troughs near the boreholes will facilitate enhanced water access for livestock. This activity will produce functional water troughs as the main product. By-products will include excess soil from excavation and general construction debris. Concrete waste may be generated from demolition of old trough structures. Waste generated will mainly be concrete waste from trough construction and minimal chemical waste associated with construction materials.

Establishing a rangeland management project and implementing soil and water conservation works
The project will map and delineate rangeland areas in agreement with local communities. It will primarily target existing rangelands requiring rehabilitation and restoration efforts. Technical experts will develop plans outlining grazing management, water conservation, and vegetation restoration. These plans will incorporate practices such as rotational grazing and reseeding to improve soil health and biodiversity. Additionally, soil conservation structures will be constructed, and native grasses, shrubs, and trees will be planted to restore degraded areas, enhance soil structure, and promote biodiversity.

The primary by-products from these interventions will be plant biomass, such as grass cuttings. These cuttings can be used as fodder for livestock, composted to improve soil fertility, or processed into biofuel. Minimal waste is expected, consisting mainly of organic material such as small branches and leaves from shrubs and trees. This organic waste can be composted or left to decompose naturally, contributing to soil health. Other potential by-products include seeds from reseeding activities, which can be harvested and reused for future restoration projects.

Description of works involved in Pasture development and fodder conservation
Pasture development is essential for sustainable livestock management. For ZAVaCEP, the project will utilize existing fields provided by beneficiaries, with approximately 40 hectares in total—20 hectares each for Chivi and Beitbridge. These fields will be developed into fodder fields. The project will supply input packages containing legume/grass forage seeds, basal dressing, and/or top dressing fertilizers. Farmers will access a ripper tine instead of conventional ploughs to minimize soil disturbance. This tool aerates the soil, improves water infiltration, and enhances root penetration by creating channels through compacted soil layers. Forage seeds and fertilizers are distributed along these channels, minimizing moisture loss and dust creation compared to conventional ploughing.

Sowing will commence at the beginning of the rainy season, with regular monitoring, reseeding, and pest management crucial for maintaining pasture health and productivity. Harvested forage will be processed at district-level feed hubs. Machinery such as mowers will harvest the forage at its peak nutritional stage, followed by drying or curing to prevent mould and spoilage. Fodder conservation ensures a year-round supply of nutritious feed.

Each district will have a feed processing hub equipped with a hammer mill, feed mixers, grinders, and pelletizers. This equipment is essential for producing balanced feed tailored to livestock needs, incorporating grains, proteins, vitamins, and minerals. The hubs will also feature storage facilities for long-term preservation, including hay baling or silage fermentation. Proper storage and regular checks for spoilage and pest infestations are crucial for maintaining fodder quality.

Implementing climate-smart fodder production practices across 40 hectares will enhance crop yield and soil health, increasing resilience to climate change. By-products include organic matter from mulching and crop residues, which can improve soil fertility. Effective waste management is essential to address the disposal of agricultural chemical containers, fertilizers, pesticides, and plastic waste from mulching sheets.

Distribution of 16 Genetically Superior Bulls and Feed Formulation Equipment

The distribution of genetically superior bulls involves a meticulous process aimed at enhancing livestock quality and productivity. The project will focus on local breeds such as the Tuli and the Nkuni, which are well-adapted to the local climate. These breeds will have undergone rigorous genetic evaluations to ensure they possess desirable traits like high growth rates, disease resistance, and superior meat or milk quality. Bulls will be sourced from reputable national breeding centres or research institutes, adhering to high standards of animal husbandry. Prior to distribution, the bulls will undergo comprehensive health screenings, including vaccinations and deworming, and may be quarantined to prevent disease spread. The transportation process is carefully planned to ensure the bulls' safety and comfort, with proper handling during loading, unloading, and acclimatization to new environments upon delivery to project farmers.

Feed for the bulls will be procured from the district feed processing hubs. Regular quality checks to ensure that the feed consistently meets the required standards will be conducted. Farmers will receive extensive training on managing the bulls, including feeding practices, health care, and breeding techniques. Ongoing technical support is necessary to address any issues with the bulls' performance or health. The project's impact will be monitored through performance assessments, and a feedback mechanism will be set up to refine and improve the distribution and support processes based on farmers' experiences.

Distributing 16 genetically superior bulls and feed formulation equipment will directly enhance livestock genetics and feed quality. The main by-product of this activity will be animal waste (manure). Waste management will involve handling packaging waste from the feed formulation equipment and any veterinary waste generated during health checks of the bulls.

Agro-processing Industry Chivi District

In a small-scale agro-processing, several technologies and processes are employed to add value to agricultural produce. These typically include simple machinery for milling, pressing, drying, and packaging. For instance, maize milling involves the use of small-scale hammer mills or stone grinders to convert maize into mealie-meal, which is a staple food. Similarly, oilseed processing involves mechanical presses or small-scale expellers to extract oil from crops like sunflower and groundnut. Solar dryers are commonly used for drying fruits and vegetables, taking advantage of the abundant sunlight to preserve produce and extend its shelf life.

The design of these small-scale processing facilities often incorporates locally available materials and simple, durable equipment that can be easily maintained by community members. Processing units are usually organized in a modular fashion, allowing for the gradual addition of new technologies as the business grows. The workflow typically begins with the cleaning and preparation of raw materials, followed by the core processing activities such as milling, pressing, or drying, and concluding with packaging and storage. Emphasis is placed on maintaining hygiene standards to ensure the quality and safety of the processed goods.

By-products and waste generated from these processes vary depending on the type of agro-processing. In maize milling, by-products include bran and germ, which can be used as animal feed. Oilseed processing generates oil cake, which is also used for livestock feed. Fruit and vegetable drying produces peels and seeds that can be composted to enrich the soil. However, waste management remains a challenge, as improper disposal of organic waste can lead to environmental pollution. Efforts will be made to convert waste into useful by-products, such as composting organic waste to improve soil fertility. By integrating agro-processing in the ZAVaCEP project targeting women's participation enhances food security and economic resilience but also contribute to environmental conservation.

3.4 Project Beneficiaries

The primary beneficiaries of the project will be livestock-keeping farmers, local entrepreneurs, and participants in the beef and leather value chains within the targeted districts. These participants include hides and skin collectors, livestock traders, meat processors, and tanning companies. The project will directly benefit 30 registered livestock-keeping groups, encompassing more than 30,000 households. Additionally, 50,000 livestock-keeping households will indirectly benefit from improvements in water supply, livestock infrastructure, and veterinary services. Approximately 100,000 people, including 60,000 women and 20,000 youths, will indirectly benefit and engage in businesses and activities along the commodity value chains.

Identifying Vulnerable Groups
Through discussions with the communities and a review of literature, including the ZIMVAC Reports (2021), marginalised (vulnerable) groups were identified for Chivi and Chiredzi districts and these include the following:

- **Women and Women-Headed Households:** Women, especially those heading households, often face significant barriers in agricultural value chains due to gender roles, limited land ownership, and restricted access to resources and decision-making (FAO, 2016).
- **People Living with HIV/AIDS:** Individuals with the virus have faced discrimination in the past, the availability of anti-retroviral treatments has improved their situation. However, they still face health-related challenges that affect their participation in the value chain (UNAIDS, 2020; ZIMSTAT, 2019).
- **Unemployed Youth:** Youth unemployment is particularly high in both districts, with Chiredzi reporting a rate of 16% and drug and substance abuse at 12% (ZimVac, 2022). Young people may be marginalized due to limited access to education, training, and employment opportunities in the agriculture sector (IFAD, 2019).
- **People Living with Disabilities**: People with disabilities often experience social exclusion and lack of access to agricultural resources and opportunities (UNDP, 2018). In one instance, a disabled individual was part of the pasturelands management committee and noted that their community prioritizes disabled and vulnerable groups.
- **Elderly-Headed Households:** The 2022 ZimVAC Assessment of Matabeleland South Report estimated that 26.9% of households in Chivi are headed by the elderly, with an average

household size of 4.4. In Beitbridge, 22% of households are elderly-headed, with an average household head age of 49.4 years.

- **Child-Headed Households:** In Beitbridge, 1.6% of households are child-headed.

Indigenous and ethnic minorities might face exclusion from mainstream economic activities and decision-making processes (World Bank, 2010). However, this did not appear to be a significant issue in Chiredzi or Chivi, possibly due to the lack of minorities in these areas or the migration patterns of the communities.

Obtaining disaggregated data on vulnerable people was challenging, as many reports do not provide this information. It is recommended that the project should ensure disaggregated reporting to meet milestones towards achieving gender equity. This will help ZAVaCEP comprehensively identify and address the needs of all vulnerable groups, promoting inclusivity and equity in the beef and leather value chain.

4. LEGAL REVIEW

4.1 Zimbabwe Policy Framework, National and Local Laws and Regulations

Legal Instruments of Zimbabwe Relevant to the Beef and Leather Value Chain Project

3.1.1 Zimbabwe Constitution, 2013.

The Constitution of Zimbabwe, enacted in 2013, stands as the supreme law, establishing the framework for governance, fundamental rights, and the duties of both the state and its citizens. It safeguards a broad spectrum of civil, political, social, economic, and cultural rights, including environmental rights that ensure citizens have access to a clean environment. The Constitution advocates for principles such as good governance, transparency, accountability, and sustainable development, stressing the importance of citizen involvement. Additionally, it requires the decentralization of governmental powers to local authorities, thereby enhancing local governance and encouraging community participation in decision-making. The Constitution also addresses economic and social progress, promoting poverty eradication, equitable resource distribution, and improved living conditions, along with regulations for the acquisition and sustainable use of agricultural land.

ZAVaCEP's efforts in the beef and leather value chains are closely aligned with these constitutional mandates, prioritizing sustainable practices and adherence to environmental rights. The project focuses on job creation, value addition, and poverty reduction, reflecting the objectives of economic and social development. Engaging with communal landholders and ensuring transparency and accountability through decentralization are pivotal strategies for gaining local support and ensuring the sustainable implementation of the project.

3.1.2 Environmental Management Act (EMA), Chapter 20:27

This Act is the primary legislation for environmental management in Zimbabwe. The Environmental Management Act (EMA) of Zimbabwe, enacted in 2002, is a legislative framework aimed at promoting sustainable environmental management and ensuring the protection, conservation, and sustainable use of natural resources. The Act mandates environmental impact assessments (EIAs) for any proposed projects that might significantly affect the environment, enforcing stringent regulations and standards to mitigate negative environmental impacts. It also emphasizes public participation, transparency, and accountability in environmental decision-making processes, thereby fostering community engagement and compliance.

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) aligns closely with the EMA Act to ensure its activities, including establishing hide collection centres and enhancing livestock production, adhere to sustainable practices without environmental harm. Through thorough this ESMP mandated by the EMA, the project minimizes environmental impacts, enhancing legal compliance, credibility, and local stakeholder acceptance while promoting sustainable agricultural practices for long-term environmental and economic benefits.

The project will need to obtain and Environmental Impact Assessment Certificate or letter from EMA the agency for the projects. In cases where waste need to be disposed additional permits such as the Waste Disposal License and Water Discharge Permit will be needed.

3.1.3 Animal Health Act, Chapter 19:01

This Act is critical for livestock management within the beef and leather value chains. It is designed to regulate and control animal diseases to safeguard livestock health and public well-being. It mandates measures for the prevention, containment, and eradication of infectious diseases among animals, setting standards for veterinary practices and the handling of animal products.

In relation to the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP), the Animal Health Act is of paramount importance as the project focuses on enhancing the beef and leather value chains, where animal health is a cornerstone for ensuring productivity and product quality. Compliance with the Act ensures that the project's initiatives in livestock health management, such as disease control and the improvement of animal husbandry practices, align with national standards, thereby reducing the risk of disease outbreaks that could jeopardize both local and export markets.

Under the **Animal Health Act, several permits and licenses** are required to operate within the legal framework. These include permits for the movement and transportation of livestock to prevent the spread of diseases (namely **Animal Movement Permits, Disease Control Certificates**), licenses for veterinary practitioners and animal health technicians, and **certifications for facilities** involved in the processing and handling of animal products. Additionally, the project must obtain **permits for the establishment and operation of new dip** tanks and other disease control facilities. These regulatory requirements ensure that ZAVaCEP's activities are conducted in a manner that upholds animal health standards, promotes sustainable livestock management, and supports the overall goal of improving the agricultural value chain in Zimbabwe.

3.1.4 Water Act, Chapter 20:24

This Act governs the use and management of water resources, crucial for livestock farming. The Water Act of Zimbabwe establishes guidelines for water rights, permits, and the responsibilities of water users. It mandates that any significant use or abstraction of water from natural sources, including rivers and dams, requires a permit issued by the Zimbabwe National Water Authority (ZINWA). Additionally, the Act outlines procedures for water quality management and the protection of water sources from pollution.

The significance of the Water Act in relation to the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) is critical, given the project's reliance on water resources for livestock and processing activities. ZAVaCEP must comply with the Water Act to ensure sustainable water use, especially in regions where water scarcity and quality are major concerns.

The project will need to secure appropriate permits for any water abstraction or usage (**i.e. the Water Abstraction Permits, Effluent Discharge Permits**), such as for livestock hydration, hide processing, and other related activities. These permits ensure that the project's water use is regulated, preventing over-extraction and pollution. Compliance with the Water Act also entails regular monitoring of water quality to prevent pollution and maintain a clean and safe environment, aligning with the project's objectives.

3.1.5 Forestry Act (Chapter 19:05)

The Forestry Act provides for the regulation and management of forest resources in Zimbabwe. It promotes the conservation of forests and the establishment of plantations and ensures the sustainable use of forest products, which includes timber used for fencing beef dip tanks, markets and fodder fields. Additionally it regulates the harvesting and sale of forest produce, impacting the availability of materials like tannins used in leather processing.

3.1.6 Communal Lands Forestry Produce Act (Chapter 19:07)

The Communal Lands Forestry Produce Act (Chapter 19:07) governs the utilization of forestry produce within communal lands in Zimbabwe. It regulates the harvesting of forestry resources to ensure sustainable use, including materials essential for leather tanning. The Act recognizes the rights of local communities to utilize forest resources while emphasizing conservation efforts. This support for sustainable resource management facilitates community participation in Zimbabwe's beef and leather value chain. The Act mandates licensing for the exploitation of forestry resources, influencing the availability of materials for fencing, construction that may be required for the project.

3.1.7 Hazardous Substances and Articles Control Act (Chapter 15:05)

The Hazardous Substances and Articles Act (Chapter 15:05) oversees the handling, storage, and disposal of hazardous substances across Zimbabwe. It establishes rigorous safety standards for managing hazardous substances used.

Various regulations, including the Environmental Management (EIA and Ecosystems Protection) Regulations, 2007, and the Environmental Management (Effluent and Solid Waste Disposal) Regulations, 2007, provide specific guidelines for waste disposal, hazardous substances handling, and atmospheric pollution control. These regulations ensure project activities align with environmental standards and safeguard community well-being.

Should the ZAVaCEP handle activities involving hazardous substances in Zimbabwe, several permits and licenses are required. These include the **Hazardous Substances License** issued by EMA, which ensures compliance with environmental standards. For importation and exportation, a license from the Ministry of Industry and Commerce is required.

3.1.8 Parks and Wildlife Management Act (Chapter 20:14)

The Parks and Wildlife Management Act (Chapter 20:14) is designed to safeguard wildlife and parks in Zimbabwe through protection, conservation, and sustainable management practices. The Act promotes wildlife conservation, encompassing animals that may stray into communal lands. It mandates permits for hunting and trade of wildlife products, thereby regulating the hunting of wildlife.

3.1.9 Labour Act, Chapter 28:01

The labour Act regulates employment conditions, health, and safety standards. The Labour Act of Zimbabwe is a critical piece of legislation that regulates labour relations and employment standards in the country. It encompasses a wide range of provisions related to the rights and obligations of employers and employees, including conditions of employment, contracts of employment, dispute resolution mechanisms, and the establishment of employment councils. The Act ensures fair labour practices, the protection of workers' rights, and promotes safe and healthy working conditions. In the context of the Zimbabwe

For ZAVaCEP, the Labour Act's significance lies in its role in governing the employment conditions of workers involved in the beef and leather value chains. The project must adhere to the Act's stipulations to ensure that labour practices are fair, equitable, and compliant with national standards, thus fostering a supportive and legally compliant working environment.

Regarding permits and licensing under the Labour Act, ZAVaCEP must ensure that all employment contracts are in accordance with the Act, including obtaining the necessary work permits for any

foreign workers involved in the project. Important certificates include the **Labour Compliance Certificate and Occupational Health and Safety Certificates** that all project contractors should have.

3.1.10 Public Health Act, Chapter 15:09

The Public Health Act ensures the health and safety of communities and workers, relevant to the project activities. This Act outlines the responsibilities of the government in preventing and controlling diseases, managing public health risks, and ensuring the provision of health services. It mandates the establishment of health standards and regulations, particularly concerning sanitation, water quality, and waste management. The Act's significance in relation to the ZAVaCEP) involves activities that can impact community health, such as livestock management, hide processing, and the construction of sanitation facilities.

ZAVaCEP will need to obtain several permits and licenses under the Public Health Act among them the Health Inspection Certificates and Sanitary Permits, to ensure its activities align with public health regulations. These include permits for the construction and operation of sanitation facilities, **licenses for waste management practices** related to the project and hide processing, and approval for water quality standards at project sites. Additionally, any interventions involving the handling of livestock must comply with health and safety standards to prevent zoonotic diseases.

3.1.11 Factory and Works Act, Chapter 14:08

The Act regulates the safety and health conditions in factories, including those for leather processing. The Factory and Works Act of Zimbabwe is a legislative framework designed to regulate workplace safety, health, and welfare in factories and industrial sites across the country. It mandates stringent safety standards, requiring employers to ensure that their workplaces are free from hazards that could cause injury or illness to workers. This Act encompasses various provisions, including the need for regular safety inspections, proper maintenance of machinery, and the implementation of health and safety training programs for employees. In relation to the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP), the Factory and Works Act is significant as it ensures that all processing facilities, such as those involved in leather tanning and hide collection, adhere to the highest safety standards. This not only protects workers but also enhances operational efficiency and compliance with national regulations.

Under the Factory and Works Act, several permits and licenses are required to legally operate. These include a Factory Registration Certificate, which is mandatory for the establishment and operation of any factory. Additionally, specific permits may be needed for the installation and use of machinery, depending on the nature of the equipment. To ensure safe conditions a Workplace Safety Certification may be required. Annual safety audits and inspections are also a requirement, ensuring ongoing compliance with safety standards.

3.1.12 Rural District Councils Act (29:13)

The Rural District Councils Act of Zimbabwe, crucially overseen by the Minister in charge of Local Government and Social Amenities, serves as a vital link between the Central Government and Provincial Governments. This legislation confers legal entity status upon Rural District Councils (RDCs), empowering them to deliver services to local communities. Section 71 (First Schedule) enumerates the powers of RDCs, ranging from natural resource conservation to pollution control and waste management. Beyond these delegated powers, RDCs also function as the Development and Planning authorities in their respective jurisdictions, enabling them to strategically plan for the overall development of their districts.

The ZAVaCEP project will need to be officially approved the RDC before implementation.

3.1.13 The Communal Lands Act (Chapter 20:28),

The Communal Land Act serves as the legal foundation for land use planning, tenure, and management, addressing concerns related to agricultural land, communal land, and resettlement programs. Its goal is to strike a balance between economic development and sustainable land management practices. The President holds tenure rights and issues permits for land use, with Section 7 imposing restrictions on Communal Land occupation. Section 8 allows agricultural or residential use, requiring Traditional Leaders' consent based on customary law. Communities enjoy communal ownership and usage rights for agriculture, residence, grazing, woodland, and wildlife purposes. Despite lacking formal tenure security, communities find certainty through a "settlement permit" under Section 24, guaranteed by customary law.

3.2. Local Regulations National Environmental or Social Action Plans and Strategies

Local authorities may have additional regulations regarding land use, water management, and waste disposal that the project must adhere to. These regulations ensure that the project activities are compatible with local environmental and social standards.

3.2.1. National Environmental Policy and Strategies (2009)

Provides a framework for sustainable environmental management practices. It emphasizes the need for environmental impact assessments and sustainable resource management. The National Environmental Policy of Zimbabwe, established in 2009, provides a comprehensive framework for the sustainable management and protection of the country's environment. The policy emphasizes the integration of environmental considerations into all sectors of national development, recognizing the intrinsic value of natural resources and the need to conserve them for present and future generations. Key pillars of the policy include promoting sustainable land use, biodiversity conservation, pollution prevention, and the equitable distribution of environmental benefits and costs. Additionally, the policy advocates for the integration of environmental education and awareness-raising initiatives to foster a culture of environmental stewardship among Zimbabwean citizens.

ZAVaCEP's focus on sustainable environmental practices, including development of an ESMP to mitigate potential adverse effects aligns with the policy. It must adhere to land use regulations, promote biodiversity conservation, prevent pollution, and manage waste effectively.

3.2.2 National Climate Change Response Strategy (2014)

Outlines Zimbabwe's approach to addressing climate change impacts, crucial for sustainable livestock farming and leather processing. The National Climate Change Response Strategy of Zimbabwe, formulated in 2014, serves as a comprehensive framework to address the challenges posed by climate change and promote resilience-building efforts across various sectors of the economy. This strategy outlines key priorities, including mitigation and adaptation measures, capacity building, and institutional strengthening to address climate change impacts effectively. It emphasizes the need for sustainable development practices, incorporating climate change considerations into policy formulation and implementation processes. Additionally, the strategy promotes the adoption of climate-smart agricultural practices, enhancing the resilience of agricultural systems to climate variability and extremes.

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) integrates climate resilience measures, focusing on productivity and value addition in the beef and leather value chains. It promotes sustainable practices like water conservation and climate-smart technologies, aligning with the National Climate Change Response Strategy to enhance community and stakeholder resilience against climate impacts.

3.2.3 Zimbabwe Livestock Growth Plan (2021-2025)

Aims to improve livestock productivity and health, aligning with ZAVaCEP's objectives to enhance the beef and leather value chains. The Zimbabwe Livestock Growth Plan (2021-2025) sets forth ambitious objectives aimed at revitalizing and enhancing the country's livestock sector. The primary goal of the plan is to significantly increase livestock productivity, improve animal health and genetics, and promote sustainable livestock production practices. It also seeks to enhance value addition and market access for livestock products, thereby boosting the sector's contribution to national food security, economic growth, and rural livelihoods. Through targeted interventions such as capacity building, infrastructure development, and policy support, the plan aims to address key challenges facing the livestock sub-sector, including low productivity, limited access to water resources, and the impacts of climate change.

The implementation of the ZAVaCEP stands to benefit significantly from the objectives and strategies outlined in the Livestock Growth Plan. ZAVaCEP can leverage existing initiatives and resources to enhance its impact and effectiveness.. Additionally, ZAVaCEP can collaborate with stakeholders involved in implementing the Livestock Growth Plan to ensure coordination and synergy, thereby maximizing the benefits for livestock farmers and communities in the targeted regions.

3.2.4 Zimbabwe Vision 2030

The Zimbabwe Vision 2030 is a development blueprint that includes goals for sustainable agricultural development and poverty reduction, directly relevant to ZAVaCEP. The Zimbabwe Vision 2030 outlines the nation's aspirations for sustainable economic growth, social development, and prosperity over the next decade. It envisions Zimbabwe as an upper-middle-income economy characterized by inclusive growth, job creation, and improved living standards for all citizens. The vision emphasizes key pillars such as modernization and industrialization, agriculture transformation, infrastructure development, and social services delivery. The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) closely aligns with the goals of Vision 2030 by contributing to the transformation of the agricultural sector through, job creation, and poverty reduction, all of which are central to Vision 2030's objectives.

3.2.5 Biodiversity and Conservation Policy (2013)

This policy focuses on the conservation of biological diversity and sustainable use of natural resources. It aims to mainstream biodiversity considerations into various sectors, promote community-based natural resource management, and establish a comprehensive framework for the conservation of Zimbabwe's rich biodiversity.

3.2.6 The National Biodiversity Strategy and Action Plan (NBSAP)

In 1998, the Ministry of Environment and Tourism prepared its National Biodiversity Strategy and Action Plan (NBSAP). Based on consultations, a number of unmet needs in the conservation and sustainable use of Zimbabwe's biodiversity (which included forestry, wildlife, aquatic life and agriculture) were identified and prioritized (MMET, 1998). The unmet needs included the absence of comprehensive and elaborate biodiversity inventory and monitoring programmes; limited

appreciation of the importance and contribution of biodiversity to the national economy and to local communities by policy makers; and inadequate affordable livelihood alternatives to reduce high reliance on natural.

3.2.7 The National Gender Policy 2013-2017

The second iteration of Zimbabwe's National Gender Policy (NGP) supersedes the 2004 version and rectifies its deficiencies. While the 2004 NGP primarily concentrated on women's involvement in politics, the economy, education, and institutional mechanisms for their advancement, it fell short in achieving gender parity and addressing the escalating issue of gender-based violence. Despite accomplishments such as legislative changes, institutional reforms, gender mainstreaming, and constitutional provisions, women's representation remains below parity.

The updated NGP responds to evolving political, economic, and social contexts at local, regional, and global levels. Influenced by international and regional developments post-2004, including the CEDAW Report and the 2008 SADC Protocol on Gender and Development, among others, the new priorities align with national initiatives such as constitutional provisions, the Medium Term Plan (2012-2015), the Indigenization and Empowerment Policy, the Broad-Based Women's Economic Empowerment Framework, and the Land Reform program, contributing to the evolving gender landscape. The second NGP aspires to create a gender-just society, striving for equality and equity in all aspects of life and development, with eight priority areas guiding policy objectives and strategies from 2013-2017, emphasizing principles of gender justice, equality, integration, and inclusiveness.

The significance of the gender policy is evident in its role in implementing ZAVaCEP initiatives. This policy advocates for gender equality and women's empowerment across various sectors, including CBNRM, water, and sanitation. Component 1.3 targets women and ensures that both women and youth benefit from the project.

3.2.8 Legislation Governing WASH

Zimbabwe's WASH sector has key policies and strategies providing sector direction and clarification of roles, namely National Water Policy (2013), Water Act (Chapter 20:24), ZINWA Act (Chapter 20:25), Rural District Act (Chapter 29:13), Urban Councils Act (Chapter 29:15), Public Health Act (Chapter 15:17) and the National Sanitation and Hygiene Strategy (2018–2022). The National Sanitation and Hygiene Policy and the National Water Resource Master Plan are still under development.

ZAVaCEP intends to provide water and sanitation facilities at all its intervention sites, e.g. dip tanks, pasture fields and cattle market places.

3.3 International Treaties and Agreements

Zimbabwe is a signatory to several international treaties that have implications for the beef and leather value chains:

3.3.1 Convention on Biological Diversity (CBD)

The Convention obligates Zimbabwe to conserve biodiversity, crucial for maintaining healthy ecosystems for livestock farming. The Convention on Biological Diversity (CBD) is a multilateral treaty aimed at promoting the conservation and sustainable use of biological diversity worldwide. It recognizes the intrinsic value of biodiversity and the vital role it plays in supporting ecosystems, livelihoods, and human well-being. For the Zimbabwe Agricultural Value Chain Enhancement Project

(ZAVaCEP), the CBD holds significant relevance as it underscores the importance of biodiversity conservation within agricultural practices. By promoting sustainable farming methods and protecting natural habitats, ZAVaCEP can contribute to the preservation of biodiversity in the targeted regions. Additionally, adherence to CBD principles can enhance the resilience of agricultural ecosystems, safeguarding against potential risks such as pests, diseases, and climate change impacts.

3.3.2 United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC is a crucial convention that requires Zimbabwe to implement measures to mitigate climate change impacts, relevant to sustainable livestock management. The United Nations Framework Convention on Climate Change (UNFCCC) holds immense significance for the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) because climate change poses substantial challenges to livestock production, which is a vital component of Zimbabwe's agriculture

To align with UNFCCC objectives, ZAVaCEP will implement climate-smart strategies within the beef and leather value chain, such as sustainable land management practices, improved livestock husbandry techniques, and the adoption of renewable energy solutions. Moreover, going forward ZAVaCEP can leverage climate finance to access funds and technology transfer opportunities, facilitating the adoption of innovative solutions to reduce greenhouse gas emissions and enhance the sustainability of beef and leather production.

3.3.3 World Health Organization (WHO) Guidelines

The World Health Organization (WHO) guidelines hold profound significance for the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) by ensuring that public health standards are met in the processing and handling of livestock products. With a focus on ensuring food safety, hygiene standards, and disease control, WHO guidelines offer indispensable frameworks for enhancing the quality and safety of beef products and leather goods. By adhering to WHO standards, ZAVaCEP can mitigate the risks of foodborne illnesses and contamination along the production, processing, and distribution stages of the value chain. Additionally, WHO recommendations on animal health and welfare contribute to sustainable livestock management practices, reducing the prevalence of zoonotic diseases and ensuring the well-being of both animals and farmers.

3.3.4 International Labour Organization (ILO) Conventions

The International Labour Organization (ILO) conventions play a vital role in shaping labour standards and promoting decent work worldwide. Its provisions are applicable to the workers in the beef and leather value chains. Within the context ZAVaCEP adherence to ILO conventions holds significant importance for ensuring fair labour practices and improving working conditions especially for contracted work. By incorporating ILO standards into its initiatives, ZAVaCEP can contribute to enhancing the rights and well-being of workers involved in all stages of beef and leather production, from farming and herding to processing and manufacturing.

3.4 Bank Operational Safeguards (OS) Applicable to Project Activities

The African Development Bank (AfDB) has established a set of Operational Safeguards (OS) designed to ensure that projects financed by the Bank are environmentally and socially sustainable. The following OS are applicable to the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP):

OS 1: Environmental and Social Assessment

- This safeguard requires comprehensive environmental and social impact assessments to identify and mitigate potential adverse effects. For ZAVaCEP, this includes assessments related to the beef and leather value chains, ensuring that all environmental and social risks are adequately addressed.

OS 2: Involuntary Resettlement: Land Acquisition, Population Displacement, and Compensation

- Activities that might involve land acquisition or affect local populations require careful planning and compensation strategies to avoid or minimize displacement impacts. For ZAVaCEP, this may pertain to the expansion of livestock and leather processing facilities.

OS 3: Biodiversity and Ecosystem Services

- This safeguard emphasizes the protection of biodiversity and the sustainable management of natural resources. ZAVaCEP must ensure that livestock farming and leather processing do not adversely affect local ecosystems and biodiversity.

OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency

- This safeguard addresses pollution control, efficient resource use, and the management of hazardous materials. The project must implement measures to control emissions and waste from livestock and leather processing activities.

OS 5: Labour Conditions, Health and Safety

- Ensures fair labour practices, safe working conditions, and compliance with health and safety standards. ZAVaCEP must ensure that all activities within the beef and leather value chains comply with these requirements.

The African Development Bank (AfDB) operational safeguards are designed to ensure that projects financed by the bank adhere to environmental and social standards, thereby mitigating potential risks and promoting sustainable development outcomes. In the case of the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP), focusing on the beef and leather value chain, the following AfDB safeguards in Table *1* would likely be triggered.

Table 1. Safeguards Triggered by the ZAVaCEP Project

AfDB Safeguards Instruments	Triggered by ZAVaCEP	Remarks
Integrated Safeguards Systems (ISS)	Yes	Overarching operational safeguard mainstreams environmental and social considerations in all Bank operations
Environmental Assessment (OS1)	Yes	As a Category II Project, environmental and social assessment is required. ZAVaCEP would likely require a comprehensive ESIA to identify and assess potential environmental and social risks associated with activities such as livestock farming, slaughterhouses, and waste management. This assessment would inform the project's design and implementation, ensuring that environmental and social considerations are adequately addressed.
Biodiversity and Ecosystem Services (OS3)	Yes	Reflects the objectives of the CBD: conservation of biodiversity, renewable resources and ecosystem services and promote the sustainable management and use of natural resources . Given the potential impact of livestock farming and leather production on biodiversity, AfDB's biodiversity policy would be relevant. ZAVaCEP would need to incorporate measures to minimize habitat destruction, preserve biodiversity, and promote sustainable land use practices within the project area.

Pollution Prevention and Control, Greenhouse gases, Hazardous Materials and Resource efficiency (OS4)	Yes	Policy intended to achieve high quality environmental performance, efficient and sustainable use of natural resources
Labour Conditions, Health and Safety (OS5)	Yes	Reflects appropriate labour conditions, health and safety that. AfDB's occupational health and safety requirements would be triggered to ensure that workers involved in the beef and leather value chain are protected from workplace hazards. ZAVaCEP would need to implement measures to prevent accidents, provide personal protective equipment, and promote a safe working environment for all workers.
Disclosure and Access to Information (DAI)	Yes	Reflects need for public information

Applicable Requirements under the AfDB OSs and ISS Guidance Notes

The AfDB Integrated Safeguards System (ISS) provides detailed guidance on how projects should comply with the Bank's OSs. ZAVaCEP must follow these guidelines to ensure that all environmental and social risks are managed appropriately. The ISS Guidance Notes offer specific instructions on conducting environmental and social impact assessments, stakeholder engagement, and implementing mitigation measures.

3.5 Differences between Zimbabwe's Existing Framework and OS Requirements

While Zimbabwe has a robust legal framework for environmental and social management, there may be gaps when compared to AfDB's OS requirements. Key differences include:

Key differences include:

- Both Zimbabwe's EMA Act Chapter 20:27 and AfDB OS 1 emphasize sustainable development, public participation, and rigorous environmental assessment processes. While the EMA Act focuses more on national regulatory frameworks and enforcement, AfDB OS 1 integrates environmental and social considerations into the project cycle with a stronger emphasis on stakeholder engagement and adaptive management.

- OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency. OS 4 differs significantly from the Zimbabwe's EMA Act Sections 74-77. The EMA Act provides a detailed national framework focusing on the registration, control, licensing, and disposal of pesticides. In contrast, AfDB OS 4 offers a broader, project-based approach, emphasizing IPM, risk assessments, training, and ongoing monitoring to align with international best practices. The AfDB OS 4's focus on IPM and less hazardous alternatives highlights a more proactive approach to reducing pesticide reliance and mitigating risks.

- Labour Standards: OS 5 compared to Zimbabwe Labour Act15:09. Both frameworks emphasize worker rights and protections, but OS 5 places additional emphasis on the specific requirements for development projects, including rigorous health and safety standards and detailed grievance mechanisms

The ESMP for the ZAVaCEP must align with both national and international standards, incorporating the AfDB's stringent OS requirements. By addressing the legal, institutional, and capacity-building needs, the project can ensure sustainable development of the beef and leather value chains, contributing to Zimbabwe's broader economic and social goals.

4. PROJECT BASELINE DESCRIPTION

4.2 Methods and Approach Used for Baseline Information Collection

Baseline information was obtained using various approaches. Data was gathered through a review of existing literature, reports, and relevant documents on the environmental and social conditions of Chivi and Beitbridge. Field visits to the project sites and district offices were conducted for consultations with rural district officials and communities in most of the project-implementing wards. These visits provided information on vegetation types, topography, land use, income activities, socioeconomic conditions, and community perspectives. Stakeholders, including local communities, government agencies, NGOs, and other relevant parties, were engaged to understand their perspectives and concerns. A list of all those consulted is provided in Annex 2.

4.3 Masvingo Province -Project districts overview

The ZAVaCEP will be implemented in 2 districts Chivi and Chiredzi (Figure 3 below) out of the seven districts in the province.

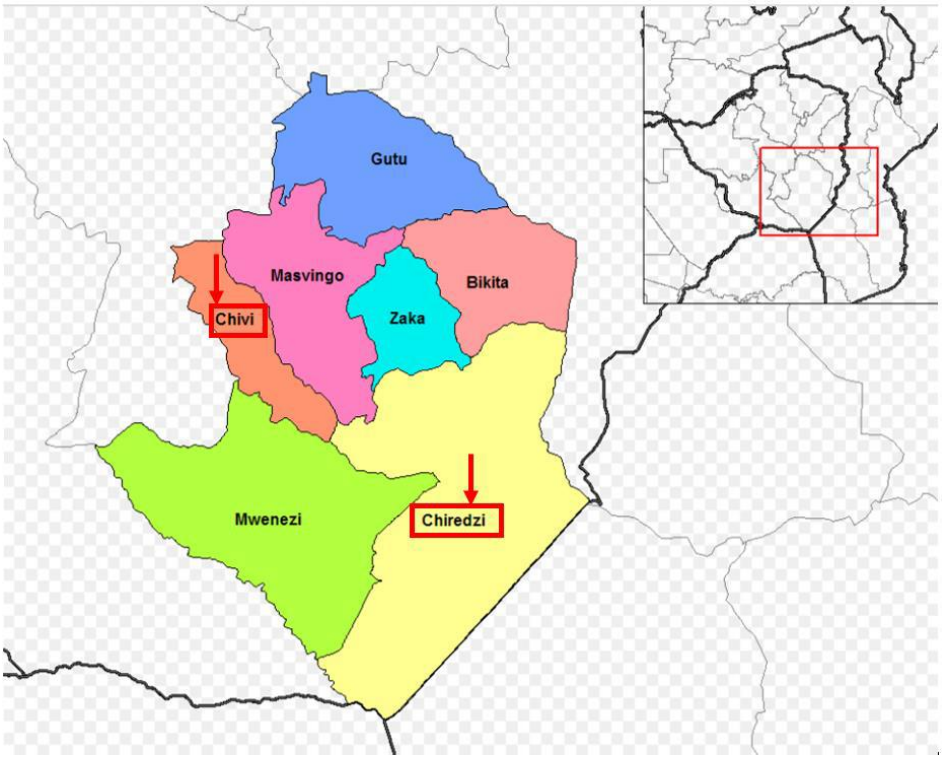


Figure 3. Map of Masvingo Showing the location Chivi and Chiredzi districts

4.3.1 Chivi District, Masvingo Province, Zimbabwe

Population Statistics and Demography

According to the 2022 Zimbabwe Census Report, the total population of Chivi district is estimated to be 172,979, with a male population of 79,550, a female population of 93,428 with a total of 40,313 households. The district has a predominantly rural population engaged in subsistence agriculture, with high levels of poverty and unemployment. Demographic characteristics include a youthful population with limited access to education and healthcare services. According to the ZimVAC report, the average

household size of the district is 5.3. The average age for the head of the household is 55.3 years. The male headed household were reported to be 72.4%, 27.6% were female headed. Child-headed households were estimate to be 1.2% while elderly headed households were 31.5%. Settlements range from dispersed homesteads to densely populated villages, with housing infrastructure varying in quality and access to basic amenities.

Water and Sanitation Accessibility

Access to safe water and sanitation services is limited, particularly in rural areas where reliance on unprotected water sources poses health risks. Sanitation infrastructure is inadequate, contributing to waterborne diseases. ZimVac report 2022, indicated an increase of 9% in accessibility to improved water in the district between 2021 (56%) and 2022 (65%). A decrease in the households that are using unimproved water sources for cooking and drinking with 2021 having a total of 44% and 2022 having 35% of households was reported.

The main sources of drinking water in the district per household were reported to be 53% of basic water services, 13% were limited water services, 21% was unimproved water services and 13% had access to surface water services. The accessibility of adequate water for the households for drinking needs was estimated to be 91%, cooking needs 92%, for personal hygiene needs was 87% and 86% for other domestic needs.

In 2022, 18% of households were estimate to participate in open defecation, 4% had access to unimproved sanitation and 79% to improved sanitation. There was in an increase in accessibility of the improved sanitation by 10% from 2021.

Basic infrastructure such as schools, healthcare facilities, and roads are unevenly distributed across the district, with rural areas experiencing greater deficits. Public health services face challenges related to staffing, equipment, and medication shortages

Income-generating activities

Subsistence and Small-Scale Agriculture is one of the sources of income in the district. Subsistence Farming is dominant growing staple food crops such as maize, sorghum, millet, and groundnuts, horticulture and vegetable production. Livestock rearing, including cattle, goats, and poultry supplement income from crop farming.

Limited opportunities for formal employment exist, leading to high levels of rural-urban migration where most young women are employed as domestic workers. Some seek casual employment in the nearby commercial farms or temporarily migrate to South Africa seeking work opportunities. The farm and domestic sector labour conditions are general associated with long hours and low wages and limited access to social protection. A relatively small number of the district residents practice informal trade and have small businesses. The activities are associated with this include cross-border trade with neighbouring countries in particular, South Africa and Mozambique. Residents also have small shops, kiosks, and market stalls. Another income generating activity in the district is gold panning.

Gender Issues

The HIV/AIDS pandemic has also had a significant impact, with many households caring for orphans and vulnerable children. Gender disparities are evident, with women often bearing the brunt of economic and social hardships. Domestic violence and child marriage are notable social concerns. According to ZimVac report 2022, Chivi district had low reports of GBV with 1.8% having reported physical abuse and no sexual abuse reported. In relation to the spousal abuse, both male and female respondents reported 0% for sexual abuse, 1.2% of men reported physical abuse, 10% of men and 6.6% of female reported emotional abuse and 2.4% of men were reported be emotionally abused.

However, it is believed that these figures are underestimated because many women do not report sexual abuse nor domestic violence for fear of repercussions.

Physical Environment

Chivi District is characterized by a semi-arid climate, with a terrain that is predominantly flat to gently undulating, with scattered hills and kopjes. Soils in Chivi are generally sandy and of low fertility, which, combined with the limited rainfall, makes agriculture challenging.

Chivi District experiences a subtropical climate with distinct wet and dry seasons. Rainfall is erratic, with the rainy season typically occurring from November to March. Average annual rainfall ranges from 450mm to 650mm, impacting agricultural activities and water resource management. Chivi is vulnerable to droughts and floods, and cyclones. Flood vulnerability is heightened during the rainy season, with low-lying areas prone to inundation. Existing infrastructure, including roads, bridges, small dams were damaged by cyclones in the past decade and some have remained unrepaired. During extreme weather events, particularly when it floods mobility and access to essential services is curtailed.

Local and regional data on GHG emissions indicate predominantly agricultural sources, including methane from livestock and carbon dioxide from deforestation and land use changes. Existing approaches to pollution prevention and abatement include agroforestry initiatives, soil conservation practices, and renewable energy promotion. The district is traversed by various seasonal rivers and streams, including the Shashe, Tokwe and Runde River, which serve as a major water sources for both domestic and agricultural purposes. Tokwe River flow into the Tugwi-Mukosi Dam, the largest inland reservoir in Zimbabwe, and an important water source for large irrigation estates in Chiredzi and Mwenezi District.

Water Quality

Water quality data highlight concerns regarding contamination from agricultural runoff and insufficient sanitation infrastructure. Both groundwater and surface water have been extensively studied, with notable works by Sityawareva (2013) and Chitata and Musekiwa (2015) focusing on surface water, and Marecha (2014) on groundwater. Overall, water quality is influenced by various factors, including agricultural practices, geological formations, and climatic conditions. Below are the key findings from these studies.

Groundwater Quality

- **pH:** Groundwater in Chivi typically exhibits a pH range of 6.5 to 8.5, indicating slightly acidic to slightly alkaline conditions.
- **Total Dissolved Solids (TDS**): The TDS levels in groundwater range from 200 to 1500 mg/L, which suggests varying degrees of mineralization, often influenced by the underlying geology and human activities.
- **Nitrates:** Nitrate concentrations can range from 1 to 50 mg/L. Elevated levels are often attributed to agricultural runoff and improper sanitation practices.
- **Fluoride:** Fluoride levels in Chivi's groundwater can be as high as 2.5 mg/L in some areas, which may pose health risks such as dental and skeletal fluorosis.
- **Hardness:** Groundwater in the district is generally hard, with calcium and magnesium concentrations contributing to total hardness values between 100 to 500 mg/L.
- **Microbial Contamination:** Coliform bacteria are often detected in groundwater sources, indicating contamination from human or animal waste, which poses significant health risks.

Surface Water Quality

- **pH:** Surface water bodies in Chivi have a pH range of 6.0 to 8.0, similar to groundwater but can be influenced more by seasonal changes and runoff.

- **TDS:** The TDS in surface water varies widely, generally from 100 to 1000 mg/L, depending on the location and season, with higher values often observed during the dry season due to evaporation and concentration of salts.
- **Nitrates:** Nitrate levels in surface water range from 0.5 to 30 mg/L, with higher concentrations during the rainy season due to runoff from agricultural fields.
- **Phosphates:** Phosphate concentrations are generally low, typically less than 5 mg/L, but can increase during the rainy season due to agricultural runoff.
- **Dissolved Oxygen (DO):** DO levels in surface waters are generally between 4 to 8 mg/L, crucial for maintaining aquatic life.
- **Microbial Contamination:** Surface waters in Chivi are often contaminated with coliform bacteria, especially during the rainy season, posing significant health risks for communities using these water sources for drinking and domestic purposes

The studies provide some detailed insights into the water quality issues faced in Chivi District, highlighting the need for regular monitoring and management to ensure safe drinking water .

Air Quality, Noise, and Vibrations

Baseline quantitative data on air quality show levels of particulate matter (PM10, PM2.5) within acceptable limits but with occasional spikes during the dry season due to dust from unpaved roads and agricultural activities. Noise and vibrations are primarily associated with agricultural machinery and vehicular traffic.

Biological Environment

Chivi District encompasses several protected areas such as Mushandike Wildlife Sanctuary, including communal lands designated for conservation purposes, such as forests and wildlife reserves. These conservation areas are home to a diverse array of terrestrial fauna, including elephants, buffalo, antelope species, and various smaller mammals and these areas play a vital role in preserving biodiversity and ecosystem services. The natural vegetation in Chivi District is typical of the Zimbabwean miombo woodland, consisting mainly of *Brachystegia* species and *Julbernardia globiflora.* However, due to human activities, much of the original woodland has been cleared for agriculture and settlement. Wildlife is limited due to habitat loss, but small mammals, birds, and reptiles are still found. The district faces significant environmental challenges, including soil erosion, deforestation, and the depletion of water resources, which have further degraded the natural habitat. The communal lands are very degraded and have limited pasture lands that at times they encroach on these protected areas to harvest firewood or rear the cattle. Deforestation and land degradation pose threats to biodiversity and ecosystem resilience.

Cultural Environment

Chivi District is predominantly inhabited by the Shona people, whose cultural and traditional norms are deeply rooted in Shona heritage. The community continues to observe traditional rituals based on ancestral worship, such as "kutanda botso" and "kurova guva," which are essential aspects of their culture. These rituals are often led by spiritual leaders and involve offerings, music, and dance. Traditional marriages are significant events marked by elaborate ceremonies that include the payment of "roora" (bride price), symbolizing the union of two families and the creation of new social bonds.

In Chivi, traditional agricultural practices are also integral to the community's way of life. These include the observance of "chisi," a rest day, and participating in "nhimbe," a collective day of labour where community members help one farmer sow, weed, or harvest in exchange for locally brewed beer and non-alcoholic beverages for women and children. On "chisi" days, the community may gather for village meetings or traditional courts presided over by the chiefs or kraalheads. The gatherings are

also used as opportunities to share messages on village developments and to discuss any proposed projects. These gatherings reinforce social cohesion and harmony within the villages.

Main Challenges faced by the district

Chivi District is prone to recurring droughts, which have a significant impact on agricultural production and food security for the local population. The ZimVAC reported that one of the major development challenges was the long spells experience in the district at 63%. This challenge is exacerbated by climate change and the need to develop more resilient farming practices. Access to clean and reliable water sources is a major challenge. The district experiences water shortages, particularly during the dry season, which affects both domestic and agricultural water needs.

The district faces challenges with inadequate road networks, limited electricity coverage, and poor communications infrastructure. This hampers economic development and access to basic services for rural communities. The district also has a high unemployment rate and limited economic opportunities contributing to challenges in accessing healthcare, education, and other essential services. Access to quality healthcare services is a challenge, particularly in remote areas of Chivi District. This is due to the limited number of healthcare facilities and the distance that some communities need to travel to reach them.

4.2.2 Project locations in Chivi District

In Chivi District, the ZAVaCEP projects will be implemented in Wards 3, 8, 23, and 28 (Table 2). In total four dip tanks will be rehabilitated and two (2) solar powered boreholes installed in Wards 3 and 8 (as shown in **Table *2***). **Error! Reference source not found.** presents a satellite image of the dip tank locations. A detailed description of some of the dip tanks implementation sites visited during the field mission is provided in Annex 2.

Table 2. Location of ZAVaCEP Dip Tanks and Boreholes in Chivi District

District	NAME OF DT	WARD	LATITUDE	LONGITUDE	BOREHOLE	AHMC *
Chivi	Gororo	28	-20.22800	030.85082		Shongamiti
	Chebvumbi	23	-20.85082	030.70611		Chasiyatende
	Madamombe	3	-20.04770	030.33309	BH	Madamombe
	Chikova	8	-20.14452	030.44398	BH	Vuravhi

**Animal Health Management Centre*

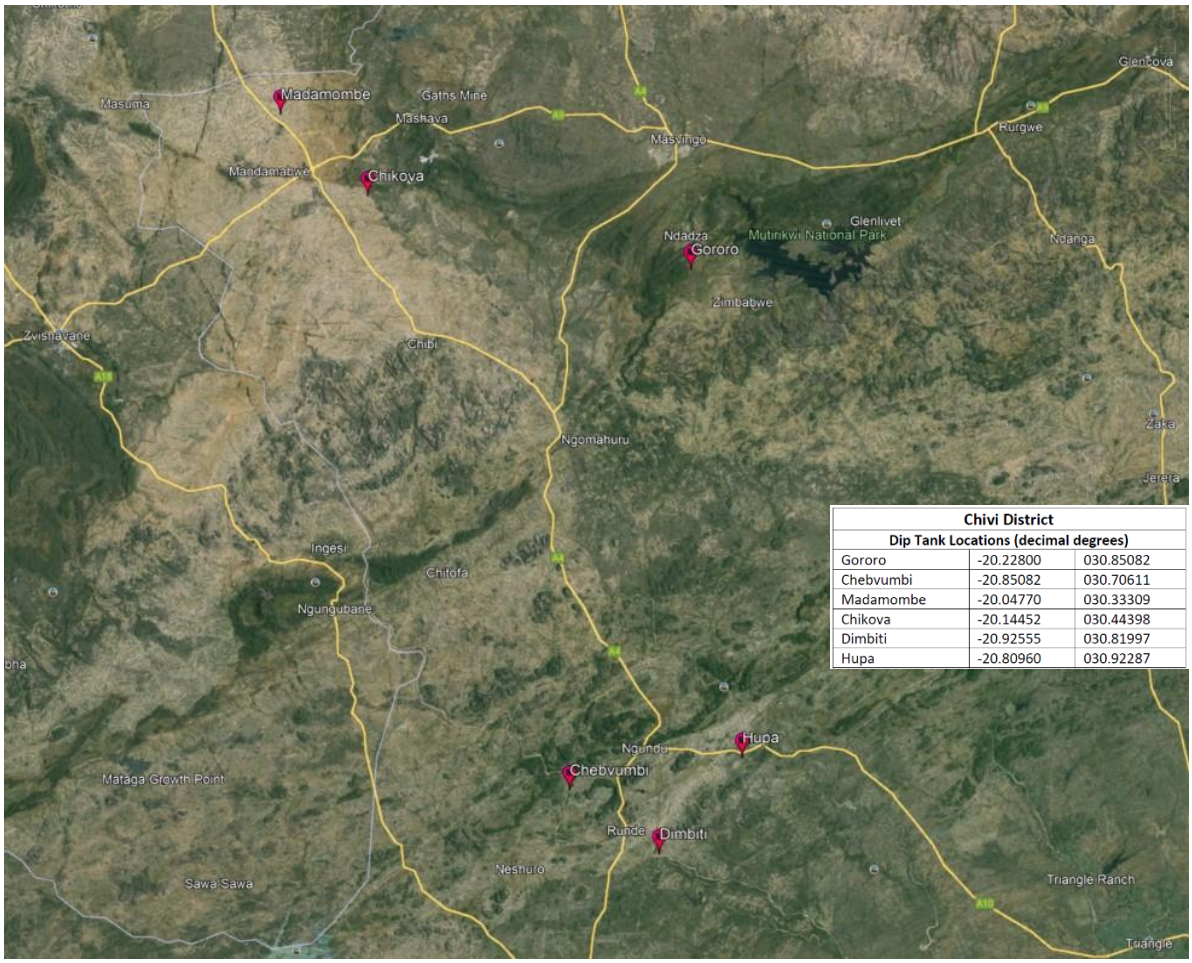


Figure 4. Satellite image showing Location of Dip Tanks in Chivi, District

4.2.3 Chiredzi District

Chiredzi District is situated in the south-eastern part of Zimbabwe, within the Masvingo Province. The district lies in a semi-arid region characterized by low rainfall, typically receiving between 450mm to 650mm annually. The landscape is dominated by savannah and scrubland, interspersed with acacia and baobab trees. The soil composition varies, with areas of fertile alluvial soils along riverbanks and less fertile, sandy soils in other parts. The topography is generally flat with some gentle undulations, contributing to its agricultural suitability in certain regions.

Population Statistics and Demography

According to the 2022 Zimbabwe population and Housing Census Report, the population of Chiredzi District is estimated to be 343,960 people, with 88% of the populations living in the rural areas. The population includes a mix of ethnic groups including the Shona, Shangaan, and Ndau. The district capital, Chiredzi Town, serves as the administrative and economic hub. The Chiredzi rural district has approximately 71,885 households with an average population size of 4.2. Approximately 89% of the head of households are women. About 89% of the people in the district have ownership of the land that they reside.

Hydrology and water Quality

Chiredzi District's hydrology is heavily influenced by the Save and Runde rivers, which provide essential water resources for agriculture and domestic use. The district also relies on a network of smaller rivers and streams, although these can be seasonal and are prone to drying up during prolonged droughts.

The construction of small dams and weirs helps in water storage, but water scarcity remains a persistent challenge, particularly during the dry season. Groundwater extraction through boreholes is another crucial source of water for many communities.

Key water quality parameters for Chiredzi were extracted from the World Bank report titled "Zimbabwe: Strategy for Managing Water Quality and Protecting Water Sources" authored by Murwira *et al*. Groundwater in the district is predominantly affected by contamination from agricultural runoff and seepage as well as from unsanitary sources. Generalised findings are outlined in the following sections.

Groundwater Quality:

- **pH:** 6.5 - 8.5
- **Total Dissolved Solids (TDS):** Typically ranges from 500 to 1500 mg/L
- **Nitrate:** Often exceeds the WHO limit of 50 mg/L
- **Fluoride:** Levels can be high, often around 1.5 mg/L
- **Microbial Contamination:** Frequently detected, posing health risks

Surface Water Quality:

- **pH:** 6.8 - 7.8
- **Turbidity:** High, often above 50 NTU
- **Biochemical Oxygen Demand (BOD):** Exceeds the recommended limits, indicating organic pollution
- **Chemical Oxygen Demand (COD):** High, suggesting chemical contaminants
- **E. coli:** Commonly found, indicating fecal contamination
-

Given the water quality indications it is therefore, not surprising that the district struggles with cholera outbreaks, primarily due to inadequate sanitation and reliance on untreated surface water.

Water and Sanitation Accessibility

The ZimVAC reported stated that Chiredzi reported that the accessibility of improved water was at 65% in 2022 which was an increase from the 56% of 2021. There was also a reported decrease in the households using unimproved water sources for cooking and drinking with 28% in 2022 and 31% in 2021. The basic water services were reported to be accessible to 60% of households, 12% had limited water access, 9% had unimproved water access and 18% of households had surface water services as their main water drinking sources. It was also reported that 94% of households had adequate domestic water to meet their drinking needs, 97% for cooking needs, 97% for personal hygiene needs and 86% accessibility to adequate water for other domestic needs.

Open defecation was practiced by 42% of households in the district in 2022, with 0% having access to unimproved sanitation but 58% having access to improved sanitation. Chiredzi district had the highest proportion of households that practice open defecation in the Masvingo province. In the district, 0% have no access to handwashing services, 10% have limited services and 8% of households have access to basic handwashing services.

Income-generating activities

Economically, Chiredzi District is largely agrarian. Sugarcane farming, cantered around the Hippo Valley and Triangle estates, is a significant economic activity, contributing to both local employment and national export revenue. According to the 2022 Chiredzi District Food and Nutrition Security

Profile, red sorghum, cotton, and groundnuts are the key cash crops in Chiredzi. The vast majority of farmers are smallholders, who use traditional farming practices that combine cash and food crops in the same farming unit. Livestock husbandry consists primarily of cattle, sheep, and goats, and it is a major component of the district's livelihoods. Farms and nutrition gardens produce vegetables, tomatoes, sweet potatoes, and sugar beans. Due to low harvest, most impoverished households rely on casual work from better-off homes to weed and harvest. Poor households make a living by working in irrigation facilities.

Gender Issues

The physical abuse in Chiredzi is reported to be 5.2%. The sexual abuse at the hand of a spouse in the district is reported to be 0% for both male and females, 1.2% of men and 2.7% of women reported to be physically abused. The emotional abuse was reported to be experienced by 6.3% of women and 14.3% of men. The economical abuse was higher in men at 4.9% compared to the 2.7% in women.

Vulnerability Issues

Chiredzi District's vulnerability is closely tied to its climatic conditions. Droughts severely affect agricultural outputs, leading to food insecurity and economic instability. Water scarcity and poor infrastructure further exacerbate these vulnerabilities. The reliance on rain-fed agriculture makes the population particularly susceptible to climate change impacts. Additionally, the prevalence of diseases such as malaria and HIV/AIDS adds to the health burdens of the community.

Cultural Environment in Chiredzi

Chiredzi District's cultural heritage and traditional norms are predominantly shaped by the Shangaan people, the area's main ethnic group. The Shangaan community upholds a vibrant cultural identity, marked by traditional music, dance, and oral storytelling. Integral to community celebrations, ceremonies, and festivals are traditional dances like the Tsonga and Ndlamu. Accompanied by rhythmic drumming and singing, these dances preserve historical narratives and impart moral lessons to younger generations.

Traditional norms in Chiredzi emphasize a deep connection to the land and natural resources. Farming and cattle herding are central to the community's way of life, with agricultural practices and land use guided by taboos aimed at sustaining the natural resources through generations. Rituals and ceremonies related to agriculture, such as rainmaking ceremonies, reflect the community's reverence for the environment. Additionally, traditional healers, known as n'angas, play a crucial role in community health and spiritual well-being, offering remedies and guidance based on indigenous knowledge systems. Initiation ceremonies remain a significant and respected cultural practice, more prevalent in Chiredzi District, among the Shangaans, than in any other part or ethnic group of Zimbabwe.

Main Challenges faced by the district:

According to the 2022 Chiredzi District Food and Nutrition Security Profile, the district is prone to foot and mouth disease due to its proximity to conservancies and national parks. The most common diseases are Newcastle in poultry and, foot and mouth in cattle.

Livestock farmers in Chiredzi also face a number of challenges which include disease outbreaks, lack of vaccines, tick infestation challenges, continuous periods of drought seasons resulting in poverty

deaths, inadequate grazing areas, lack of competitive livestock markets resulting in low livestock prices, livestock thefts, with stolen livestock mainly driven and sold in Mozambique and long distance to water points especially during the Dry season.

Market challenges in the district also include, poor market accessibility due to poor road network, multi-currency system, fluctuations of commodity prices, no legislation to regulate livestock prices, during drought years prices of cattle significantly go down and few buyers on the market which affects pricing of commodities and livestock.

3.2.4 Project Locations in Chiredzi District

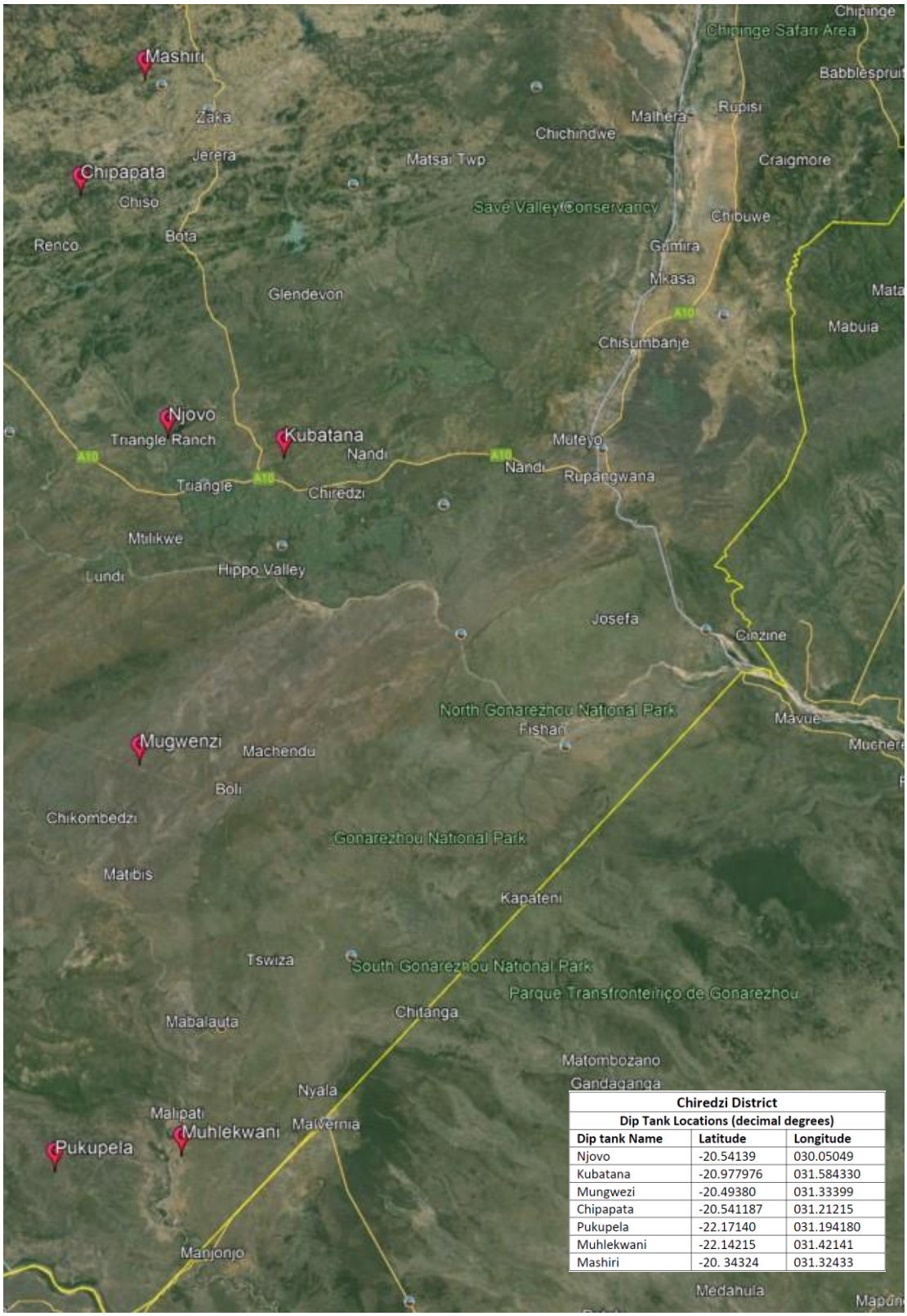
ZAVaCEP will rehabilitate 5 dip tanks and install 3 boreholes in Chiredzi district. The detailed coordinates and names of the dip tanks are provide in **Table *3***. The satellite map **Error! Reference source not found.** shows the geographical locations of these dip tanks and boreholes. Further comprehensive descriptions of the implementation sites can be found in Annex 2.

Table 3. Location of Dip Tanks and Borehole in Chiredzi

District	Name of DT	Ward	Latitude	Longitude	Borehole	AHMC*
Chiredzi	Njovo	16	-20.54139	031.05049	BH	Nuanetsi
	Kubatana	29	-20.977976	031.584330	BH	Buffalo range
	Mugwezi	26	-20.49380	031.33399		Buffalo range
	Chipapata	17	-20.541187	031.211987	BH	Samba
	Chiromwana	17	-20.50368	031.21215		Samba

*Animal Health Management Centre

Figure 3 provide the satellite image showing dip take the will be rehabilitated by the project. The detailed description of some of the dip tank project is given in Annex 3.



Chiredzi District		
Dip Tank Locations (decimal degrees)		
Dip tank Name	**Latitude**	**Longitude**
Njovo	-20.54139	030.05049
Kubatana	-20.977976	031.584330
Mungwezi	-20.49380	031.33399
Chipapata	-20.541187	031.21215
Pukupela	-22.17140	031.194180
Muhlekwani	-22.14215	031.42141
Mashiri	-20. 34324	031.32433

Figure 5. Satellite image of ZAVaCEP Dip tank locations, Chiredzi district

5 PROJECT ALTERNATIVES

This ESMP study sought to consider possible alternatives to the proposed project for the beef and leather value chain development in Chivi and Chiredzi districts, Zimbabwe. These alternatives included, among other considerations, the "No Project Alternative," Alternative Locations, and Alternative Designs. This study aimed to identify and assess alternatives to the proposed developments to find the best working models that have minimal environmental and social impacts.

5.1 The "No Project" Alternative

The "No Project" alternative implies that the project does not proceed, thereby maintaining the status quo. The environmental resources remain unchanged as they are not interfered with. However, this alternative means foregoing all the environmental, social, and economic benefits anticipated from the project's implementation. The proposed project i.e. the development of the beef and leather value chain in Chivi and Chiredzi districts has been identified to bring significant social and economic benefits.

The targeted beneficiaries acknowledge that the project will enhance cattle husbandry, pasture development, fodder production, and hide processing. Improved cattle husbandry and pasture development will lead to better livestock health and productivity, while the rehabilitation of plunge dip pools will reduce tick-borne diseases. The availability of quality fodder will ensure cattle have sufficient nutrition, especially during dry seasons, thereby improving overall cattle health and reducing mortality rates and leading to increased beef production. Furthermore, the processing of hides will add value to the leather industry, creating employment opportunities and improving local economies. Thus the project has significant social and economic benefits for the targeted communities in Chivi and Chiredzi districts as it will enhance household incomes.

Beneficiaries acknowledge that the project will help improve their livelihoods. Currently, poor cattle husbandry practices and inadequate infrastructure for cattle dipping and fodder production and disease limit the productivity and health of livestock. By not implementing the project, it means the current challenges, such as inadequate cattle health management, poor pasture quality, and limited hide processing facilities, will persist. Additionally, the potential improvements in livestock productivity, income generation from better-quality hides, and overall community well-being will be lost.

The "No Project" alternative maintains the current inadequate water supply for cattle dipping, negatively impacting cattle health and productivity. It also means continued reliance on suboptimal cattle husbandry practices and insufficient fodder production, leading to lower cattle productivity and economic returns. Therefore, while this alternative may avoid immediate environmental impacts, it fails to address the long-term socio-economic needs and environmental sustainability goals of the region.

By foregoing the project, these potential benefits will not be realized, and the local communities will miss out on the opportunity to improve their socio-economic conditions and resilience to environmental challenges and continue to face challenges Therefore, the “No Project” alternative is not considered favourable due to the significant positive impacts the project is expected to bring.

5.2 Alternative Locations

The selected sites for the project were deemed suitable based on feasibility studies conducted in 2010, which identified them as principal production locations. The Chivi and Chiredzi districts face several environmental and non-environmental challenges, such as limited rainfall affecting agricultural production, poor infrastructure, lack of markets, and the impact of climate change on agricultural

production. These factors highlight the need for targeted interventions in these areas, in these specific locations.

Alternative locations were considered, but they did not present better options. Chivi and Chiredzi districts has existing potential of for cattle husbandry and leather production. The current sites are strategically located to maximize the benefits of the project, including proximity to existing cattle farming activities, infrastructure and the potential for integrating improved cattle husbandry and pasture development. Moving the project to different locations would entail constructing new infrastructure facilities and likely incur higher costs and reduce the project's effectiveness in addressing the identified challenges. Additionally , it would be less beneficial in terms of social and economic impact.

5.3. Alternative Designs

Various design alternatives were analysed, focusing on site, technology, materials, and chemicals. The goal was to select designs that offer the best balance between effectiveness, cost, and minimal environmental and social impacts. The chosen designs for plunge dip pool rehabilitation, improved cattle husbandry practices, pasture development, fodder production, and hides processing were evaluated based on these criteria. The mitigation hierarchy was incorporated to avoid, minimize, and mitigate any potential negative impacts.

For instance, different cattle dipping technologies were considered, including spray races and pour-on treatments. However, plunge dip pools were selected due to their effectiveness in controlling tick infestations and their suitability for large-scale cattle operations (i.e. large number of cattle). The design incorporates sustainable materials and chemicals that minimize environmental harm while ensuring cattle health.

In pasture development and fodder production, various grass species and cultivation techniques were assessed. The selected options prioritize drought-resistant species and sustainable farming practices to enhance pasture quality and resilience to climate change.

The hides processing component evaluated several processing technologies, with a focus on eco-friendly methods that reduce water usage and chemical waste. The selected technologies aim to produce high-quality hides while mitigating environmental impacts.

Considering alternative designs for the project was deemed unfeasible in the current context. The proposed design, which includes the rehabilitation of plunge dip pools, improved cattle husbandry practices, pasture development, fodder production, and hides processing, is tailored to address the specific needs of Chivi and Chiredzi districts. This integrated approach is essential for achieving the desired outcomes of improved livestock health, enhanced productivity, and value addition in the beef and leather value chain.

Site Options: The chosen sites were selected based on their suitability for cattle husbandry and fodder production. These are existing sites currently used for similar activities and therefore there will be no new land acquisition nor displacement.

Technology: Improved cattle husbandry techniques, such as rotational grazing and advanced veterinary care, were considered to enhance livestock health and productivity. The use of modern equipment for fodder production and hide processing was also evaluated to increase efficiency and product quality.

Design: The design of the plunge dip pools was carefully considered to ensure they are effective in reducing tick-borne diseases while being safe for both livestock and handlers. Pasture development designs focused on sustainable land management practices to prevent overgrazing and soil degradation.

Materials: Sustainable and locally available materials were prioritized for construction and rehabilitation activities. This not only reduces costs but also minimizes the environmental footprint of the project.

Chemicals: The use of chemicals in cattle dipping and fodder production was evaluated to ensure they are safe for the environment and livestock. Environmentally friendly and less toxic alternatives were selected to mitigate potential negative impacts.

5.4 Mitigation Hierarchy

The mitigation hierarchy was applied in selecting and designing project components. In impact management, a mitigation hierarchy serves as a structured approach to addressing and managing potential impacts on the environment, society, or any system due to various activities or projects. It typically consists of four steps i.e., **avoidance, minimization, restoration and offsetting or compensation**.

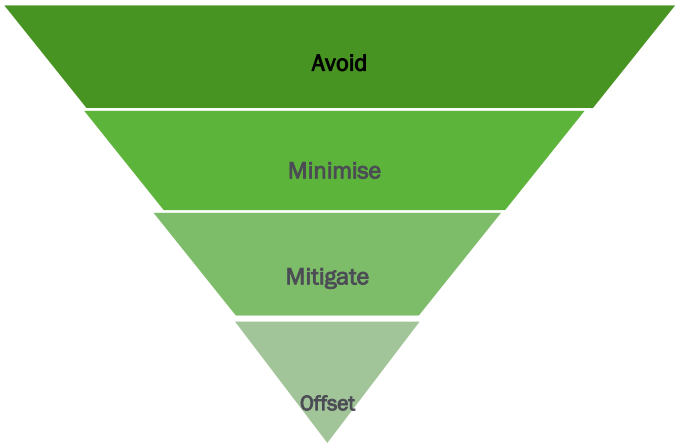


Figure 6. The Mitigation Hierarchy

The mitigation hierarchy is a framework that guides the selection and implementation of projects and activities. In this case the hierarchy is designed to ensure that projects funded by the AfDB prioritize the most effective and sustainable approaches to reduce negative impacts and enhance project sustainability. The mitigation hierarchy consists of four key steps:

Avoidance

At the top of the hierarchy is the principle of "avoidance." This step emphasizes the importance of avoiding activities or projects that could lead to significant social and environmental impacts or exacerbate existing impacts. Avoidance includes examining alternative options and considering if the project is necessary in the first place.

Minimization

The next step in the hierarchy is "minimization." If avoidance is not possible, the focus shifts to minimizing negative environmental and social impacts. This involves designing projects and activities in a way that reduces environmental and social harm as much as possible.

Restoration and Rehabilitation

If emissions and impacts cannot be completely avoided or minimized, the mitigation hierarchy promotes "restoration and rehabilitation." This step involves restoring or rehabilitating ecosystems, natural resources, and affected areas to their original or a better condition. This can help offset negative impacts and enhance positive ones.

Compensation

The final step, "compensation," is considered only when avoidance, minimization, and restoration options have been exhausted. Compensation typically involves measures to offset the remaining impacts. This can include activities like afforestation and revegetation forestation, carbon capture and storage, and other carbon removal approaches.

It's important to note that the mitigation hierarchy encourages project developers and stakeholders to prioritize avoidance and minimization whenever possible. The emphasis is on preventing harm from the onset rather than relying solely on compensation and offset measures. The hierarchy promotes a holistic and sustainable approach to addressing project impacts and making decision on whether the project should go ahead or not.

This ESMP has considered and followed the mitigation hierarchy in assessing the project interventions in Chivi and Chiredzi district. And all the identified potential impacts can be avoided and or mitigated.

Conclusion

This ESMP has evaluated a range of feasible project alternatives, including the "No Project" alternative, alternative locations, and alternative designs. The “No Project” alternative, while maintaining the status quo, would result in missed opportunities for development and improvement in the local beef and leather industries. The selected alternatives project design and locations were chosen for their potential to meet the project's purpose and need while minimizing environmental and social impacts. The proposed were determined to be the most suitable for maximizing the environmental, social, and economic benefits for the communities in the two districts. Through stakeholder consultation and public participation, the project aims to achieve sustainable and inclusive development outcomes for the communities in Chivi and Chiredzi districts.

6. MAJOR ENVIRONMENTAL AND SOCIAL IMPACTS AND CLIMATE CHANGE RISK

6.1 Beneficial Impacts

The project will bring substantial positive impacts which are believed to outweigh any risks. Implementing all the components of ZAVaCEP can have several positive impacts on i) communities facing food insecurity and lack of income ii) institutions implementing the projects and iii) offers opportunities to the whole nation of learning and upscaling the successful practices of livestock value chain enhancement. Below are some of the positive outcomes likely to result from the project if successfully implemented:

- **Enhanced Cattle Husbandry Knowledge and skills** - The ZAVaCEP involve effective pasture development, fodder conservation, cattle breeding including disease control and soil conservation and marketing strategies. These interventions will increase beef production and related income, building self-sustenance in the community. These methods not only improve livelihoods but also brings environmental benefits, such as biodiversity conservation and carbon sequestration, in the pasture lands. As climate change intensifies, the frequency of droughts and severity of natural disasters like flooding are expected to increase.
- **Economic Resilience**- The ZAVaCEP by promoting Climate Smart agriculture, and skill development programs offer options to diversifies income sources for communities. Job opportunities will also arise within the beef and leather value chain as well as related business and services, in infrastructure construction activities. These income sources help buffer against economic shocks, ensuring a steadier income even in challenging times.
- **Community Engagement and Empowerment**- Involving communities in the planning and implementation of these project activities fosters a sense of ownership and empowerment. Engaging locals in activities like fencing of pasture lands, or dip tank areas, training and monitoring of mitigation measures not only builds resilience but also strengthens community bonds. Collaborative efforts in pursuing sustainable livelihoods create a stronger social fabric, leading to better problem-solving and support systems during crises. This empowerment boosts morale, encourages innovative thinking, and increases the likelihood of sustained success for these initiatives. All these strategies can provide additional benefits such as increased education, training, and capacity building within communities, empowerment to take ownership of the project.
- **Increased Environmental Health**- Implementing ZAVaCEP will go hand-in-hand with conserving natural resources, soils, vegetation and water. Preserving natural habitats and ecosystems ensures the preservation of biodiversity, which in turn contributes to ecosystem balance and overall environmental health.
- **Enhanced Health and Well-being**- Improved environmental conditions resulting from project will positively impact the health and well-being of communities. Cleaner water quality (from boreholes) instead of unprotected sources, and reduced risks of waterborne diseases and contribute to overall better living standards. Sustainable agricultural livelihoods produce healthier food options. This, in turn, can positively impact the health and well-being of community members.
- **Policy Influence**-. Successful implementation of ZAVaCEP can influence policies at national level, particularly policies promoting the beef and general livestock production sector. This can lead to

the incorporation of the successful approaches into broader policy frameworks, ensuring sustained support and upscaling of the initiatives nationwide.

- **Knowledge Sharing and Management**- Establishing knowledge management mechanisms helps in sharing best practices, lessons learned, and scientific findings related to the project. This facilitates informed decision-making and fosters innovation in addressing livestock farming. Knowledge sharing can lead to scaling up of initiatives nationally.
- **Investment Opportunities**-ZAVaCEP offer opportunities to create business enterprises within the value chain. Successful approaches can attract investors interested in sustainable and impactful projects. Additional benefits such as impact measurement can emanate from improved finance mechanisms stringent reporting and evaluation processes. This ensures better tracking of progress, allowing for adjustments and improvements based on measurable outcomes.
- **Cross-Sector Collaboration**-The nature of ZAVaCEP approaches is that different expertise are necessary to ensure success. It requires collaboration among various government departments (e.g. water and sanitation, environment, veterinary services, industry and commerce, agriculture and land management, local government, etc), including public, private, and non-profit. This fosters partnerships and knowledge-sharing, leveraging diverse expertise for more holistic and effective agricultural solutions.
- **Long-Term Viability**- ZAVaCEP offers long-term viability by building upon exiting livestock farming and enhancing its practices, thus building interest and adaptability over time. This approach will more likely sustain itself even in changing circumstances while simultaneously reducing vulnerability. By introducing innovative ways of enhancing cattle husbandry – the approach ensures on-going interest and knowledge strengthening which is an asset for sustainability of the project.
- **Technological Advancements**-As systems are introduced as well as technologies for fodder production for instance will lead to better farming practices, enhancing its efficiency and impact of animal husbandry within the communities.

6.2 Climate Change Adaptation and Mitigation

The ZAVaCEP project contributed to climate change impacts mitigation. By promoting sustainable practices such as improved pasture management and water resource utilization, to bolster resilience against climate variability. Initiatives like integrated pest management and sustainable fodder production not only mitigate environmental impacts but also enhance productivity and income stability for farmers. Through these efforts, ZAVaCEP not only addresses immediate agricultural challenges but also fosters long-term adaptation strategies that are essential for safeguarding livelihoods amidst a changing climate. These facilities not only mitigate the effects of droughts and floods but also enhance the resilience of agricultural production systems.

Conclusion

The Beef and Leather Value Chain Enhancement Project represents a sustainable development approach, addressing environmental conservation, socio-economic empowerment, and climate change adaptation. By improving water management, enhancing agricultural productivity, and fostering inclusive growth, the project not only strengthens local economies but also builds resilience against future environmental and economic shocks. Through targeted interventions and community engagement, the project is poised to make a lasting positive impact on the lives and livelihoods of the targeted rural populations in Zimbabwe, paving the way for a more sustainable and prosperous future.

6.3 Potential Negative Social And Environmental Impacts

The proposed project is expected to have moderate impacts on the biophysical and socio-economic environment specifically during the construction phase of infrastructure. This is because the Project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment and to a large extend, it is built on existing infrastructure (dip-tanks), resources (fodder fields) and practices. Being a category 2 project, the potential risks and impacts and issues are likely to have the following characteristics: (i) predictable and expected to be temporary and/or reversible; (ii) low in magnitude; (iii) site-specific, without likelihood of impacts beyond the actual footprint of the Project; and (iv) low probability of serious adverse effects to human health and/or the environment. The Project's risks and impacts can be easily mitigated in a predictable manner.

However, land-use changes, physical restoration measures and value chain and enterprise development might result in moderate social or environmental impacts given the sensitivity of the dryland ecosystems, the complexity of the social fabric and an increasing pressure from resource competition. Overall the identified impacts are expected to be site-specific, largely reversible, and readily addressed through project mitigation measures. However, the overall project is classified as 'moderate risk', partially in the context of risk of inadequate stakeholder and community engagement and disclosure of information. Inadequate engagement and disclosure could lead to exclusion of truly vulnerable, marginalized and minority members of the community from project benefits. This exclusion would be amplified by the context of limited resources against widespread need. Other risks include elite capture (where project benefits are diverted to less needy individuals and locations), and poor access to beneficiaries that hinders meaningful community engagement and monitoring of social harm.

The potential environmental and social impacts of the proposed activities include: (i) potential soil erosion and pollution; (ii) air and water pollution (including groundwater); (iii) generation of solid waste; (iv) occupational health and safety risks related to minor-moderate construction works and facilities; (v) potential disease outbreak for proposed re- stocking of livestock; and (vi) potential degradation of the wildlife habitats and agricultural lands. Social risks and impacts include: (i) gender-based violence, (ii) labour influx, (iii) discrimination and exclusion of vulnerable groups, (iv) child labour, (v) Labour dispute, (vi) spread infectious diseases like STIs and HIV/AIDS, (vii) community conflicts and threat of security. Under each impact, the ESMP, sets out mitigation measures to minimize the negative risks and impact while enhancing the positive impacts.

Impacts on Flora and Fauna

Some of the proposed activities will require land clearing, soil movement and other civil works that may lead to habitat loss and disturbance of existence of fauna. Removal of vegetation during excavation works is likely to lead to loss of plants and animal habitats. The biodiversity that may be affected includes insects, small mammals, reptiles and birds. This impact are expected to be significant in cases where the districts communal lands are adjacent to protected Parks or forest lands. Poor handling of human activities during project construction activities and operations may cause harm to flora and fauna.

Soil Erosion & Degradation of Rangelands

Any of the activities intended for the project if not properly implemented can result in soil erosion and further degradation of rangelands. Civil works activities using motorized equipment including materials delivery, excavation, concrete works are likely to lead to localized and cumulative impacts on resources such as bio-diversity, rangeland, soil and water quality.

Poor agricultural practices and other land use may exacerbate soil erosion, siltation and pollution of surface waters leading to cumulative impacts. Poorly managed reforestation and grazing lands may lead to erosion and gully development or exacerbation of the two problems. Pasture development or rehabilitation activities of existing pastures could potentially affect soil health and water quality if not managed properly, leading to erosion, soil degradation, or surface water contamination.

Habitat Fragmentation and disruption of Natural Processes

Some activities such as soil conservation or like gully erosion rehabilitation might disrupt natural processes if not done in harmony with the environment. Changes in land use or rehabilitation efforts might fragment habitats, affecting ecosystem continuity.

General Construction Waste Impacts

During construction phases of the different projects under the sub components mentioned below, general construction wastes will be generated including among others cement bags, used wrapping materials, wood, glass etc. If improperly disposed, general wastes could result in pollution of water bodies, soil and impact on flora and fauna.

Community Health and Safety Risks

There is a potential community health and safety hazards associated with the implementation of subprojects components handling of machinery, traffic accidents, open pits, noise and injury from unsecured building materials. Construction sites may be a source of both liquid and solid wastes that can accidentally poison community members especially children who may curiously enter the site. Similarly, the construction activities may lead to physical harm, disruption of daily activities and blockage of routes limiting access to livelihood activities.

Pollution of Open Water Sources

The primary potential sources of surface water pollution are pesticides and fertilizers used in fodder fields, as well as mishandled dip effluent containing acaricides. Additionally, general solid waste from construction activities, feed processing hubs, and agro-processing facilities, if not properly disposed of, can also end up in rivers, contributing to water pollution. Pesticides and their containers pose a significant risk to surface waters. The contents of these pesticides can migrate into open watercourses, such as rivers, as well as groundwater sources.

Occupational Safety and Health Risks

The construction of subprojects facilities is associated with occupational as well as community safety and health risks related minor construction /civil works i.e. water-pans, and for community livestock watering points and any other civil works.

Cumulative Impacts from Sub-Projects

Some sub-projects may in some areas result in cumulative impacts on the environment and communities. Cumulative impacts are impacts which may result from individually, small-scale subprojects with minimal impacts but which over time can combine to yield a significant adverse effect on the environment or communities. In such cases, cumulative impacts shall be assessed based on the combined effects of potential impacts from the various Project inputs. They include:

- Potential impacts on surface water bodies (constructed water-troughs and dip tanks) arising from the construction of numerous small-scale constructed water-pans troughs and potential cumulative impacts on water users (especially downstream users of potential river and streams) that share the water sources and aquifers;
- Loss of vegetation cover / degradation of rangelands / soil erosion;
- Pollution of open water sources and underground water aquifers.

6.4 Potential Social Risk and Impacts

Gender Based Violence (GBV) and Sexual Harassment

GBV risks are high in the construction sector and the risk of sexual harassment by workers is likely to be high. Construction workers are predominantly younger males. Those who are away from home on the construction job are typically separated from their family and act outside their normal sphere of social control. This can lead to inappropriate and criminal behaviour, such as sexual harassment of women and girls, exploitative sexual relations, and illicit sexual relations with minors from the local community. Influx of male labour may also lead to an increase in exploitative sexual relationships and human trafficking whereby women and girls are forced into sex work.

Projects can create changes in the communities in which they operate and can cause shifts in power dynamics between community members and within households. These changes can contribute to higher levels of GBV associated with the project. GBV incidents are likely to occur as a result of higher wages for workers in a community contributing to transactional sex. Site specific Environmental and Social Management Plans (ESMPs) will specify ways to address potential GBV in the community.

Child Labour

Child labour is work by children under the age of 18 that is exploitative, hazardous or otherwise inappropriate for their age and detrimental to their schooling or social, mental, physical, spiritual or moral development. Poverty may drive children to earn an income resulting in underage children seeking employment at construction sites or from families with huge cattle heads as headers. A set of Labour Management Procedures may be prepared to support this ESMP with clear guidelines on the prohibition of child Labour.

Labour Disputes

The project's civil works will employ several workers in the different sites. Potential Labour disputes may arise due to disagreements regarding conditions of employment, fringe benefits, hours of work, wages and any other contract terms and conditions; between workers and contractors. Disputes are disruptive to work flow and contribute to failure to meet deadlines thus increasing project costs.

Spread of HIV/AIDS, STIs and other communicable diseases

As beef and leather production improves people will travel from other areas to purchase animals and hides. The beef owners will also mingle with a lot more people as they go to markets in other areas, in urban centres etc. In migration of people from different regions may lead to behavioural influences which may increase the spread of diseases such as Human Immuno-Deficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS) and other Sexually Transmitted Infections (STIs). Migrant labour, such as those involved in the leather and beef industries, can inadvertently contribute to the spread of HIV/AIDS. Movement of workers and associated social dynamics can increase vulnerability to disease transmission and strain local healthcare systems. As such, while the project aims to improve agricultural practices and economic outcomes, careful consideration of public health and social implications is crucial to mitigate unintended consequences.

Discrimination and Exclusion of Vulnerable Groups

Vulnerable members of communities suffer from insecurities and normally do not have a voice to articulate their rights. They also are more likely to disadvantaged by project interventions or made more vulnerable by climate change events. As a result, such communities could fail to benefit from the development and opportunities resulting from the project through discrimination and exclusion during the selection of beneficiaries. Vulnerable categories include women, differently abled persons, youths and elderly and these groups could be excluded from planning processes, leadership and implementation.

Social Conflicts

Activities like rangeland management, rehabilitation and might lead to conflicts over land use. Disputes may arise between communities due to many factors and, conflict may be generated or exacerbated by the identification of the project site and when the beneficiaries have competing interests. The gathering together of community members could trigger social conflicts arising from disagreements over leadership selection or governance structures, etc. Moreover, changes in community dynamics due to increased economic activities as a result of the project may disrupt traditional social structures and norms, potentially affecting local social cohesion and stability.

Community livelihoods

Changes in land use or agricultural practices could affect traditional livelihoods, especially if not managed well or if new practices aren't viable alternatives for local communities. Changes in agriculture methods or land use could initially impact the income of farmers or communities if not managed with proper support systems.

Aid Dependence

Dependence on external aid and market fluctuations can affect local economies and livelihoods. Dependency can lead to long-term sustainability challenges. Once funding ends, communities and stakeholders may struggle to maintain infrastructure and practices established under the project. Moreover, if not managed carefully, the influx of aid and development resources could foster a reliance on external assistance rather than sustainable local initiatives, perpetuating a cycle of dependency instead of fostering self-sufficiency and long-term economic stability within the affected communities.

Conclusion

The Beef and Leather Value Chain Enhancement Project presents a complex array of negative social and environmental impacts alongside its economic development objectives. From potential biodiversity loss and soil pollution to human health risks and social displacement, these impacts necessitate stringent management and monitoring. Careful planning, community engagement, and strict adherence to the ESMP are essential to minimize adverse effects on both the environment and local communities.

6.5 Climate Change Impact on the Project Area

Climate change impacts cause a lot of challenges to the communities of Chivi and Chiredzi, two districts. These areas already experience variable and often insufficient rainfall, but climate change is exacerbating these conditions. Increased temperatures and further reductions in rainfall are becoming more common, which greatly affects water availability for livestock and agriculture (USAID, 2018). The changing climate patterns are making it increasingly difficult for farmers to maintain consistent crop yields and provide sufficient water for their cattle, which are crucial for the local economy.

The increased frequency and severity of droughts pose a major concern for Chivi and Chiredzi. Droughts reduce water levels in rivers, dams, and groundwater sources, severely impacting the availability of drinking water for cattle and irrigation for fodder crops (UNDP, 2017). Additionally, higher temperatures contribute to heat stress in livestock, leading to reduced productivity, slower growth rates, and increased mortality rates (FAO, 2019). These climate-related challenges directly affect the beef value chain by decreasing the number of healthy cattle available for both meat and leather production, thus threatening the livelihoods of many local farmers and the broader agricultural economy.

6.6 Project Contribution to Climate Change and Associated Risks

If not properly managed the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) holds potential to significantly impact climate change dynamics in implementing districts in Masvingo. Through its focus on beef production and associated activities, such as cattle ranching and pastureland development, ZAVaCEP may exacerbate greenhouse gas emissions, particularly methane from enteric fermentation of livestock (IPCC, 2019) as well as from cow dung. The expansion of pasturelands, necessary for cattle grazing, could also contribute to deforestation, releasing stored carbon into the atmosphere as CO^2 emissions (UNEP, 2020). Moreover, the installation of boreholes for water access, while essential for livestock and community use, risks depleting groundwater resources, thus impacting local hydrology and water availability.

To address these climate-related risks, ZAVaCEP could integrate robust mitigation measures. Sustainable land management practices, such as rotational grazing and agroforestry, can enhance carbon sequestration, reduce soil erosion, and improve water retention (World Bank, 2021).

Implementing improved livestock management techniques, including selective breeding for heat-tolerant cattle and optimizing animal nutrition, can help minimize methane emissions per unit of beef produced (IPCC, 2019). By prioritizing these sustainable practices, ZAVaCEP has the potential to mitigate its environmental footprint while fostering resilient agricultural systems in these vulnerable districts.

6.7 Potential Risks that could affect the ZAVaCEP Project

Political Instability and Governance Issues

- Zimbabwe has faced significant political instability over the years, impacting the implementation of development projects. Political tensions, especially surrounding elections and governance, can disrupt project activities and influence the prioritization and allocation of resources (International Crisis group 2020).

Economic Challenges and Inflation

- The country has experienced severe economic difficulties, including hyperinflation, currency instability, and a high unemployment rate. These economic challenges can affect the project's cost structure, funding availability, and overall financial sustainability.(World Bank 2021).

Regulatory Environment and Bureaucracy

- Complex regulatory requirements and bureaucratic delays can pose significant challenges to project implementation leading to project time and cost overruns. Compliance with local regulations, obtaining necessary permits, and navigating bureaucratic processes can be time-consuming and may hinder project timelines (Transparency International 2019).

. Social and Community Dynamics

- Social factors, including community cohesion, local power dynamics, and traditional leadership structures, play a significant role in project acceptance and success. Understanding and integrating local customs and practices are essential for gaining community support and avoiding conflicts (ISS, 2020).

Human Rights and Labour Issues

- Ensuring compliance with international human rights standards, particularly regarding labour practices in the beef and leather value chains, is crucial. There are risks related to child labour, unfair wages, and poor working conditions that need to be addressed (Human Rights Watch, 2021).

6.8 Activities that could contribute cumulative impacts on Project activities

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) could have cumulative effects on its impact. Here are the key areas of focus along with references to support this understanding:

In Chivi and Beitbridge, various ongoing development activities may have cumulative effects on the project impacts.

i. Current Agricultural Practices and Land Use:

- In Masvingo, particularly in livestock farming, current agricultural practices can contribute to poor soil health, exacerbate water scarcity, and lead to cumulative impacts on biodiversity loss.

For instance, the development of boreholes at dip tanks could result in increased water usage by communities, leading to resource scarcity.

ii Climate Change and Environmental Policies:

- Zimbabwe's national policies on climate change and environmental protection are crucial for aligning the project with sustainable practices. These policies dictate how resources are managed and how agricultural projects must mitigate their environmental impact (Ministry of Environment, Water and Climate, 2016).

iii. Local Community and Economic Activities:

- Local economic activities, including small-scale mining and artisanal operations, can have significant environmental impacts (Mabhena, 2015). Additionally, the expansion of gold panning can result in increased land degradation, deforestation, and water pollution.

iv. Complementary Projects:

- Some projects, being implemented by other NGOs or agencies in the area can have a positive cumulative effect on ZAVaCEP. This project complements ZAVaCEP by adding components that enhance the overall impact and sustainability of agricultural development efforts in the region.

7. ENHANCEMENT/MITIGATION MEASURES AND COMPLEMENTARY INITIATIVES

Improving the environmental and social performance of the ZAVaCEP project in Chivi and Chiredzi particularly in the beef and leather value chain, can yield significant quantitative benefits while mitigating adverse impacts. Let's delve into the beneficial impacts first:

7.1 Beneficial Impact Enhancement Measures

i **Economic Growth**: To enhance economic growth, the project can invest in establishing cooperatives or producer associations can improve market access and bargaining power for smallholder farmers. Establishing financial support mechanisms for purchasing quality breeds and inputs can boost production. Fodder production can allow non-cattle owners. To also participate in the project and gain income by selling their fodder to cattle owners. Collaborating with export agencies to meet international quality standards will facilitate export and increase revenue.

ii **Poverty Alleviation:** Implementing targeted training programs for smallholder farmers and rural communities can enhance productivity and income. These programs should focus on sustainable farming practices, animal husbandry, and hide processing techniques. Revolving funds, facilitated through the project beneficiaries, can provide financial assistance for purchasing livestock, equipment, or inputs. Facilitating access to markets through transportation infrastructure improvement and market linkages will ensure farmers receive fair prices for their products.

iii **Skills Development:** Collaborating with vocational institutions to establish training centres or extension services that offer practical training on farming techniques, hide/leather processing, and business management will empower local communities. These centres can provide hands-on training, demonstrations, and workshops. Partnering with vocational institutions or agricultural colleges can enhance the quality and reach of training programs. Providing certification for skilled individuals can enhance their employability and encourage entrepreneurship.

iv **Environmental Conservation**: Promoting sustainable farming practices such as rotational grazing, and construction of soil conservation infrastructures will mitigate environmental degradation. Providing technical assistance and incentives for implementing these practices will encourage adoption. Setting up community-based natural resource management committees can oversee sustainable land use practices and monitor environmental impacts. Creating awareness campaigns on the importance of biodiversity conservation and ecosystem services will garner community support.

v **Social Inclusion:** Zimbabwe's rural communities adhere to patriarchal norms that continue to disproportionately disadvantage women. The inclusion of targeted interventions for women and managed by the MWASCMED will ensure equal participation of marginalized groups in project. This includes providing targeted training and capacity-building programs for women and youth. Establishing gender-sensitive policies and practices within project management structures will promote gender equality. Creating platforms for marginalized groups to voice their concerns and participate in decision-making processes will foster social cohesion. ZAVaCEP will ensure GESI principles are integrated into all project interventions.

7.2 Mitigation Measures for Adverse Environmental Impacts

Flora and Fauna

To mitigate the environmental impacts on flora and fauna within the ZAVaCEP project, several measures will be implemented. Once work on any clearings is completed, re-planting vegetation will be prioritized to restore the natural habitat as much as possible. Efforts will be made to spare vegetation that does not need to be removed, particularly tree species, to preserve the existing biodiversity. To minimize destruction caused by machinery, non-mechanized methods of construction will be promoted, especially on slopes where the risk of erosion and habitat disruption is higher. Prohibiting the opening up or encroaching on forested areas and minimizing vegetation cutting within the project coverage area are critical measures. Vegetation, particularly grass, will be planted in all disturbed areas, including along gullies, under the guidance of local Agritex officers to prevent the introduction of invasive plant species and the creation of gullies. Additionally, boundary planting of trees on fodder fields and public areas, such as dip tanks, will be encouraged to increase tree cover and further protect the land.

Soil Erosion and Rangeland degradation

To mitigate soil erosion and rangeland degradation as part of the ZAVaCEP ESMP, several measures are being implemented to ensure sustainable land use and conservation. Public awareness programs play a crucial role during project implementation, ensuring beneficiaries understand and actively participate in rangeland management. Farmers will be trained in soil and water management practices to prevent land degradation, with specific techniques such as terracing and contouring used to reduce erosion and stabilize slopes. Structures to trap sediments are installed within pasture farmlands, preventing their entry into water bodies. Farmers will be encouraged to limit the number of animals based on the capacity of available land resources, while the length of grazing time will be controlled through rotational grazing, the development of dry-season grazing areas, and reserves..

General Construction Waste Impacts

Waste generated in civil works will be covered under the contractors environmental plan. Although relatively not much waste will be generated, it's expected that there will be some concrete waste from the rehabilitation of existing dip tanks and provision of water troughs. Where possible construction waste will be utilised in the rehabilitation of borrow areas from which sand materials were extracted, in collaboration with the local authority's waste management plan to identify suitable sites for backfilling. On-site waste disposal will be facilitated by providing waste bins, and workers will receive training on proper waste management practices, including the principles of reducing, reusing, and recycling wastes wherever possible. Additionally, a curbside debris pickup program may be implemented, allowing community members to salvage safe, reusable construction waste for personal use. Project workers will be trained to handle construction waste in compliance with existing waste management regulations. Designated temporary waste holding areas for both agrochemicals and construction waste will be established at construction sites. The contractor will be responsible for the handling and disposal of all construction-related waste throughout the project's duration and until the completion of their contract. Waste disposal bins for different waste streams will be provided, with regular emptying schedules to ensure proper waste management and compliance with regulations.

Soil Contamination from Construction Oils

In cases of civil works, contractors will ensure that employees are well-informed about procedures for dealing with spills and leaks from oil storage tanks, which will include using dispersants or adding biological agents to accelerate oil breakdown. This will be facilitated through comprehensive induction and safety training. Contractors will propose clean-up methods, subject to approval, to ensure effective and environmentally friendly solutions. Additionally, waste management procedures will be established, and dustbins and sanitation facilities will be provided to prevent waste seepage into the natural environment, thus protecting the integrity of local ecosystems.

Community Health and Safety

The ZAVaCEP ESMP outlines comprehensive mitigation measures to address various environmental and social risks associated with the project. Contractors are required to develop and implement a site environmental management plan which will cover Occupational Health and Safety and strategies for the Management and Safety of Hazardous Materials. Additionally, the contractors should have a a GBV/SEAH and Child Protection Action Plan, Employment Plans, included in their plans to safeguard workers and the populations, in the vicinity. The ZAVaCEP Grievance Redress Mechanism (GRM) will support fair labour practices and conflict resolution. An Emergency Preparedness and Response Plan is essential for addressing unforeseen incidents, and safety signages in local languages will warn of specific hazards such as deep cuts, water dangers, and speed limits. Community sensitization on project risks and preventive measures from the outset is also critical and E and S specialist will work with district implementors on the ground to ensure the communities have been sensitised. Ensuring all construction machinery and equipment are in optimal condition according to manufacturer specifications will prevent occupational hazards, and fencing off the project site with secure materials will prevent unauthorized access and potential injuries. These measures collectively aim to mitigate risks and promote the safety and well-being of both workers and local communities.

Pollution of Open Water Sources

To mitigate the pollution of open water sources within the ZAVaCEP, several measures will be implemented. Firstly, promoting and training farmers on Integrated Pest Management (IPM) practices is essential. This approach combines crop management control techniques, biological control, and the restricted use of biopesticides to minimize the reliance on chemical pesticides. Safe use of agrochemicals is also emphasized, ensuring that the correct amounts of pesticides, fertilizers, and biocides are applied for various crops. Beneficiaries' communities in all ZAVaCEP interventions shall be encouraged to use of organic manure and compost fertilizers, and integrated pest management while discouraging reliance on chemical/synthetic pesticides. Additionally, it is crucial to avoid applying pesticides and fertilizers before rain periods, as rainfall can wash these chemicals into surface water bodies, leading to contamination. Regular testing of water samples for basic physio-chemical properties will be conducted to monitor and verify if the parameters remain within required standards, ensuring that any significant changes are detected and addressed promptly.

Labour Occupational Health and Safety

To mitigate occupational safety and health risks associated with the ZAVaCEP project, several measures have been put in place to ensure the safety and well-being of construction workers. Workers will receive comprehensive training on occupational health and safety (OHS) risks, along with preventive and corrective actions to minimize these risks. Daily briefings, also known as toolbox talks, will be conducted before the start of each assignment to keep workers informed and sensitized about the day's activities and associated hazards. Personal protective equipment (PPE), including gumboots, coveralls, and gloves, will be provided to all workers to ensure they are adequately protected. Active construction areas will be fenced off to prevent unauthorized access and reduce the risk of accidents. Additionally, a well-stocked First Aid Kit will be available on-site at all times, with a trained First Aider ready to respond to any incidents. Arrangements will be made with nearby health centres or hospitals to provide healthcare services to project workers if needed. Clearly marked safety signage will be installed at project sites to alert workers and visitors to potential hazards. Finally, all equipment used in the project will be thoroughly cleaned before and after use to maintain hygiene and prevent contamination. Most of these measures are the responsibility of the contractors and should be agreed on at the bidding stages.

Air Quality Environmental Degradation:

To mitigate air quality degradation, the project should enforce strict emission standards for machinery, vehicles, and livestock operations. Implementing dust suppression measures on unpaved roads and construction sites can minimize particulate matter emissions.

Water and Soil Pollution from Dip Effluent and Fodder fields

To mitigate water pollution, the project should establish buffer zones along water bodies and implement riparian area management practices to prevent sedimentation and contamination from agricultural runoff. Implementing erosion control measures such as contour ploughing, vegetative buffer strips, and terracing can reduce soil erosion and nutrient runoff into waterways. All dip tanks will have Soakaways for disposal of effluent but during heavy rains there may be overflows from the dip plunge pool or the drying pen. Establishing appropriate grassed sites for disposal of overflow dip effluent to minimize run-off into the nearby streams will reduce water pollution. Ensuring that drying pens have outlet valves that empty into the soakaway, and to keep the valves opened during rain events to reduce run-off. Implementing best management practices for manure and waste management, such as composting and proper storage facilities, will minimize nutrient runoff. Proper waste management practices, including the safe disposal of agrochemical containers, are essential. Regular water quality monitoring and prompt remediation of pollution sources are necessary to safeguard aquatic ecosystems and drinking water sources.

7.3 Mitigation Measures for the Social Impacts

Mitigations against GBV

To mitigate GBV/SEAH incidents, ZAVaCEP will adhere to both Zimbabwean legal standards and AfDB Safeguards Standards, both of which have zero tolerance for GBV/SEAH. The project's grievance redress mechanism will support victims in reporting violations and seeking redress. Contractors and their employees will be required to comply with these standards, and all project personnel will be expected to fully understand the repercussions and avoid any violations. These issues will be emphasized to all stakeholders, project personnel and local beneficiaries from the project's onset during trainings and inception meetings.

Leveraging the state's gender machinery will enhance the capacity to handle GBV/SEAH-related complaints swiftly and effectively. Continuous monitoring and implementation through the GRM by will ensure adherence to protocols and need for prompt action were necessary.

Use of Child Labour

To address child labour concerns within the ZAVaCEP project, stringent measures will be implemented. All contractors will be required to adhere strictly to Zimbabwe's Labour Act and the Children's Act, as well as the AFDB OS5 which prohibit the employment of individuals under the age of 18, except for youth volunteers engaged in educational skill-building activities. The E&S specialist and DPIUs will play a crucial role in raising awareness among communities about these legal provisions, ensuring that no individuals under 18 seek employment on project sites. Non-compliance will result in penalties enforced in accordance with national laws, safeguarding against any exploitation of underage labour.

Labour Disputes

Efforts to mitigate labour disputes within the ZAVaCEP project will focus on ensuring fair and equitable treatment of workers. All project contractors will be required to implement fair terms and conditions in accordance with Zimbabwe's labour laws. The project's Grievance Redress Mechanism (GRM) will be established to promptly and fairly resolve disputes at the project level. However, it will be limited to non-contractual issues. Workers and contractors will be encouraged to use the GRM channels to efficiently address workplace grievances and project-related concerns. The GRM will handle issues related to violations of ESMP standards, such as human/worker rights violations, pollution, gender-based violence (GBV) and sexual exploitation and abuse and harassment (SEAH), and social ethics concerning the environment and community. Contractual disputes should be referred to the labour court for arbitration.

HIV and AIDS

In response to the HIV/AIDS challenge within the project area, ZAVaCEP will implement robust mitigation measures aimed at sensitizing workers and local communities. Staff training, awareness campaigns, multimedia dissemination, and workshops during community meetings will be employed to raise awareness about HIV/AIDS prevention and management. The project will complement the nation's ongoing HIV/AIDS efforts encouraging voluntary HIV/AIDS testing among workers and community members to promote early detection and access to treatment. Furthermore, ZAVaCEP will prioritise hiring local workers where possible to minimize external migrations that could exacerbate risks such as transactional sex. Contractors will be expected to sensitise their employs and reinforce compliance.

Exclusion and Marginalization of Vulnerable People

ZAVaCEP will adopt comprehensive measures to ensure the social inclusion of all groups, particularly vulnerable members of the populations. The project will implement inclusive consultations and focus groups, ensuring the active participation of women and other marginalized groups as outlined in the project's Stakeholder Engagement Plan (SEP). Employment opportunities and relationships within the project will be managed without discrimination, fostering an environment of equal opportunity for all. GESI sensitization meetings will be held to educate stakeholders on resource planning and conflict resolution mechanisms, promoting fairness and equity in decision-making processes. The institutionalization of social inclusion principles ensures that all categories, including elders, traditional leaders, men, women, young people, and the physically challenged, will be integrated into project processes and decision-making. The project will capacitate all staff, traditional leadership and local NGOs to mainstream GESI principles and develop promotional materials to encourage inclusivity and use gender-sensitive indicators in monitoring the project impacts. Additionally, non-exclusion requirements will be integrated into beneficiary selection criteria, monitoring systems, and contracts with third parties to uphold inclusivity throughout project implementation.

Social Conflicts

Mitigation measures for social conflicts within the ZAVaCEP will be addressed using the project Grievance Redress Mechanism include utilising village-level grievance and conflict handling mechanisms or utilizing traditional conflict resolution institutions. The local level conflict are expected to be resolved through culturally acceptable dispute resolution methods such as mediation and negotiation, facilitated by elders or traditional leaders as outlined in the ZAVaCEP GRM. Training will be provided to committee members on group dynamics to enhance their effectiveness in managing conflicts. Clear guidelines will be developed for selecting committee members based on qualities like fairness and good communication skills, ensuring impartial conflict resolution processes. Social conflicts by other stakeholders who are part of the project will follow the provisions of the GRM.

Mitigating Community Loss of Livelihoods

Among all the ZAVaCEP interventions, only the use of existing fields for fodder production may potentially impact community livelihoods if those fields were previously used for family food production. ZAVaCEP will utilize fields that are lying fallow, not optimally producing crops, and have been volunteered by their owners. Assessments will be conducted with the help of Agritex Officers before these fields are used for fodder production. Farmers will be required to retain some fields for crop cultivation, ensuring a balance between fodder production and food security. Additionally, farmers will be educated on sustainable techniques and trained in climate-smart agriculture methods to enhance resilience against climate change impacts. Crop diversification and intercropping will be promoted to improve agricultural resilience and ensure food security. These measures collectively aim to safeguard and enhance community livelihoods amidst environmental and economic challenges.

Animal Health and Genetic Loss:

The project will prioritize animal health through the implementation of robust disease prevention and control measures. This includes regular veterinary inspections, vaccination programs, and adherence to biosecurity protocols at cattle dipping and hide processing facilities. Genetic diversity will be safeguarded through sustainable breeding practices and the promotion of indigenous livestock breeds e.g. the Nkuni that are resilient to local environmental conditions. Collaborations with veterinary experts and local farmers will ensure continuous monitoring and management of animal health and genetic resources.

Aid Dependency:
Mitigating aid dependency will involve promoting sustainable economic development through capacity building and skills training programs. The project will support local entrepreneurship and value addition within the beef and leather value chain, enhancing income generation opportunities for communities. Diversification of livelihoods and promoting self-sufficiency in agricultural practices will reduce dependency on external aid and foster long-term economic resilience.

7.4 Mitigation Cumulative impacts

The ZAVaCEP project adopts a comprehensive approach to mitigate environmental and social impacts through several key measures. During the sub-project planning stage, it is crucial to keep track of activities and their characteristics to identify areas where cumulative impacts may occur. If such areas are identified, a cumulative impact assessment should be developed to pinpoint negative impacts and corresponding mitigation measures. Avoiding the encroachment of sensitive ecosystems associated with water sources and aquifers is essential. The project emphasizes reducing the use of agrochemicals by adopting integrated pest management options. Periodic monitoring and implementation of mitigation measures for cumulative impacts are necessary to ensure their effectiveness. Continuous manual translocation of grass tussocks and shrub/tree saplings from the surrounding environment should be conducted carefully to avoid causing harm to donor locations. Additionally, monitoring and controlling the proliferation of invasive species is important for early suppression. Adhering to specific mitigation measures outlined in the ESMPs and training communities on environmental and social risk assessments in selecting sub-projects will help limit the exacerbation of cumulative impacts due to new sub-projects.

Conclusion
In conclusion, the Environmental and Social Management Plan (ESMP) for ZAVaCEP outlines comprehensive strategies to address the significant impacts of climate change and social conflicts in the project areas of Chivi and Chiredzi districts. These are summarised in **Table *4*** below. By acknowledging the escalating challenges posed by climate variability, including reduced rainfall and increased temperatures, the ESMP prioritizes resilience-building measures. These include the introduction of sustainable agricultural practices, promotion of water conservation techniques, and the establishment of robust community conflict resolution mechanisms. Through these proactive mitigation efforts, ZAVaCEP not only aims to safeguard local livelihoods but also seeks to foster sustainable development that harmonizes environmental stewardship with social well-being in the project regions.

Table 4. ESMP Impacts & Mitigation Measures

Impacts Identified	Nature of impact (negative or Positive)	Duration of Impact	Scope of Impact	Level of Risk associated with Impact	Proposed mitigation measures	Capacity Building required	Reporting Frequency	Responsibility
CONSTRUCTION PHASE								
Vegetation, habitat and biodiversity losses (C1)	Negative	6-12 months	Localised	Moderate	Minimise unnecessary vegetation clearance Rehabilitate cleared sites and replant vegetation Vehicles & workers to use existing roads and tracks	Sensitization of workers and farmers	Monthly	Construction supervisor District PCU E&S,
Soil Erosion around dip tanks and feed processing hubs (C2)	Negative	6-12 months	Localised	moderate	Control drainage Cover up grub & cleared sites Compact borrow sites	Sensitization of workers		Construction supervisor E&S, District PCU
Soil pollution from vehicle oils and waste (C3)	Negative	6-12 months	Localised	Low	Have vehicles regularly serviced React when oil is detected	Worker /drivers sensitisation	Weekly	Construction supervisor E& S
Solid waste Increased waste generation, Dumping of construction waste (C4)	Negative	6-12 months	Localised	Moderate	Employ recycling where necessary Place litter bins at convenient places Use existing waste dumps Waste management protocols Use existing waste dumps	Educate and build awareness	Monthly	Construction Supervisor E&S District environmental officer
Water pollution (C5)	Negative	6-12 months	Can spread Beyond project site	Moderate to high	Waste water has to be contained at all sites Avoid dumping pesticide or anything into water ways	Prevention of water pollution	Monthly	Construction supervisor E & S District environmental officer
Dust, air quality at construction sites and fodder fields (C6)	Negative	6-12 months	Localised	Moderate -Significant	Establish & enforce speed limits for construction vehicles to avoid dust from the access roads	Display notices Sensitize workers		Construction supervisor EMA, District PCU

					Wet cleared sites & working area to reduce dust			
Occupational health and safety (C7)	Negative	6-12 months	Localised	Moderate	Workers trained on safety measures Safety gear for workers during construction Display construction notices and warnings in visible places Cordon off pits and trenches, construction site	Sensitize workers and nearby communities on safety issues	monthly	Construction supervisor E&S, District PCU District Environmental officers
Noise Pollution (C8)	Negative	6-12 moths	localised	Low to moderate	Have serviced vehicles and machinery to reduce noise Use mufflers on heavy machinery Limit noise to allowable levels 45-65 decibels	Awareness raising	monthly	Construction supervisor E&S, District PCU District Environmental officers
Social intrusion affecting harmony in community (C9)	Negative	6-12 months	Localised	Low	Educate workers Employ locals for unskilled labour to reduce number of outsiders	Awareness raising	quarterly	Traditional leadership and contractor E&S
Increase in HIV and AIDs infections (C10)	Negative	Life long	Local/Regional /national	Moderate-significant	Train on HIV and other communicable diseases Provide condoms at project sites Develop educational material Compliment on-going efforts by Ministry of health	Education and awareness	quarterly	Local Health institution/ traditional leadership E& S
Employment opportunity (C11)	Positive	6-12 months	Localised	Moderate Short term	No mitigation	GESI awareness education	Quarterly	PCU, MWACSMED Contractor E&S
Soil compaction on roads leading to and around construction site(C12)	Negative	6-12 months	Localised	moderate	Vehicle to remain on existing roads and designated parking at sites. Reduce movement on site revegetate	Sensitization of drivers and workers	Monthly	Construction supervisor

OPERATIONAL PHASE								
Impacts Identified	**Nature of impact (negative or Positive)**	**Duration of Impact**	**Scope of Impact**	**Level of Risk associated with Impact**	**Proposed mitigation measures**	**Capacity Building required**	**Reporting Frequency**	**Responsibility**
Improved water supply for productive use (OM1)	Positive	Medium-long term	localised	Moderate	No mitigation	WASH awareness	Biannually	
Employment opportunities from fodder production, cattle restocking and hide processing (OM2)	Positive	Medium to long -term	localised	moderate	none	ANIMAL HUSBANDRY, fodder production	Quarterly	
Improved communication and enhanced capacity for livestock market (OM3)	Positive	Medium to long term	localised	significant	None	Pricing and marketing training	Bi annually	
Improved farmers access to cattle breeds (OM4)	Positive	Long-term	Local and regional	significant	None	Animal husbandry	quarterly	
Increased yield/production of cattle, fodder and income (OM5)	Positive	Medium to long-term	Local to national	Moderate - significant	None	Animal husbandry, fodder processing	Bi annually	
Increased market access through export and improved Food quality in beef value chain (OM6)	Positive	Long term	Localised	significant	No mitigation	Value chain training	Quarterly	
Reduction in Diseases, Improved Nutritional Security and reduced threat to public health (OM7)	positive	Medium to long term	Localised to regional	significant	Reinforcement of good husbandry practice	Animal husbandry	Every six months	Animal health department and Vet department
Pollution of air and bad odour (from cattle Production (OM8)	Negative	Medium term	localised	Low to moderate	Regular cleaning of pens and using manure for fertiliser Avoiding stock piling animal manue0- distributing frequently	Organic fertiliser production	quarterly	E & S District environmental officer
Solid Waste at fodder fields, feed processing	Negative	Low to medium	localised	low	Waste management practices	Waste management	quarterly	E & S

hubs and dip tanks (OM9)					Recycling			District environmental officers
Degradation of land due to poor agronomic practices re fodder fields (OM10)	Negative	Medium to long term	localise	Moderate Significant	Practise soil conservation Rotational cropping Reduce fertiliser and pesticide use	Land management Us of organic fertilisers	yearly	
Soil and surface water Pollution from feed lots and from dip tanks (OM11)	Negative	Negative	Short/ medium	Localised	Avoid improper disposal of empty containers of pesticides and acaricides into river channels Treat the waste water from dips before disposal	Education and awareness	Monthly	
Depletion of underground water impacting water users and reservoirs recharge (OM12)	Negative	Medium to long term	Localised	Significant	Monitor water levels Install water schedules and water efficiency measures	Water monitoring	Biannually	
Accelerated or frequent breakdown of infrastructure and equipment (OM13)	Negative	Medium term	localised	significant	Put in place a maintenance plan Provide basic tools and manuals from day one Build incentive for maintaining infrastructure and equipment	Maintenance skills	quarterly	Relevant committees RIDA Department of mechanisation
Loss of genetics through inbreeding (OM14)	Negative	Medium to long term	Localised	Significant	Frequently change the bulls used Monitor breeds performance throughout	Animal breeding training	Yearly	Vet officers Researchers
Resistance to acaracides (OM15)	Negative	Medium to long term	Localised	Significant	Implement PMP	PMP training	Yearly	
Spread of HIV and AIDs (OM16)	Negative	Long term	Local to national	significant	Awareness, reinforcement of messages Condom provision Provision of periodic Counselling and testing	HIV campaign s	Every quarter	District health facilities staff, DPIC, Traditional Leadership
Occupational Health and Safety (OM17)	Negative				Health and safety guidelines at project facilities	Proper equipment use	Yearly or every six months	E&S Relevant committees

					Availa first aid kits at facilities Sensitise communities on use of equipment Prohibit access to risky areas and equipment	First aid skills		
CAPACITY BUILDING AND INSTITUTIONAL STRENGTHENING INITIATIVES								
Improved livestock value chain capacities	Positive	Medium to long term	Local/ regional	May require reinforcement	Put in place a skills refresher training	Technical skills	yearly	Department of livestock and animal health
Improved knowledge on animal husbandry	Positive	Long term	Local	None	None	Technical skills	yearly	
Improved market and entrepreneurial skills	Positive	Long term	Local/regional national	None	None	Technical skills	yearly	MoFED
Inclusion of women and youth in the Value chain	Positive	Long term	Local	Needs reinforcement	Upscaling /reinforcement	GESI awareness	Yearly and when necessary	Ministry of women /PCU
Enhanced institutional management capacities	Positive	Medium – long term	Local and national	High turnover in Govt may result in loss of capacity	Establish systems and procedures manuals	Technical skills Management skills	Yearly and when necessary	PCUs M&Es
Improved environmental management and conservation skills	Positive	Long term	Local/regional /national	None	None	Technical skills, education & Awareness	Yearly	PCU/ E&S

7.5 Environmental and monitoring plan

The overall objective of environmental and social monitoring for the ZAVaCEP Project in Chive and Chiredzi districts is to ensure that mitigation measures are effectively implemented. Environmental and social monitoring will also enable the project to respond to new and emerging issues during implementation, ensuring that project activities comply with environmental provisions and standards of the Bank and the Government of Zimbabwe.

The Project Implementation Unit (PCU) at the MLAFWRD will have the overall responsibility for environmental and social monitoring, working closely with district environmental management units and in collaboration with EMA. The project will rely on the MWACSMED specialized in social and gender issues to monitor the GESI elements of the project. The African Development Bank (AfDB) will also follow up to ensure adherence to environmental and social safeguards, particularly during supervision missions.

Environmental and social monitoring under the ZAVaCEP Project will include compliance monitoring, worksite management, execution of specific environmental and social tasks, and finding solutions to emerging environmental issues. The monitoring team will ensure regular reporting on a monthly, quarterly, biennially, or annually basis, depending on the aspects being monitored, to avoid serious environmental consequences. Key issues to be monitored include:

The monitoring programme will ensure compliance with local environmental standards as per Zimbabwean law. This involves:

- **Reviewing Contractor's Worksite ESMP or ESIA:** Ensuring detailed environmental and social management plans are in place and adhered to.
- **Mitigating Negative Impacts**: Confirming that all identified negative impacts are being effectively mitigated.
- **Assessing Effectiveness of Measures:** Evaluating the success of proposed mitigation measures.
- **Studying Applicability Conditions**: Ensuring the proposed measures are suitable for specific conditions.
- **Monitoring Implementation:** Regularly checking the implementation of environmental and social measures during project works.
- **Proposing Remedies:** Suggesting solutions in case of major impacts.
- **Environmental Compliance and Assessment:** Conducting a final environmental assessment at the end of the project to ensure all standards were met.

Table *5* below provides the monitoring plan, which includes proposed mitigation measures, monitoring indicators, the frequency of monitoring and the responsible individual or institution. Through this monitoring plan, the ZAVaCEP Project aims to minimize its environmental and social footprint, promoting sustainable development in Matabeleland South districts.

Table 5. Monitoring Plan and Cost (Chivi and Chiredzi District)

Anticipated Environmental and Social Impacts	Proposed Action/Measures and Objective of Management Measures	Monitoring and Reporting Indicators	Frequency of Monitoring (Timing)	Implementation Plan & Institutional Responsibilities	Cost Estimates (US$)
PRE-CONSTRUCTION (PLANNING/DESIGN) PHASE					
Compliance with National environmental land and all applicable AfDB Environment and Social Safeguards Policies (PC1)	• Identify and assess the environmental and social impacts and risks including those related to gender, climate change and vulnerability (PC1MI) • Identify and address all pollution, biodiversity and occupational health and safety issues. (PC1M2)	- ESMPs prepared for each ZAVACEP Province with appropriate safeguards document developed and implemented	Once	Consultants/ EMA)	$20,000
Environment and Social Safeguards Training (PC2)	Safeguards training including AfDB operational safeguards for all District Agritex officers, Vet Services Department, District EMA Officers and MLAFWRD project implementing unit (PCU) PC22M1)	Project staff and district officers trained	Once	E & S Specialist EMA	Costs covered in Capacity building Table 8.
Community mobilization and consultation (PC3)	Prepare and implement a stakeholder engagement plan (SEP), inform all communities affected by the project implementation schedule and their involvement (PC3M1)	No of farmers/community groups engaged/sensitized	Once-Before commencement of construction	District EMA	Cost included in SEP
Health and Safety Issues (PC4)	Preparation of a health and safety plan for workers and impacted communities addressing issues including education of workers and impacted communities on measures to prevent the spread of HIV/AIDs through awareness campaigns, provision of safety equipment for workers (PC4M1), Child labour prohibited (PC4M2)	-Health and Safety plan prepared - Workshop on HIV/AIDs held for workers and community	Monthly	Contractor, District EMA	$10,000
Anticipated Environmental and Social Impacts	**Proposed Action/Measures and Objective of Management Measures**	**Monitoring and Reporting Indicators**	**Frequency of Monitoring (Timing)**	**Implementation Plan & Institutional Responsibilities**	**Cost Estimates (US$)**
CONSTRUCTION PHASE					

Vegetation, habitat and biodiversity losses (may occur during re-grassing in pasture development and construction of meeting sheds and pasture nursery sheds) for each rangeland (C1)	• Clearing of vegetation should be done only where necessary.(C1M1) • Use of ripper tine to minimise clearing in grasslands (Total estimated clearing about 70 hectares (20% of 350 hectares) non continuous open ground (C1M2) • At least 50% of any indigenous trees removed during clearing will be replaced (C1M3). • Ensure clearing is undertaken with minimal disturbance to the surrounding environment within the approved work sites. (C1M4)	Area re-vegetated or restored. Conservation of at least 50% of indigenous trees.	Monthly during construction period and pasture development	Contractor (E&S , M&E -PCUs) and respective District Environmental Officers)	Provided in contractor bids
Soil erosion (may occur after clearing vegetation) (C2)	• Prompt backfilling and refrain from trenching in rain season. (C2M1) • Progressive rehabilitation will be done so that no trenches are left uncovered for more than 48 hours. (C2M2) • Stockpiles will be made not to exceed a height 1 metre. (C2M3) • Utilize excavated material for construction and restoration works (C2M4)	Excavated soil banked and backfilled. In pasture fields trenching by ripper tine interspaced with existing grass vegetation minimising soi loss	Monthly during construction period	Contractor, E& S Specialist, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids
Soil Contamination (from leakages from machinery) (C3)	• Machinery that will be used for the project will be properly serviced to minimize fuel leaks to the environment. (C3M1) • In cases of spillages, in-situ bio-remediation will be done. (C3M2)	Daily and weekly checklists completed. Machinery services as per specification of manufacturer	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids Oil spillage remediation Small area affected $2,000
Solid Wastes (C4)	• Provide waste collection receptacles (C4M1) • Acquire approvals/permits for waste disposal sites/utilize (C4M2) • Sensitization of workers on waste management practices. (C4M3) • Conduct waste segregation, recycle (C4M4)	Number of waste bins at camp sites Permit for waste disposal sites. No litter left at work site	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids Litter collection receivers *12 for Mat South - $6,000
Water Pollution (C5)	• Avoid improper disposal of empty containers of pesticides and acaricides into river channels (C5M1) • Treat the waste water from dips before disposal (C5M2) • Limit of fertilisers on rainy days (C5M3)	Water pollution prevention measures in place Observed empty containers disposed in undesignated areas Observed treatment methods for dip effluent No of water samples failing to meet standards		Contractor, M&E -PCUs and respective District Environmental Officers	Provided in contractor bids

Air pollution (C6)	• Sprinkle water in construction yards, on dusty roads and soil heaps to keep down the dust produced. (C6M1) • The on-site burning of cleared vegetation will be mitigated by making it available to local communities for use as firewood. This will prevent burning large quantities of cleared vegetation during single events. (C6M2)	Air quality monitored. No complaints from affected parties	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in contactor bids Provision of 2 air quality meters $2,000
Occupational Health and Safety (C7)	• Develop, implement and disseminate occupational health and safety guidelines (C7M1) • First aid kits to be available on construction site for use by the workers (C7M2) • Provide Personal Protective Equipment (PPE) to employees. (C7M3) • Sensitize community about ongoing works through notice boards, reflective liners and detours (C8M4)	OHS guideline in place (% of contractor staff aware of OHS measures and trained - Documented qualifications of first aider and safety officer - PPE usage -Informed public and employees -Gender and HIV/AIDs mainstreamed	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Provided in Contractor bids OHS guide printing PPE $5,000
Noise Pollution (C8)	• Installation of noise mufflers on equipment (C8M1) • Periodic measuring of noise levels (C8M2)	Equipment with noise reduction provision Noise levels kept at less than 65 decibels during the day and 55 decibels during the night (*EMA regulations*)	Monthly	Contractor, M&E -PCUs, respective District Environ mental Officers	Provided in Contractor bids Provision of 2 sound level meters purchased for $200
Dust (C9)	• Reduced speeds in dusty roads (C9M1) • Vehicles transporting raw materials especially soil should be covered or avoid overloading to reduce dust emissions (C9M2) • Use of wet excavations/damping of roads (C9M3) • Wearing of masks when ripping the ground or digging construction trenches (C9M4) • Avoiding using of ripper tine on windy days (C9M5)	Measured levels of dust particles (air pollution levels) No complaints from affected parties	Monthly	Contractor, M&E -PCUs and District Environmental Officers	Provided in Contractor bids

Employment Opportunities (C10)	• Implementing clear and transparent procedures for recruitment of labour and sourcing of goods and services will enhance the positive impact. (C10M1) • Preference will be given to residents of local communities, in the case of unskilled labour, and preference given to local suppliers in the case of goods and services (C10M2).	Number of local communities' employed and/or procured as part of project interventions	Once during construction phase (construction is short and temporal)	Contractor, M&E -PCUs, District Environmental Officers	Provided in Contractor bids
Strained social infrastructure due to increased population (C11)	Construction of public toilets and washing facilities at construction sites (C11M1)	- Number of public toilets and washing at each construction camp facilities constructed	Three month intervals	Contractor, M&E -PCUs and respective District Environmental Officers	Contractor's cost
Conflicts due to differences in social, cultural norms/values (C12)	• Sensitization of workers on respect for cultural norms and values (C12M1) • Develop grievance mechanisms to handle related grievances (C12M2)	Number of workers sensitized Grievance mechanism in place	Three month intervals	Contractor, M&E -PCUs, District Environmental Officers	Costs Covered in GRM
Spread of HIV/AIDS (C13)	• To complement existing initiatives in the community, HIV/AIDS awareness and sensitization will be provided to personnel as part of health and safety awareness. (C13M1) • Development of brochures and other materials that will convey information about diseases and infections, regular provision of adequate prevention measures such as condoms; (C13M2)	HIV/AIDS is included in regular Health, Safety and Environment awareness No of condoms distributed	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Costs for awareness Covered in SEP Condom provision $3,000
Increased traffic related impacts including strain on existing roads infrastructure and traffic accidents and congestion (C14)	(Type of infrastructure is small and should be completed at each site between a week to a month.) (C14M1) • Develop and implement a traffic management plan (C14M2) • Erect road safety features (C14M3) • Limit speed around shops and other public places/institutions(C14M4)	Traffic management plan prepared Safety signage Speed limits set	Weekly during construction	Contractor, M&E PCU	Provided in contractor bids
Temporary loss of livelihoods, social disruption and unrest amongst farming communities (C15)	• Sensitization of communities on how to cope with changes. (C15M1) • Scheduling/phasing of works to minimize disruption- e.g. when pasture lands will be ploughed. Appropriate time to rehabilitate dip tanks (C15M2) • Use of alternative dip methods such as pour-on during rehabilitation and construction(C15M3)	Number of farmers sensitized Schedule of works agreed with community	Monthly	Contractor, M&E -PCUs	Engagement costs covered in SEP Cost of pour-on dip acaricides $10,000

Anticipated Environmental and Social Impacts	Proposed Action/Measures and Objective of Management Measures	Monitoring and Reporting Indicators	Frequency of Monitoring (Timing)	Implementation Plan & Institutional Responsibilities	Cost Estimates (US$)
OPERATION AND MAINTENANCE PHASE					
Improved water Supply for productive uses (OM1)	This positive impact will be enhanced by developing or strengthening Dip tank and water committees in the communities and raising awareness on water conservation and efficiency (OM1M1)	Water User Association developed. Training on water conservation and water use efficiency	Annually	DPIUs, M&E -PCUs, respective District Environmental Officers	$20,000
Employment Opportunities from pasture development, cattle restocking, Hide collection and processing (OM2)	This positive impact although limited in scope will be enhanced by: • Implementing clear and transparent procedures for recruitment of labour and sourcing of goods and services. (OM2M1) • Giving Preference to residents of local communities, in the case of unskilled labour, and preference given to local suppliers in the case of goods and services. (OM2M2)	Number of local communities' employed and/or procured as part of project interventions.	Three month interval	M&E -PCUs and respective District Officers	No direct cost to project
Improved Communication and enhanced capacity for livestock market (OM3)	This is positive impact will be enhanced by • Linking many farmers to the stock market platform (OM3) • Regular dissemination of market information by Agritex (OM3M1) • Training staff and farmers on communication skills (OM3M3)	• Number of farmers trained • Level of market information available to farmers • Level of communication competence among staff and farmers	Annual	District Agric Officer, M&E -PCUs, and respective District Environmental Officers, Local Leaders	Training $10,000 Information dissemination covered in SEP
Improved Farmers access to cattle breeds (OM4)	This positive impact will be enhanced by: • Accrediting distribution agents for seedlings and breeds (OM4M1) • Create awareness among farmers (OM4M2) • Multiply enough seedling and breeds for farmers use (OM4M3)	• Number of accredited distributors • % level of awareness in communities • Number of nurseries and improved seedlings and breeds • Number of farmers using improved species	Annual report and when needed	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$10,000

Increased production/yield of cattle, fodder and Income (OM5)	This positive impact will be enhanced by: • Wide dissemination of improved seedling and breeds (OM5M1) • Securing good improved breeding stocks (OM5M2) • Training of farmers and extension workers production and use of organic fertilisers (OM5M3)	•No of secured breed stock • Quantity of yield of carcass for cattle • Level of Improvement in income of farmers • Level of sales of organic fertilizers from cattle production system	Annual reports	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$10,000
Increased market access through export and Improved Food Quality in beef Value Chain (OM6)	• Increased market information and targeting premium prices (OM6M1)	• Level of market information among stakeholders • No of farmers accessing new markets (benefiting from market)	Annual	DPIUs, M&E -PCUs, and respective District VET officer	$15,000
Reduction in Diseases, Improved Nutritional Security and Reduced threat to public Health (OM7)	• Increase in distribution and use of improved cattle breeds (OM7M1) • Strengthening of existing biosecurity (OM7M2) • Training of vet practitioners (OM7M3) • Regular vaccination of cattle and application of preventive measures (OM7M4) • Regular disease surveillances (OM7M5) • Establish more quarantine centres (OM7M6) • Create more awareness (OM7M7)	• number of farmers owning improved cattle breeds • Number of trainings for vet personnel on new skills • Record of vaccinations and frequency of surveillance per year • Number of quarantine centres • Reduction in cattle disease incidences	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Dipping committees and rangeland committees	$20,000
Pollution of Air and Bad odour (from cattle production) (OM8)	• Prompt evacuation of waste and cleaning pens (OM8M1) • Train farmers on use of appropriate stocking density (OM8M2) • Recycle waste to organic fertilizer (OM8M3) • Training of personnel on handling animal waste (OM8M4) • Monitoring by vet and district environmental technicians (OM8M5)	• Number of farmers trained • Schedule of monitoring provided	Annually	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$10,000
Solid waste at rangelands and dip tanks (OM9)	Provide waste collection receptacles (OM9M1)	• Number of waste bins at camp sites and dip tanks • No litter left at work site	Monthly	M&E -PCUs and respective District Environmental Officers	$4,000

Degradation of land due to poor agronomic practices (OM10)	• Sensitise farmers on adoption of improved livestock technologies. (OM10M1) • Promote soil conservation practices and labour saving technologies (OM10M2)	• Number of farmers trained in improved livestock practices • Soil conservation practices implemented	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$20,000
Soil and Water Pollution From feedlots also effluent water from dips tanks (OM11)	• Encourage use of environmentally friendly pesticides and Acaricides. Use PMP. (OM11M1) • Regulate use of fertilizers, pesticides and herbicides (OM11M2) • IPM training farmers on safe use and handling of agrochemicals (PMP). (OM11M3) • Recycle water (OM11M4) • Monitor surrounding water quality monitoring (OM11M4)	• Approved dip chemicals used • Byelaws on Agro-chemicals documented and disseminated • IPM Manual developed for farmers Number of IMP training conducted	Quarterly	DPIUs, E&S, M&E - PCUs, and respective District Environmental Officers, Local Leaders	Covered in PMP
Decline in volume of ground water because of over abstraction and Impact on water Users and Rivers, reservoirs (OM12)	• Establish and strengthen Water User Associations (OM12M1) • Train association on water conservation (OM12M2) • Monitor levels of borehole water (OM12M3)	• Number of Dip committees established and strengthened • Functional water scheduling protocol • Records of borehole water levels	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders, Farmers	$10,000
Accelerated or frequent breakdown of infrastructure and equipment (OM13)	•Training of farmers on maintenance and operation of water structures. (OM13M1) •Provision of equipment, tools and manuals. OM13M2) •Provision of incentives to maintain infrastructures OM13M3)	% Farmers trained on maintenance. Training manuals for Dip management; borehole maintenance, , O&M, equipment and tools maintenance.	Quarterly	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders, Farmers	$5,000 training $5,000 for tools and manuals
Genetic Losses in livestock due to external breeds	• Monitor calving performance • Change bulls every two years to avowing inbreeding • Collaborate and share information with breeding centre	Number Calving success Records of abnormalities Frequency of bull changes undertaken	Yearly	Animal Health Specialists, Farmers Researchers	$4000

Spread of HIV/AIDS (OM14)	• To complement existing initiatives in the community, HIV/AIDS awareness and sensitization will be provided to personnel as part of other health and safety awareness. (OM14M1) • Development of brochures and other materials that will convey information about diseases and infections, (OM14M2) • Regular provision of adequate prevention measures such as condoms; (OM14M3)	HIV/AIDS is included in regular Health, Safety and Environment awareness	Monthly	Contractor, M&E -PCUs and respective District Environmental Officers	Costs covered in SEP
Occupational Health and Safety (OM15)	• Develop, implement and disseminate occupational health and safety guidelines (OM15M1) • First aid kits to be available on site for use by the farmers , (OM15M2) • Provide Personal Protective Equipment (PPE) to farmers at dip tank sites and at rangelands . (OM15M3) • Sensitize community about ongoing works through notice boards, reflective liners and detours (OM15M4)	OHS guideline in place Documented qualifications of first aider and safety officer PPE usage -Informed public and employees Gender and HIV/AIDs mainstreamed	Monthly	M&E -PCUs and respective District Environmental Officers	$6,000
TOTAL amount for MONITORING					**$209,200**

8. CONSULTATIONS & ENGAGEMENT WITH STAKEHOLDER

The implementation and monitoring of some mitigation or enhancement measures require that consultative mechanisms be used. In such cases, the ESMP shall first identify for which measures consultations will be undertaken as well as the goals and expected outcomes of these consultations. Then the ESMP shall specify the target groups, appropriate consultative processes, consultation frequency, reporting methods and result disclosure procedures. Consultations began during the field visits for the preparation of this ESMP and should continue through the project implementation to ensure that mitigation and monitoring activities are well implemented. Consultations should be conducted with primary and secondary stakeholders, affected people, community leaders and civil society organizations in order to share information and obtain their views on the project activities. These consultations shall occur during the planning phase of the project to identify and confirm key environmental and social issues and impacts, and after completion to disclose the findings and obtain comments from stakeholders on the proposed mitigation/enhancement measures. In particular, the convenor will ensure that there is a safe and culturally appropriate space for the consultations with women and girls and other vulnerable groups. This includes the use of accessible participatory methods and target groups that have difficulties in getting information and voice, such as non-readers, women, children and youth, the elderly, and persons with disabilities. The consultations, especially those with women, should follow ethical considerations related to GBV data collection. No GBV prevalence data or data on individual GBV incidents should be collected.

An engagement report shall be prepared to adequately summarize the public consultations and the opinions expressed, including focus group discussions and document the consultations with agendas, photos, and/or signed meeting minutes, list of documents shared, and any comments or inputs provided.

8.1. Rationale for Consultation and Disclosure

Consultations and public participation are legally required to address concerns about the environmental impacts of any development project or programme. During the preparation of this ESMP, a number of consultations and public participation were conducted. Further consultations are anticipated during the subsequent parts of the project development process, particularly during the preparation of site-specific environmental and social management plans (ESMPs).

The public consultation and participation process serves as a crucial mechanism to inform the public, key stakeholders, interested parties, and those affected by the project about its purpose, aims, and key activities during the development and implementation phases. The objectives of stakeholder and public participation include:

Providing Clear Information: Ensuring that affected individuals receive clear, accurate, and comprehensive information about the proposed project and its anticipated environmental impacts.
Gathering Views and Concerns: Offering affected individuals a platform to express their views, raise concerns, and suggest alternative arrangements to mitigate environmental and social impacts.
Mitigation Suggestions: Allowing the public to suggest ways of avoiding, reducing, or mitigating negative impacts or enhancing positive impacts of the proposed project activities.
Incorporating Stakeholder Input: Enabling project proponents to incorporate the needs, preferences, and values of stakeholders into the proposed project.
Resolving Disputes: Providing opportunities to avoid and resolve disputes and reconcile conflicting interests among stakeholders.
Enhancing Transparency: Fostering transparency and accountability in decision-making processes.

Stakeholder consultations and public participation were carried out during the project preparation process and will continue during the implementation phase. This ongoing communication ensures regular updates and modifications based on stakeholder feedback, facilitating the implementation of proposed mitigation measures. Additional consultations will occur during the preparation of site-specific ESIAs and the ESMP implementation phase, including monitoring based on community concerns.

8.2. Methodology of Engaging Stakeholders

Stakeholders were engaged through various methods.

Public Consultative Meetings: These meetings involved communities and technical officials from relevant government ministries.
Key Informant Interviews: Interviews were conducted with key informants related to the proposed project.
Physical Site Visits and Inspections: These visits included discussions with community leaders and members.
Inclusive Participation: Consideration of gender and various age groups during consultative processes.

8.3 Consultative Meetings Held During the Preparation of this ESMP

Several consultative meetings were held during the project preparation mission. These consultations adhered to the updated AfDB's Integrated Environmental and Social Impact Assessment (IESIA) Guidance Notes on consultation, participation, and broad community support. Consultations were carried out with technical officers from various ministries at national, provincial and district levels. The rural district councils officials and executives were also engaged, briefed about the project and gave their consents. Public engagements were communities were then conducted at the project sites.

In Chivi district public consultations were held at Gororo, Chikova and Madamombe, while in Chiredzi district communities gathered at Njovo, Kubatana and Chipapata Wards. Public consultations commenced with disclosure of adequate project information and environmental and social information to ensure participants were fully informed, understood and appreciated the project components and their involvement as a community and as individuals. Consultations were conducted using appropriate vernacular languages (Shona and English), and at the dip tank or pasture field sites.

The consultations were preceded by the disclosure of adequate project social and environmental information to ensure informed participation. The process will continue throughout the project lifecycle, as needed.

Given the project's Category 2 status, consultations primarily focused on issues necessary for drafting the ESMP. The objective was to ensure broad community support and endorsement of proposed mitigation and management measures.

8.4 Key Issues Considered During Stakeholder Engagements

Several key issues were identified during stakeholder engagements:

Identification of Ecologically Sensitive Sites: Stakeholder consultations identified areas protected by national laws and international conventions, such as forest reserves, Ramsar sites, migration routes, and world heritage sites. Initial assessments revealed that except for national parks areas and game reserves that were far from these project sites none were protected areas were located in the vicinity of project sites and thus would not affect these sites.

Identification of Important Cultural Sites: Consultations also included identifying lands set aside for cultural rituals, cemeteries, and special burial sites. The assessment revealed that the programme would not affect any of these areas.

Identification of Environmental Impacts: Environmental impacts, both negative and positive, were identified, covering issues such as pollution (water, air, oil spills), waste generation, and biodiversity destruction. Remedial measures were proposed to address these impacts.

Environmental/Biodiversity Issues: Issues such as destruction of natural environments, damage to vegetation, biodiversity loss, and the intensity of construction works were identified. Mitigation measures were proposed in this ESMP.

Socio-Economic Considerations for the Project: The programme's socio-economic impacts were discussed, including livestock potential for value addition, employment opportunities, and complementary initiatives. The impacts were identified and addressed in this ESMP.

Socio-Cultural Issues Regarding the Project: Considerations included gender mainstreaming, women and youth empowerment, vulnerable groups (e.g., poor women, elderly, disabled), disease spreading (HIV/AIDS, communicable and non-communicable diseases), and overall improvement in life quality and standards of living. Discussions included beneficiary selection and management arrangements at project site level.

Disruption of Normal Life: Analysis included the project's interference with daily economic activities, such as road closures and changes in normal routines.

Trans-Boundary Issues and Cumulative Impacts: Trans-boundary impacts and cumulative effects, such as contributions to climate change, were reviewed during consultations.

Occupational Health and Safety: Considerations included possible occupational health challenges and worker safety during both the development and operational phases of the project.

8.5 Summary of key risks/impacts presented by stakeholders

Stakeholders have identified several critical challenges affecting livestock farming, including economic and **market difficulties**, **water scarcity,** deteriorating infrastructure, **disease outbreaks**, and social support issues. Economic concerns revolve around low livestock and hide prices, high costs of hide processing chemicals, and exploitation by cattle buyers. To address these, ZAVaCEP aims to ensure the viability of livestock farming by facilitating access to fair markets, providing pricing information, and supporting value addition for hides. Water scarcity and poor infrastructure impact livestock production and community well-being, necessitating reliable water sources and rehabilitated dip tanks and livestock handling facilities. ZAVaCEP plans to prioritize the restoration and rehabilitation of these facilities, construct boreholes and water troughs, and implement water conservation measures for sustainability.

Disease outbreaks, especially January disease, along with inadequate fodder, result in high mortality rates and economic losses for farmers. ZAVaCEP will implement comprehensive disease management programs, including regular vaccination and treatment campaigns, and promote the cultivation of drought-resistant fodder crops. The project also aims to change harmful practices, such as not dipping cattle and moving cattle without inspection, to reduce disease spread. Social and community support issues, including the exclusion of non-cattle owners and the risk of droughts, were also highlighted. ZAVaCEP will extend support to all community members, potentially including them in fodder production or related activities, employ drought mitigation strategies, and diversify livelihood programs targeting women and youth. These insights will guide the government in designing the ZAVaCEP project to address market access, improve water and infrastructure, enhance livestock health, and provide comprehensive community support.

8.6 Consultations and disclosure

As emphasized in the project's SEP, continuous engagement throughout the project lifecycle is essential to address emerging issues and ensure that interventions and mitigations remain relevant. The table below summarizes the issues likely to require consultations, the target groups, engagement methods, frequency of engagements, and relevant disclosures.

Consultations that need to continues through the project life are listed in the **Table 6** below;

Table 6. Consultation Topics and Goals

Issue	Goal	Expected Outcomes:	Target Groups:	Consultative Process:	Consultation Frequency:	Reporting Methods:	Result Disclosure:
Land Use Planning and Management	- Ensure sustainable land use practices that prevent deforestation and land degradation. - Mitigate conflicts over land use rights and ensure equitable access.	- Clear land tenure arrangements. - Enhanced land productivity without compromising natural ecosystems.	- Local communities, including smallholder farmers and pastoralists. - Traditional leaders and local government authorities.	- Hold participatory workshops and meetings to gather input on land use planning. - Facilitate stakeholder engagement sessions to discuss proposed land management strategies.	- Initial consultations during project planning. - Regular consultations annually or biannually to review and update land use plans	- Document outcomes and decisions from each consultation session. - Prepare progress reports on land use planning and management.	- Publish summaries of consultations and decisions in local languages. - Display information in community centres and local government offices.
Water Resource Management	Minimize water pollution from livestock farming activities. - Ensure sustainable water use and availability for both agriculture and community needs	Improved water quality and availability. - Enhanced water efficiency in agricultural practices.	- Local communities relying on water sources affected by agricultural activities. - Environmental NGOs, water management authorities, and agricultural extension officers.	Conduct public hearings and focus group discussions on water management practices. - Establish water user committees for ongoing consultation and management	- Initial consultations during project inception. - Regular consultations quarterly or semi-annually to assess water quality and usage.	Develop water quality monitoring reports. - Share updates through community meetings and newsletters.	Publish water quality assessment reports and management plans. - Distribute findings to stakeholders via accessible channels such as local radio or bulletin boards.
Livelihood Support and Alternative Income Generation	Mitigate socio-economic impacts of project activities, such as livelihood displacement. - Promote sustainable income sources and enhance community resilience.	Diversified income streams for affected communities. - Improved living standards and reduced dependency on agriculture.	Smallholder farmers, pastoralists, and other vulnerable groups. - Local cooperatives, NGOs working on livelihood development, and	Conduct needs assessments and focus group discussions on livelihood preferences. - Facilitate capacity-building workshops and skills training sessions.	- Initial consultations to identify needs and preferences. - Ongoing consultations semi-annually to review progress and adjust support strategies.	Track income generation activities and livelihood outcomes. - Prepare annual reports on livelihood support interventions.	- Share success stories and case studies through community meetings and social media platforms. - Provide feedback on the impact of livelihood support

			microfinance institutions				measures to stakeholders.
Mitigation Measure: Implementing Sustainable Grazing Practices	Ensure buy-in and participation of local communities and stakeholders in adopting sustainable grazing practices to reduce environmental impacts.	Improved understanding and acceptance of sustainable grazing practices, leading to reduced deforestation, soil erosion, and water pollution.	Local farmers, community leaders, environmental NGOs, government agencies	Hold community meetings, workshops, and focus group discussions to discuss the benefits and methods of sustainable grazing. Seek feedback and suggestions on implementation strategies	Initiate consultations during project planning and continue periodically (e.g., annually) to assess progress, address concerns, and adapt strategies as needed.	Document minutes of meetings, compile feedback and suggestions, and prepare progress reports on the adoption of sustainable grazing practices.	Share outcomes through community meetings, project newsletters, and online platforms accessible to stakeholders
Mitigation measure Establishing Waste Management Systems for Livestock Farming	Engage stakeholders in designing and implementing effective waste management systems to reduce water pollution and improve hygiene.	Adoption of best practices in waste management, reduction in pollutants discharged into water bodies, and improved community health.	Livestock farmers, local health authorities, environmental regulators, waste management experts.	Conduct technical workshops, site visits, and expert consultations to assess existing practices and propose sustainable waste management solutions. Seek consensus on implementation strategies and responsibilities.	Conduct initial consultations during project inception, followed by regular meetings (quarterly or bi-annually) to monitor compliance and address emerging issues.	Develop action plans based on consultation outcomes, monitor implementation progress through periodic reports, and conduct audits to ensure adherence to standards.	Share findings through public forums, stakeholder workshops, and annual sustainability reports.
Enhancement Measure: Training Programs for Skill Development	Identify training needs and preferences of local communities to enhance skills in agriculture, livestock management, and leather processing.	Improved employability, entrepreneurship, and income generation among community members	Youth, women's groups, agricultural cooperatives, vocational training centres.	Conduct needs assessments through surveys, interviews, and focus groups to tailor training programs. Collaborate with local educational institutions and vocational training providers to design curriculum and delivery methods.	Initiate consultations annually or bi-annually to evaluate training effectiveness, gather feedback on content relevance, and adapt programs to evolving needs.	Compile training evaluation reports, track participant progress, and document success stories showcasing skill development impacts.	Present outcomes at graduation ceremonies, publish success stories in local media, and share reports with funding partners and stakeholders.

9. RESPONSIBILITIES AND INSTITUTIONAL ARRANGEMENTS

The successful execution of ZAVaCEP necessitates a clear delineation of roles among the diverse organizations engaged in project implementation and operation. While the Borrower holds ultimate responsibility for monitoring and reporting on outcomes achieved, support in implementing the ESMP may be required from the project team and external consultants. Hence, the ESMP must outline the roles of the Bank, the Borrower, implementing agencies, and other stakeholders in adhering to the ESMP, particularly its monitoring framework. Furthermore, the ESMP should propose assistance for organizations with inadequate capacity to fulfil their obligations, which could encompass technical support, training, or procurement assistance.

9.1 ZAVACEP Key Government Implementing Institutions

Ministry of Finance and Economic Development (MoFED)

The Ministry of Finance and Economic Development (MoFED) is responsible for formulating, coordinating, and monitoring the implementation of national development plans and macroeconomic policies. It effectively mobilizes, allocates, manages, and accounts for public resources. MoFED also secures domestic and international financial resources by negotiating and concluding grant and loan agreements with private, bilateral, and multilateral financial partners. The proposed project stems from MoFED's mobilization efforts and contributes to the implementation of the National Development Strategy 1 (NDS1) by promoting new enterprise development, employment, job creation, and the strengthening of social infrastructure and social safety nets.

Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD)

This ministry oversees the overall agricultural policy framework, land management, and rural development strategies. It is crucial for implementing policies and programs related to livestock and crop production. It provides policy guidance, support for breeding programs, and management of veterinary services essential for disease control in the beef sector. In addition it develop strategies to ensure food self-sufficiency and security, as well as for export, as well as designing strategies and guidelines for implementing enterprise or industry-specific policy objectives through various technical departments and major agricultural sector players. This ministry houses most of the technical staff needed for the project implementation at national, provincial and district levels.

Department of Veterinary Services (DVS)

The department falls within the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development and is responsible for animal health and welfare. It is responsible for managing disease control programs, such as vaccination and quarantine measures, critical for maintaining healthy livestock populations and ensuring the quality of beef products. It will play an important role in the project in terms of sourcing and distributing pesticides and acaracides and manging the dipping program, inspecting livestock, training and planning and preparing disease prevention on a seasonal basis.

Ministry of Industry and Commerce (MIC)

The Ministry of Industry and Commerce (MIC) is mandated to facilitate and promote the development of sustainable, innovative, inclusive, and globally competitive commercial enterprises to drive economic growth.

Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED)

The Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED) is tasked with creating a conducive and enabling environment that promotes vibrant micro, small, and medium enterprises (MSMEs) and cooperatives. Its functions include formulating and implementing policies for MSME and cooperative development and developing the legal and regulatory framework for MSMEs.

Ministry of Youth, Arts, and Culture (MYAC)
The Ministry of Youth, Arts, and Culture is responsible for formulating and establishing policy frameworks to promote the development of youth, sports, arts, and recreation. It aims to institutionalize and enforce good corporate governance in youth, sports, and arts programs to attract full participation from individuals and corporations.

Other Collaborative Institutions

In addition to government ministries and their departments, ZAVaCEP will involve and collaborate with various institutions to provide technical services, certification, product development, market access and skills development. These institutions are listed below.

- **Zimbabwe Leather Development Council (ZLDC)**
  The ZLDC promotes the development of the leather industry in Zimbabwe. It supports the leather value chain by providing industry standards, promoting technological upgrades, and facilitating training programs to improve the quality of leather products.

- **Livestock and Meat Advisory Council (LMAC)**
  LMAC is a private sector organization that represents the interests of livestock producers and meat processors. It provides advocacy, market research, and technical support to enhance productivity and efficiency in the livestock sector.

- **Zimbabwe Farmers Union (ZFU)**
  ZFU represents the interests of farmers, providing support and advocacy for agricultural development. Offers training for its members, including access to resources, and policy advocacy to support smallholder farmers involved in beef production.

- **Zimbabwe Investment and Development Agency (ZIDA)**
  ZIDA promotes and facilitates investment in Zimbabwe. Among other sectors , it attracts investment into the beef and leather sectors, supporting infrastructure development and modernization efforts.

These institutions collectively support the beef and leather value chain in Zimbabwe through policy advocacy, market access, product development and capacity building. Their collaboration is essential for addressing challenges and realizing the full potential of these sectors.

9.2 Project Implementation And Management Structure

The Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) will be implemented over a period of four (4) years. The Ministry of Finance and Economic Development (MoFED) will be the project's Executing Agency (EA), through its existing Programme Management Unit (PMU). The existing PMU consists of

i Programme manager (PM),
ii M&E Specialist,
iii Procurement Specialist
iv Budget and Finance Officer,
v Procurement Officer,
vi Programme Officer and
vii Programme Assistant Finance.

The Ministry of Industry and Commerce (MIC), Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD) and the Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED) will be the Implementing Agencies (IAs). The three ministries will each have a lean Project Coordinating Unit (PCU) that shall be responsible for coordination the day-to-day. Project activities in the implementing Provinces and Districts. The three ministries will assign dedicated staff to implement the project and these will include a :

i Project Coordinator (PC)
ii Accountant
iii Subject Matter (Technical) Specialist (TS)
iv Monitoring and Evaluation (M&E) Officer, and
v Procurement Officer.

The 3 project coordinators will report to the PM at the MFED for consolidation of project reports. An Environmental and Social specialist will be recruited for the project and will be housed at the MLAFWRD coordination unit .

i) E & S specialist

At Provincial and District level the responsibility for implementation rests with the respective heads in the implementing Ministries. A District Project Implementing Unit (DPIU), will be set up comprising of a focal person from the following MLAFWRD departments primarily, namely

i Department of livestock development (pastures and Feed processing),
ii Department of Veterinary Services (Animal Health, disease control)
iii Department of Agriculture Engineering (solarised boreholes)
iv Rural Infrastructure Development Agency
v MWACSMED focal person
vi MYAC representative (optional)

The Provincial and District Project Implementing Units will follow Government established structures and as such will be chaired as per the Government rules and regulations. **Figure 6** provides an illustration of the proposed Institutional arrangements.

The existing SBLVP Project Steering Committee (PSC) will continue and provide oversight for the ZAVaCEP project. The PSC will be responsible for Project compliance with sub-sector National Policies and Strategies. The PSC will also approve annual work plans and budgets. The Project Manager shall be the Project Steering Committee secretary. The Project Steering Committee is chaired by the Permanent Secretary MLAFWRD.

The role of the Inter-ministerial Project Coordination Units is to ensure coordinated planning and harmonization of respective department activities. It will also ensure general compilation of project activities, budgeting, reporting and ensuring that their decentralized sector offices at Province and Districts implement and report on their respective sector activities.

Procurement Arrangements

Procurement of goods (including non-consultancy services), works and the acquisition of consulting services, financed by the Bank for the project, will be carried out in accordance with the “Procurement Policy and Methodology for Bank Group Funded Operations” (BPM), dated October 2015. The Borrower Procurement System (BPS) will serve as the main reference point for procurement activities. The Procurement Risk and Capacity Assessment (PRCA) was conducted to evaluate the risks associated with the use of the BPS, assess the sector capacity of the local industry, the project complexity and design, an d the procurement capacity of the Executing Agency in relation to the project. Based on the risk

assessment it was determined that the existing PMU within the MoFED will provide overall project implementation support including procurement. The PMU has previous experience managing AfDB -funded project and including on-going projects. The procurement officers in the in the three ministries will be part of the Implementation teams at the ministry level and will work closely with the procurement officer at the PMU. It is noted that some of the identified activities will require that Memorandum of Understanding (MoU)s are adapted to engage the services of some of the project partners in Zimbabwe including research institutions and the details of these arrangements will also be clearly defined during project inception phase.

8.3 Financial Management including Audit

The Financial Management (FM) of the ZAVaCEP project will be handled by the PMU within the MoFED. The African Capacity Building Fund (ACBF) will be responsible for manging the Special Account of the project. The PMU has extensive experience working with the ACBF on AfDB -funded projects. The PMU uses PASTEL financial a management system and will use the same for the ZAVaCEP project, including existing financial management system manual, budgeting processes approval and payments. The PMU will be responsible for preparing and submitting quarterly interim and annual financial reports to the Bank. The Directors of Finance in the Implementing Agencies will be responsible for the financial management of activities under the components under their Ministries. The IA's accountants will be responsible for the day-to-day financial management function for the project..

Disbursement Arrangements: The project will primarily make use of the Bank available disbursement methods (i.e. Reimbursement, Special Account, Direct Payment and Reimbursement Guarantee) in accordance with Bank rules and procedures. The Special Account will be managed by the Africa Capacity Building Foundation (ACBF) on behalf of the Government of Zimbabwe. The funds channelled by AfDB financing will be denominated in foreign currency and deposited at accredited commercial banks. The PMU will be responsible for processing Direct Payments and any Reimbursement payments.

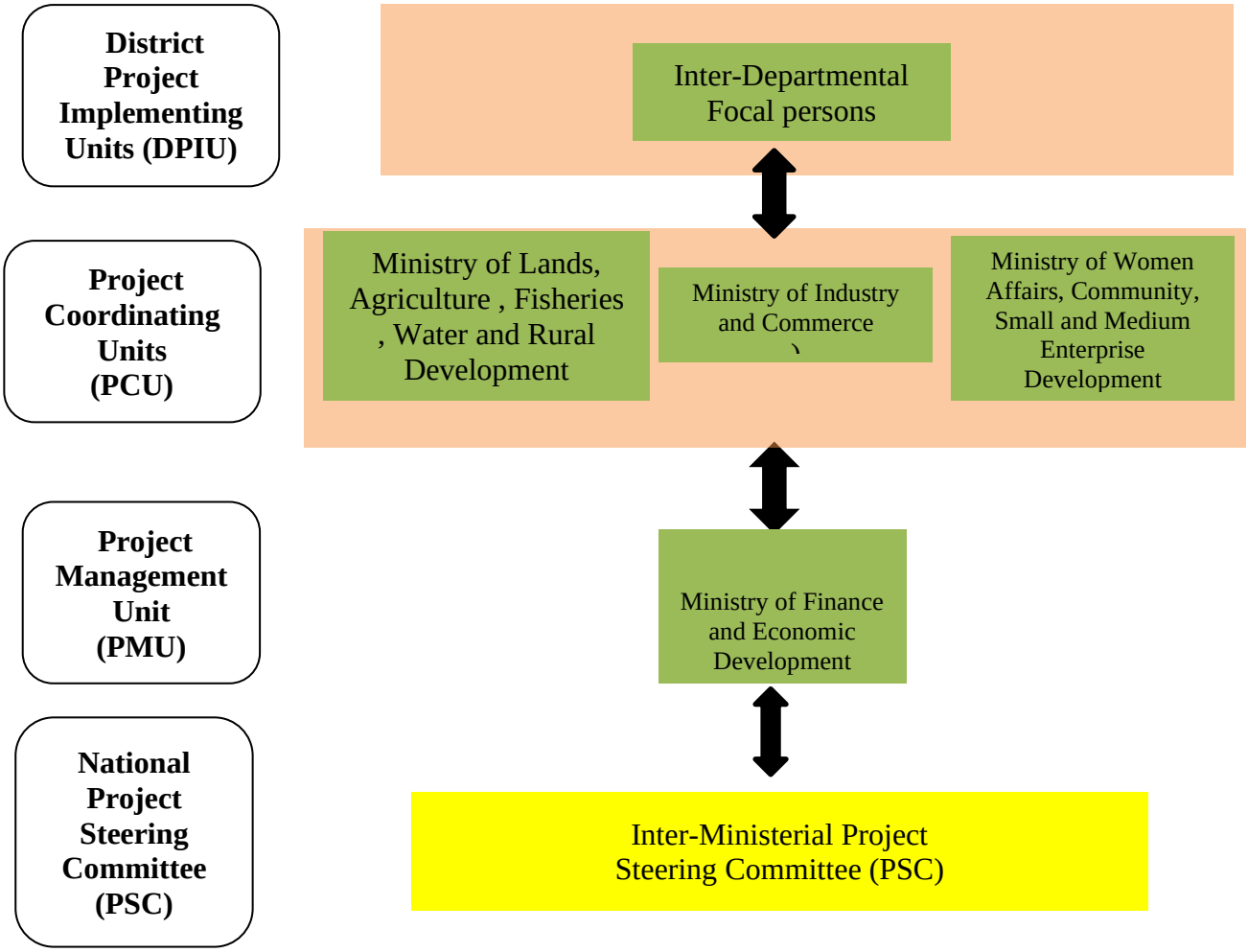


Figure 7. Proposed Institutional Structure for ZAVaCEP

Roles and Responsibilities for the implementation of the ESMP

Positions in the Project Coordinating Units at National Level

- Project Coordinator; (PC-PCU)
- Procurement specialist (PS-PCU);
- Technical specialist (TS – PCU):
- Project Accountant (PA – PCU):
- Monitoring and Evaluation specialist (M&E-PCU):
- Social and Environmental Specialist (E&S- MLAFWRD PCU).

The three IAs namely, MLAFWRD, MIC and MWACSMED as the implementing agencies of ZAVaCEP, will establish the Project Coordinating Units within their ministries. They will staff the PCUs and coordinate project activities at national level. The PCUs will be based in Harare. Given the overall responsibility of the MLAFWRD PCU for the ZAVaCEP, a Social and Environmental Specialist, will be recruited and he/she will assist the Project Coordinator to facilitate development of all the various management plans, seek adoption and implementation of the plans in this ESMP. The E&S will work closely with the M&E specialists of all the PCUs as well as with the TS Specialist/s. Their main task of E&S is to facilitate implementation of the ESMP, PMP, SEP and GRM. M & E specialist is monitoring the implementation of the ESMP including the monitoring of the implementation of the SEP, PMP and GRM.

To ensure a smooth and effective implementation of the GRM, as well as the Stakeholder Engagement Plan (SEP), the E&S will work closely with the District Project Implementation Units and district technical specialists. The E&S and M&Es staff will receive monthly updates from District Project Implementation Units on project progress. They will conduct regular field supervision visits to ZAVaCEP project implementation sites.

For all infrastructure construction, site-specific EMPs will be developed and implemented by the hired project Contractors. The Office will thereby engage support from stakeholder ministries for various expertise or hire external consultants to avoid bottlenecks.

The M&Es will ensure that mitigation measures and monitoring frameworks are in place with respect to their sectors.

District Project Implementation Units and technical specialists will be responsible for direct implementation of their sub-components, and implementation of ESMP, ensuring compliance with proposed interventions. They will be supported by the PIUs technical Specialists, and will also send progress reports on a monthly/quarterly basis, to the E&S and M&Es. The E&S and PCU M&E specialists will be responsible for the detection of correctional activities required, on the basis of monitoring activities. They will report such to the PMU Project Manager.

Table 7 below describes the proposed Roles and Responsibilities for implementing ZAVaCEP.

Table 7. Institutional Roles and responsibilities for implementing the ESMP

Project stages	Activities	Responsible	Collaboration with	Service Provider
Pre-Implementation	**Mobilization and planning** - Formation of implementation unit - allocation of budgets resources, personnel	PMU PSC IAs	AfDB local	
	Training and Capacity building - Training staff and stakeholder on ESMP objectives and best practices - Capacity for monitoring	PCUs PMU E&S	RDCs DPIUs Community leaders	Envi and Social safeguard consultant or EMA
	Stakeholder engagement - Informing and Consultations - Finalize grievance mechanism	E&SDPIUs	Community leaders	Consultant for GRM
Implementation Stage	**Compliance and enforcement** - ensuring compliance with E & S regulations - Independent Performance audits - Implementing Mitigation measures	E&S TS- DPIUs	EMA M&E- PMU	Contractors and Sub-contractors And if needed consultant
	Monitoring and reporting - Regular monitoring - Documentation and reporting - Annual Performance audits	M&E-PCU TS- DPIUs	EMA M&E- PMU	Independent E&S auditor for the annual performance audit.
	Corrective actions - Identifying non-compliance or unexpected impacts - Adjusting mitigation measures	E&S	PC-PCU	E&S Consultant if required
Operational	**Ongoing monitoring and evaluation** - Continuous monitoring	E&S M&E-PCU TS- DPIUs	EMA M&E- PMU	

	- Maintenance of env and social safeguards			
	Stakeholder communication - Keeping stakeholders informed - Addressing stakeholder concerns	E&S M&E-PCU TS- DPIUs	Local Leadership PC- PCU	Community Liaison officers
Evaluation and feedback	**Performance evaluation** - Periodic Evaluation of ESMP outcomes - Comparing actual and predicted impacts	E&S M&E-PCU M&E -PMU TS-DPIU	PC-PCU PM-PMU	External reviewers/ Consultants
	Feedback and improvement - Incorporating feedback from evaluation - Revising ESMP as needed	E&S M&E- PCU M&E-PMU	PC-PCU PM-PMU	Consultant if needed
Closure Stage	**Final reporting** - Prepare final ESMP compliance report - Document lessons and best practices - Completion Audit	PC-PCU PM-PCU	AfDB Local office	PCU teams PMU team Consultant for audit
Post-Closure Stage	**Post implementation Monitoring** - Post closure monitoring to ensure long-term stability - Address any residual impacts	E&S	PC-PCU PM-PMU	PCU teams PMU team
	Stakeholder Engagements - Engage stakeholders to confirm satisfaction with project's closure - Maintain open communication for any future issues	E&S	Local leadership	PCU teams PMU team

Notes: <u>Explanation of additional roles</u>

Monitoring and Evaluation (M&E) specialists: *Collect, analyse, and report data on ESMP performance.*

Contractors and Subcontractors: *Implement specific mitigation measures as per the ESMP and ensure compliance on the ground.*

Liaison Officers: *Facilitate communication and engagement with local communities and other stakeholders.*

Local Government and Community Leaders: *Support capacity building, training, and local implementation efforts.*

Independent Auditors/External Consultants: *Conduct periodic reviews and audits to ensure compliance and recommend improvements.*

Each Stage in the table involves a cycle of planning, action monitoring and adjustment to ensure the ESMP effectively mitigates adverse impacts and enhances positive outcomes throughout the project's life cycle.

10. ENVIRONMENTAL AND SOCIAL AWARENESS, CAPACITY BUILDING AND TRAINING

Implementing an approved Environmental and Social Management Plan (ESMP) for the ZAVaCEP project in Zimbabwe involves several stages, each requiring specific capacity building and training. Here is an outline of the requirements for each stage and the responsible parties:

10.1 General Requirements

Effective implementation of the OS instruments and this (ESMP) will require adequate capacity enhancement within institutions and stakeholders, especially regarding monitoring and evaluation. This calls for building the capacity of implementers at the Project Management Unit and project implementing structures including at the National, District and Community levels.

10.2 Environmental and Social Awareness, Capacity Building and Training

Effective execution of responsibilities for sub-project environmental and social risk management requires institutional strengthening. Capacity building will include all project staff at National and district level and, the relevant Implementing Departments and partners such as local NGOs where deemed necessary. As part of the ESMP, the PCUs will prepare raining needs and training schedules according the implementing stages. Capacity building will be carried out in liaison with EMA the agency and Department of Gender and Women's Affairs. Below are some of the envisaged capacity building training needs:

Capacity Building and Training Requirements:

a) *Environmental and Social Impact Assessment (ESIA) Training*: Training on identifying potential environmental and social impacts and understanding regulatory compliance i.e. Understanding national and international environmental regulations and standards.-

b) *ESMP Development Training*: Workshops on developing comprehensive ESMPs, including mitigation measures and monitoring plans.

c) *ESMP mitigation measures* – training on implementation of ESMP mitigation measures (e.g., sustainable fodder production, cattle dipping practices, hide processing techniques).

d) *Health and Safety Training*: Ensuring all project staff understand and adhere to health and safety protocols.

e) *Community Engagement Training*: Training on effectively engaging with local communities and addressing their concerns.

f) *ESMP monitoring training i*ncludes the three below
   - Monitoring Techniques Training: Training on environmental and social monitoring techniques and data collection methods.
   - Data Analysis Training: Workshops on analysing monitoring data to assess ESMP effectiveness.
   - Performance Reporting Training: Training on preparing regular environmental and social performance reports.

g) *Documentation and Knowledge Transfer:* Ensuring all knowledge and lessons learned are documented and transferred to relevant stakeholders.

h) Cross-Cutting Capacity Building and Training Requirements:

- Gender and Social Inclusion Training: Ensuring all project activities are inclusive and consider gender and social dynamics.
- Conflict Resolution Training: Training on managing and resolving conflicts that may arise during project implementation.

The overall responsibility for training lies with the PSC and PMU. Project Steering Committee: Provides oversight and ensures that all capacity-building and training activities are planned, budgeted for and implemented effectively. Project Management Unit (PMU): Day-to-day responsibility for coordinating and facilitating training programs across all stages.

10.3 Technical Assistance (TAs)/Contractors

For Specialized technical inputs into the projects for example installation for solar panels, civil works for various subprojects, soft components such as mid-term project evaluations, monitoring of aspects of the project such as GRM and PMP will require expertise which may be procured outside the implementation units. Procurement may be by request for Bids and MOUs with specialist ministries and their departments. The PMU will manage technical and contractor procurement with assistance from the PIUs

This schedule will be updated once site-specific ESMPs have been developed.

Table 8. Capacity Development And Training Schedule

Capacity building & training requirements	Project Stage	Method of delivery Target Group	Target group	Responsibility	Timeline	Cost
Development of project site ESMP	Planning/Design	Workshop	PIUs and DPIUs project staff	PMU / EMA or consultant if needed	1 day workshop	4000
Identification of Social and env impacts and regulatory compliance	Planning/Design	T**raining** on SEIA and basic national and international standards	PCU and DPIUs	PMU with PCUs/ E and S Consultant	2 day training (5 days with prep)	6000
ESMP mitigation measures	Implementation	Training	PCU -TSs and District level - TS	PMU / EMA	2 days	6000
Health and safety protocols	Implementation	Training/workshop	All Project staff	PMU HSE specialists Contractors responsible for own personnel and costs	1 day	4000
Community engagement training	Implementation	Workshop	PCU TS and M&E DPIUs Local leaders Local NGO	PMU PCUs Community liaison officers	1 day	Covered in SEP
E & S monitoring methods	Operational phase	Workshop	M&E- PCU M&E-PMU	External E & S Auditors	2 days	12000

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Data analyses to assess effectiveness	Operational phase	Training	M&E- PCU M&E-PMU	External E & S Auditors		
Performance Report Training	Operational phase	Training	M&E- PCU M&E-PMU	External E & S Auditors		
Document and knowledge transfer	Post implementation	Workshop	M&E- PCU M&E-PMU PCs PM	E & S Specialist EMA	1 day	8000
GESI	Cross -cutting	Training	All staff including DPIUs	MW SMED	2 days	Covered in SEP
Conflict resolution /GRM	Cross-cutting	Training	Community leaders, local NGOs	Community liaison Officers	1 day	Covered in GRM
Long term Evaluation	Implementation	Training	All staff at PCUs and DPIUs	E&S specialist M&E specialist	2 days	6000
TOTAL COST FOR MONITORING				$46000		

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11. IMPLEMENTATION SCHEDULE AND COST ESTIMATES

The ESMP implementation budget encompasses all costs associated with executing the requirements and recommendations outlined in this Environmental and Social Management Plan (ESMP). The ESMP aims to ensure that the project's implementation integrates environmental and social considerations, thereby promoting the sustainability of the project and its various components and sub-components.

Key areas of focus within the ESMP include:
- Implementation and management of the ESMP
- Preparation of site-specific Environmental and Social management Plans
- Training and capacity building of Staff and farmers on ESMP aspects
- Supervision of ESMP
- Review and monitoring mechanisms

These areas are elaborated and clearly detailed within the ESMP. It is essential to train the staff involved in project implementation to enhance their skills in specific environmental and social issues.

Building the capacity of staff from the implementing units, divisions, departments, and sections—particularly those directly involved in executing the project and its sub-projects, value chain systems, as well as management and finance—is crucial. This training will enable them to review and monitor environmental issues within the project and sub-projects, ensuring compliance with national policies, laws, and regulations, as well as African Development Bank (AfDB) safeguard policies.

Based on experience from similar projects, the estimated cost for implementing the ESMP's recommendations is approximately US$0.652 million. Detailed cost breakdowns are presented in the table below.

Table 9. Key ESMP Activities and The Timeframes

	ACTIVITY	Timeframe	Responsibility
1	Preparation of site-specific ESMPs	First 3 months of inception phase	PCU, EMA
2	Capacity Building -staff- ESMP components	Year 1 first 6 months	PMU, PMU, EMA
3	Capacity building farmers – ESMP components	Year 1 – 4th-12 month	M&E-PCU
4	ESMP monitoring – Regular Supervision	Through Project Life	PCUs, PMU, DPIUs.
5	ESMP Monitoring Control Missions	Annually during Project period	PCU, AfDB
6	Institutional Capacity Strengthening	When needed	PCU, PMU
7	Stakeholder consultations and public awareness	Throughout project life and as when needed	PCU, DPIUs
8	GESI mainstreaming	Bi-annually workshops	MWACSMED
9	HIV/AIDS mainstreaming	Quarterly campaigns	Ministry of Health & Child Welfare

11.2 The ESMP Budget

Table 10 below presents the detailed budget for the Environmental and Social Management Plan (ESMP) for the ZAVaCEP project, covering all its components over a four-year period in the Chivi and Chiredzi districts. Based on experience from similar projects, the estimated cost for implementing the ESMP's recommendations is approximately US$0.615 million.

Table 10. ESMP budget for Chivi and Chiredzi Districts

Activity	Year 1	Year 2	Year 3	Year 4	Total
1. PRECONSTRUCTION PHASE MITIGATION MEASURES					
ESMP development	$ 20 000,00				$ 20 000,00
Health and safety, HIV and Aids awareness	$ 8 000,00				$ 8 000,00
SUB-TOTAL	$ 28 000,00				**$ 28 000,00**
2. CONSTRUCTION PHASE – MITIGATION MEASURES NOT COVERED BY CONTRACTOR					
Oil spills remediation	$ 2 000,00				$ 2 000,00
Installation of waste receptacles at all project sites	$ 6 000,00				$ 6 000,00
Field Air quality meters (4)	$ 2 000,00				$ 2 000,00
OHS PPE and brochure printing	$ 5 000,00				$ 5 000,00
Sound measurement meters (2)	$ 200,00				$ 200,00
HIV and Aids Campaign and Condoms	$ 3 000,00				$ 3 000,00
Community sensitization and provision of pour-on dip acaracides during dip rehabilitations	$ 6 000,00				$ 6 000,00
SUB-TOTAL					**$ 24 200,00**
3. OPERATION AND MAINTENANCE PHASE					
Setting up and strengthening committees on the various projects	$ 5 000,00	$ 5 000,00	$ 4 000,00		$ 14 000,00
Livestock breeds awareness and monitoring	$ 2 000,00	$ 4 000,00	$ 4 000,00	$ 2 000,00	$ 12 000,00
Fodder production awareness and monitoring, reporting	$ 3 000,00	$ 3 000,00	$ 2 000,00	$ 1 000,00	$ 9 000,00
Market information, access (Exhibitions) and dissemination		$ 3 000,00	$ 6 000,00	$ 6 000,00	$ 15 000,00
Diseases surveillance and awareness	$ 5 000,00	$ 5 000,00	$ 5 000,00	$ 5 000,00	$ 20 000,00
Air pollution (response), monitoring and reporting	$ 2 000,00	$ 2 000,00	$ 2 000,00	$ 2 000,00	$ 8 000,00
Solid waste monitoring and reporting	$ 1 000,00	$ 1 000,00	$ 1 000,00	$ 1 000,00	$ 4 000,00
Land degradation and agronomic practices, sensitization and monitoring	$ 2 000,00	$ 2 000,00	$ 2 000,00	$ 2 000,00	$ 8 000,00
Ground water monitoring, training and field equipment	$ 3 000,00	$ 3 000,00	$ 3 000,00	$ 3 000,00	$ 12 000,00
Infrastructure maintenance and repairs-tools and training	$ 3 000,00	$ 2 000,00	$ 2 000,00	$ 3 000,00	$ 10 000,00
Breed performance monitoring and awareness		$ 2 000,00	$ 1 000,00	$ 1 000,00	$ 4 000,00
OHS monitoring , including first aid kits		$ 1 000,00	$ 1 000,00	$ 1 000,00	$ 3 000,00
SUB-TOTAL					**$119 000,00**
4. CAPACITY DEVELOPMENT					

ESMP workshop (Table 8)	$ 4 000,00				$ 4 000,00
Env and Social regulatory compliance	$ 6 000,00				$ 6 000,00
ESMP Mitigation measure implementation	$ 6 000,00				$ 6 000,00
OHS protocol	$ 4 000,00				$ 4 000,00
E & S monitoring methods and reporting	$ 6 000,00	$ 6 000,00			$ 12 000,00
Document and knowledge transfer				$ 8 000,00	$ 8 000,00
Long term evaluation and audit training	$ 3 000,00	$ 3 000,00			$ 6 000,00
SUB-TOTAL					**$ 46 000,00**
5. ASSOCIATED DOCUMENTS					
Stakeholder Engagement plan	$ 20 000,00	$20 000,00	$20 000,00	$10 000,00	$ 70 000,00
Grievance redress mechanism	$ 20 000,00	$10 000,00	$10 000,00	$10 000,00	$ 50 000,00
Pest Management Plan	$ 30 000,00	$20 000,00	$20 000,00	$20 000,00	$120 000,00
SUB-TOTAL					**$240 000,00**
6. DECOMMISSIONING					**$129 000,00**
SUB-TOTAL for ESMP					**$ 586 200,00**
Contingency 5%					$ 29 310,00
7. OVERALL PROJECT BUDGET FOR CHIVI and CHIREDZI					**$ 615 510,00**

This budget provides an outline of key activities and costs associated with the ZAVaCEP project. Adjustments can be made during the project life based on specific needs, local costs, and project priorities.

12. PROJECT DECOMMISSION PLAN

Decommissioning for the Zimbabwe Value Chain Enhancement Project will involve developing a decommissioning plan that outlines the steps and procedures to be followed, ensuring compliance with legal requirements. It is assumed that the decommissioning will consider minimal demolition of infrastructure and will only demolish infrastructure that will no longer be in use. An assessment to identify infrastructure and areas to focus on will be carried out. Once identified the process will include the dismantling and removal of all non-functional project infrastructure, such as temporary facilities, equipment, and installations used during the project's implementation. Functional infrastructure will be handed over to the communities for continued use. All materials must be appropriately disposed of, recycled, or repurposed to reduce waste and environmental contamination. Additionally, any land disturbed by project activities will be rehabilitated to restore it to its original state or to a condition that supports its intended post-project use, whether for agriculture, conservation, or other community needs.

Environmental monitoring and assessment will be crucial throughout the decommissioning phase to identify any residual impacts and to ensure that all mitigation measures are effectively implemented. This includes soil and water testing to detect any contamination and subsequent remediation efforts if necessary. Social considerations are also paramount, involving the engagement of local stakeholders to address any concerns and to ensure that their needs are met during the transition period. The project will work closely with PMU, PCUs, local authorities and community members to develop a sustainable exit strategy that supports long-term community resilience and environmental sustainability. Proper documentation and reporting of the decommissioning activities will provide transparency and accountability, ensuring that all regulatory requirements are met and that the project's legacy is one of positive contribution to the region's sustainable development.

Table 11. Cost Estimates for the Decommissioning Plan.

i Assessment and Planning:	**For the Two Districts**
- Infrastructure and site assessment:	$10,000
- Development of decommissioning plan:	$4,000
- Stakeholder engagement and consultation:	$4,000
ii. Dismantling and Removal:	
- Dismantling non-functional infrastructure:	$8,000
- Removal and transportation of materials:	$20,000
- Recycling and disposal of waste:	$10,000
iii. Site Rehabilitation:	
- Soil and water testing	$10,000
- Land rehabilitation and restoration:	$20,000
iv. Environmental Monitoring:	
- Continuous monitoring during decommissioning:	$10,000
- Post-decommissioning environmental assessment:	$10,000
5. Social Considerations:	
- Community engagement and support:	$10,000
- Development of exit strategy:	$5,000
6. Documentation and Reporting:	
- Documentation of decommissioning activities:	$4,000
- Final reporting and compliance verification:	$4,000

Total Estimated Cost	**$129,000**

This budget provides the financial requirements for decommissioning ZAVaCEP, ensuring that all activities are conducted in an environmentally and socially responsible manner. This budget may not necessary be needed if the project has minimal demolitions.

13. CONCLUSION

The Environmental and Social Management Plan (ESMP) for the Zimbabwe Agricultural Value Chain Enhancement Project (ZAVaCEP) is a comprehensive framework designed to ensure that the project meets the African Development Bank's (AfDB) safeguard requirements. This ESMP identifies the main expected environmental and social impacts of the project and outlines mitigation and enhancement measures to address these impacts. The successful implementation of these measures is crucial for promoting sustainable development and ensuring compliance with national and international standards.

The expected environmental impacts of the beef and leather value chain enhancement project primarily revolve around land degradation, water resource depletion, and pollution. Fodder production can lead to soil erosion and nutrient depletion if not managed sustainably. Cattle dipping, essential for controlling diseases, might result in the contamination of water sources with chemicals. Hide processing in the leather industry can generate significant wastewater and solid waste, contributing to pollution if not properly treated. Additionally, the expansion of these activities could lead to increased greenhouse gas emissions and loss of biodiversity due to deforestation and habitat disruption.

To mitigate these impacts, the project includes several key strategies. Sustainable fodder production practices, such as crop rotation and conservation tillage, will be promoted to maintain soil health. Integrated pest management and the use of environmentally friendly chemicals will be prioritized in cattle dipping to prevent water contamination. For hide processing, the project will implement wastewater treatment systems and promote the recycling and safe disposal of solid waste. Furthermore, reforestation initiatives and the adoption of energy-efficient technologies will help offset carbon emissions. Regular environmental monitoring and capacity-building programs for stakeholders will ensure compliance with best practices and national regulations, fostering long-term sustainability and minimizing negative environmental impacts.

Main Expected Social Impacts and Mitigation Measures

The implementation of the Beef and Leather Value Chain Enhancement Project is anticipated to bring about several significant social impacts within the communities it serves. Firstly, improved infrastructure and modernized practices across the value chain are expected to generate new employment opportunities, particularly benefiting local farmers, youth, and women. Enhanced market access and income diversification opportunities will contribute to poverty alleviation and economic empowerment, fostering social stability and resilience.

To mitigate potential adverse social impacts, the Environmental and Social Management Plan (ESMP) emphasizes comprehensive stakeholder engagement and capacity building programs. These initiatives aim to ensure inclusive participation, promote local knowledge sharing, and address any social inequalities that may arise. Additionally, the ESMP includes robust grievance redress mechanisms to promptly address community concerns, thereby fostering a supportive and harmonious environment conducive to sustainable development and long-term socio-economic benefits for all stakeholders involved.3. Social Inclusion and Gender Equality

Ensuring social inclusion and gender equality is a critical aspect of the project. The project will:

- Promote equal participation of men and women in all project activities.
- Ensure that vulnerable groups, such as the elderly and people with disabilities, benefit from the project.

- Conduct gender-sensitive assessments and tailor interventions to address specific needs.

Enhancement Measures

In addition to mitigating negative impacts, the ESMP includes measures to enhance the positive impacts of the ZAVaCEP project:

- *Capacity Building and Training*: Continuous training programs will be provided to all stakeholders to enhance their understanding of environmental and social issues and build their capacity to address these challenges effectively.
- *Community Engagement*: Regular consultations and participatory approaches will be employed to ensure that the views and needs of local communities are integrated into project planning and implementation.
- *Monitoring and Evaluation:* A robust monitoring and evaluation framework will be established to track the progress of ESMP implementation and ensure that the mitigation and enhancement measures are effective.

In conclusion the ZAVaCEP project has the potential to significantly improve agricultural productivity and economic opportunities in Zimbabwe. However, it is essential to address the associated environmental and social impacts comprehensively. The ESMP provides a detailed plan for mitigating negative impacts and enhancing positive outcomes, ensuring that the project aligns with AfDB's safeguard requirements.

By implementing the ESMP, the ZAVaCEP project will promote sustainable development, protect natural resources, and improve the well-being of local communities. The commitment to environmental stewardship and social responsibility will ensure that the project contributes to the long-term prosperity of Zimbabwe's agricultural sector. Regular monitoring, capacity building, and community engagement will be key to the successful implementation of the ESMP, fostering a collaborative approach to achieving the project's objectives.

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ANNEX 2: LIST OF STAKEHOLDERS INCLUDING FARMERS ENGAGED DURING THE ZIMBABWE AGRICULTURE VALUE Chain (ZAVaCEP) Project Preparation Mission - 28 May to 7 June 2024

Date	Place visited	Number attended (Males , Females)		Issues raised /Raised
		F	M	
29th May 2024	Kubatana	7	17	• Water challenges, the nearby dam dries up and go to fetch water an alternative water sources which is 11km away • The dip tank structures need rehabilitation
29th May 2024	Madamombe	3	2	• A weir which used to supply water had collapsed, the go to collect water from alternative water source which is about 7km • Livestock handling facilities need rehabilitation
29th May 2024	Chivi district Local Government	3	4	
30th May 2024	Chiredzi district Local Government	3	4	• Outbreak of diseases, • High livestock mortalities • Water shortage for livestock
30th May 2024	Allium Hides	0	5	• Low prices of hides • Low quality hides from abattoirs • High prices of hide processing chemicals
29th May 2024	Chitowa	41	33	• Water for both dipping and drinking for livestock, and human use is inadequate and is collected from a distance of 8km. There grazing area supply inadequate feed and pastures for livestock production

No	Full Name	Title	Organisation	Contact No	E-mail Address
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ANNEX 3 ZAVACEP SITE DESCRIPTIONS MASVINGO PROVINCE

1 Chivi District

1.1 CHITOVA Dip Tank

Chitova Dip Tank is situated in Dzingai village in the Chivi district, 68 kilometres from Masvingo and Zvishavane towns. The road conditions leading to Dzingai are generally good, facilitating access for various developmental activities.

The ZAVaCEP project in Dzingai will include several initiatives aimed at improving local infrastructure and livelihoods. These interventions are:

- Drilling boreholes
- Constructing water troughs and toilets
- Rehabilitating the dip tank
- Training farmers
- Implementing soil and water conservation measures

Figure 8. Infrastructure Rehabilitation Discussion Chitova

Dzingai village features a mix of flat and hilly terrain, with notable rivers and streams. The soils are predominantly sandy with poor fertility and are easily leached of nutrients. The average temperature ranges from 18°C to 27°C, with annual rainfall around 450 mm. The prevalent wind direction is southward.

There are no national parks, reserves, or protected areas nearby, and no significant wildlife. The dominant plant species is Terminalia sericea, with generally dense vegetation cover. A small dam that once supported the Dzingai dip tank has silted and no longer retains water. The community relies on sand abstraction for drinking water during dry periods, traveling up to 8 kilometres to fetch water for the dip tank. There are no sources of clean water for domestic use, and the dip tank site lacks sanitation facilities, including toilets. Pollution from agrochemicals is a concern, impacting air and water quality.

Human and Socio-Economic Situation

The land tenure system is primarily communal, with land used for livestock grazing, small grain production, residential areas, and essential social services like clinics, shops, and schools. Households typically consist of 4 to 5 members, facing almost non-existent formal employment opportunities. The main economic activities are agriculture and artisanal mining, with some individuals traveling to Mashava and Shurugwi for mining opportunities or employment in mining companies. Women are predominantly involved in subsistence agriculture.

Although there is no history of flooding, the area experiences strong winds during cyclones. The infrastructure includes roads, schools, and health facilities, with two schools located approximately 5 km from the dip tank and a clinic 7 km away. The Surrounding area has three dip tanks that serve 500 cattle, for 333 households.

Cultural practices are significant, with the chief and village heads conducting ground-breaking ceremonies for new projects and observing a cultural norm ‘chisi’ of not working in the fields on

Wednesdays. Vulnerable groups include people with disabilities, women-headed households, child-headed households, and the elderly, who face specific risks such as difficulty accessing water.

The project is not expected to alter land use patterns, as the land has historically been used for similar purposes. However, potential conflicts may arise if other community members use the same boreholes for different purposes. Improved grass and pasture quality will enhance food security through better beef production.

Social norms and practices in this community are patriarchal, with males dominating decision-making processes. Teenage marriages are common, leading to higher school dropout rates due to financial constraints. Empowering women could challenge these patriarchal systems. Gender-based violence (GBV) is addressed by the ZRP's Victim Friendly Unit and local village heads, but there are no community-based structures for resolving GBV.

The community has handled past projects implemented by NGOs and government departments, providing valuable lessons for future success. Conflicts are managed through a dip tank committee and village heads, with the committee comprising seven members.

Challenges

The village faces several challenges:

- Livestock theft
- Shortage of skilled labour
- Inadequate water availability and sanitation
- Soil erosion and siltation affecting surface water sources
- Impact of strong winds during cyclones
-Pollution from agro-chemical use

1.2 Madamombe Dip Tank- Chivi District

Figure 9. Silted weir Madamombe

Madamombe is one of the project sites for the Beef and Leather Value Chain Technical Assistance Pilot Project (SBLVCP) in Masvingo provinces. Located in Chivi District, specifically in the village of Musariri, Madamombe is situated at coordinates Lat 18.956338 and Long 29.154856. The nearest town, Masvingo, is approximately 65 kilometres away, accessible by fairly maintained roads. The project interventions in Madamombe include borehole drilling, water trough construction, toilet construction, dip tank rehabilitation, training of farmers, and soil and water conservation trainings. These efforts aim to challenges such as skills shortages, availability, and sanitation.

Figure 10. Mud in Madamombe dip tank

Madamombe features a predominantly flat topography with landscape features including rivers, small waterways. The area is

characterized by sandy soils with poor fertility that are prone to leaching. The average temperature ranges between 18°C and 27°C, with an annual rainfall of about 500mm, and prevalent southward winds. Water resources are limited, with no perennial sources; the community often relies on sand abstraction during dry periods. It hosts dense vegetation dominated by species like Terminalia sericea and Cordyla africana, with small patches of wetlands providing key ecosystem services. Human activities are mainly agricultural, with settlement patterns showing linear and scattered rural settlements.

Figure 11. Cyclone Collapsed weir Madamombe

The local economy is driven by agriculture and artisanal mining, with women playing a significant role. Infrastructure includes roads, schools, and a clinic, but the area lacks proper sanitation facilities and faces community health risks, livestock theft and strong winds during cyclones. Cultural practices such as ground-breaking ceremonies by chiefs and village heads, along with the dominance of males in decision-making processes, highlight the social norms of the community. Gender-based violence issues are addressed by local structures, but there is a need for more comprehensive GBV response services.

2 Chiredzi District

2.1 Kubatana Dip Tank.

The Kubatana Dip tank is located in Chengeta village, Ward 29, within Chiredzi District. The site coordinates are approximately 20.977976° latitude and 31.584330° longitude, with the nearest town, Chiredzi, about 35 kilometres away. The dip tank serves 300 cattle, however faces water challenges. Despite fair road conditions, the project site faces several challenges, including a shortage of skilled workers and issues related to water availability and sanitation. The project aims to improve local infrastructure and resources through interventions such as borehole drilling, construction of water troughs and toilets, rehabilitation of the dip tank, farmer training, and soil and water conservation works.

The physical environment of the project site is characterized by a mix of flat and hilly areas, featuring rivers, streams, and small waterways. The geology consists primarily of sandy loam soils, which are poorly fertile and easily leached. The climate in the area typically ranges from 26-35°C, with an average annual rainfall of 580mm and prevalent southward winds. Water resources include the nearby Maranga Dam, which often dries up by August, forcing the community to rely on a borehole 11 kilometres away. There are no perennial water sources, and the site lacks clean water and sanitation facilities. The village is close to a CAMPFIRE area and the Buffalo Range aerodrome is located 10 kilometres away. The dominant vegetation consists of Mopani, Muuyu, and various Acacia species, with dense coverage. Terrestrial fauna is not commonly observed.

Land tenure is communal, supporting livestock grazing, small grain cultivation, and residential areas. The typical household size is four to five members, with agriculture as the primary economic activity and some residents are employed by the Hippo Valley sugarcane estates. Settlement patterns are a mix of linear and scattered rural setups. The local economy is driven by agriculture, with employment rates below 15%, predominantly involving women. The community faced significant flooding in 2017 due to cyclones, with no existing flood management infrastructure. Local infrastructure includes roads and health facilities, with two schools and a clinic located within 7 kilometers. Occupational health

and safety risks are present, particularly from handling hides without protective clothing, with no reported existing measures. Community safety concerns include livestock theft and strong winds during cyclones. Cultural practices involve chiefs and village heads conducting ground-breaking ceremonies, with significant cultural sites like a sacred stone depression. Vulnerable groups include people with disabilities, women-headed households, child-headed households, and the elderly. The project aims to improve livestock grazing conditions and food security while addressing potential conflicts over shared rangeland. Social norms are patriarchal, with traditional cultural and gender practices. Efforts to empower women could challenge these norms, promoting greater gender equality. The community relies on the Zimbabwe Republic Police's Victim Friendly Unit and local elders to address gender-based violence (GBV), with no dedicated community structures for GBV resolution.

Stakeholders involved include various departments within the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD), Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACDSME), and local leadership. The dip tank committee, environmental monitor, and community members manage operations and conflict resolution. Associated facilities must comply with Bank OS1 requirements. Pollution sources include dust from roads and smoke from charcoal production. Cattle are sold at Koala abattoir and MC meats, with hides discarded after slaughter. Locally available materials include river sand, gravel, and quarry stone.

2.2 Allium Hide Centre

The Allium Hide Collection Centre, part of the Beef and Leather Value Chain Technical Assistance Pilot Project (SBLVCP), is located in Chiredzi District, approximately 18 kilometres from the nearest town, Chiredzi. The project aims to upscale from a hide collection site to a processing facility, which includes constructing toilets and providing leather tanning-related training. The site is accessible via good road conditions but faces challenges such as a shortage of skilled labour, water availability, and sanitation.

The project site features flat topography with no notable water bodies. The area consists predominantly of sandy loam soils with poor fertility, easily leached due to minimal moisture retention. The climate ranges from 26°C to 35°C with an average annual rainfall of 580mm, and winds predominantly blow southwards. There are no major water bodies at the site, and the dam typically dries up, leaving no perennial water source. Consequently, there is a lack of clean water and sanitation facilities on-site.

The surrounding biological environment includes dense vegetation with dominant species such as Mopani and various Acacia species. There are no wetlands or commonly observed terrestrial fauna reported by the community. Key ecosystem services in the area include pollination and water purification.

The Allium Hide Collection Centre operates from a communal land used for livestock grazing, small grain production, and residential purposes. The average household consists of three members, with agriculture being the primary economic activity, supplemented by employment at Hippo Valley sugarcane estates. Settlement patterns are linear and scattered, with below 15% employment rates and women predominantly engaged in agriculture. The community experienced significant flooding in 2017 due to cyclones, and there is no existing flood management infrastructure. Infrastructure includes roads, a clinic 7 kilometres away, and other social services such as schools.

The community's cultural practices include ceremonial ground-breaking led by chiefs and village heads, and a sacred depression with a central stone. Vulnerable groups, such as people with disabilities, face challenges in accessing water and other livelihood activities. The project site,

occupying 2 hectares of rangeland. Social norms are traditional and patriarchal, with decision-making predominantly male-dominated. Gender-based violence issues are managed by the ZRP's Victim Friendly Unit and local elders, with no dedicated community structures for GBV.

Key stakeholders include various departments within the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD), Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACDSME), and local government. The dip tank committee, consisting of seven members, and an environmental monitor handle operations and conflict resolution. The community previously emphasized the importance of site agreement to avoid conflicts.

Figure 12. Alium Hides Collection Centre

The Allium Hide Collection Centre collects approximately 140 hides daily from Koala and local butcheries. The hides are sun-dried for 5 days in winter and 2 days in summer before being sold in Harare. The processing site currently employs five males and buys fresh hides for $2 each without grading. Unwanted hide parts, such as fat and tail skin, pose health and pollution risks due to their decaying matter.

Overall, the Allium Hide Collection Centre is working towards enhancing its capabilities and addressing local challenges while navigating the socio-e

Figure 13. Waste Disposal Site at Alium Hides Centre

ANNEX 4 - PROJECT COMPONENTS TABULATED

Table 12. Zavacep Project Components And Activities

Component Name	Cost (UA million)	Sub-Component and Associated Activities
Component 1: Climate Smart Agricultural Productivity and Value Chain Enhancement		**Sub-component 1.1: Support to Sustainable Livestock Production and Productivity (UA 0.869 million, 25.7%):** • Rehabilitate 25 existing seasonal dip tanks/to make them fully functional (including start-up package **acaricides**, initial stock of medication and supplies, etc) and drilling of multipurpose solar-powered boreholes (with overhead tanks & reticulation system including water troughs etc). • Facilitate drilling of 4 multipurpose solar-powered boreholes (with overhead tanks & reticulation system including water troughs etc). • Facilitate construction of 14 water troughs (livestock-watering points) near existing boreholes. • Facilitate climate smart rangeland management, total 40 ha (construction of water and soil conservation works, integrated catchment management, etc). • BENEF - Carry out appropriate conservation practices around dip tanks and multi-purpose boreholes areas (total 42 ha), to be emphasised during community/beneficiaries training *(community in-kind contribution - labour, locally available materials).* • Support pasture development and fodder conservation, total 700ha (legumes & grass pastures). • Procure and distribute 14 bulls of superior genetics (managed by traditional leader). • Procure and distribute 14 feed formulation equipment. **Sub-component 1.2: Support to Agri-Business and Value Chain Enhancement (UA 0.834 million, 24.6%):** • Conduct 6 training courses on quality standards and market linkage in the Leather Value Chain (SMEs and Clusters) – MIC • Facilitate 6 product development and design courses/sessions to enhance both quality and competitiveness utilizing both physical and virtual design studios for TOT designers and product developers including follow up mentorship sessions – MIC • GOVT - Establish the value of the fifth quarter for cattle (6 sessions*) (Government in-kind contribution - Stakeholders consultations)* – Agric • Support to 3 local exhibitions (SMEs/clusters) – MIC • Support 5 Regional exhibitions (2 Zambia, 2 South Africa and 1 Tanzania)- MIC • Support total of 2 leather value chain development knowledge-exchange visits (to Ethiopia or Tunisia), participants 4 Govt/MIC and Agric4, 4 clusters & 2 SMEs. • Support development of 8 community-level demand-driven feedlots (including minor construction/ maintenance, training-market linkages & start-up inputs) – Agric • BENEF - Support to 8 community-level demand-driven feedlots (including minor construction/maintenance labour and locally available materials) - *Beneficiaries/Community in-kind contribution.* • Establish 4 community-managed demand-driven aggregation centres (community centre of excellence, holding pens, water trough, training), close to selected feedlots – Agric. • Establish 1 online market platform for leather finished products (National and International Markets) – MIC. • Support 5 **existing** dairy farmers groups (including women and youth) to sustainably improve quality of associated products.

Sub-component 1.3: Support to Women and Youth MSME Agro – Processing and Market Access

(To be managed by the Ministry of Women Affairs, Community, Small and Medium Enterprises Development)

Sensitization and Awareness

- Organise 5 community mobilisation workshops in each district of Chiredzi and Chivi.
- Engage mass media in disseminating the programme to portray project activities to make it known to communities and institutions that are involved in implementation.
- Produce and disseminate awareness and promotional materials including brochures, posters, and T shirts.
- Launch of the Project in each of the districts.

Capacity Building of MSMEs in Agro-processing

- Identification of MSMEs (clusters, private companies, groups, cooperatives, associations, individuals).
- Engage partners and consultants to capacitate MSMEs with technical skills in production, processing, harvesting, packaging, standardisation and quality assurance. At least 20 training workshops will be conducted.
- Conduct periodic visits to MSMEs to provide onsite training.
- Conduct at least 10 business management training workshops in each district. The capacity building workshops will be provided to groups of potential beneficiaries. Trainings will cover areas such as business planning, costing, record keeping, marketing, association building, business and cooperative registration among others.

Strengthening of the MSME Agro–processing Value Chain

- Acquisition of at least 100 Agro – processing machinery such as stock feed processing plant, peanut butter processing plant, tomato puree, honey processing plant and packaging machinery for each district.
- Acquisition of preservation facilities such as cold chain facilities, dryers, vacuum packaging.
- Installation and servicing of machinery.
- Drilling of 20 solar powered boreholes to improve access to water and also connection to perennial water bodies for increased output to compliment availability of processing machinery and handling facilities.

Market Access

- Certification of MSME products to access local, regional and international markets.
- Facilitate participation of MSMEs with quality products at local, regional and international market platforms.
- Provision of capacity building to MSMEs to produce products ready to be absorbed by the international market.
- Identification and secure lucrative markets for MSME products.

Support to the Ministry

- Facilitate technical support covering beneficiary assessments, guiding project activities through technical backstopping, stakeholder engagement, monitoring and compilation of reports.
- Procurement of a project vehicle, 2 laptops.
- Look and Learn visit to a country that has robust agro processing value chain such as Kenya.
- Funding of Project Focal person.

Component 2: Capacity Building, Gender, Social Inclusion, and Knowledge Management	1.426 (42.1%)	**Sub-component 2.1: Capacity Building, Social Inclusion, and Smallholder Livestock Farmers Empowerment (UA 0.802 million, 23.7%):** • Conduct farmer training (practical/hands-on) on livestock identification and traceability – Agric. • Conduct product development and value addition training (combined), for clusters (beef, horns, hides, skins, footwear, leather crafts, etc), including quality standards and leather designs though Leather studios to enhance competitiveness – MIC. • Procure equipment for leather-value addition (clusters/ 2 sets of equipment/tools per cluster), to support the value addition training. – MIC. • Support pass-on scheme for small stock (goats - total 1400 does/female + 70 bucks/male), for women and youth groups -Agric. • Conduct staff training (Training of Trainers/ToT) on low carbon livestock production (husbandry, inputs management for resilience and methane reduction, health management and animal welfare) – Agric. • Conduct training in eco-friendly sustainable leather tanning especially of goat and sheep skins targeting mainly rural livestock farmers including women and youth – Agric. • Conduct farmer training on low carbon livestock production (husbandry, inputs management for resilience and methane mitigation; health management and animal welfare, feed formulation etc) (4 sessions/year)- Agric. • GOVT - Provide Office Space, including utilities, for PMU & PCU Staff - *Government in-kind contribution.* • GOVT - Provide funds/counterpart contribution for various annual taxes/or waiver value - *Government in-kind contribution.* • GOVT - Provide PMU & PCU Office Furniture Sets - *Government in-kind contribution.* • GOVT - Provide PMU & PCU Office & ICT Equipment Sets (including desktops, laptops, printers) - *Government in-kind contribution.*

		Sub-component 2.2: Knowledge Management, Policy Development, Monitoring and Evaluation (UA 0.624 million, 18.4%): • Facilitate review of legislations/SI/Act (Animal Health Act, SI 182 Live Carcass Classification and Grading, SI 240 of 2001 Pigs) - Agric. • Facilitate review of policies, plans and strategies (Livestock Growth and Recovery Plan, and Gender Strategy in Agriculture) – Agric. • Support production of Policy Briefs on (i) Leather Value Chain, and (ii) Low carbon Beef Value Chain – Agric. • Support or build awareness of the Zimbabwe national standard body/Standard Association of Zimbabwe on best practices of standardization and guideline for climate actions in beef and leather value chain development and access to international markets. • Produce 3 Annual Work Plans and Budgets, and Procurement Plans (Set). • Support the Stakeholders' Platform (lumpsum, 1 per year) to enhance sustained facilitated dialogue at national level of all stakeholders (public and private) along the beef and leather value chain, and to improve the effectiveness of the value chain. • Facilitate 1 Project Technical Launch (PY1). • Facilitate Production of 1 Project Implementation Manual (PIM) - Consultancy (PY1). • Support Tender Advertising and Evaluation (Procurement) Activities (PY1 & PY2). • Support Information Education and Communication (IEC & Visibility) Activities (including promotional wear, airtime, data bundles, billboards, pamphlets etc). • Support 12 monitoring/supervisory field visits (quarterly)/HQ (max 5 people, 5 days/trip). • Support 36 monitoring/supervisory field visits (Provincial/District - monthly). • Conduct 3 quarterly and 3 annual review meetings (& produce Quarterly/Annual Progress Reports). • Facilitate 3 Annual Project Steering Committee (PSC) Meetings. • Facilitate 3 Annual Project Management Committee Meetings. • Procure 2 Sector-MIC and Agric-Livestock PCU Vehicles (twin/double cabs 4x4). • Conduct 1 Mid Term Review (MTR) - recruit consultant (fees & field trip DSA). • Conduct 1 Beneficiary Impact Assessment (BIA) - recruit consultant (fees & field trip DSA). • Conduct End of Project Implementation Report (PCR) - recruit consultant (fees & field trip DSA). • Facilitate E&S Audits, Environmental and Social Safe-guards compliance and Grievance Redress Mechanism (GRM) activities.
Component 3: Project Management	0.256 (7.6%)	**Sub-component 3.1: Project Management (UA 0.256 million, 7.6%):** • Contribute to annual MoFED Project Management Unit and Sector Project Coordination Units Operational Costs (Office supplies/consumables/stationery, cartridges, courier services etc). • Support Third Party (AU-African Capacity Building Foundation/ACBF) to manage Project Special Account. • MoFED PMU Annual Staff Costs – Project Officer (1). • Conduct Annual Financial and Procurement Audits (3, combined). • Support Pastel Accounting Software license (2, PY1 and PY3). • Support various Bank Missions, Procurement and Financial Management functions, including fiduciary clinics. • Support 1 PMU-MoFED Vehicle Operation (Fuel) and Maintenance (servicing/repairs).

ANNEX 5 - LIST OF ASSOCIATED REPORTS APPENDED

This ESMP is supported by the following report and plans

1. Project Grievance Redress Mechanism (GRM)
2. Project Stakeholder Engagement Plan (SEP)
3. Project Pest Management Plan (PMP)