GOVERNMENT OF ZIMBABWE

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

AGRICULTURAL CONFLICT RESOLUTION AND SUSTAINABLE LIVELIHOODS PROJECT-ACRES-MATABELELAND PROVINCE

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)/ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

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Project Name: Agricultural Conflict Resolution and Sustainable Livelihoods Project (ACRES)-Matabeleland South Province

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ACRONYMS

ACBF	Africa Capacity Building Foundation (ACBF)
ACRES	Agricultural Conflict Resolution and Enhanced Sustainable Livelihoods Project
AfDB	African Development Bank
AGRITEX	Agriculture Technical and Extension Services
AIDS	Acquired Immunity Deficiency Syndrome
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources.
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
ESMF	Environment and Social Management Framework
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	Integrated Safeguards System
ISS	AfDB Integrated Safeguards System
MIC	Ministry of Industry and Commerce
NAPF	National Agriculture Policy Framework
NDS1	Zimbabwe's National Development Strategy 1
PCU	Project Coordinating Unit
RDC	Rural District Council
RIDA	Rural infrastructure Development Agency
SADC	Southern Africa Development Community

ZINWA	Zimbabwe National Water Authority
ZRBF	Zimbabwe Resilient Building Fund

1. EXECUTIVE SUMMARY

1. INTRODUCTION

This is the Executive Summary of the Environmental and Social Management Plan (ESMP) developed for the Agricultural Conflict Resolution and Sustainable Livelihoods Project (ACRES), which covers the districts of Gwanda, Bulilima, Matobo and Mangwe in Matabeleland South, Zimbabwe. The ACRES will be implemented over 5 years with financial support from the African Development Bank, Africa Development Fund.

1.1 Background & Context

Agriculture is a vital sector in Zimbabwe's economy, contributing approximately 16% to the total output but with limited value addition. It encompasses crops, livestock, and fisheries, playing a central role in employment, income generation, and poverty reduction. The sector contributes between 12% and 18% of GDP, employs 60-70% of the population, supplies 60% of raw materials for industry, and accounts for nearly 40% of export earnings. Livestock production is integral to this sector, contributing about 30% of agricultural GDP, mainly from small-scale farmers. The Zimbabwe Livestock Growth Plan (2021-2025) highlights its significance for food security, foreign currency earnings, and livelihoods for 67% of rural households.

Climate variability and change had posed several challenges to the country's Agricultural sector thereby significantly affecting its performance towards the country's GDP. Based on these challenges the Government submitted the request for funding from the African Development Bank's Transition States Facility (TSF) Pillar 1. Consequently, this Project will focus on participatory approach in order to select demand-driven activities which will aim to address context-specific drivers of fragility and build resilience, with due consideration to sustainability. Some of this Project's activities will complement the planned activities under the Zimbabwe Resilience Building Fund II (ZRBF-II), which is currently being executed by the United Nations Development Programme (UNDP).

The Agricultural Conflict Resolution and Sustainable Livelihoods Project (ACRES) will address the following challenges within the agricultural sector:

- **Livestock migration to Botswana:** The farmers are killed after crossing into Botswana and some cases the farmer are harassed or injured when they follow the livestock.
- **Low productivity:** Improving overall crop and livestock productivity through better farming practices and support systems.
- **Poor animal genetics**: Enhancing animal breeding programs to improve the genetic quality of livestock.
- **Limited supply of water:** Providing reliable water sources for drinking, existing dip tanks and other livestock needs.
- **Climate change impacts:** Addressing the increased frequency of animal disease outbreaks, poverty deaths, droughts, and occasional cyclones due to climate change.
- **Disease control:** Implementing measures to control and prevent diseases in livestock.
- **Value addition:** Promoting value addition in the crop and livestock production to enhance their competitiveness.
- **Capacity building:** Training farmers in livestock and crop production to produce better yields and sustainability, and supporting fodder production, and livestock feed processing with the procurement of start-up packages and feed processing equipment.
- **Logistical support:** Coordinating stakeholders in the value chain for more effective operations.

- **Private sector development:** Encouraging private sector involvement to boost economic growth and create jobs.
- **Environmental and social management**: Ensuring compliance with environmental regulations and addressing social impacts through comprehensive management plans.

The development of the Environmental and Social Management Plan (ESMP) is in line with the requirements of the AfDB's Integrated Safeguards System (ISS).

1.2 Project site baseline conditions in Gwanda, Bulilima, Matobo and Mangwe Districts

1.2.1 Gwanda District

Gwanda District (Figure 1), with a population of 122,903, features a semi-arid climate and varied terrain, receiving crucial seasonal rainfall of 400-600 mm annually. The soil composition ranges from sandy loams to clay, influencing vegetation and agricultural practices. Water scarcity during the dry season poses significant challenges, with some residents relying on sand pits for water. Cattle dipping, requiring 15,000 litters per dip, is particularly difficult, necessitating long-distance water collection, particularly in dry seasons.

The district's flora includes drought-resistant vegetation such as acacia and mopane trees. The population, predominantly Ndebele, relies on subsistence crop and small-scale livestock production, with gold panning becoming significant in recent years. Resettled areas face underdeveloped infrastructure, impacting access to essential services. Environmental issues, including river pollution from gold mining and land degradation, exacerbate food security challenges.

1.2.2 Mangwe District

Mangwe District, located in southern Zimbabwe, experiences a semi-arid climate with high temperatures and minimal rainfall. The flat terrain is characterized by sparse vegetation suited to arid conditions, and the Ramakwebana River forms a natural boundary with Botswana. The district's population includes 94,001 in rural areas and 58,574 in Plumtree town, with a notable youth demographic. The local economy relies on cross-border trade, subsistence farming, and livestock rearing. As a major border post in the SADC region, the district contends with social issues such as unemployment and drug abuse. Additionally, livestock and crop farming are frequently impacted by environmental shocks, including droughts, diseases, and periodic cyclones that have resulted in home losses and damaged infrastructure like bridges and weirs.

1.2.3 Bulilima District

Bulilima is located in Matabeleland South, and is characterized by a semi-arid climate. The District lies in a region that experiences seasonal rainfall, with significant variability leading to droughts and floods. The area has fertile soils suitable for agriculture, although land degradation is a concern due to overuse. Water resources are limited, with rivers and boreholes being primary sources for communities.

The district hosts various ecosystems, but habitat loss from agricultural expansion and urban development poses threats to local wildlife. There is deforestation due to wood harvesting for fuel and construction. Soil erosion and degradation from unsustainable farming practices. Climate change impacts, including increased drought frequency. Bulilima's population is predominantly rural, with communities engaged in subsistence farming and livestock rearing. There is Ethnic diversity that include various groups, with cultural practices and traditions playing a significant role in community life. Agriculture is the primary economic activity, with crops such as millet, sorghum, and maize.

Livestock farming is also integral, providing food and income. Access to education is improving, but many schools face challenges such as inadequate facilities and resources. Literacy rates vary, with efforts ongoing to enhance educational opportunities. Healthcare facilities are often limited and under-resourced, impacting access to essential health services. The district experience common health issues

1.2.4 Matobo District

Matobo is located South East of the Bulawayo city. The district is a home to the Matobo National Park, which boasts a variety of flora and fauna, including rare species like the black and white rhinoceros. The district is characterized by unique granite formations and diverse ecosystems, including savannas and woodlands. The community depend on agriculture and livestock for their livelihoods, which are increasingly threatened by environmental degradation and climate change. The district is culturally significant, with sites of historical importance, including rock paintings and sacred sites. Community initiatives often focus on preserving cultural heritage while promoting sustainable development. Matobo District faces a complex interplay of environmental and social challenges, requiring integrated approaches that promote sustainability, community resilience, and the preservation of cultural heritage. Addressing these issues is crucial for enhancing the well-being of its residents and protecting its unique ecosystems.

Project sites

Sites of Boreholes by district

DISTRICT	BOREHOLE NAME	WARD
Matobo	Nkubi B/H	16
	Donkwe Donkwe Sec School B/H	14
	Dzembe Sec School B/H	2
	Manyane Pry School B/H	13
	Zamanyoni Pry School B/H	19
	Mabonyane -Bhalangwe Village	10
	Mbuso School	11
	Mbembeswana Clinic	11
Mangwe	Valinos B/H – Village Tokotseu	6
	Macingwane B/H	2
	Petros B/H – Newline 2	7
	Madzibaembulu B/H	14
	Majojo B/H	15
	Zareba B/H	11
	Monearn B/H	11
	Leighoogs	11
Gwanda	Murake B/H	16
	Magama B/H	19
	Maluta B/H	17
	Moshe B/H	20
	Dombo Pry School	15

Bulilima	Sibomvu	21
	Tsukuru	10
	Gala	6

Project sites for Dip-tank Rehabilitation

Summary of Scope of works

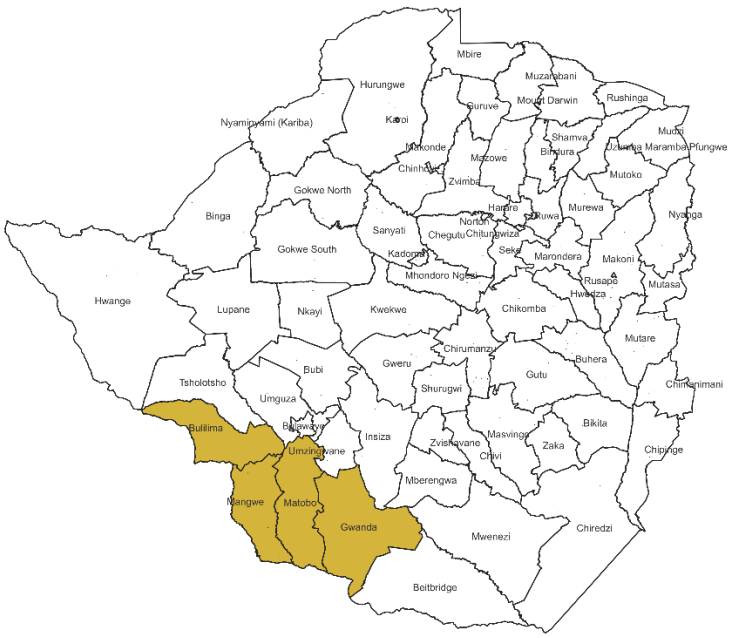
Force pen, inspection race, neck-clamp, holding pen, foot bath, jump-off point, roof, sump walls, floors and pillars, dry pen race, floors and gates, dip attendant shade, toilets and side tanks.
Drilling and installation of solar powered bore hole, building water troughs, pipe network to provide water in the dip tank and water troughs. Provision of starter-up package of acaricide and initial stock of medication.

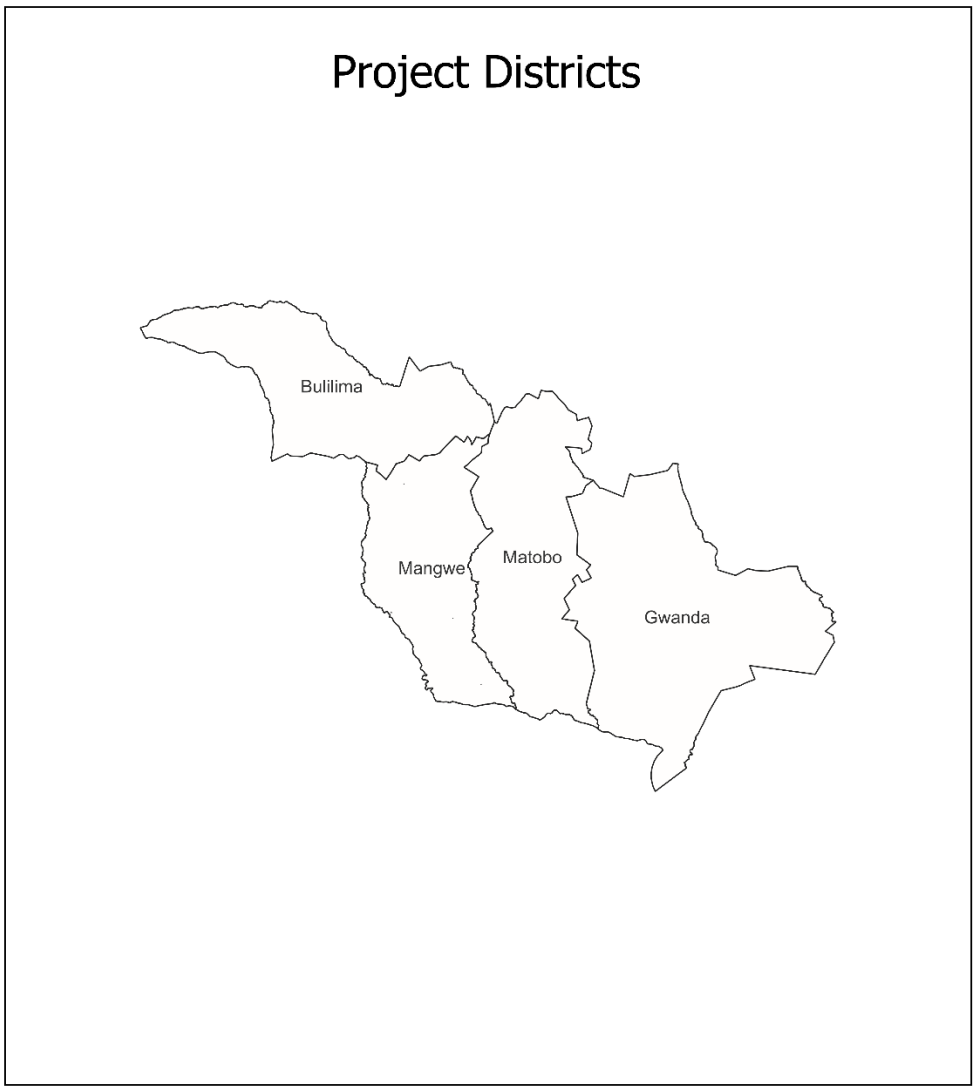
2	**District**	**WARD**	**DIP-TANK**
1	Gwanda	19	Rantasi
2		24	Seboza
3		24	Nhwali
4		23	Tshabezi
5		9	Lushonkwe
6	Mangwe	11	Greenfields
7		11	Monearn
8		9	Ntali
9		3	Madabe
10		5	Kweneng
11	Matobo	23	Mt Edgecombe

12		21	Polymagama
13		24	Ravenswood
14		09	Marinogha
15			Homestead

Figure 1. Map showing location of Bulilima, Gwanda, Matobo and Mangwe Districts

Project Districts




Project Districts
Bulilima
Mangwe
Matobo
Gwanda

1.3 POLICY LEGAL AND ADMINISTRATIVE FRAMEWORK

The Agricultural Conflict Resolution and Sustainable livelihoods Project (ACRES) will operate within a comprehensive legal framework guided by several national and local laws and regulations. The Zimbabwe Constitution of 2013 is the supreme law that ensures the protection of various rights, including environmental rights, emphasizing sustainable development, citizen participation, and decentralization. Complementing this, the Environmental Management Act (EMA), Chapter 20:27, which mandates environmental impact assessments (EIAs) for significant projects to mitigate negative impacts, fostering public participation and compliance with environmental standards. The Animal Health Act regulates livestock health to prevent disease outbreaks, essential for the agriculture value chains. The Water Act Chapter 20:24, governs water resource use, necessitating permits for significant water usage, critical for ACRES's reliance on water for livestock and processing activities. Additionally, the Forestry Act and Communal Lands Forestry Produce Act regulate the sustainable use of forest resources, essential for leather processing and agricultural activities.

ACRES must also adhere to the Environmental management (Control of Hazardous Substances (General)) Regulations SI268 of 2018, which mandates permits for handling hazardous materials, and the Parks and Wildlife Management Act, which protects wildlife and regulates hunting. The Labour Act ensures fair labour practices and safe working conditions, while the Public Health Act mandates health standards for community and worker safety. The Factory and Works Act (Chapter 14:08) enforces safety regulations in industrial settings, relevant to feed processing facilities. The Rural District Councils Act (Chapter 29:13) and Communal Lands Act (Chapter 20:28), provide frameworks for local governance and land use, crucial for project approval and implementation. Additionally, local regulations such as the National Environmental Policy and Strategies (2009) and the National Climate Change Response Strategy (2014) guide sustainable environmental and climate-smart practices, aligning ACRES initiatives with national development goals outlined in the Zimbabwe Vision 2030 and the Zimbabwe Livestock Growth Plan (2021-2025). International treaties, such as the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC), along with guidelines from the World Health Organization (WHO) and International Labour Organization (ILO), further shape the project's legal and operational landscape.

The African Development Bank (AfDB) has established a set of Operational Safeguards (OS) to ensure environmental and social sustainability in its financed projects. For the Agricultural Conflict Resolution and Sustainable Livelihoods Project, the applicable safeguards include:

1.4 African Development Bank E&S Operational Safeguards (OS) Applicable to Project Activities

AFDB Integrated Safeguard Systems of 2023

Environmental and social sustainability is key to economic growth and poverty reduction in Africa. The Bank's Strategy for 2023-2032 emphasises the need to assist regional member countries in their efforts to achieve inclusive growth and transition to green growth. In addition, the Bank is committed to ensuring the social and environmental sustainability of the projects it supports. The ISS is designed to promote the sustainability of project outcomes by protecting the environment and people from the potentially adverse impacts of projects.

The safeguards aim to: (i) Avoid adverse impacts of projects on the environment and affected people, while maximising potential development benefits to the extent possible, (ii) Minimise, mitigate, and/ or compensate for adverse impacts on the environment and affected people when avoidance is not

possible, and (iii) Help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

The Bank requires that borrowers/clients comply with these safeguards' requirements during project preparation and implementation. The Integrated Safeguards Policy Statement sets out the basic tenets that guide and underpin the Bank's approach to environmental safeguards. In addition, the Bank has adopted ten OSs, limiting their number to just what is required to achieve the goals and optimal functioning of the ISS:

- ***Operational Safeguard 1: Assessment and Management Environmental and Social Risk and Impacts*** – This overarching safeguard governs the process of determining a project's environmental and social category and the resulting environmental and social assessment requirements. OS1 is triggered by the project activities considering environment and social assessment has to be undertaken prior to implementation of any component requiring civil works and water conservation interventions.

- ***Operational Safeguard 2: Labour and Working Conditions*** – This safeguard establishes the Bank's requirements for its borrowers or clients concerning workers' conditions, rights and protection from abuse or exploitation. It also ensures greater harmonisation with other multilateral development banks. Workers will be engaged on the project; therefore, this OS will be triggered. Key aspects will be to follow national and international labour organization recommendation when engaging workers on the project.

- ***Operational Safeguard 3: Resources Efficiency and Pollution Prevention and Management***– This safeguard covers the range of key impacts of resource usage, pollution, waste, and hazardous materials for which there are agreed international conventions, as well as comprehensive industry-specific and regional standards, including greenhouse gas accounting, that other multilateral development banks follow. The project will use pesticides, fertilizers and acaricides for its operations and national standards for discharge of effluent will be referenced throughout project lifecycle.

- **Operational Safeguard 4: Community Health, Safety and Security**]- This OS recognizes the increase in community exposure to risks and impacts due to projects, activities, equipment and infrastructure therefore it addresses the health, safety and security risks on project affected communities.

- ***Operational Safeguard 5: Land acquisition, Restrictions on Access to Land and Land Use and Involuntary Resettlement]***– This safeguard consolidates the policy commitments and requirements set out in the Bank's policy on involuntary resettlement, and incorporates a number of refinements designed to improve the operational effectiveness of those requirements. Land ownership of targeted small-holder farmers in Bulilima, Gwanda, Matobo and Mangwe is governed by Communal Lands Act in Zimbabwe. All the communal land is vested in State President who has the powers to permit its occupation and use in accordance with the Act. The communal land is administered by Rural District Councils and the inhabitants have use rights over the land. It was confirmed and agreed by MLAFWRD that the existing

physical infrastructures (dip tanks, irrigation schemes, rural feeder and boreholes) projects to be rehabilitated are on existing state-owned land in communal areas and new physical investment (village business units, multipurpose boreholes, nurseries, feed and fodder plants and 1-hectare nutritional gardens) will be implemented on existing state-owned communal land designated for such projects. Therefore, the mission concluded that the project will not lead to any physical or economic displacements and hence a Resettlement Action Plan (Plan) is not required for the project. This OS is not triggered.

- **Operational Safeguard 6: Habitat and Biodiversity Conservation and Sustainable Management of Living Natural Resources**- Ensuring protection and conservation of biodiversity across all forms of habitats through the promotion of sustainable management of living natural resources.

- **Operational Safeguard 7: Vulnerable Groups-** Ensure that vulnerable groups and individuals are identified as early as possible in Bank Group operations and that engagement is meaningful, taking into account individuals' and communities' specificities, and delivered in an appropriate form, manner and language including affirming, respecting, and protecting the rights and interests of vulnerable individuals and groups throughout the lifecycle of the project or investment.
- **Operational Safeguard 8: Cultural Heritage-** ensuring protection of heritage from the adverse impacts of project activities and support its preservation through addressing cultural heritage as an integral aspect of sustainable development. It promotes meaningful consultation with stakeholders regarding cultural heritage as a means to identify and address risks and impacts related to cultural heritage.
- **Operational Safeguard 10: Stakeholder Engagement and Information disclosure]-** This OS acknowledges the importance of right to effective participation in decision making process during the project cycle. It requires openness and transparency during stakeholder engagement between the Borrower and project stakeholders to improve E&S sustainability of the projects, enhance project acceptance and make significant contribution to successful project design and implementation.

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 ACRES, focusing on the crop and livestock production, the following AfDB safeguards in Table 1 would likely be triggered.

Table 1. Safeguards Triggered by the ACRES Project

AfDB Safeguards Instruments	**Triggered by ACRES**	**Remarks**
Integrated Safeguards Systems (ISS)	Yes	Overarching operational safeguard mainstreams environmental and social considerations in all Bank operations
Assessment and Management of Environmental and	Yes	As a Category II Project, environmental and social assessment is required. ACRES would likely require a comprehensive ESIA to identify and assess potential environmental and social risks associated with

Social Risk and Impact (OS1)		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.
Labour and Working Conditions (OS2)	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 agriculture value chain are protected from workplace hazards. ACRES would need to implement measures to prevent accidents, provide personal protective equipment, and promote a safe working environment for all workers.
Resources Efficiency, Pollution Prevention and Management (OS3)	Yes	Policy intended to achieve high quality environmental performance, efficient and sustainable use of natural resources
Community Health, Safety and Security (OS4)	Yes	The risks and impacts associated with the project that affect the community shall be addressed.
Habitat and Biodiversity Conservation and Sustainable Management of Living Natural Resources-(OS6)	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. ACRES would need to incorporate measures to minimize habitat destruction, preserve biodiversity, and promote sustainable land use practices within the project area.
Vulnerable Groups (OS7)	Yes	The vulnerable groups such as people living with disabilities, old people and pregnant women shall engaged during project lifecycle.
Cultural Heritage (OS8)	Yes	Tangible and intangible cultural heritage shall be identified and managed if found during the project lifecycle.
Stakeholder Engagement and Information disclosure OS10	Yes	It requires effective stakeholder participation and consultation throughout the project lifecycle.

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. ACRES 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.

1.5 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 3: Resources Efficiency, Pollution Prevention and Management. OS 3 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 3 offers a broader, project-based approach, emphasizing IPM, risk assessments, training, and ongoing monitoring to align with international best practices. The AfDB OS 3's focus on IPM and less hazardous alternatives highlights a more proactive approach to reducing pesticide reliance and mitigating risks.

- Labour Standards: OS 2 compared to Zimbabwe Labour Act15:09. Both frameworks emphasize worker rights and protections, but OS2 places additional emphasis on the specific requirements for development projects, including rigorous health and safety standards and detailed grievance mechanisms

The ESMP for the ACRES 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 agriculture value chains, contributing to Zimbabwe's broader economic and social goals.

2.0 ANALYSIS OF ALTERNATIVES

The ESMP study for the Agricultural Conflict Resolution and Sustainable Livelihoods in Gwanda, Bulilima, Matobo and Mangwe districts, Zimbabwe, considered several alternatives, including the "No Project" alternative, alternative locations, and alternative designs, to identify the best models with minimal environmental and social impacts. The "No Project" alternative would maintain the status quo, preserve environmental resources but forfeit anticipated social and economic benefits. The project is expected to resolve conflicts arising from cattle migration to Bostwana, enhance cattle husbandry, pasture development, fodder production, crop production and hide processing, leading to improved livestock health, reduced tick-borne diseases, better cattle nutrition, increased beef production, and value addition to the leather industry. Without the project, the ongoing issues of cattle migration to Bostwana, inadequate livestock and crop health management, poor pasture quality, and lack of income from crops and livestock would continue, leading to missed opportunities for sustainable livelihoods and economic benefits.

Alternative locations were considered, but Gwanda, Bililima, Matobo and Mangwe were deemed suitable based on a 2010 feasibility study, existing cattle husbandry potential, and the strategic benefits of integrating improved practices and infrastructure. Alternative designs focused on site, technology, materials, and chemicals to balance effectiveness, cost, and minimal impacts. Selected

sites will utilize land previously used for similar activities, minimizing changes in land use and reducing potential negative impacts. Chosen technologies will maintain the use of plunge dip pools for tick control, introduce local drought-resistant grass and tree species, pasture development and crop production. The mitigation hierarchy (avoidance, minimization, restoration, and compensation) was applied to manage potential impacts. The selected alternatives and project designs/technologies aim to maximize environmental, social, and economic benefits for the communities, making the project a suitable option for sustainable development in Gwanda, Matobo, Bulilima and Mangwe districts.

2.1. BRIEF DESCRIPTION AND KEY COMPONENTS

The proposed Project aims to enhance the adaptive capacity of drought-affected communities by addressing the interconnected challenges of climate change, water, food and nutrition insecurity, and poverty. The Project will focus on improving water-related infrastructure in order to ensure a reliable water supply for agricultural and domestic uses, thus stabilizing crop and livestock production. Most of the proposed activities will complement the ongoing ZRBF II, in order to build synergies with other development partners, namely EU and Government of Ireland. The Project will ensure social inclusion by addressing the specific needs of women, youth, and marginalised groups through targeted gender equality and protection related interventions. To ensure sustainability, the Project will strengthen local institutions and community structures, including VBUs, and also focus on technical capacity building for sustainable management of resources. Additionally, the Project has incorporated Water, Sanitation, and Hygiene (WASH) and nutrition activities including early warning systems. This integrated approach aligns with Zimbabwe's national climate adaptation strategies and Sustainable Development Goals (SDGs), ensuring long-term sustainability and recovery. The Project aims to complement the Government's efforts to protect livelihoods in the current crisis caused by the El Niño induced drought. The Project is also in line with two of the Bank's "High 5" priorities of *"Feed Africa"* and *"Improving the Quality of Life of Africans"*.

2.2 Components and Subcomponents

The Project consists of 3 components, as summarised below, and associated activities.

Component Name	Sub-Component and Associated Activities
Component 1 Support to Reduce Drought-Induced Poverty and Migration for Protection and Resilience of Vulnerable Communities	**Sub-component 1.1: Response to Mitigate the Impact of Future Extreme Events Similar to the 2024 El Niño Induced Drought** *(UA 2.042 million. 11.2%)* • Immediate response - Identification and registration of drought-affected households, prioritizing women-headed households, children, elderly, and persons with disabilities. • Immediate response - Procurement of essential food items (maize, pulses, cooking oil) for immediate distribution. Targeted food-insecure people receive adequate food transfers to meet their basic food and nutrition needs (total of 60,000 households receiving unconditional food assistance). • Monitoring and reporting on the distribution process, ensuring transparency and accountability. • Support 100,000 drought-affected livestock farmers (project direct beneficiaries) through procurement and distribution of livestock feed packs (including hay, silage, and supplementary feed/mineral premixes)

Component Name	Sub-Component and Associated Activities
	for on farm feed formulation, to support drought affected livestock farmers. • Support 8,000 drought-affected livestock farmers through procurement and distribution of fodder production inputs. • Support 100,000 drought affected farmers with soil borne disease vaccines and dewormers. • Facilitate immediate access of water for (i) livestock watering points and (ii) for domestic use using hired (existing) water mobile/portable water bowsers/tanks, for smallholder livestock farmers. • Enhance dialogue and dispute resolution mechanism (Zimbabwe and Botswana border-livestock communities). • Reduce risks associated with trans-boundary livestock diseases through expertise in disease surveillance, capacitating cross-border collaboration and policy development, and working with partners to strengthen disease risk mapping. • Support operationalization of the Zimbabwe-Botswana Memorandum of Understanding (MoU), including (i) procurement of Foot and Mouth Disease (FMD) Vaccine (400 000 doses, initial vaccine and booster), and (ii) Joint (Zimbabwe–Botswana) Awareness Campaigns. • Train Government staff on trans-boundary disease risk mapping. • Capacitate 4 veterinary laboratories with reagents for trans-boundary disease surveillance. • Capacitate 20 field personnel with sampling material for zero surveillance of trans-boundary diseases. • Develop robust livestock identification and traceability system for livestock (150,000) animals along the shared border. • Train the 20 lead livestock farmers and Government staff on disease surveillance and sample collection. • Support community-based screening for wasting and quality treatment for children with wasting. • Scale up the Care Group network in the targeted districts to enhance access to quality diets and multi-sectoral services for the prevention of malnutrition. • Promote consumption of nutritious and healthy diverse diets
	Sub-component 1.2: Climate-Resilient Agricultural (Crop and Livestock) Production, Productivity and Marketing for improved nutrition security *(UA 6.591 million. 36.2%)* *Establishment of livestock greenbelt center, along Zimbabwe Botswana Boarder)*

Component Name	Sub-Component and Associated Activities
	• Improve productivity of the rangelands along the Zimbabwe-Botswana border area through re-enforcement with improved grasses and legume. • Reinforce about 75 km^2 (15km stretch along the border) of veld with improved grass and pasture varieties for improved access to grazing • Solar powered borehole with water reticulation system to ensure adequate supply of livestock water along the boarder • Construct a 3 roomed structure for security of the infrastructure • Construct water troughs along the border line for livestock watering • Construct feedlots, sale pens, sorting pens, auction pens, race, loading ramp, feed storage facilities, spray race, feed and water troughs, • Establish a feed processing hub (involves procurement and construction) shed, chopper grinder, baling set, feed mixer, tractor and trailer • Procure 3 motorbikes for officers manning and managing the border area *Crop Value Chain Development (Dakar II) and Nutrition gardens integrated into Village Business Units* • Drill 5 commercial type-high-yielding, community-level demand-driven, multipurpose boreholes fitted with solar-powered pumps, including overhead tanks, and reticulation system (payment will be based on wet-boreholes only). • Rehabilitate 4 demand driven community level smallholder irrigation schemes (max 40 ha each) for crop and fodder production, including pit latrines • Procure and distribute 200,000 start-up packages of drought-tolerant and pest-tolerant agricultural inputs (cereal and legume seed only) • Train 30 water point committee members on risk-informed planning and operation and maintenance and for established water systems. Train and equip village pump minders and plumbers. • Train irrigation scheme farmers on (800 Farmers, 4 Training sessions) agronomy, irrigation scheme management, business development, project management, market linkages and value addition, promotion of cash crops non-palatable for wildlife (chili and others) for multiple solutions). • Train 120 local authorities on Village Business Units (VBUs, 4 training sessions) to manage the Project's community level infrastructure. • Conduct nutrition days to support nutrition and resilience building (2 per district). • Construct and equip community-based seed banks (4no) to enhance availability and accessibility of high-quality seeds for farmers and

Component Name	Sub-Component and Associated Activities
	empowering existing and emerging seed houses through training and mentorship programs. • Training of 20 extension staff and 1,200 farmers on Good Agronomic Practices (GAP), climate smart agriculture and sustainable soil and water technologies • Upscale the use of water harvesting (in-situ and ex-situ) technologies to ensure moisture availability during in-season dry periods and to reduce the severity of droughts (20 schools). • Establish a 5 (1-hectare each) nutrition gardens under the village business unit model. • Establishment of 16 nursery sheds (0.3 hectare each) for the promotion of agroforestry as a nature-based solution to climate change resilience in terms of landscape restoration, increased crop and livestock production in Zimbabwe, promoting food crop-based agroforestry (Maize and other crops preferred by local communities) and promoting fuel-wood based mixed with indigenous fruit trees agroforestry (Community fuel-wood agroforestry system). • Rehabilitate/establish 14 Village Business Units (min 2 hectares each) within the Project area (participating districts) to promote rural industrialization and economic empowerment, including establishment of markets and also linkages. • Nutrition education for social behaviour change communication interventions towards dietary diversity *Livestock Production and Marketing* • Construct 100 community-level demand driven livestock water troughs at existing boreholes for reliable water access. • Rehabilitate 10 community-level demand driven existing seasonal livestock dip tanks (5 per district) to make them fully functional (drilling and installation solar powered borehole, start-up package aca]ricides, initial stock of medication and supplies, water troughs etc) to improve livestock health and disease control. • Establish pastures (100ha), under irrigation to enhance carrying capacity and fodder availability (Forage value chain), with support from Bank's flagship programme Technologies for African Agricultural Transformation-TAAT (International Livestock Research Institute-ILRI). • Construct fire guards/breaks, in the participating districts, to avoid veld fires from spreading into pastures. • Set up 4 feed and fodder processing centers and feed banks with storage sheds near borehole clusters, equipped with processing equipment (Hay baling sets, Chuff cutters, feed mixers) – TAAT ILRI.

Component Name	Sub-Component and Associated Activities
	• Construct 10 low-cost shelters for patrol officers/security officers, at strategic locations, at least one kilometre, away from the Zimbabwe-Botswana border to minimise Zimbabwe livestock straying across the border into Botswana, in search of water. • Procure 10 spray-race units and neck-clamps for VBUs, including construction of handling facilities, and water -troughs. • Procure and establish agroforestry trees in the rangelands along the Zimbabwe-Botswana border area, including leguminous tress such as Leucaena and other indigenous tree species such as monkey bread. • Determine livestock carrying capacity of the rangelands to avoid overstocking which results in over grazing and land degradation. • Map land suitability for conservation and development of vlei areas. • Develop vleis by introducing water loving weeds such as nuts-edges, reeds among others and flooding the range-lands in order to recharge the water table by the use of water harvesting techniques. • Train 400 extension personnel on feeding strategies/feed formulation, animal health management, O&M of livestock infrastructure. • Train 7 000 livestock farmers and on feeding strategies/feed formulation, animal health management, O&M of livestock infrastructure. • Entrepreneurship Training. Develop specialized training modules on livestock-based agribusiness and value chain development for women and young entrepreneurs. Train and equip 2,000 young farmers on pen fattening and maximizing profit through rural auctions. • Produce annual marketing calendar indicating where and when auctions are being done. • Support the review of the carcass and livestock grading act. • Climate-Smart Land Use and Governance Participatory land use planning, including the co-development of land use maps and action plans with traditional leaders and local communities, integrating indigenous knowledge and climate risk assessments. • Establishment and capacity-building of community-based land governance structures, such as grazing committees, water point user groups, and nutrition garden committees, to ensure inclusive, transparent, and accountable land and resource management.
	Sub-component 1.3: Social Inclusion, Sustainable and Diversified Livelihood Options for Rural Inclusive Economic Empowerment of at-risk Communities *(UA 1.447 million. 7.9%)* • Support 70 women and 30 youth groups, (each group, 10 birds and 1 hen), for dual-purpose poultry rearing, using ILRI's improved, well-researched breeds.

Component Name	Sub-Component and Associated Activities
	Facilitating High nutrient value/Biofortified seed inputs supply chain financing and nutrition education • Nutrient rich/biofortified seeds production supply chain finance. • Innovative nutrition education activities. *WASH - Provision of water supply, systems* and sanitation infrastructure for *communities at acute risk for water scarcity* • Strengthen water quality monitoring by procuring and distributing consumables, water quality testing kits and hygiene kits for vulnerable households.
Component 2: Strengthen the agricultural input supply chain (*To be implemented by AFFM*)	**Sub-component 2.1: Strengthening Input Supply Chain Financing** *(UA 3.857 million. 21.2%)* • Provide risk-sharing financing mechanisms (Partial Trade Credit Guarantee) to the input supply chain players, leveraging private sector resources to enhance input distribution. (at least 2 private sector input suppliers seed and fertilizer). • Leverage the guarantee at least two times during the winter irrigated season and summer rain fed campaign leverage factor >2. • Demand creation to on board farmer groups transitioning from VBUs (>40). • Demand creation to onboard smallholder farmers into selected smallholder irrigation schemes, starting by those located in drought-prone areas (Metric tons of fertilizer distributed (No of small holders reached 180,000, metric distributed over the project period). • Demand creation to on-board large-scale farmer supporting satellite farmer groups or medium scale farmers >30. • Enhance institutional capacity and accountability by training financial institutions and cooperatives in the administration and monitoring of partial trade credit guarantees (4 training sessions). • Support the enhancement of existing registries to track and monitor the finance provided to targeted beneficiaries. in partnership with MLWARD AFC, CBZ and Input suppliers (2 registries). • Strengthen institutional capacity and accountability by digitizing and integrating national and local beneficiary registries with real-time data dashboards and credit reference bureaus (3). • Support framework of the input consortia for oversight of the input distribution mechanisms, and finance leveraging private sector resources. Development of standardized reporting templates (4) (1 Framework). • Facilitate the creation of risk mitigation mechanisms, such as crop insurance, and support the development of a framework to enhance this risk mitigation mechanism. Partnering crop insurance service providers regional and national (2).

Component Name	Sub-Component and Associated Activities
	• Leverage on the existing commodity trading platform to embed a central digital registry connecting input suppliers, buyers and financier supporting transparent financial transactions (1). • Provide linkages with input suppliers & ARDA to micro lending financial institutions to enhance extension of credit on a portfolio basis to Village Based Units (VBUs), (35). • Support AFFM Component Management Fees.
	Sub-component 2.2: Farmer Capacity and Resilience Building *(UA 0.663 million. 3.7%)* • Develop in collaboration with ARDA- the Farmer Business School — empowering farmers with essential business and entrepreneurial skills to boost efficiency and profitability on their farms (3). • Foster strategic partnerships between fertilizer suppliers and farmers to institutionalize soil testing and fertilizer calibration as integral components of the input supply chain. (5 Partners). • Support ARDA and input providers in co-developing tailored agricultural extension tools that reflect localized soil profiles and targeted production outcomes for transitioning farmers. (7 partners, one agriculture extension tool). • Integrate the distribution of extension materials with input delivery (e.g., seeds and fertilizers) to ensure timely access to embedded advisory services. (at least 30,000 smallholder farmers, 30 farmer groups 60 Mediums Size Farmers). • Facilitate regular on-farm demonstrations and technical visits to reinforce the adoption of GAPs and climate-resilient practices, including: (100 demos plots). • Expand the reach of extension services by enabling public and private actors to utilize existing digital platforms (e.g., MLAWFRD, AFC, FSG) for delivering mobile-based, farmer-friendly advisory content. (minimum 20 campaigns). • Promote inclusive access to GAP knowledge by ensuring materials and digital tools are adapted for women, youth, and marginalized farming communities. (at least 20% of target smallholder farmers are women and 10% are young). • Support the domestication of the African Fertilizer and Soil Health (AFSH) Ten-Year Agenda by assisting the MLAWFRD in reviewing the national input market structure. • Collaborate with stakeholders to develop a ten-year roadmap for input systems reform, focused on improving soil health, nutrient management, and long-term agricultural resilience.

Component Name	Sub-Component and Associated Activities
	• Development of the issues paper (highlighting the problems and the need for policy interventions) • Conduct stakeholder consultations for evidence generation for the development of fertilizer policy • Development and validation of zero draft fertilizer policy
Component 3: Project Management	**Sub-component 3.1: Knowledge Management, Monitoring & Evaluation, and Communication** *(UA 1.007 million. 5.5%)* • Conduct 2 stakeholders consultative workshop on developing the implementation and procurement strategy • Procure 4 off-road-vehicles (4x4 double/twin cabs), one for BDMT and for Livestock head office monitoring and evaluation teams, one for Agriculture and Rural Development Advisory Services. • Procure 5 off-road-vehicles (4x4 single cabs), one for each participating District for project monitoring and reporting. • Procure 5 off-road motorcycles/motorbikes, (border district) for monitoring the border area, rangeland re-enforcement and irrigation schemes. • Procure 40 bicycles/pushbikes for management of VBU activities. • Support vehicle operation and maintenance. • Procure 13 laptops for (5 x district teams, 2 x BDMT, 2 x Livestock (vet & LPD focal persons) 1 x Mechanisation, 1 x Land use planning, 1 x Crops). • Organise a total of 4 community mobilisation workshops/awareness meetings in Project Districts. • *Communication* – Support information generation, dissemination, promotion of dialogue and shared understanding of the established project infrastructure to drive positive change towards a sustainable future. • *Communication* - Promote Project visibility (mass media, brochures, posters, Project branding, signages on site, banners, 5 videos, 4 radio jingles, and multimedia coverage of community etc.). • *Communication* - Support Information Education and Communication (IEC) activities [workshop and awareness meetings, 5 short project documentaries, including photos, Radio, television, print media campaigns (content placement), Media project visit - twice in the project cycle]. • Produce (i) 4 Annual Work Plans and Budgets, and (ii) 4 Procurement Plans. • Facilitate 1 Project Technical Launch (PY1). • Conduct Baseline Survey/Study – Individual Consultancy (PY1). • Produce 1 Project Implementation Manual (PIM) – Inhouse activity (PY1).

Component Name	Sub-Component and Associated Activities
	• Conduct 2 monitoring/supervisory field visits per year, for HQ, Regional and District Official (max 10 people, per 5 day-trip). • Conduct 48 District monitoring/supervisory field visits. • Conduct 16 quarterly review meetings & produce associated Bank's Quarterly Progress Reports (QPR). • Facilitate 4 Annual Project Steering Committee (PSC) Meetings. • Conduct 1 Mid Term Review (MTR, PY3) - recruit consultant (fees & field trip DSA). • Conduct 1 Beneficiary Impact Assessment (BIA, PY5) - recruit consultant (fees & field trip DSA). • Conduct 1 Project Implementation Progress/Completion Review (PCR, PY5) - recruit consultant (fees & field trip DSA). • Support environmental and social safeguards compliance, technical assurance, Grievance Redress Mechanism (GRM), strategic communications and visibility, for streamlined execution and efficiency. • Support implementation of ESMP activities, and protection systems to facilitate strengthened implementation. • Support the development of nutrition education for dietary diversity promotion materials to sustainably support the consumption of nutritious and healthy diets.
	Sub-component 3.2: Project Coordination *(UA 2.603 million. 14.3%)* • Support Third Party (UNOPS) Fees to manage the Project (max 5%). • Support United Nations Resident Coordinator's Office (RCO, max 1%). • Support UNOPS Staff Costs (Project - Coordinator, Procurement Specialist, Accountant, M&E Specialist, Gender Specialist, E&S Officer, Conflict Resolution Specialist, and Civil/Irrigation Engineer). • Conduct 5 Annual Financial and Procurement Audits (including field verification visits). • Support various Bank Implementation Support Missions, including fiduciary clinics.

1.6 MAJOR ENVIRONMENTAL, SOCIAL AND CLIMATE CHANGE RISKS

1.6.1 Expected Positive Impacts

The anticipated positive outcomes from the project interventions include:

Component 1: Support to Reduce Drought-Induced Poverty and Migration for Protection and Resilience of Vulnerable Communities

- **Improved Animal Health and Productivity:** Rehabilitation of dip tanks and the drilling of solar-powered boreholes will ensure disease control and a consistent water supply, enhancing animal health and productivity.
- **Enhanced Rangeland Management:** Implementing climate-smart reinforcement of rangeland with improve grass and pasture varieties over 75km2 (stretch of 15km on Zimbabwe side along the Zimbabwe Botswana boarder) will improve pasture quality, soil health, and the overall sustainability of grazing areas. This also mitigate the livestock migration to Botswana.
- **Fodder Availability:** Developing 100 hectares of pasture and emphasizing fodder conservation will ensure livestock have adequate nutrition throughout the year.
- **Improved agroforestry**: Establishment of 16 nursery sheds (0.3 hectare each) for the promotion of agroforestry as a nature-based solution to climate change resilience in terms of landscape restoration, increased crop and livestock production in Zimbabwe, promoting food crop-based agroforestry (Maize and other crops preferred by local communities) and promoting fuel-wood based mixed with indigenous fruit trees agroforestry (Community fuel-wood agroforestry system).
- **Enhanced crop productivity:** The rehabilitation/establishment of 14 village business units and 5 nutritional gardens will horticulture crop production.
- **Community Training**: Training communities on conservation practices will increase awareness and implementation of sustainable practices, benefiting both the environment and livestock.

Component 2: Strengthen the Agricultural Input Supply Chain

- **Market Expansion:** Supporting exhibitions and knowledge-exchange visits will expose local producers to new markets and best practices, expanding their business opportunities.
- **Feedlot and Aggregation Centres:** Developing feedlots and aggregation centres will streamline livestock management and market access, improving efficiency and profitability for farmers.
- **Online Market Platform:** Creating an online platform for leather products will provide broader market access and direct sales opportunities, increasing revenues for producers.

- **Enhanced Skills and Knowledge:** Practical training in livestock identification, improves the technical skills of smallholder farmers, leading to better agricultural practices and higher quality products.
- **Economic Empowerment:** Training in product development and the provision of equipment support the growth of local industries related to beef, hides, and leather, potentially increasing income for smallholder farmers.
- **Gender and Youth Inclusion:** Distributing goats to women and youth groups promotes gender equality and youth involvement, fostering empowerment and sustainable development.

Component 3: Knowledge Management, Monitoring & Evaluation, and Communication

- **Improved Policy Framework:** Reviewing and updating key legislations and strategic plans supports better governance and policy development, enhancing the effectiveness of the agricultural sector.
- **Enhanced Sector Knowledge:** Creation of policy briefs and annual work plans fosters better understanding of value chains, best practices, and international standards.
- **Informed Decision-Making:** Regular monitoring and evaluation, along with stakeholder dialogues, improve project oversight and ensure compliance with environmental and social safeguards.
- **Efficient Operations:** Proper management of operational costs ensures smooth functioning of the Project Management Unit (PMU) and effective coordination of project activities.

- **Financial Accountability:** Regular audits and financial management practices enhance transparency and accountability, reducing the risk of mismanagement.
- **Support for Capacity Building:** Funding for software and other resources supports the administrative and operational needs of the project, contributing to overall project efficiency.

1.6.2 Expected Negative Environmental Impacts

Component 1: Support to Reduce Drought-Induced Poverty and Migration for Protection and Resilience of Vulnerable Communities

- **Environmental Degradation:** Increased livestock numbers could lead to overgrazing and degradation of rangelands if not managed properly.
- **Water Resource Strain**: Drilling boreholes might strain local water resources, potentially affecting other community water needs.
- **Disease Management Risks:** Over-reliance on chemical treatments for disease control can lead to resistance and environmental contamination.

Component 2: Strengthen the Agricultural Input Supply Chain

- **Dependency on External Inputs:** Provision of inputs and feed formulation equipment could lead to dependency on external inputs, which might not be sustainable in the long term.
- **Resource Limitations:** The success of training programs and equipment provision depends on the availability of resources and the effectiveness of the pass-on scheme, which may face logistical or financial challenges.
- **Implementation Challenges:** The effectiveness of capacity-building efforts may be limited by local infrastructure, existing skill levels, or resistance to new practices.
- **Potential Gender Bias:** Despite efforts to include women and youth, there may be challenges in ensuring equitable access and participation in all activities.

Component 3: Knowledge Management, Monitoring & Evaluation, and Communication

- **Resource Allocation:** The budget allocation for knowledge management and policy development may be limited, potentially affecting the depth and breadth of policy reviews and stakeholder engagement.
- **Complexity of Implementation:** The process of policy development and monitoring can be complex and time-consuming, which may delay the implementation of project activities.
- **Potential Resistance:** Stakeholders may resist policy changes or new practices, impacting the overall effectiveness of knowledge management efforts.
- **Administrative Costs:** A significant portion of the budget is allocated to operational expenses, which might limit funds available for direct project activities and impact the overall budget balance.
- **Dependency on External Support:** Reliance on external organizations like ACBF for managing the Project Special Account may create dependencies and affect project control.
- **Potential Inefficiencies:** Operational and maintenance costs for the PMU vehicle and other administrative expenses may lead to inefficiencies if not managed effectively.

Specific Construction and Operational Phase Impacts

- **Impact on Vegetation:** Clearing vegetation for access roads, feed processing infrastructure and any other project, as well as planting new grass in proposed fodder fields, could lead to deforestation and biodiversity loss.
- **Pollution from Pesticides and Acaricides:** Increased use of fertilizers and pesticides could cause soil and surface water contamination.
- **Occupational Health and Safety Risks:** Use of pesticides may pose risks to farmers.
- **Pollution from Effluent Discharges**: Effluents from dip tanks can pollute water bodies.

- **Solid Waste Pollution:** Construction and operational activities will generate solid wastes, which could cause environmental and public health issues if not managed properly.
- **Air and Noise Pollution:** Dust, emissions from construction vehicles, and operational activities could affect air quality and health.
- **Odour:** Increased cattle population and dung production will contribute to bad odour if not properly managed.
- **Soil Compaction and Erosion:** Heavy machinery use during construction could lead to soil compaction and erosion.

1.6.3 Expected Negative Social Impacts from Construction and operation phases

- **Resource Allocation Inequalities:** Distributing resources such as goats might lead to disputes or dissatisfaction among community members due to perceived inequalities.
- **Training Accessibility:** Practical training sessions may not be easily accessible to all intended beneficiaries due to logistical issues, language barriers, or varying levels of prior knowledge among farmers.
- **Dependency on External Support:** The introduction of new equipment and techniques might create a dependency on external support and resources, which could be unsustainable in the long term if local capacity for maintenance and further training is not developed.
- **Public Health Risks:** The prevalence of HIV/AIDS could increase due to the influx of people during construction and market opportunities.
- **Increased Market Competition:** Enhanced market access for Micro, Small and Medium Enterprises (MSMEs) might lead to influx of outsiders, heightened competition, potentially disadvantaging less competitive producers.

1.6.4 Potential Cumulative Impacts

The project is not expected to contribute significantly to cumulative impacts in the project areas. However, mitigation actions are planned to prevent and minimize potential cumulative impacts, such as deforestation and water depletion. Site-specific Environmental and Social Management Plans (ESMPs) will be developed during the design and planning stages to address these issues and ensure monitoring and mitigation activities are implemented.

1.6.5 Projected Climate Change Risks

The ACRES is expected to deliver long-term positive environmental impacts by implementing climate-smart agricultural practices and soil and water conservation measures, which will enhance soil fertility and hydrological patterns. Given Zimbabwe's increasing temperatures and declining rainfall, the project targets the vulnerable districts of Gwanda, Bulilima, Matobo and Mangwe, which face recurring droughts, water scarcity, and land degradation. To address these challenges, the ACRES will adopt climate-smart rangeland management, introduce solar-powered boreholes, and align with Zimbabwe's Climate Change Response Strategy to integrate adaptation and mitigation strategies. While there may be increased greenhouse gas emissions from beef production, these can be mitigated by recycling animal waste into organic fertilisers, ensuring the project ‘s sustainability and resilience.

1.7 ENHANCEMENT AND MITIGATION PROGRAM

Within this extended Environmental and Social Management Plan (ESMP) are highlighted recommended mitigation measures to correct, minimize or remedy the value chain specific negative impacts that may be associated with the implementation of ACRES for Zimbabwe Agricultural sector.

The inclusion of mitigation and enhancement measures satisfies the stipulations of AfDB's ESMP. The overall goal of the ESMP is to ensure adherence to laws and regulations governing environmental management in Zimbabwe, eliminate unintended effects, and ensure sustainability. Each site-specific ESMP will include an environmental and social monitoring plan detailing how to implement and verify the effectiveness of the mitigation measures. Additionally, the AfDB requires the production of associated plans such as the Stakeholder Engagement Plan to ensure all stakeholders are engaged throughout the project, the Grievance Redress Mechanism to address project-related grievances, and the Pest Management Plan for managing pesticides within the project. In ACRES, the responsibility for implementing and monitoring the Environmental and Social Monitoring Scheme lies with the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development and the Environmental Management Agency. Ultimately, the success of the ESMP will depend on the level of awareness, sensitization, and ownership of its content.

In order to mitigate impacts associated with construction or rehabilitation activities, the bidding documents for the award of the contract shall include specification of best environmental management practices (and by binding the contractor in the contract documents to ensure that impacts are avoided or minimized) as well as technical civil engineering measures.

1.7.1 Climate Change Adaptation Measures

Climate change adaptation initiatives for the Agriculture cluster will focus on enhancing resilience and sustainability. One crucial approach is **improving pasture management and fodder production**. Implementing **rotational grazing systems and planting drought-resistant forage crops** can help maintain healthy pastures, ensuring that livestock have **access to nutritious feed throughout the year**. Additionally, establishing **water conservation** can mitigate the impacts of water scarcity. These measures not only protect the environment but also enhance livestock productivity and reduce vulnerability to climate variability.

Another significant adaptation initiative is the integration of climate-smart agricultural practices. These initiatives collectively contribute to a more sustainable Livestock and crop production, ensuring long-term benefits for the communities involved.

1.7.2 Mitigation measures

The ACRES aims to significantly enhance its environmental and social performance within the livestock and crops value chain, balancing substantial benefits with proactive mitigation strategies. Table 1 provides the summarised mitigation measures for the project in Gwanda, Matobo, Mangwe and Bulilima districts.

Table 2. Mitigation Measures for the ACRES for Matabeleland South

Component & Sub-component	Negative Impact	Mitigation measures	Responsibility
Support to Reduce Drought-Induced Poverty and Migration for	Environmental Degradation:	- Implement rotational grazing systems to prevent overgrazing. - Promote reforestation and rangeland rehabilitation programs. - Educate farmers on sustainable land management practices.	- E& S Specialist - DPIU, Rangeland Committees - Agritex Officer; Village heads

Component & Sub-component	Negative Impact	Mitigation measures	Responsibility
Protection and Resilience of Vulnerable Communities	Water Resource Strain:	- Conduct thorough water resource assessments before drilling boreholes. - Implement water-saving technologies and practices. - Monitor and manage water usage to ensure sustainable levels.	- E& S Specialist - DPIU, Water Committees - RIDA; E&M specialist
	Disease Management Risks:	- Promote integrated pest management practices to reduce chemical reliance. - Train farmers in the use of biological and organic disease control methods. - Regularly monitor and assess the impact of chemical treatments.	- E& S Specialist - District Vet officers (DVO) - District Animal Health officers
	Dependency on External Inputs:	- Develop local capacity for breeding superior livestock genetics. - Encourage the production of local feed resources to reduce dependency on external inputs. - Provide training on sustainable feed formulation techniques using locally available resources.	- -DVO - Animal Health Specialists - Agritex Officers
Strengthen the Agricultural Input Supply Chain	Resource Limitations:	- Establish a robust pass-on scheme with clear guidelines and monitoring mechanisms. - Foster partnerships with local organizations for resource support.	VET Extension Officers (VEOs) Agritex Officer DPIUs
	Implementation Challenges:	- Customize training programs to match the existing skill levels of farmers. - Engage local leaders and influencers to encourage adoption of new practices	- E& S Specialist - Agritex - Trainers
	Potential Gender Bias:	- Design specific programs targeting women and youth to ensure their inclusion. - Monitor participation rates and make adjustments to improve equitable access. - Provide additional support and incentives for women and youth participation.	- DPIU - E& S Specialist - MWASCMED - district focal person - M&E specialist
Knowledge Management, Monitoring & Evaluation, and Communication	Resource Allocation:	- Prioritize critical areas for policy review and stakeholder engagement. - Seek additional funding and support from international donors and NGOs. - Optimize resource use by focusing on high-impact activities.	PCs- all PCUs PM- PMU E & S Specialist

Component & Sub-component	Negative Impact	Mitigation measures	Responsibility
	Complexity of Implementation:	- Break down policy development and monitoring processes into manageable phases. - Allocate sufficient time and resources for comprehensive implementation. - Provide continuous training and support to those involved in policy development.	E& S Specialist PCs- all PCUs PM- PMU M& E specialists
	Potential Resistance:	- Conduct awareness campaigns to highlight the benefits of new policies and practices. - Involve stakeholders early in the decision-making process to gain their buy-in. - Provide incentives for the adoption of new practices and compliance with policies.	DPIU E& S Specialist M& E specialists Local leadership
Project Management	Administrative Costs:	- Optimize operational expenses by implementing cost-saving measures. - Regularly review budget allocations to ensure funds are directed towards high-priority activities. - Seek additional funding sources to supplement administrative budgets.	PM-PMU PCs-PCUs PSC
	Dependency on External Support:	- Build local capacity for project management and financial oversight. - Develop contingency plans to reduce dependency on external organizations. - Establish clear roles and responsibilities for local and external partners.	PM-PMU PCs-PCUs - PSC
	Potential Inefficiencies:	- Implement strict monitoring and evaluation systems to track efficiency. - Regularly review and adjust operational processes to improve effectiveness. - Train staff on efficient resource management practices.	- DPIU PM-PMU PCs-PCUs
Specific Construction and Operational Phase Impacts	Impact on Vegetation:	- Minimize vegetation clearance by optimizing land use planning. - Implement reforestation and afforestation programs. - Preserve areas of high biodiversity value during project planning.	Agritex Officer E& S specialist M&E specialist Contractor

Component & Sub-component	Negative Impact	Mitigation measures	Responsibility
	Pollution from Pesticides and Acaricides	- Promote the use of organic and environmentally friendly pest control methods. - Implement buffer zones to protect water bodies from contamination. - Educate farmers on the safe use and disposal of chemicals	- E& S Specialist - District VEO - District environmental Officer
	Occupational Health and Safety Risks:	- Provide adequate protective gear and training for farmers using pesticides. - Monitor health and safety practices regularly to ensure compliance. - Implement first aid and emergency response plans.	- DPIU - M&E specialist - Contractor - Relevant committees
	Pollution from Effluent Discharges:	- Construct proper effluent treatment facilities for dip tanks. - Regularly monitor water quality to detect and address contamination. - Educate farmers on proper effluent management practices.	E & S specialist Animal Health extension officers District Environmental Officer Dip Attendants
	Solid Waste Pollution:	- Develop and implement a solid waste management plan. - Promote recycling and safe disposal of construction and operational waste. - Conduct regular waste audits to ensure compliance with environmental standards	- E& S Specialist - District env officer
	Air and Noise Pollution:	- Use dust suppression techniques during construction. - Maintain equipment to reduce emissions and noise levels. - Monitor air quality and noise levels regularly.	- E & S specialist - M& E specialist -
	Odour:	- Implement proper waste management practices to minimize odour. - Educate farmers on best practices for manure management.	District Environment Officer Agritex Officer
	Soil Compaction and Erosion:	- Limit the use of heavy machinery and use alternative methods where possible. - Implement soil conservation techniques such as contour ploughing and terracing. - Monitor and rehabilitate affected areas promptly.	- E&S Specialist - Agritex

Component & Sub-component	Negative Impact	Mitigation measures	Responsibility
Expected **Negative Social Impacts** from Construction and Operation Phases	Resource Allocation Inequalities:	- Develop transparent and equitable resource distribution plans. - Engage community leaders to mediate and resolve disputes. - Monitor resource allocation processes to ensure fairness.	- DPIU - E & S specialist - PCs
	Training Accessibility:	- Conduct training sessions in multiple locations to improve accessibility. - Provide training materials in local languages and adapt to varying knowledge levels. - Use multiple delivery methods, such as in-person, online, and radio broadcasts.	Agritex Officers DPIUs VEOs E&S Specialist
	Dependency on External Support:	- Focus on building local capacity for maintenance and further training. - Develop local supply chains for equipment and materials. - Provide continuous support and follow-up training to ensure sustainability.	- E& S Specialist - PMU - PCUs - DPIS
	Public Health Risks:	- Implement comprehensive health awareness and education programs. - Provide access to healthcare services and support for HIV/AIDS prevention. - Monitor public health indicators and respond promptly to emerging issues.	- E & S specialist - M&E specialist - DPIUs - Traditional Leaders
	Increased Market Competition:	- Support local MSMEs to improve their competitiveness. - Facilitate access to market information and training on business development. - Monitor market dynamics and provide support to disadvantaged producers.	MWASCMED E&M specialist MYAC

The specific monitoring plan and indicators are detailed below, in a Table 2. The included budget covers the implementation of the ESMP, encompassing training on understanding legal compliance, identifying impacts, and implementing mitigation measures, as well as monitoring ESMP activities.

1.7.3 ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

The ACRES aims to ensure that its environmental and social mitigation measures are effectively implemented, complying with both the Government of Zimbabwe's environmental provisions and the African Development Bank's standards. The Project Coordination Unit (PCU) at the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD) will oversee the ESMP monitoring

efforts, collaborating with district environmental implementation units and the Environmental Management Agency (EMA). Additionally, the Ministry of Women Affairs, Community, Small, and Medium Enterprises Development (MWACSMED) will focus on social and gender issues, while the African Development Bank (AfDB) will supervise adherence to environmental and social safeguards during its missions.

The project's monitoring plan includes several key activities such as compliance monitoring, worksite management, and resolving emerging environmental issues. This involves regularly reviewing contractor worksite ESMP, ensuring negative impacts are mitigated, assessing the effectiveness of mitigation measures, and proposing remedies for significant impacts. The plan mandates frequent reporting—monthly, quarterly, biennially, or annually—depending on the monitored aspect, ensuring compliance with local environmental standards. By adhering to this comprehensive monitoring plan, the ACRES aims to minimize its environmental and social impact, fostering sustainable development in Matabeleland South.

TABLE 2. MONITORING PLAN AND COST FOR GWANDA, BULILIMA, MANGWE AND MATOBO DISTRICTS					
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 ACRES Province with appropriate safeguards document developed and implemented	Once	Consultants/ EMA)	$50,660
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
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	$25 330
Anticipated Environmental and Social Impacts	**Proposed Action/Measures and Objective of Management Measures**	**Monitoring and Reporting Indicators**	**Frequency of Monitoring (Timing)**	**Implementation Plan & Institutional Responsibilities**	**Cost Estimates (US$)**
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 $5 066
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 for Mat South - $15 198

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 $5 000

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 $12,665
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 $500

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 $7 500
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 Vet officers	Engagement costs covered in SEP Cost of pour-on dip acaricides $25 300
Anticipated Environmental and Social Impacts	**Proposed Action/Measures and Objective of Management Measures**	**Monitoring and Reporting Indicators**	**Frequency of Monitoring (Timing)**	**Implementation Plan & Institutional Responsibilities**	**Cost Estimates (US$)**
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	$50 600
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 $ 25 300 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	$30 360
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 seed stocks (OM5M2) • Training of farmers and extension workers' production and use of organic fertilisers (OM5M3)	• Level of Improvement in income of farmers • Level of sales of organic fertilizers from crop, fodder and cattle production system	Annual reports	DPIUs, M&E -PCUs, and respective District Environmental Officers, Local Leaders	$25 300

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	$37,950
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	$50,600

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 in pens (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	$25 300
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	$10,120
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	$50,600

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	$25,300
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	$12,600 training $12,600 for tools and manuals

Genetic Losses in livestock due to external breeds	• Use of local breeds minimizes loss • 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	$10,120
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	$12 131
TOTAL amount for MONITORING					**$530 000**

1.7.4 PUBLIC CONSULTATIONS AND DISCLOSURE REQUIREMENTS

Both the Zimbabwean environmental legal framework and the AfDB safeguards require comprehensive stakeholder consultations and disclosures to minimize project negative impacts and ensure projects are acceptable to beneficiaries while being socially and environmentally sustainable. These efforts are critical for implementing effective mitigation and enhancement measures throughout the project's lifecycle.

The ESMP for ACRES prioritizes transparent and inclusive stakeholder engagement as a legal and ethical necessity. Consultations started during the field appraisal visits for the ESMP preparation and will continue throughout project implementation. These consultations targeted primary and secondary stakeholders, affected communities, and district local institutions, aiming to create a stakeholder register and secure local support. The purpose of those consultations included providing clear project information, gathering views and concerns, allowing suggestions for mitigation, and incorporating stakeholder input to enhance project design and transparency.

Initial consultations informed stakeholders about the project's scope, objectives, and potential impacts, with ongoing consultations planned to refine mitigation strategies and incorporate feedback. Further engagements are outlined in an associated document the Stakeholder Engagement Plan and the plan aims to provides clear information, gather community and other stakeholder views, continue to enhance transparency, resolve disputes using local structures and following the Grievance Redress mechanism, and incorporates stakeholder input to improve project relevance and sustainability. Various participatory methods, including public meetings, key informant interviews, focus group discussions and site visits, will be used to ensure inclusivity, capturing diverse perspectives from women, youth, the elderly, and persons with disabilities.

Initial consultations across Gwanda, Bulilima, Matobo and Mangwe districts (Table 3) adhered to guidelines for comprehensive engagement, conducted in local languages within community settings. Key issues discussed included protecting ecologically sensitive sites, respecting cultural sites, addressing environmental and biodiversity impacts, and focusing on socio-economic considerations. Stakeholders highlighted the importance of gender mainstreaming and youth empowerment due to high employment rates.

Stakeholder engagement has revealed several key issues. Ecologically sensitive sites and important cultural locations were identified and confirmed not to be impacted by the project. Socio-economic considerations included discussions on livestock value addition, employment opportunities, and overall quality of life improvements. Issues related to water scarcity due to recurring droughts, infrastructure deterioration, disease outbreaks, and social exclusion were prominently raised. The project aims to address these through market access facilitation, infrastructure rehabilitation, comprehensive disease management, and inclusive community support initiatives. Local mechanisms for resolving conflicts were discussed, and communities indicated general satisfaction with using local structures. However, in some previous community-based projects, some members withdrew because they couldn't commit to the cash contributions or were dissatisfied with the project objectives or demands. The implementation and success of mitigation and enhancement measures within the ACRES relies significantly on robust consultation and engagement with stakeholders. The project intends to use this aspect effectively to balance community needs and expectations.

1.7.5 INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING

The ACRES success will primarily be shaped by its complex and collaborative implementation structure, involving multiple government ministries and specialized units. Effective coordination among these institutions will involve regular communication, joint planning sessions, and alignment of strategies to ensure that the ACRES achieves its goals.

Institutional and Implementation Arrangements

Implementation Arrangement: The Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD) will be the Project's Executing Agency (EA), through the existing Programme Management Unit (PMU). The PMU is housed in the Ministry of Finance, Economic Development and Investment Promotion (MFEDIP), and has vast experience in the management of the Bank and other Donor-funded projects. The PMU is composed of the following seven (7) core staff (i) Programme Manager (PM), (ii) M&E Specialist, (iii) Budget and Finance Officer, (iv) Procurement Officer; (v) Senior Procurement Specialist, (vi) Programme Officer, and (vii) Programme Assistant Finance Officer (ACRES). The Government shall recruit an Assistant PM to beef up the capacity of the PM and will be responsible for management of the Bank-funded Zimbabwe ACRES. The PMU shall be responsible for all aspects of project management, including planning, procurement, finance management, results monitoring and evaluation and environmental and social safeguards. The APM (ACRES) shall also oversee the implementation of this Project. The capacity of the PMU may further be strengthened through financial support to the ACRES recruited individual consultants, namely (i) Conflict Management Expert, (ii) Environmental and Social Safeguards Expert, and (iii) Gender Specialist. In addition, this Project will contribute to the operating costs of the PMU in relation to its implementation. The Project will be implemented over a period of five (5) years. The implementing agencies include all directorates within the MLAFWRD, which will have focal persons. Support will also be sourced from the Ministry of Women Affairs, Community, Small and Medium Enterprises Development. The Government will establish a Project Steering Committee (PSC) to provide overall policy guidance and strategic direction for the Project, ensure engagement, commitment, synergy and harmonization in Project implementation amongst participating stakeholders, and review and approve workplans and budgets throughout the Project implementation period. The PSC will be chaired by the Chief Director (MLAFWRD). At Provincial and District levels, the responsibility for project implementation rests with the respective heads on the implementing Sector Ministries, based on the decentralization system. The Bank's Headquarters, Regional Office (RDGS) and Zimbabwe Country Office (COZW) will support the Project through regular supervision missions, informal meetings, and processing of all technical and fiduciary documents.

The Project's Component 2 will be implemented by the AFFM which will be responsible for coordination, through its secretariat housed at the AfDB. AFFM will also serve as the direct link with the MLAFWRD for coordination, monitoring, and reporting. As a special fund under AfDB, AFFM has established operational guidelines for project processing and approval that are well aligned with the Bank's processes. Through a competitive call for proposals, AFFM will select implementing partners for Component 2.

Procurement Arrangements: Procurement financed by the Bank for the project, will be carried out in accordance with the "Procurement Policy for Bank Group Funded Operations", dated 2015 and following the provisions stated in the Financing Agreement. Specifically, the Bank's PMP shall be used for procurement of large value contracts. For lower value contracts, the procurement will be in line with Public Procurement and Disposal of Public Assets Act [Chapter 22:23] 2018. Accordingly, the PMU within the Ministry of Finance shall undertake all procurement within the project. Considering the

current workload of the team, the review is being carried out to assess the capacity to take one another project. The PMU may need to be augmented with additional procurement officer to support the project. The PMU should consider advanced procurement for any additional staff identified from the assessment of PMU capacity.

Financial and Audit Arrangements: *PMU Managed Resources - Component 1 and 3*: The PMU within MOFED will lead on Financial Management with the support of the Africa Capacity Building Foundation (ACBF). Under the existing project management arrangements, the financial management aspects, inclusive of the management of direct disbursements, are managed within the PMU. The Special Account is managed by the African Capacity Building Foundation (ACBF) under an agreement between the Bank, the Government of Zimbabwe and the ACBF. The PMU and ACBF have extensive experience in the management of AfDB-funded projects including several ongoing projects (SEDWY, ADRIFI II, Institutional Support for State Enterprise Reform Project and SACAGE among others). The ACBF has reorganized to address concerns the Bank and PMU raised with regard to late submissions of justifications and input to the quarterly interim financial reports. Steps to address these concerns include the reorganization of accounts staff to manage the projects. The mission raised concern about the staffing arrangements within the PMU and requested the PMU to undertake an internal assessment to ensure they have adequate capacity in relation to the additional projects that will come on board, currently the staffing capacity meets the minimum requirements.

Reporting: The PMU will be responsible for preparing the quarterly interim financial reports that will be submitted to the Bank within 45 days of the end of the quarter. The PMU will also prepare the annual financial statements that will be submitted to the auditor for review. ACBF will be responsible for submitting the reconciliation of the Special Account and Bank Statements to the PMU, on a monthly basis.

Auditing: The annual financial statements prepared by the PMU, will be audited by an independent private audit firm. The audit report, comprising audited financial statements inclusive of auditor's opinion and management letter, will be submitted to the Bank no later than 6 months after the end of the financial year. The cost of the audit will be borne by the project.

Disbursement Arrangements: The project would primarily make use of the Bank's (i) Direct Payment, and (ii) Special Account (SA) disbursement methods in accordance with Bank rules and procedures as applicable in the Disbursement Handbook 2020 Edition, as amended from time to time. The other two methods approved by the Bank (Reimbursement and Reimbursement Guarantee) will also be available if required. ACBF will manage the Special Account on behalf of the Government of Zimbabwe. The PMU will prepare the Direct Payment requests together with the supporting documentation and submit them to the ACBF for review and payment processing.

AFFM-Managed Resources - Component 2: Following the entry into force of the separate agreement to be signed between the Republic of Zimbabwe and the Bank, acting as the AFFM Fund Administrator, the Bank shall disburse, the grant funds dedicated to the Component 2, directly to the AFFM responsible for its implementation in one tranche.

1.7.5.1 Government Ministries and agencies involved in ACRES

The main Executing Agency for the project is the Ministry of Finance, Economic Development and Investment Promotion (MoFEDIP). The MOFEDIP will leverage its Programme Management Unit (PMU) to oversee project execution, financial management, and procurement ensuring adherence to national development plans and strategies like the National Development Strategy 1 (NDS1). They have experience of having worked with AfDB projects before.

The implementing Agency is the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD). The Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED) and, and the Ministry of Youth, Arts, and Culture will deal with social and gender inclusion issues. These ministries form the Project Coordinating Units (PCUs) at national, provincial, and district levels to handle day-to-day project activities, ensure compliance with sector policies, and facilitate smooth operations.

The MLAFWRD will play a pivotal role in coordinating the interventions and providing technical expertise in crop, livestock and fodder production, and managing livestock diseases through its various departments. MLAFWRD is crucial in formulating and implementing agricultural policies that support the livestock and crop value chain development. They will work on strategies for food security, agricultural sustainability, and mechanization in a changing climate. They will form the Lead coordinating unit among the other two PCUs. The Ministry of Youth, Arts, and Culture will be responsible for fostering youth empowerment and inclusion in project activities.

Local Government and Regulatory Bodies entities; Rural District Councils (RDCs)), Environmental Management Agency (EMA), Forestry Commission, Zimbabwe National Water Authority (ZINWA), Ministry of Health and Child welfare, Rural Infrastructure Development Agency (RIDA)) will provide regulatory oversight, environmental stewardship, and infrastructure support essential for sustainable development within the value chain. The will form the District Project Implementation Units (DPIUs) for each district.

1.7.5.2 Project Responsibilities and Roles.

The responsibilities and institutional arrangements for the ACRES are structured to ensure effective implementation, monitoring, and reporting. Key roles include:

Responsibilities Clarification: The Borrower (Government of Zimbabwe) is accountable for monitoring and reporting project outcomes. Implementation support may come from the project team and external consultants as needed. The ESMP identifies roles for the Bank, Borrower, implementing agencies, and stakeholders, emphasizing support for capacity building where necessary.

Project Management Structure: Over a Five-year period, the Ministry of Finance and Economic Development (MoFED) will serve as the Executing Agency (EA) through its Programme Management Unit (PMU). Implementing agencies like, Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD), and Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED) will establish Project Coordinating Units (PCUs) at national, provincial, and district levels to oversee day-to-day activities.

1.7.5.2 Capacity Strengthening

The ACRES aims to enhance environmental and social management through comprehensive capacity building and training. Successful implementation of the Environmental and Social Management Plan (ESMP) hinges on strengthening institutional capacities at the national, district, and community levels. Key training areas include Environmental and Social Impact Assessment (ESIA), ESMP development and mitigation measures, health and safety protocols, community engagement, monitoring techniques, data analysis, and performance reporting. Additionally, gender and social inclusion, conflict resolution, and effective documentation and knowledge transfer are essential cross-cutting training needs. The Project Steering Committee (PSC) and Project Management Unit (PMU) are responsible for planning, budgeting, and executing these training programs, with support from local NGOs and government agencies such as EMA and the Department of Gender and Women's Affairs from the MWACSMED. Training staff from various implementing units and divisions is crucial to

enhance their skills in handling specific environmental and social issues. This capacity building will enable staff to effectively review and monitor environmental issues within the project and its sub-projects, ensuring compliance with national policies and AfDB safeguard policies.

The project also involves the procurement of technical assistance and specialized contractors for tasks like solar panel installation, civil works, mid-term evaluations, environmental audits and monitoring of grievance redress mechanisms (GRM) and pest management plans (PMP). These tasks require expertise that may be sourced through bids and MOUs with relevant ministries and departments. The PMU, with help from the Project Coordination Units (PCUs), will oversee the procurement process for contractors and technical experts, ensuring that all technical inputs are effectively integrated into the project. The PCUs in particular the lead PCU from MLAFWRD will spearhead collaboration with local institutions such as the **Research Institutions** (Matopos Research Centre, Makoholi Research Centre, Grasslands Research Institute, International Livestock Research Institute, CIMMYT), **Zimbabwe Agricultural Colleges and Technical Colleges (**Masvingo and Matabeleland South**)** to contribute knowledge and technical expertise to improve productivity and sustainability within the value chains and build youth skills capacity. Additionally, the **Institute of Agricultural Engineering, Mechanisation and Soil Conservation** will be engaged to focus on strengthening community skills and knowledge on mechanization and soil conservation practices that are integral to sustainable livestock and Crop management in VBUs

1.8 ESTIMATED COSTS FOR THE ESMP

The Environmental and Social Management Plan (ESMP) encompasses a budget covering all costs associated with executing the plan's requirements and recommendations, including the Stakeholder Engagement Plan (SEP), Pest Management Plan (PMP), and Grievance Mechanism. The budget covers the four districts in Matabeleland South jover the five-year period. The detailed breakdown is provided in the ESMP and is summarized in Table 4 below.

Table 4. Budget Estimate for ESM for Gwanda, Bulilima, Mangwe and MatoboDistricts.

Phase	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Preconstruction Phase mitigation measures	$18,500					18,500
Construction phase Measures	$15,000					15,000
Operation and maintenance phase awareness and Monitoring activities	$ 12,000	$12,000	$12,000	$12,000	$15,000	$60,000
Capacity Building	$ 15,000	$ 5,000	$ -	$ 5,000	$ 6.325	$ 31,325
Stakeholder Management plan	$ 17,200	$17,200	$17,200	$8,600		$ 150,000
Grievance redress Mechanism	$ 30,000	$20,000	$20,000	$15,000	$25 000	$ 105 000
Pest management	$ 30 000,00	$20 000,00	$15 000,00	$20 000,00	$20,000	$95,000
Decommissioning						$30,000
SUB total						$504,825
Contingency 5%						$ 25,175
GRAND TOTAL						**$530 000**

1.9 IMPLEMENTATION SCHEDULE AND REPORTING

The ACRES aims to integrate environmental and social considerations into its implementation to promote sustainability across its components. Key focus areas within the ESMP include its implementation and management, preparation of site-specific plans, training and capacity building for staff and farmers, supervision, and review and monitoring mechanisms.

Timeframes for implementing key components are detailed in the ESMP, emphasizing the importance of thorough supervision and continuous capacity building to ensure the project's sustainability. Table 5 shows the implementation of the key components of the ESMP.

Table 5. ACRES ESMP Timeframe And Responsibility

	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 – 4 intense in the first 18 months	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	HIV/AIDS mainstreaming	Quarterly campaigns	Ministry of Health & Child Welfare

1.9.1 DECOMMISIONING

The decommissioning phase of the Agricultural Conflict Resolution and Enhanced Sustainable Livelihoods Project (ACRES) 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.

1.9.2 CONCLUSION

Agricultural Conflict Resolution and Enhanced Sustainable Livelihoods Project (ACRES) is expected to have several environmental and social impacts, which the Environmental and Social Management Plan (ESMP) aims to address comprehensively. Environmentally, the project could lead to land degradation, water resource depletion, and pollution due to fodder production, cattle dipping activities. To mitigate these effects, the project will promote sustainable practices, such as crop rotation, integrated pest management, and advanced wastewater treatment systems. Additionally, reforestation and energy-efficient technologies will help counteract greenhouse gas emissions and biodiversity loss. The pest management plan (PMP) has been developed to address potential pesticide and acaricide health risks and pollution of water and soils.

Socially, the project is anticipated to improve infrastructure and create employment opportunities, particularly benefiting local farmers, youth, and women. It aims to enhance market access, income diversification, and poverty alleviation. To address potential social issues, the ESMP emphasizes stakeholder engagement, capacity building, and robust grievance redress mechanisms. The project will also focus on social inclusion and gender equality by ensuring equal participation and addressing the needs of vulnerable groups. Overall, the ESMP outlines measures to maximize positive impacts while minimizing negative ones, ensuring the project's alignment with African Development Bank's safeguard requirements and contributing to sustainable development in Zimbabwe.

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2 THE ENVIRONMENTAL AND SOCAIL MANAGEMENT PLAN

2.1 INTRODUCTION

The Zimbabwean government is seeking a grant from the African Development Bank Fund, amounting to UA 18.000 million (USD 24.10 million), to support the development of the crop and livestock value chain under the ACRES. Additionally, the government of Zimbabwe will contribute AU 0.537 million (USD 0.713 million), with a small 1.5% contribution from beneficiaries. This document represents the Environmental and Social Management Plan for the ACRES project for the Matebeleland South Province. The project will be implemented in Gwanda, Mangwe, Bulilima and Matobo Districts.

The Environmental and Social Management Plan (ESMP) is designed to ensure that the ACRES aligns with the applicable national environmental and social legal requirements and the African Development Bank's (AfDB) safeguards policies and procedures. The primary objective of the ESMP is to ensure that the ACRES complies with all relevant environmental and social regulations and guidelines, mitigating any potential negative impacts while enhancing positive outcomes. In addition other objectives of the ESMP is to outline the necessary mitigating, enhancing, monitoring, consultative, and institutional measures required to prevent, minimize, mitigate, or compensate for adverse environmental and social impacts associated with the project, while enhancing its beneficial impacts. Furthermore, the ESMP addresses capacity-building requirements to bolster the grantee's ability to manage these safeguards effectively, ensuring that all environmental and social aspects are managed effectively throughout the project's lifecycle.

2.1 Background & Context

Agriculture is important for Zimbabwe's economy, contributing approximately 16% of the total output, yet it remains underdeveloped in terms of value addition. The sector, encompassing crops, livestock, and fisheries & aquaculture, is pivotal for employment, income generation, livelihoods, and poverty reduction. Contributing between 12 and 18% of GDP, agriculture provides employment and income for 60-70% of the population, supplies 60% of raw materials for industry, and accounts for nearly 40% of export earnings. Key crops include maize, tobacco, wheat, and sugarcane. Given that 67% of Zimbabwe's population resides in rural areas, predominantly relying on smallholder farming, enhancing agricultural productivity is crucial for reducing poverty, hunger, and malnutrition.

The Agriculture Transformation Strategy (2019) aims to develop a robust sector to drive Zimbabwe towards Vision 2030, addressing challenges such as population growth, low productivity, and climate change. The National Agriculture Policy Framework (2018-2030) provides a roadmap for sustainable investments to boost agricultural productivity and competitiveness, addressing crop and livestock production, marketing, and trade.

Livestock production is integral to Zimbabwe's agriculture, contributing about 30% of agricultural GDP, primarily from small-scale communal farmers. It is vital for livelihoods and inclusive growth, providing

high-quality protein and essential nutrients for food and nutrition security. Challenges such as livestock migration to Botswana, low productivity, poor genetics, water scarcity, and climate-induced animal diseases necessitate strategic interventions to enhance productivity and safe trade.

In response to the challenges aforementioned, the Government of Zimbabwe implemented the AfDB-funded Support to the ACRES Project in Matabeleland South Province. This project aimed to catalyse economic growth through value addition in the agriculture sectors, addressing bottlenecks and involving all stakeholders for a holistic approach. The success of the ACRES prompted the Government to request a similar project for broader implementation.

The ACRES aims to replicate and expand the successful elements of the ACRES to Matabeleland South and Masvingo Provinces, focusing on capacity building, potable water provision, livestock productivity enhancement, value addition, and private sector development. This project 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 E&S obligations, this ESMP has been developed in consultation with the Zimbabwe Environment Management Agency (EMA). In accordance to the Environment Management Act 20:27 Section 98, a prospectus highlighting potential project impacts and mitigation measures was submitted to EMA's Director-General for consideration before development of this Social and environmental Management plan.

2.2 Project Category

The ACRES is designated as a Category 2 project under Zimbabwe's Environmental Management Act (EMA), which aligns with the African Development Bank's (AfDB) ISS requirements. This categorization indicates that the project is anticipated to have localized environmental and/or social impacts that are less severe than those associated with Category 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 ISS of 2023, Category 2 projects are expected to conduct an ESIA whilst EMA require a partial ESIA which is known as ESMP that follow a more streamlined process compared to Category 1 projects. This approach ensures that any potential environmental impacts are adequately addressed and managed, aligning with Zimbabwe's regulatory framework for Schedule 1 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 not of the EMA. Given the acceptance of the prospectus by EMA, which confirmed that ACRES aligns with category 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 crucial for Zimbabwe's agricultural sector, contributing about 30% of the agricultural GDP and a significant portion of cash flow from small-scale communal farmers. The Zimbabwe Livestock Growth Plan highlights the sector's importance to household and national food and nutrition security, foreign currency earnings, and rural livelihoods. However, challenges such as low productivity, water supply limitations for dip tanks, and climate change-induced issues need to be addressed to enhance livestock productivity and ensure safe trade.

The ACRES will support Zimbabwe's efforts through capacity building, provision of potable water, enhancement of plunge dipping infrastructure, enhancing livestock productivity, value addition, and promoting private sector development. This support will contribute to macroeconomic stability, job creation, and poverty reduction. The project aims to replicate and scale-up successful activities from the SBLVCP and introduce new interventions focusing on sustainable, climate-resilient livestock production. Activities will include livestock disease control, 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 enhance the resilience of rural communities severely hit by climatic shocks and ecosystem degradation through climate-smart agricultural interventions and sustainable natural resource management approaches, thereby improving their ability to recover from future shocks. The specific objectives are to (i) develop sustainable grazing areas and water resources in Zimbabwe to minimise livestock migration which will address the Zimbabwe-Botswana cross-border livestock farmers' tensions, (ii) strengthen the socio economic situation of the vulnerable rural communities in line with the Village Business Unit (VBU) concept, (iii) promote social inclusion by addressing the specific needs of women, youth, and marginalized groups, ensuring equitable access to the benefits of improved water systems, agricultural productivity and economic stability, (iv) strengthen the agricultural input supply chain by catalysing private sector investment, reinforcing input supplier distribution networks through access to finance, capacity-building, and enhancing efficient utilization among smallholder farmers, and (v) support communities in achieving nutrition security. All these shall be implemented whilst complying with E&S requirements of AfDB ISS of 2023.

The main objectives of the ESMP include to:

- identify and assess the potential environmental, climate change, and social impacts associated with the proposed development projects. By doing so, it ensures that any adverse effects are thoroughly understood and addressed.

- propose a range of measures to avoid, minimize, mitigate, compensate for, offset, and monitor these adverse impacts while simultaneously maximizing the development benefits 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 achieving these objectives, the ESMP serves as a crucial framework for promoting sustainable and responsible development within Zimbabwe's agriculture sector.

2.5 Scope of Work

The scope of work for developing the ESMPs includes:

- Conducting environmental and social analyses of the project portfolio and priority investments.
- Reviewing relevant documentation and conducting field visits to project sites to assess environmental and social conditions.
- Analysing potential direct, indirect, and cumulative impacts of project activities.
- Establishing institutional arrangements, roles, and responsibilities for ESMP adoption and implementation.
- Conducting gender analyses to address gender gaps and opportunities within the project.
- Developing a Grievance Redress Mechanism and recommending project design adjustments to optimize positive impacts and mitigate negative ones.
- Estimating budgetary requirements for implementing the ESMP during the project execution phase.
- Preparing comprehensive ESMP reports compliant with Zimbabwean regulatory requirements and the African Development Bank's guidelines.

This consultancy aims to ensure that the ACRES aligns with national development strategies, promotes sustainable livelihoods, and contributes to economic stability, job creation, and poverty reduction across targeted provinces.

2.6 Methodology

The development of the ESMP involve a comprehensive and structured approach from the initial document review to the final report compilation. The process included a desktop study, where relevant project documents such as the African Development Bank (AfDB) safeguard instruments, the project proposal, baseline reports, and documentation from similar projects within Zimbabwe were reviewed. This was followed by an examination of various legal and policy documents, including national policies, regulations, legislations, and relevant international instruments and conventions.

In addition, visits were conducted by a team of government experts to selected intervention sites to observe and assess the existing environmental conditions. These visits informed the development of the environmental baseline for the Environmental and Social Management Plan (ESMP). During the impact assessment phase, a comprehensive literature review was performed 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 assessed, and the likely environmental impacts were predicted. This included analysing 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 evaluated 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 parts of the process. Community engagement meetings were held to explain the project, gather concerns, and incorporated local inputs into the ESMP. The final ESMP includes identification of potential impacts, proposals for mitigation or enhancement measures, assignment of responsibilities, and an implementation timeline, along with a monitoring strategy to ensure effective implementation, complete with cost estimations for the monitoring plan.

3 PROJECT DESCRIPTION

2.1 Introduction and context

The ACRES project aims to enhance the agriculture 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 ACRES 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.

2.2 The Project Components and Activities

The Project consists of 3 components, as summarised below, and associated activities.

The Project consists of three components, namely (i) Component 1 - Support to Reduce Drought-Induced Poverty and Migration for Protection and Resilience of Vulnerable Communities, (ii) Strengthen the Agricultural Input Supply Chain, and (iii) Project Management. This Project has focused on participatory approach in order to select demand-driven activities which will address the specific drivers of fragility and build resilience of rural population, with due consideration to sustainability. The Project activities also aim to complement the Government's efforts to protect livelihoods in the current crisis caused by the El Niño induced drought and future climatic shocks. Gender, Environmental, Fragility and Resilience, Climate Change and Green Growth issues have been incorporated in the Project design. The public and private sectors shall work together to harness economic opportunities from the livestock value chain, which has the potential to create jobs and attract export markets.

3.2.1 ***Component 1 - Support to Reduce Drought-Induced Poverty and Migration for Protection and Resilience of Vulnerable Communities (To be implemented by MLAFWRD - UA 10.08 million, 55.3%).*** This Component has three sub-components, namely:

3.2.1.1 Response to Mitigate the Impact of Future Extreme Events Similar to the 2024 El Niño Induced Drought,

3.2.1.2 Climate-Resilient Agricultural (Crop and Livestock) Production, Productivity and Marketing.

3.2.1.3 Social Inclusion, Sustainable and Diversified Livelihood Options for Rural Inclusive Economic Empowerment of at-risk Communities.

This component includes immediate response in terms of (i) food assistance for drought affected rural communities, and (ii) feed assistance for Livestock. It will also facilitate medium term interventions including (i) water supply and nutrition interventions to support drought affected rural population, (ii) Support establishment of Village Business Units (VBUs – Presidential Initiative) within the Project area, in order to promote rural industrialization and economic empowerment, (iii) development of commercial type-high-yielding, community-level demand-driven, multipurpose boreholes fitted with solar-powered pumps, including overhead tanks, and reticulation system which will be used for livestock and crop production and also domestic purpose, (iv) development of water-sand abstraction system (infiltration gallery) to collect water from intermittent sandy riverbeds, even during the dry season, thus utilising the sand as a natural filter, which will provide potable water to target rural communities, and (v) creation of green-zones on the Zimbabwe side for both livestock and crop value

chains development. The green-zones will be established using extended VBU-concept, for bridging the gap, which will include construction of livestock service centers, at strategic locations, closer to the Zimbabwe-Botswana border in order to minimise Zimbabwe livestock, especially cattle, straying across the border into Botswana, in search of water and feed. The center will consist of community-level demand driven livestock watering points, low-cost shelters for patrol officers/security officers, feed and fodder processing units (hay baling sets, chuff cutters, feed mixers), feed banks with storage sheds near borehole clusters, pasture production unit (20ha) under irrigation to enhance carrying capacity and fodder availability (forage value chain) with support from Bank's flagship programme Technologies for African Agricultural Transformation (TAAT) International Livestock Research Institute-ILRI), and also community-level demand driven existing livestock dip tanks with start-up package acaricides, initial stock of medication and supplies to improve livestock health and disease control. Targeted investments in climate resilient infrastructure, improved water management, community-based adaptation, institutional capacity building is urgently needed to reduce vulnerability and enhance resilience, early warning systems, training of lead farmers and extension worker in sustainable land and water management. This Component will provide opportunity to address the underlying causes of climate change vulnerability in the selected districts, thereby building resilience including enabling access to climate proof investment to support productive livestock and crops value chain. The Project has also included the sustainable nutrition activities which shall facilitate awareness and provision of nutritious food to the rural population to achieve enhanced diet quality, whilst preserving the natural resources.

3.2.2 ***Component 2 - Strengthen the Agricultural Input Supply Chain – (To be implemented by AFFM - UA 4.52 million, 24.9%).*** This component has two sub-components, namely:

3.2.2.1 Improving Input Supply Chain Financing (*include Development of Fertiliser Policy*),

3.2.2.2 Farmer Capacity and Resilience Building.

In Zimbabwe's drought-prone agricultural landscape, where smallholder farmers face chronic input shortages and limited access to finance, the Partial Trade Credit Guarantee (PCG) model offers a transformative solution. The PCG, as part of the suite of blended finance instruments, enhances the public-private partnerships (PPPs) by leveraging concessional capital to attract commercial investment, thereby easing the fiscal burden on government resources. The PCG design will be adapted and enhanced to provide the necessary support in the selected project regions in order to incentivize stimulate private sector investment in sustainable agricultural inputs (fertilizer, seeds and pesticides) distribution. Incorporating risk-sharing mechanisms, such as covering a portion of potential losses, the PCG will catalyse private sector participation in agricultural value chains, unlocking scalable and sustainable financing for inputs, infrastructure, and market access. This approach supports smallholder farmers in transitioning from aid dependency to commercially viable, resilient agricultural production systems, while reinforcing the shift toward inclusive, market-driven rural economies. By covering up to 50% of potential credit losses, the PCG reduces lending risk for local financial institutions, and input suppliers who are willing to sell inputs on credit enabling them to extend credit to medium scale farmers and farmer groups and VBUs. This mechanism not only improves fertilizer availability but also strengthens input supplier distribution networks and enhances the resilience of input supply chains, critical in a country where erratic rainfall and soil degradation threaten food security. The PCG's inclusive and flexible design allows it to serve a wide range of stakeholders, from large scale commercial farmers with satellite small holder farmers to remote small holder farmer groups, ensuring equitable access to inputs across Zimbabwe's diverse agro-ecological zones. Managed by AFFM, the guarantee fund would be governed with strong oversight, ensuring transparency and alignment with Zimbabwe's agricultural development strategies. In a context where financial institutions are often risk-averse and rural credit penetration remains low, the PCG can catalyze much-needed private capital, crowd in additional investment, leverage private sector extension expertise to improve fertilizer utilization, and support climate, resilient farming practices, ultimately contributing to sustainable, inclusive growth, and institutional accountability in fragile rural

economies. AFFM-PCG will support the project in leveraging private sector resources and attracting them to these high-risk regions. AFFM PCGs will extend the guarantee coverage to financial institutions and fertilizer suppliers, enabling them to deliver fertilizer and soil conditioners to smallholder farmers involved in food crops, particularly those cultivating drought-resistant varieties. Furthermore, AFFM will explore options to extend the guarantees to livestock farmers, covering the fodder production.

3.2.3 ***Component 3 – Project Management (UA 3.61 million, 19.8%).*** This component has 2 sub-components, namely 3.1 Knowledge Management, Monitoring & Evaluation, and Communication *(To be implemented by MLAFWRD)*, and 3.2 Project Coordination *(To be implemented by PMU and ACBF)*. The sub-component 3.1 will support knowledge management and establishment of robust monitoring and evaluation (M&E) systems for collecting, processing and disseminating/communicating the Project-related information/data and best practices to stakeholders, in order to improve performance and decision-making. M&E activities will include Project Technical Launch, production of the Project Implementation Manual, monitoring/supervisory field visits, review meetings, Mid Term Review, Beneficiary Impact Assessment, Project Completion Review which shall provide opportunities for stakeholders to discuss progress, share best practices, and produce Project progress reports. This sub-component will also support (i) environmental and social safeguards compliance, technical assurance, Grievance Redress Mechanism, strategic communications and visibility, for streamlined execution and efficiency, (ii) implementation of Environmental and Social Management Plan (ESMP) activities, and protection systems, and (iii) nutrition education and promotion package. In terms of communication, the sub-component 3.1 has included activities which will use Bank's communication strategies to promote and achieve sustainable development, namely, data and information generation, information dissemination, promoting dialogue and shared understanding of the established project infrastructure to drive positive change towards a sustainable future. The Project will promote visibility (mass media, brochures, posters, branding, signages on site, banners, videos and multimedia coverage of community), and also support Information Education and Communication (IEC) activities (workshop and awareness meetings, short project documentaries, including photos, radio, television, print media campaigns/content placement). The sub-component 3.2 will support the Third Party (United Nations Office for Project Services/UNOPS) in order to ensure efficient Project implementation in line with the objectives and also the Bank's rules and procedures. This sub-component will also facilitate financial management, and procurement related activities.

2.3 Description of Project Technologies and Works

Dip Tanks

The project aims to rehabilitate existing plunge pool dip tanks, which are narrow, deep channels ( ) 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.

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 8 seasonal 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.

Establishment of Village Business Units and Borehole drilling and solar Energy System Installation
Boreholes shall be drilled to supply water for establishment of VBUs. The beneficiaries shall grow crops under irrigation in the VBSs and this is earmarked to reduce the impacts of Elnino induced droughts, building resilient communities towards the impacts of climate change through sustainable crop production.

Figure 2. A Plunge Pool Dip Tank

Drilling and Installation of 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.

Drilling solar-powered boreholes will result in operational boreholes providing water for drinking, irrigation, and livestock. The drilling process will generate by-products like drill cuttings and slurry, along with packaging materials from the solar equipment. Waste management will primarily involve minimal demolition waste, mostly consisting of soil and rock, and potential chemical waste from the drilling fluids.

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 14 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

Grasslands totalling 75km^2 in Gwanda, Bulilima, Mangwe and Matobo districts are targeted for rangeland management. The project will map and delineate these areas in agreement with local communities, focusing on rehabilitating and restoring existing rangelands. Technical experts will develop comprehensive plans that include grazing management, water conservation, and vegetation restoration strategies. Key interventions will involve soil conservation measures such as constructing contour ridges and gabions to prevent soil erosion. Practices like rotational grazing and reseeding will be implemented to improve soil health and biodiversity. Additionally, soil conservation structures will be built, and native grasses, shrubs, and trees will be planted to restore degraded areas, enhance soil structure, and promote biodiversity.

By-products and Waste Material
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 ACRES, the project will utilize existing fields provided by beneficiaries, with approximately 100 hectares in total—25 hectares each for Gwanda, Bulilima, Mangwe and Matobo. 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 100 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.

2.4 Project Beneficiaries

The primary beneficiaries of the project will be livestock-keeping and crop farmers affected by drought within the targeted districts. The project will directly benefit 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 Bulilima, Gwanda, Mangwe and Matobo 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 Bulilima, Gwanda, Mangwe and Matobo districts 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 Bulilima, Gwanda, Mangwe and Matobo are headed by the elderly, with an average household size of 4.4.
- **Child-Headed Households:** In Bulilima, Gwanda, Mangwe and Matobo 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 Matabeleland South Districts, 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 ACRES comprehensively identify and address the needs of all vulnerable groups, promoting inclusivity and equity in the agriculture value chain.

LEGAL REVIEW

3.1 Zimbabwe Policy Framework, National and Local Laws and Regulations

Legal Instruments of Zimbabwe Relevant to the ACRES 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.

ACRES 's efforts in the agriculture 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 ACRES 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 agriculture 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 ACRES, the Animal Health Act is of paramount importance as the project focuses on enhancing the agriculture 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 ACRES '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 ACRES is critical, given the project's reliance on water resources for livestock and processing activities. ACRES 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 agriculture 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 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.

3.1.8 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 ACRES, the Labour Act's significance lies in its role in governing the employment conditions of workers involved in the agriculture 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, ACRES 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.

3.1.9 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 ACRES involves activities that can impact community health, such as livestock management, hide processing, and the construction of sanitation facilities.

ACRES 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.

3.1.10 Factories 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 ACRES, 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.

3.1.11 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 ACRES project will need to be officially approved the RDC before implementation.

3.1.12 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.

3.1.13 Fertilizers, Farm Feeds and Remedies Act Chapter 18: 12 (SI 144 of 2012)

The Act provide for the registration of fertilizers, farm feeds, sterilizing plants and certain remedies; to regulate and restrict the importation and sale of fertilizers, farm feeds and certain remedies, and substances of animal origin intended for the manufacture of fertilizers or farm feeds; and to provide

for matters incidental to the foregoing. The act also regulates the use of pesticides, registration and no pesticide shall be used without registration

3.1.14 Communal Lands Act Chapter 20:04

The Communal Land Act Chapter 20:04 is legislation that governs land ownership, use, and management in communal areas in Zimbabwe. The Act addresses the ownership of land in communal areas, recognizing the communal ownership of land by communities as opposed to individual ownership. It outlines the rules and procedures for the allocation, use, and management of communal land, including the establishment of Communal Land Boards to oversee these activities. The Act also provides for the resettlement and redistribution of land in communal areas, with provisions for consultation with affected communities and compensation for displaced persons. It emphasizes the importance of community participation in decision-making processes related to land use and management, including the development of land-use plans and the resolution of disputes.

3.1.15 Labour Act Chapter 28:01, 2019

This an Act to declare and define the fundamental rights of employees; to give effect to the international obligations of the Republic of Zimbabwe as a member state of the International Labour Organisation and as a member of or party to any other international organisation or agreement governing conditions of employment which Zimbabwe would have ratified; to define unfair labour practices; to regulate conditions of employment and other related matters; to provide for the control of wages and salaries; to provide for the appointment and functions of workers committees; to provide for the formation, registration and functions of trade unions, employers organizations and employment councils; to regulate the negotiation, scope and enforcement of collective bargaining agreements; to provide for the establishment and functions of the Labour Court; to provide for the prevention of trade disputes, and unfair labour practices; to regulate and control collective job action; to regulate and control employment agencies; and to provide for matters connected with or incidental to the foregoing.

3.1.16 Sexual Offences Act of Zimbabwe, 2001.

This sexual offences Act criminalizes marital rape, willful transmission of HIV and AIDS, and sex trafficking. The act prohibits extra-marital sexual intercourse or immoral or indecent act committed with young person, extra-marital sexual intercourse or immoral or indecent act committed with intellectually handicapped person, exploitation of young persons and intellectually handicapped persons outside Zimbabwe, conspiracy or incitement abroad to exploit young persons or intellectually handicapped persons in Zimbabwe, permitting young person to resort to place for purpose of extra-marital sexual intercourse, detention of persons for sexual purposes. Coercing or inducing a person to have extra-marital intercourse, use of place as brothel, deliberate transmission of HIV.

3.1.17 Traditional Leaders Act (Chapter 29:17)

The Traditional Leaders Act Chapter 29:17 aims to regulate traditional leadership in Zimbabwe, promote good governance, and ensure the effective participation of traditional leaders in national development efforts. The Act provides for the appointment of village heads, headmen and chiefs; to provide for the establishment of a Council of Chiefs and village, ward and provincial assemblies and to define their functions; to provide for the issue of village registration certificates and settlement permits; to repeal the Chiefs and Headmen Act [*Chapter 29:01*]; to amend the Criminal Procedure and Evidence Act [*Chapter 9:07*], the Communal Land Act [*Chapter 20:04*] and the Rural District Councils Act [*Chapter 29:13].*

The Act is a legislation that governs the roles, responsibilities, and functions of traditional leaders in Zimbabwe. The Act defines traditional leaders as chiefs, headmen, village heads, and any other traditional leader recognized under customary law. The Act specifies the functions and powers of traditional leaders, which include the administration of customary law, resolution of disputes within their communities, and the promotion of peace and harmony. The Act outlines the relationship between traditional leaders and the government, emphasizing cooperation and collaboration in matters of governance and development. It highlights the role of traditional leaders in community development initiatives, such as land allocation, infrastructure development, and the implementation of government programs. The Act provides mechanisms for the resolution of disputes related to traditional leadership, including appeals processes and the intervention of government authorities when necessary. It specifies penalties for offences related to traditional leadership, such as impersonation or misconduct, and outlines the enforcement mechanisms for ensuring compliance with the Act.

3.1.18 National Museums and Monuments Act (Chapter 25.11)

The Act to establish a board of trustees to administer museums and monuments in Zimbabwe; to provide for the establishment and administration of museums; to provide for the preservation of ancient, historical and natural monuments, relics and other objects of historical or scientific value or interest; to provide for the payment of pensions and other benefits to members of the staff of the board of trustees; and to provide for matters incidental to or connected with the foregoing.

3.1. 19 DOMESTIC VIOLENCE ACT chapter 5:16

An Act to make provision for the protection and relief of victims of domestic violence and to provide for matters connected with or incidental to the foregoing. The act deals with offenses of Domestic violation and outlines the duties of police officers in relation to domestic violence, application and enforcement of protection orders.

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

ACRES ’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 ACRES integrates climate resilience measures, focusing on productivity and value addition in the agriculture 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 ACRES 's objectives to enhance the agriculture 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 ACRES stands to benefit significantly from the objectives and strategies outlined in the Livestock Growth Plan. ACRES can leverage existing initiatives and resources to enhance its impact and effectiveness. Additionally, ACRES 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 ACRES. 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 ACRES 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 ACRES 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.

ACRES intends to provide water and sanitation facilities at all its intervention sites, e.g. dip tanks, village business units, 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 agricultural 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 ACRES, 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, ACRES 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 ACRES because climate change poses substantial challenges to crop and livestock production, which is a vital component of Zimbabwe's agriculture

To align with UNFCCC objectives, ACRES will implement climate-smart strategies within the agriculture value chain, such as sustainable land management practices, improved crop and livestock husbandry techniques, and the adoption of renewable energy solutions. Moreover, going forward ACRES 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 agriculture production.

3.3.3 World Health Organization (WHO) Guidelines

The World Health Organization (WHO) guidelines hold profound significance for the ACRES 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, ACRES 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 agriculture value chains. Within the context ACRES 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, ACRES can contribute to enhancing the rights and well-

being of workers involved in all stages of agriculture production, from farming and herding to processing and manufacturing.

3.4 3.4 African Development Bank E&S Operational Safeguards (OS) Applicable to Project Activities

AFDB Integrated Safeguard Systems of 2023

Environmental and social sustainability is key to economic growth and poverty reduction in Africa. The Bank's Strategy for 2023-2032 emphasises the need to assist regional member countries in their efforts to achieve inclusive growth and transition to green growth. In addition, the Bank is committed to ensuring the social and environmental sustainability of the projects it supports. The ISS is designed to promote the sustainability of project outcomes by protecting the environment and people from the potentially adverse impacts of projects.

The safeguards aim to: (i) Avoid adverse impacts of projects on the environment and affected people, while maximising potential development benefits to the extent possible, (ii) Minimise, mitigate, and/ or compensate for adverse impacts on the environment and affected people when avoidance is not possible, and (iii) Help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

The Bank requires that borrowers/clients comply with these safeguards' requirements during project preparation and implementation. The Integrated Safeguards Policy Statement sets out the basic tenets that guide and underpin the Bank's approach to environmental safeguards. In addition, the Bank has adopted ten OSs, limiting their number to just what is required to achieve the goals and optimal functioning of the ISS:

- ***Operational Safeguard 1: Assessment and Management Environmental and Social Impact and Risk*** – This overarching safeguard governs the process of determining a project's environmental and social category and the resulting environmental and social assessment requirements. OS1 is triggered by the project activities considering environment and social assessment has to be undertaken prior to implementation of any component requiring civil works and water conservation interventions.

- ***Operational Safeguard 2: Labour and Working Conditions*** – This safeguard establishes the Bank's requirements for its borrowers or clients concerning workers' conditions, rights and protection from abuse or exploitation. It also ensures greater harmonisation with other multilateral development banks. Workers will be engaged on the project; therefore, this OS will be triggered. Key aspects will be to follow national and international labour organization recommendation when engaging workers on the project.

- ***Operational Safeguard 3: Resources Efficiency and Pollution Prevention and Management***– This safeguard covers the range of key impacts of resource usage, pollution, waste, and hazardous materials for which there are agreed international conventions, as well as comprehensive industry-specific and regional standards, including greenhouse gas accounting, that other multilateral development banks follow. The project will use pesticides, fertilizers

and acaricides for its operations and national standards for discharge of effluent will be referenced throughout project lifecycle.

- **Operational Safeguard 4: Community Health, Safety and Security**]- This OS recognizes the increase in community exposure to risks and impacts due to projects, activities, equipment and infrastructure therefore it addresses the health, safety and security risks on project affected communities.

- ***Operational Safeguard 5: Land acquisition, Restrictions on Access to Land and Land Use and Involuntary Resettlement]***– This safeguard consolidates the policy commitments and requirements set out in the Bank's policy on involuntary resettlement, and incorporates a number of refinements designed to improve the operational effectiveness of those requirements. Land ownership of targeted small-holder farmers in Bulilima, Gwanda, Mangwe and Matobo is governed by Communal Lands Act in Zimbabwe. All the communal land is vested in State President who has the powers to permit its occupation and use in accordance with the Act. The communal land is administered by Rural District Councils and the inhabitants have use rights over the land. It was confirmed and agreed by MLAFWRD that the existing physical infrastructures (dip tanks and boreholes) projects to be rehabilitated are on existing state-owned land in communal areas and new physical investment (village business units, multipurpose boreholes, nurseries, feed and fodder plants and 1-hectare nutritional gardens) will be implemented on existing state-owned communal land designated for such projects. Therefore, the mission concluded that the project will not lead to any physical or economic displacements and hence a Resettlement Action Plan (Plan) is not required for the project. This OS is not triggered.

- **Operational Safeguard 6: Habitat and Biodiversity Conservation and Sustainable Management of Living Natural Resources**- Ensuring protection and conservation of biodiversity across all forms of habitats through the promotion of sustainable management of living natural resources.

- **Operational Safeguard 7: Vulnerable Groups-** Ensure that vulnerable groups and individuals are identified as early as possible in Bank Group operations and that engagement is meaningful, taking into account individuals' and communities' specificities, and delivered in an appropriate form, manner and language including affirming, respecting, and protecting the rights and interests of vulnerable individuals and groups throughout the lifecycle of the project or investment.
- **Operational Safeguard 8: Cultural Heritage-** ensuring protection of heritage from the adverse impacts of project activities and support its preservation through addressing cultural heritage as an integral aspect of sustainable development. It promotes meaningful consultation with stakeholders regarding cultural heritage as a means to identify and address risks and impacts related to cultural heritage.
- **Operational Safeguard 10: Stakeholder Engagement and Information disclosure]-** This OS acknowledges the importance of right to effective participation in decision making process during the project cycle. It requires openness and transparency during stakeholder engagement between the Borrower and project stakeholders to improve E&S sustainability of

the projects, enhance project acceptance and make significant contribution to successful project design and implementation.

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 ACRES, focusing on the crop and livestock production, the following AfDB safeguards in Table 1 would likely be triggered.

Table 3. Safeguards Triggered by the ACRES Project

AfDB Safeguards Instruments	**Triggered by ACRES**	**Remarks**
Integrated Safeguards Systems (ISS)	Yes	Overarching operational safeguard mainstreams environmental and social considerations in all Bank operations
Assessment and Management of Environmental and Social Risk and Impact (OS1)	Yes	As a Category II Project, environmental and social assessment is required. ACRES 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.
Labour and Working Conditions (OS2)	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 agriculture value chain are protected from workplace hazards. ACRES would need to implement measures to prevent accidents, provide personal protective equipment, and promote a safe working environment for all workers.
Resources Efficiency, Pollution Prevention and Management (OS3)	Yes	Policy intended to achieve high quality environmental performance, efficient and sustainable use of natural resources
Community Health, Safety and Security (OS4)	Yes	The risks and impacts associated with the project that affect the community shall be addressed.
Habitat and Biodiversity Conservation and Sustainable Management of Living Natural Resources-(OS6)	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. ACRES would need to incorporate measures to minimize habitat destruction, preserve biodiversity, and promote sustainable land use practices within the project area.

Vulnerable Groups (OS7)	Yes	The vulnerable groups such as people living with disabilities, old people and pregnant women shall engaged during project lifecycle.
Cultural Heritage (OS8)	Yes	Tangible and intangible cultural heritage shall be identified and managed if found during the project lifecycle.
Stakeholder Engagement and Information disclosure OS10	Yes	It requires effective stakeholder participation and consultation throughout the project lifecycle.

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. ACRES 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 3: Resources Efficiency, Pollution Prevention and Management. OS 3 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 3 offers a broader, project-based approach, emphasizing IPM, risk assessments, training, and ongoing monitoring to align with international best practices. The AfDB OS 3's focus on IPM and less hazardous alternatives highlights a more proactive approach to reducing pesticide reliance and mitigating risks.

- Labour Standards: OS 2 compared to Zimbabwe Labour Act15:09. Both frameworks emphasize worker rights and protections, but OS2 places additional emphasis on the specific requirements for development projects, including rigorous health and safety standards and detailed grievance mechanisms

The ESMP for the ACRES 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 agriculture value chains, contributing to Zimbabwe's broader economic and social goals.

4. PROJECT BASELINE INFORMATION

4.1 Introduction and context

This chapter provides the baseline information for the ACRES project sites in Matabeleland South, specifically in Gwanda, Bulilima, Matobo and Mangwe Districts. It offers a critical reference point by capturing the current socio-economic, environmental, and agricultural conditions in these regions before the project's implementation. Understanding these initial conditions establishes a benchmark for measuring the project's progress and effectiveness over time.

Although detailed analyses of all beneficiary villages were not possible during the preparation mission the description of the representative project sites provided in the annexes 3 and 4 gives a more or less indication of conditions at the ward levels. The baseline information includes data on economic activities, agricultural practices, and infrastructure status. It analyses existing cattle farming practices, pasture availability, market access, and pricing. Where possible, it also describes hide/leather processing practices. Additionally, environmental factors such as land use, water resources, and climatic conditions and their impact on agricultural productivity are described. This baseline forms the foundation for setting realistic targets and evaluating the project's impact on productivity, sustainability, and livelihoods in the districts.

4.1.1 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 Gwanda, Bulilima, Matobo and Mangwe Districts. Field visits to the project 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 1.

4.2 Project districts overview

4.2.1 Geographical location

Gwanda, Matobo, Mangwe and Bulilima districts are located in Matabeleland South Province is in Southwestern Zimbabwe, bordered by Botswana and South Africa. The project sites are located in rural area along the Zimbabwe Botswana Border.

4.2.2 Climate

The Gwanda, Bulilima, Matobo and Mangwe Districts lies in agro-ecological region IV and V (Table 2) and is characterized by low and erratic rainfall which averages between 400–650 mm per year. Precipitation falls mainly between November and March and the common type of precipitation received in the area is conventional influenced by the southern frontier of the Inter-Tropical Convergence Zone (ITCZ) mainly in January. Average daily temperatures ranges from 21°C to 33°C and average humidity is 63%. Frequent seasonal droughts are a common phenomenon in the district. Smallholder farmers grow drought-tolerant varieties of maize, sorghum, pearl millet and finger millet.

Ideally, the natural region is suitable for cattle production under extensive production systems and for wildlife production.

Table 0-1: Average temperature data (1994 – 2021)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1994	24	22	25	22	20	17	16	22	25	27	28	27
1997	24	22	26	22	20	19	17	21	25	27	27	27
2000	25	23	25	21	21	18	18	21	26	28	28	28
2003	25	22	25	21	21	18	19	23	26	28	28	29
2006	24	25	24	21	21	17	18	22	25	29	28	28
2009	25	24	21	21	21	18	16	20	26	27	26	27
2012	25	25	24	21	20	17	18	22	25	27	27	27
2015	25	28	25	23	22	18	20	22	26	29	29	30
2018	27	24	25	23	22	19	16	25	28	26	28	29
2021	24	24	25	24	20	18	17	22	26	27	29	27
2013	25	24	21	21	21	18	16	20	26	27	26	27

Table 0-2: Average rainfall data (1990 - 2018)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1994	65	56	62	13	2	1	0	1	0	0	0	48
1997	69	49	39	19	1	0	0	0	0	1	12	42
2000	46	41	43	67	8	0	1	1	0	0	15	37
2003	71	68	41	52	4	2	1	0	0	0	17	64
2006	79	73	54	56	3	0	2	0	0	0	9	71
2009	339	126	102	10	5	21	7	1	19	13	94	165
2012	86	109	65	8	2	0	0	2	5	34	19	97
2015	57	53	25	101	1	0	1	0	2	11	46	110
2018	36	358	61	9	8	0	15	0	0	0	17	152
2019	79	73	54	56	3	0	2	0	0	0	9	71
2020	339	126	102	10	5	21	7	1	19	13	94	165
2021	86	109	65	8	2	0	0	2	5	34	19	97
2022	57	53	25	101	1	0	1	0	2	11	46	110
2023	36	358	61	9	8	0	15	0	0	0	17	152

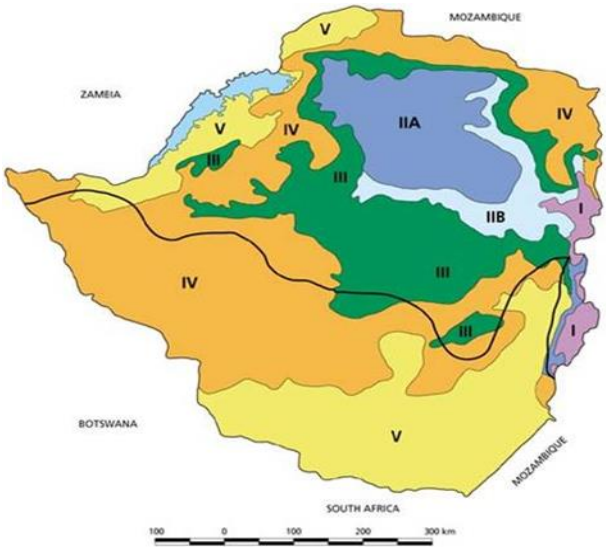


Figure 0-1: Agro-ecological regions of Zimbabwe

4.2.3 Topography

The topography of the area within which Gwanda, Bulilima, Mangwe and Matobo is situated is characterized by a gently undulating slope. The project above river level. The rivers and streams in area are characteristically shallow as a result of the nature of the terrain which is flat. Silt and sand sediment load due to erosion reduced the vertical depth of the drainage systems.

4.2.4 Hydrology

Mangwe, Gwanda and Matobo districts falls in Mzingwane catchment and Bulilima district falls in Gwayi catchment. The project sites drain its water from the two catchments. The dam was constructed by Rhodesian Government in 1964. The main drainage system constitutes seven main rivers namely Ramakwabane, Ingqwesi, Sansukwe, Simukwe, Shashani, Tuli and Umzingwane. These rivers flow southwards towards the Shashi and Limpopo rivers and are prone to desiccation especially in the long dry season (April to October). During the dry season, the pools and sandy beds become the alternative source of water for both humans and livestock. During the hottest part of the year (September - mid-November) these regularly cease to be adequate. Figure 5-3 bellow illustrates the drainage system in four districts. The hydrology of the district is impacted by the reduction in precipitation on natural and artificial surface and sub-surface water resources (rivers and dams). This is as a result of substantial deficit in surface runoff below normal conditions and depletion of groundwater supplies. Hydrological drought has led to the reduction in the supply of water for irrigation, household use and livestock. Additionally, erosion up catchment was observed as a serious problem which manifested in the siltation of rivers and dams. Development programs in this region should focus on technologies such as adoption of climate smart agriculture with the goal to conserve water. As an alternative to the seasonal diminishing dam water supply for irrigation purposes, some boreholes will be drilled to augment water deficit. The project area has moderate to high ground water potential. Water

abstraction from the major rivers through sinking boreholes will be done as part of the climate proofing and revitalization program activities at the scheme.

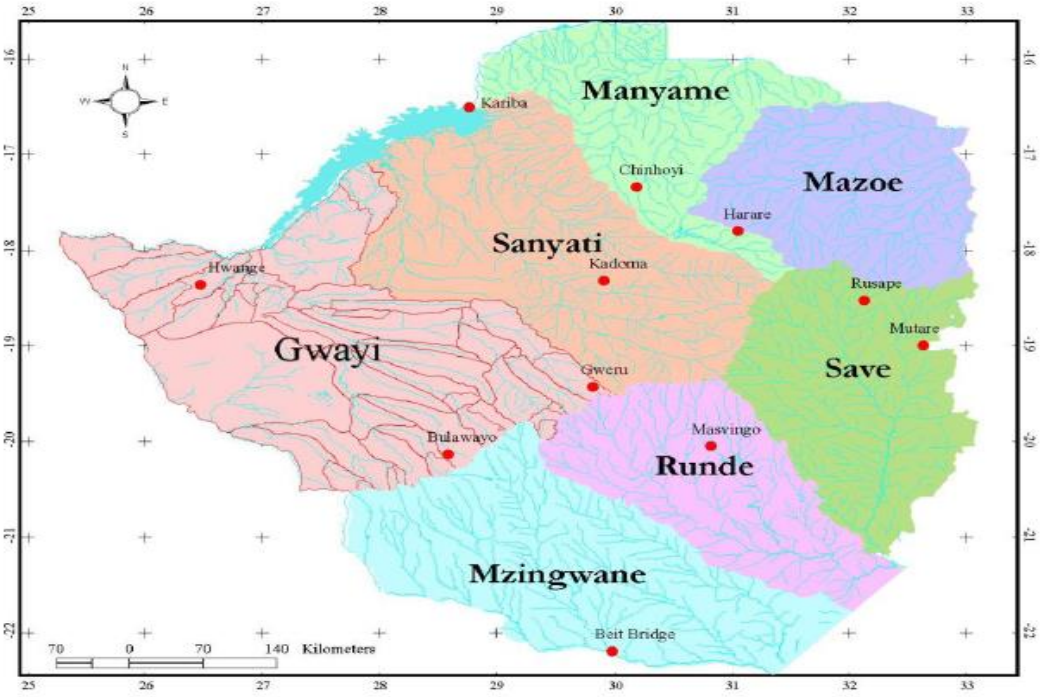


Figure 0-2: Catchments of Zimbabwe

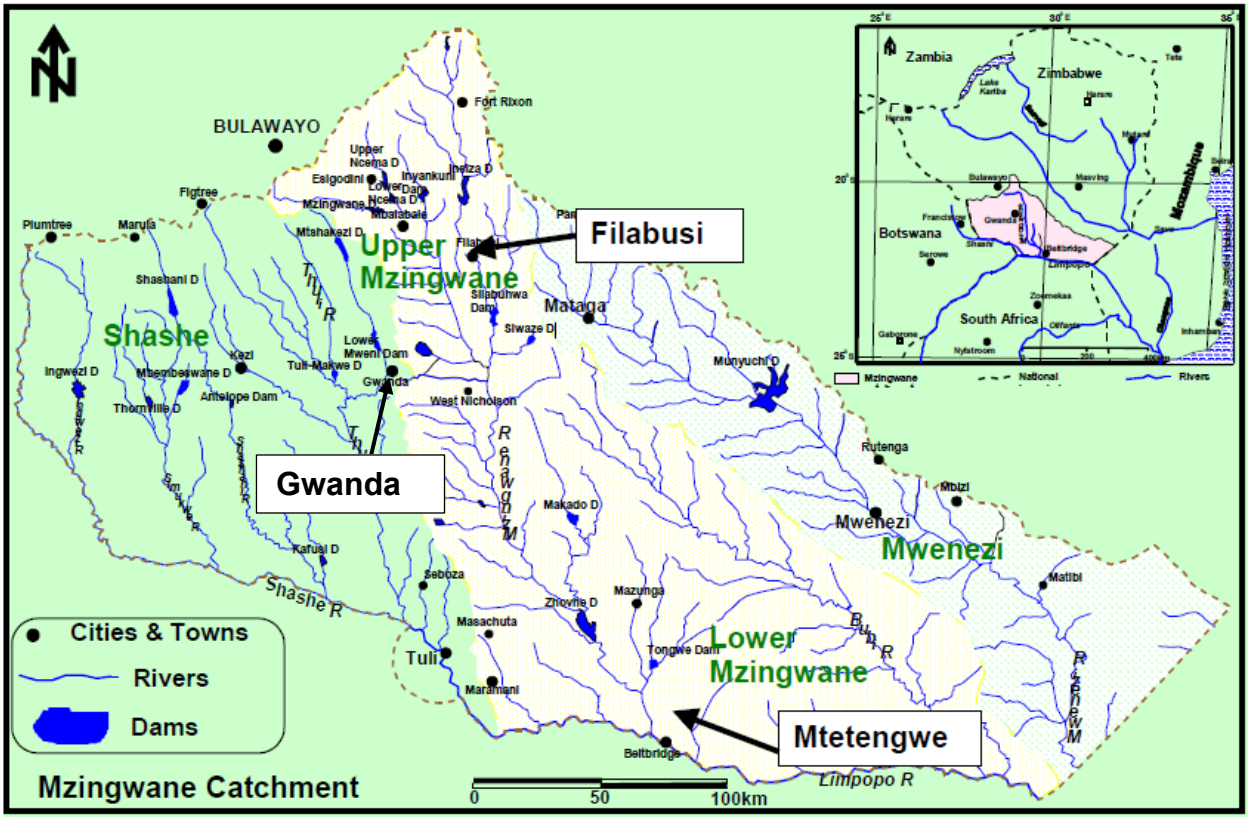


Figure 0-3: Mzingwanwe catchment showing main rivers, dams and towns

Water Quality

Water samples were collected from water bodies whose major sources of water is underground water. The sampling sites included boreholes and stream. The samples were collected using sterilized 750ml labelled plastic bottles. The samples were tested for temperature, pH, conductivity, total dissolved solids, and the turbidity in the field. The samples were then kept in coolers containing ice blocks and transported to the laboratory for preservation in a refrigerator before analysis. Of all the tested parameters, Manganese and iron were detected to be higher than the stipulated irrigation guidelines (Table. 8).

Table 0-3: Water Analysis Results

Parameter	Shashe River	FAO Standards
pH	6.7	6.4 to 8.4
Conductivity (µS/cm)	193.00	Max 700
TDS (mg/l)	135.10	Max 450
Total Hardness (mg/l)	19.66	Max 75
Total Alkalinity (mg/l)	90.00	N.A
Calcium (mg/l)	4.90	N.A
Copper (mg/l)	< 0.01	Max 0.2
Iron (mg/l)	5.15	Max 0.1
Pottasium (mg/l)	2.80	N.A
Magnesium (mg/l)	1.80	N.A
Manganese (mg/l)	0.23	Max 0.1
Sodium (mg/l)	2.45	Max 70
Zinc (mg/l)	0.02	Max 2

Nitrate (mg/l)	1.63	Max 5
Sulphate (mg/l)	61.34	N.A
Chloride (mg/l)	5.00	Max 100
Turbidity (ntu)	11.00	N.A
Phosphate (mg/l)	6.91	N.A
S.A.R.	0.24	Max 3

Ecological Assessment

Biodiversity can be defined as the variety of life forms on earth. Biodiversity is assessed at different levels in the ecosystem, and these include species, ecosystem and biome. Biodiversity assessment is important in the identification of important plant and animal species, especially those that are protected or endangered. Impacts of the project should be weighed in relation to the available species at the project site and their dynamics in number, compositional, diversity and functional attributes. Where some species are under unavoidable threat from the revitalization project, measures regarding whether some plants need translocation or not depends on the findings of the baseline biodiversity survey. Further, monitoring programs are aligned to the level of biodiversity of the project sites, especially species composition and diversity. Flora and micro and mesofauna are at times important bio-indicators of environment contamination and /or pollution. In this survey biodiversity was assessed at both species and ecosystem levels. In order to understand the flora at the project sites and around, we assessed vegetation that include trees, grasses, ferns and forbs at both the actual project site and had a general description of the flora surrounding the project sites.

Vegetation Assessment

The vegetation type in the project area depicts a mixed Jesse woodland characteristic of the natural agroecological region IV and V. The boundaries of Gwanda, Bulilima, Mangwe and Matobo is characterized by lush healthy vegetation where the growth has been promoted by the deep fertile clay to sandy-loam soils particularly in along the rivers Shashe and Tuli. Vegetation recorded inside the project site were *fabaceae family* (*Abizia amara, acacia nilotica, Senegalia nigrescens, Dichrostachys cinerea, Combretum imberbe, Ziziphus mucronata and grewia monticola)* Figure 5-4 below shows some of the vascular plants at project sites. Grasses such as the *Heteropogon Contortus*, *Boscia*, *Aristida* and *Panicium* species were observed to be common on undisturbed project sites. The immediate locations outside the project sites boundary is characterized by broad leafed deciduous savanna woodland with smaller portions dominated by the *Colophospernum mopane* and *Terminalia sericia.* Vegetation species diversity at the site is fairly rich owing to the good deep and fertile red loam soils. These plants are of paramount importance to birds and a host of insects and probably reptiles. The vegetation around is also important for regulating the micro-climate of the area and act as wind break for crop protection.

Figure 5-4: Ubiquitous vascular plant at project sites

Table 0-4: Vegetation recorded at project sites

Scientific name	IUCN Classification
Acacia Nigresens	No data available
Crinum macowanii	No data available
Piliostigma thornningii	No data available
Bauhinia petersiana	No data available
Lonchocarpus Capassa	No data available
Grewia monticola	Least concern
Acacia Karroo	No data available
Azanza garckeana	No data available
Acacia nilotica	No data available
Cassia Abbreviata	No data available
Dalbergia Melanoxylon	Near threatened
Dichrostachys cinerea	Least concern
Acacia rehmanniana	Least concern
Lonchocarpus Capassa	No data available
Combretum imberbe	Least concern
Ziziphus mucronata	Least concern
Sclerocarya birrea	No data available
Albizia amara	Least concern
Hyparrhenia hirta/altissina	No data available
Heteropogon contortus	No data available
Andropogon huillensis	No data available
Sporobolus africanas	No data available
Cenchrus ciliaris	No data available
Ehrharta erecta	No data available
Eragrostis trichophora	No data available

Fauna assessment

Animal assessments were done through use of key informants search for spoors, dung, nests, visual sightings in areas used for vegetation assessment and around the proposed project site and. Elephants are seen in Bulilima and Gwanda in areas near Shashe and Tuli rivers. Dung recorded was from cattle

and goats. Key informants noted the presence of snakes such as twig snake, black mamba, python, brown snake, and tiger snake seen around the project area and some nearby villagers, goats and cattle. However, small mammals like rodents had visible denning signs. Insects identified were *Lucastana pardalina* (brown locust), *Acanthacris ruficornis* (garden locust), *Sceliphron spirifex* (zingizi) and *Apis melifera* (honeybee). Birds were identified based on expert knowledge of gained over a number of years such as, vocalizations, presence of eggs, nests and feathers and physical observations from a short distance. The site registered a fairly large population of birds particularly insectivores, *frugivores* and *piscivores*. A list of birds identified birds are given in table 5-4. Fish recorded in the dams were *Barbous spp., labeo cylindricus spp, and Clarias gariepinus* and the dorminant being the catfish.

Table 0-5: Species of birds registered in the project area

Scientific name	IUCN Classification
Quelea quelea	Least concern
Corythaixoides concolor	Least concern
Plooceus velutus	No data available
Streptopelia senegalensis	Least concern
Uraeginthus angolensis	Least concern
Scopus Umbretta	Least concern
Corythaixoides concolor	Least concern
Coracias caudate	No data available
Dicrunus adsimilis	No data available
Lophaetus occipitalis	Least concern
Pternitis swaisonni	No data available
Oena capensis	Least concern
Lanius collaris	Least concern
Camaraptera brevicaudata	No data available

- **Entomology**

Above ground (crawling and aerial macro-invertebrates) as well as below ground macro-invertebrates were sampled. The macro-invertebrates were sampled in the surrounding area. Crawling insects were sampled using pitfall traps. The pitfall traps were set in randomly marked points in a 5m x 4m grid fashion. Traps were filled with soapy water in order to avoid escape of trapped macro-invertebrates and were checked after 24 hrs. The captured organisms were then placed in vials filled with 70% ethanol. For below ground macro-invertebrates soil monoliths were collected sifted in trays for macro-invertebrates. The remaining macro-invertebrates were then flushed out using berlese funnels. Aerial insects were captured using sweep nets and the contents were emptied into glass bottles and taken to the National museum for identification. Identified invertebrates were fall armyworms, red spiders mostly affecting tomatoes, Ladybug, aphids mostly affecting leafy vegetables, bees for pollination, butterfly.

Soil Assessment

A desktop image interpretation and auxiliary soil survey was undertaken. The purpose of the desktop soil mapping exercise was to identify and map all the soils existing in the project sites in preparation for a detailed field exercise. A soil survey was conducted concurrently with vegetation assessments. Using hand soil auger, soil samples were collected from points where vegetation assessments were being done covering project sites in four districts. Three samples were taken at each point and were mixed and thoroughly homogenised to make a composite sample. About 500g of the composite sample was subsequently sealed in a well-labelled paper bag and sent to lab for physicochemical analyses. Parameters targeted for lab analysis depended on those likely to be impacted by the proposed project e.g. nitrogen, pH and phosphorus. Existing excavation to a greater extent were used for soil profile descriptions.

The project sites are characterized by Kaolinitic soils from Fersiallitic group. The soils are mainly greyish brown to reddish brown clay to sandy – loam and the predominant loam soils have the ability to store organic matter. The soils are deep and well drained with high permeability. Light to medium texture is influenced by the nearby river. Biomass is relatively high along Shashe and Tuli rivers. The soils are suitable for most crops using any irrigation systems. The pH is ideal for most crops. Exchangeable sodium percentage is very low making the soils most ideal for irrigation without the risk of soil degradation and salinity build up

5.9.1 Soil morphological properties

Depth : >100cm.
Texture : loamy medium grained sandy (mLS) overnmedium sandy loam (SaL)
Colour : reddish brown, 5YR5/4m over yellowish brown, 10YR4/4m
Structure : weakly to medium developed fine sub-angular blocky to moderate sub angular blocky
Permeability and drainage: rapid permeability and very well drained over good permeability and well drained

5.9.2 Subsoil chemical properties

CEC (m.e.%) : 6.2 – 9.6
Base Saturation (%) : 100
pH (CaCl2) : 6.0-6.1
Infiltration rate : 0.0001m/s

Figure 0-4: Soil Chemistry

Parameter	0-25 cm	25 – 55cm	55 – 90cm
Clay %	8	17	16
Silt %	5	12	13
Fine sand %	41	33	28
Medium sand %	33	25	26
Coarse sand %	13	13	17
Gravel %	*	*	*
pH ($CaCl_2$)	6.1	6.0	6.1

Carbonates %	*	*	*
Ex Ca (me %)	5.5	7.0	9.5
Ex Mg (me %)	3.3	3.9	5.3
Ex Na (me %)	0.11	0.16	0.12
Ex K (me %)	0.30	0.13	0.09
TEB (me %)	2.7	9.6	6.2
CEC (me %)	2.7	9.6	6.2
base sat %	100	100	100
E/C	32.3	57.9	38.9
S/C	32.3	57.9	38.9
ESP	4.0	1.7	2.0
EKP	11.0	1,3	1.5

Figure 0-5 Soil Profile in Matobo district

Depth(cm)	Description	Picture
0-25 cm	Reddish brown, 5YR 5/4m; loamy medium grained sandy (mLS); dry soft, very friable moist, slightly sticky, and non-plastic wet consistence; weakly developed fine sub- angular blocky structure; rapid permeability and very well drained; few very fine and fine roots; few very fine and fine interstitial pores; gradual smooth transition to:	
25 - 55 cm	Yellowish red ,5YR 5/6m; dark yellowish brown, 10YR4/4m sandy loam(SaL);,friable moist, slightly sticky, and plastic wet consistence; weakly developed medium sub-angular blocky structure; good permeability and well drained; few fine and very fine roots; few very fine and fine interstitial pores; gradual smooth transition to:	
55 - 90 cm	Yellowish red ,5YR 5/6m; dark yellowish brown, 10YR4/4m sandy loam(SaL);friable moist, slightly sticky, and plastic wet consistence; weakly developed medium sub-angular blocky structure; good permeability and well drained; few fine and very fine roots; few very fine and fine interstitial pores; gradual smooth transition to:	

Air Quality

The project sites are situated in communal area and there are no major human activities that generate air pollutants. Fugitive dust emissions are caused by traffic entrainment of dust from unpaved roads and agricultural operations. The air emissions were re-measured on real time and were verified for three consecutive days. All the measured pollutants were complying against World Health Organisation (WHO) 2021 ambient air quality standards.

Table 0-6 : Air quality results

Parameter	Gwanda	Matobo	Mangwe	Bulilima	WHO 24hrs	WHO annual
NO_2 (ug/m^3)	0.1	0.2	0.3	0.1	25	10

CO (mg/m^3)	0.1	0.1	0.1	0.1	4	-
SO_2 (ug/m^3)	0.0	0.0	0.1	0.0	40	-
PM_{10} (ug/m^3)	3	2	4	1	45	15
$PM_{2.5}$ (ug/m^3)	1	1	0.9	0.8	15	5
O_3 (ug/m^3)	8	7	4	1	100	60

Noise and Vibration

A noise survey was conducted using a sound level meter: Model: ET-953. The noise levels are within tolerable levels of 85dB and 90dB (Table 5-6) when compared against ILO limits and section 6 of the Factories and Works (General) Regulations, RGN 263 of 1976 respectively hence there is no risk of noise induced health problems such as trinities and noise induced hearing loss, due to lack of specific environmental noise limits in Zimbabwe the results for noise were also compared against the International Finance Corporation Environmental Health and Safety Guidelines set at 70 dBs for industrial areas and were also within the limits.

Table 0-7: Noise levels at the site

Point	Result (dB)
Gwanda VBU in Ward 8	42
Gwanda VBU in Ward 9	45
Mangwe pastureland	40
Matobo Shashe river water withdrawal point	46
Bulilima ward 7 dip tank	50

Archaeology and cultural heritage

The Archaeological Impact Assessments Guidelines for Planning Authorities and Developers prepared by the National Museums and Monuments of Zimbabwe (NMMZ) derive their authority from the National Museums and Monuments Act (Chapter25:11). They outline procedures of how to deal with archaeological and cultural material during development. They require that Archaeological Impact Assessments (AIA) as a core component of the Environmental Impact Assessment (EIA) must be carried out for all major development projects prior to commencement of activities onsite. When the benefits of a project are sufficient to out-weigh the benefits of archaeological preservation, National Museums and Monuments of Zimbabwe (NMMZ) primary concern is to work with the proponent in determining how the project may be implemented with minimal loss to archaeological resource values. When proper impact management practices are implemented, it is usually possible to minimize the loss of archaeological resource values in a cost effective manner. Where the loss of significant archaeological

values cannot be adequately mitigated the role of National Museums and Monuments of Zimbabwe is to ensure that appropriate compensatory measures are implemented.

The Environmental Management Act (Chapter 20:27) of 2002 forms the basis of environmental management in Zimbabwe and makes it mandatory for developers to consider Archaeological and Cultural issues in addition to other environmental aspects in carrying out an Environmental Impact Assessment which is a very important tool for sustainable development. This Archaeological Impact Assessment was done in compliance with the National Museums and Monuments Act 25:11 which protects Monuments and Relics or otherwise the national cultural and natural heritage, which is characterized by both movable and immovable material culture.

The NMMZ Act 25: 11 defines monuments as:

a) Any ancient monument or
b) area of land which-
    i. is of historical, archaeological, paleontological or other scientific value or interest: or
    ii. has a distinctive geological formation; or
    iii. waterfall, cave, grotto, avenue of trees, old tree or old building or remaining portion of an old building; or
    iv. Other objects, whether natural or constructed by man, of historical archaeological or other scientific value or interest.

The NMMZ Act 25:11 demands that any person who desires to do the following should request permission from the Executive Director:

a) Make any alterations to destroy, damage, or remove from its original site any national monument, ancient monument or relic or any part thereof; or
b) Excavate any national monument or ancient monument.
c) Physically use any part of the area of the site of a national monument, whether or not for gain or any commercial purpose whatsoever;

The pre-development survey and evaluation would therefore ensure that action is taken to mitigate or avoid the impact of such a development on Archaeological remains and respect any cultural beliefs and practices associated with the area. This particular study or assessment therefore addresses Archaeological and Cultural issues associated with the proposed ACRES project.

Methodology

Literature review, field assessments and oral interviews were the methods used to investigate the archaeological and paleontological material of the project area. A literature survey covering any published and unpublished material–maps, photographs, books, journals on the area under

consideration and Zimbabwe in general, addressing the archaeology, history, culture and fossils of the area was undertaken. Analysis of the archaeological and paleontological collections and records at the Zimbabwe Museum of Human Sciences, Harare and Natural History Museum, for any collected voucher specimen from the study area was done. Field walking involves systematic coverage of the proposed area and its environs noting any visible archaeological, historical, cultural and paleontological material as well as assessing the impact of the project on identified heritage material. Oral interviews were held with local residents to solicit information on archaeological, historical, cultural and paleontological sites and objects and also to establish their attitudes towards the project in regards to the mentioned heritage material.

- **Desktop Survey**

The now defunct Historic Monuments Commission and its successor, the National Museums and Monuments of Zimbabwe (NMMZ) through their respective Monuments Inspectorates appealed over the years to commercial and communal farmers and officials of state land such as National Parks to report to them any pre historic or historic sites on their areas of jurisdiction. The information received and recorded form the basis for further research and investigations. This record of archaeological sites and monuments already identified throughout the country is kept in the Archaeological Survey based at the Zimbabwe Museum of Human Sciences in Harare. Evidence of human interaction with the environment is usually established through the identification of cultural remains. Literature on the historical background of the general area was consulted.

Field Survey Method

Upon arrival on the site, the archaeologist examined the area as previously obtained against the actual topography. This was done by going to an area for a good point looking for the general area. The actual archaeological survey was approached in two ways. The first was informant based questioning whereby information was obtained through consulting the public on the history of the area. The second was field-walking to examine the presence of archaeological materials on the surface of the survey area. Field walkers walked transects systematically. Grid references for specific features were recorded using a hand held GPS. Mounds were investigated for any cultural material evidence by use of hand picks, trowel and augur. Visibility was very good in the area.

Results of Surface Survey

The project sites are characterized by patches of dense cover of grass and trees on boundaries. The project sites were thoroughly examined but neither archaeological nor cultural materials were observed. Most sections of the project sites proposed for the development were furrow currently. The project cleared long back thereby disturbing the surface.

Recommendations

Although no archaeological or cultural materials were found during this study, the project proponent is strongly advised that in the event that any suspected archaeological and cultural material is encountered during the site development process, a formal report should be made to the Executive Director of the National Museums and Monuments of Zimbabwe (NMMZ).

Socio-economic status

Approach and Methodology

The social and economic baseline information was collected using mixed methods of collecting primary and secondary data. The primary and secondary data was used to determine current and to predict future social conditions with and without the ACRES project.

The primary data was collected:

- Through in-depth interviews conducted with key informants which include AREX Officer, Land Officer, District Development Coordinator, Village Heads, Water Sub Catchment Officer, Councillor, RDC CEO, District Environmental Health Officer.
- By the household survey questionnaires which were administered to community members, project beneficiaries, vulnerable (elderly, women, youth) and marginalised members of society (disabled) using well qualified experienced social scientist enumerators.
- Having focus group discussion with community members, project beneficiaries, vulnerable (elderly, women, youth) and marginalised members of society (disabled) to capture key data of irrigation scheme.
- during the participatory transact walks or field visit were conducted to assess the existing infrastructure, culture, social structure, agronomic practices, land use and activities at the irrigation scheme project was done.:

The secondary data was collected:

- through literature review which include local maps, similar case studies, research publications, ESIA or ESMPs and existing project documentation.

The relevant and useful information applicable to ACRES project was extracted from the primary and secondary data sources and assessed within the context of project life cycle**.**

Population

The population of Gwanda, Mangwe, Bulilima and Matobo Rural Districts was estimated to be 398000 as per 2022 census. The average number of persons per household ranges from 3.4 to 6 persons. The average age of community members disaggregated by gender is 63 years for women and 59 years for

men. The general community membership of the targeted four districts comprises an elderly age range averaging 57.6 years.

Vulnerable groups

There were identified six persons living with disability among the population of irrigation scheme beneficiaries. These are disaggregated as 4 under the age of 18 and 2 above the age of 19. There are also present in this beneficiary community, orphans and widows, as well as the elderly.

Prospective water users

The water from the dam is used for non-consumptive use by community members. The water is mainly used for crop irrigation, livestock drinking, bathing and clothes washing. The quantity of water consumed by livestock depends on environmental factors (e.g. ambient temperature and humidity), drinking water temperature, water quality, ration composition (nature of food and dry matter content), feed intake, size of the animal and individual variation between animals.

Table 0-8: Water users and uses

Water User	Water Uses
92249 households	Bathing, washing
Irrigation	Crops irrigation
Domestic animals	Drinking

Table 0-9: Average livestock drinking water requirements

Animal	Estimated number in the area	Daily water requirement/animal	Monthly water requirement/ animal	Total required/month (approximate)
Cattle	>1.4million	38 litres	1178 litres	16.5m hectolitres
Goats	>120000	5 litres	155 litres	186000 hectolitres
Donkeys	>9000	23 litres	713 litres	64170 hectolitres

Land tenure system and Land use and ownership

Zimbabwe has four main systems of land tenure which are freehold land that is private, state land, communal and leasehold resettlement systems. The land allocated for Dip tanks, Village Business Unit, Nutritional gardens, pasturelands and Green zones is communal land which is governed by the Communal Land Act (Chapter 20:04). This means the land allocated for the project is vested in the State President who has powers to permit its occupation and use in accordance with the Act. According to this Act, project beneficiaries have use rights over land. The Gwanda, Bulilima, Mangwe and Matobo Rural District Councils has power to allocate the land on behalf of the State as per Act. Therefore, everything is above the board since the project sites were allocated the land by Bulilima,

Mangwe, Matobo and Gwanda Rural District Councils for the purpose of farming. Common crops currently grown within the communities are millet, rapoko, sorghum, groundnuts, etc

Education

There are well distributed schools in the four targeted districts, with students walking a distance of 1 – 5 kilometres in a one-way trip to get to school. There are primary and secondary schools in these districts. The tertiary institutions which include vocational training centre, polytechnics and universities are found in Matabeleland South Province most of them are located in Gwanda.

Religion

Christianity is the most dominant faith in the area, followed by roughly 90% of the population. Despite practicing the Christian faith, the most of the locals still adhere to and practice local and traditional religious beliefs from the old ancestors and tribes.

Literacy

The literacy rate of the community members in the four targeted districts is 93.7%. They struggle to read and write and would prefer to have training materials and training sessions administered in vernacular with visual aids such as pictures for demonstrations.

Training

Trainings are often individual and there is a need to build confidence for those who have been trained to train others and share information received or lessons learnt. All trainings are free, and members of the community are permitted to participate. More training was received between December 2023 and December 2024 by th Extension officers and some community members were trained. We receive training in the growing and care for each crop and livestock.

Access to agriculture extension services

Extension officers from the Department of Veterinary Services and Agritex are in charge of assisting farmer efforts in the four districts. These were observed to be well known and active among the community members. This is an additional asset for the project as the community will have guaranteed access to extension services.

Labour for farming

Among the community members, it is a common practice to use members of the household of varying ages from 5 years and above to provide unpaid labour at the small holder plot and looking after livestock particularly on school holidays. It was also observed that the elderly has a higher inclination to hire seasonal labour to work on the smallholder plots, while work in the community garden. For

work in communal plots, there are few incidents of hiring children in the age range 10 to 14 years. In retrospect, while a household would not hire a person in the age range 10 to 14 years of age, these children if they are there in the household will do cattle rearing and field work like tilling and ploughing especially on school holidays as unpaid labour in their own home. In the following illustration yes represents a response above 60% of population asked, while No represents 40% outcome and sometimes, was often on the fence (neither strongly agree nor disagree).

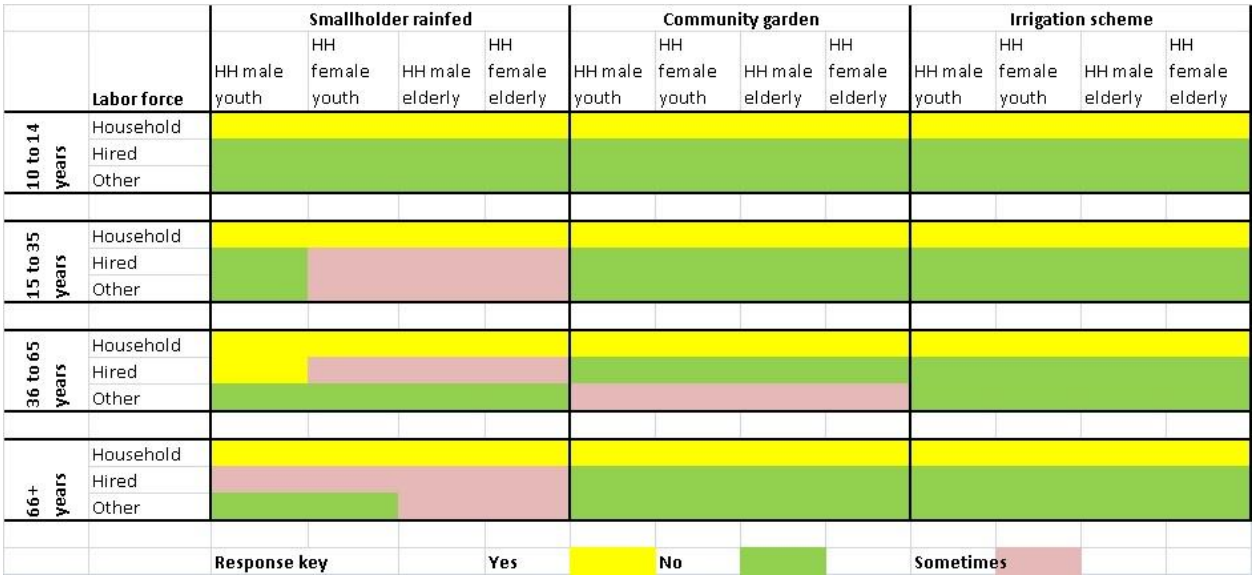


Figure 0-6: Representation of source of labour for farming

Gender issues

Women in the four districts are highly participative, they constitute more than 50% in the community as most energetic man and youth migrate to Botswana and South Africa. The community members pride themselves on equity and opportunities for every member willing to work and to learn to take their place in the community of farmers.

Economic activities

The Gwanda, Matobo, Mangwe and Bulilima rural economy is dominated by agriculture, a few people are into formal trade of goods and services. The most common type of trade among the farming community is barter trade, most prevalent in the dry season. The community members interviewed all listed agriculture (irrigated) as their primary source of income, with surplus money going towards household needs such as education and healthcare. Cattle ranching also contribute to the economy. The land is also less fertile than other provinces, as commercial crops cannot be grown and rural farmers usually cannot produce enough rainfed maize to feed their families.

Household income among community members

Five general income streams were identified namely, collective and individual sale of surplus crops from farming, general trade in goods and services, small holder farming production and sales (rain-fed), casual labour and sale of livestock or other related projects. The main source of income for over 89% of the community members from the four districts. There appeared a number of beneficiaries who are also on pension, thus increasing their monthly income. A lot of households were unable to quantify their income as they said they do small cumulative daily sales.

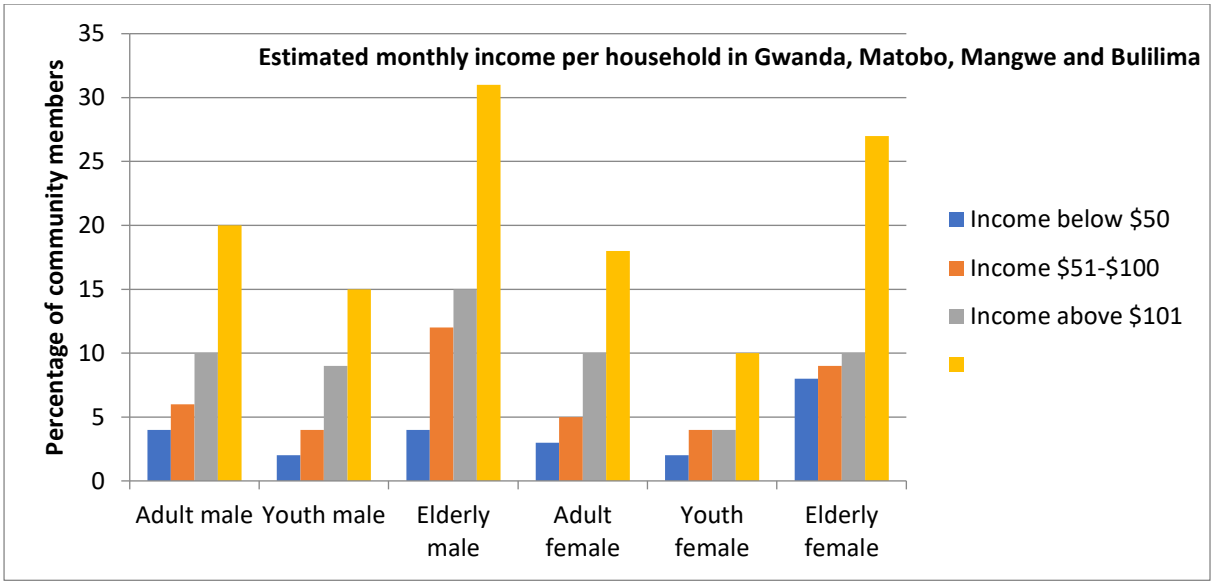


Figure 0-7 Estimated cumulative monthly household income among community members

Expenditure on assets by community member's households

The community members have expressed greater financial freedom to purchase additional assets that facilitate their improved livelihoods, in the areas of transport, communication and energy for cooking. The following illustration shows the disaggregation of assets procurement by beneficiary household age and gender. The community generally favours transport means that can facilitate moving produce from the farm to the market or the main road, thus the investment in scotch carts. In addition mobile phones are a big purchase across all age groups and genders because the phones are used for communication, for lighting and sometimes to charge other low voltage devices.

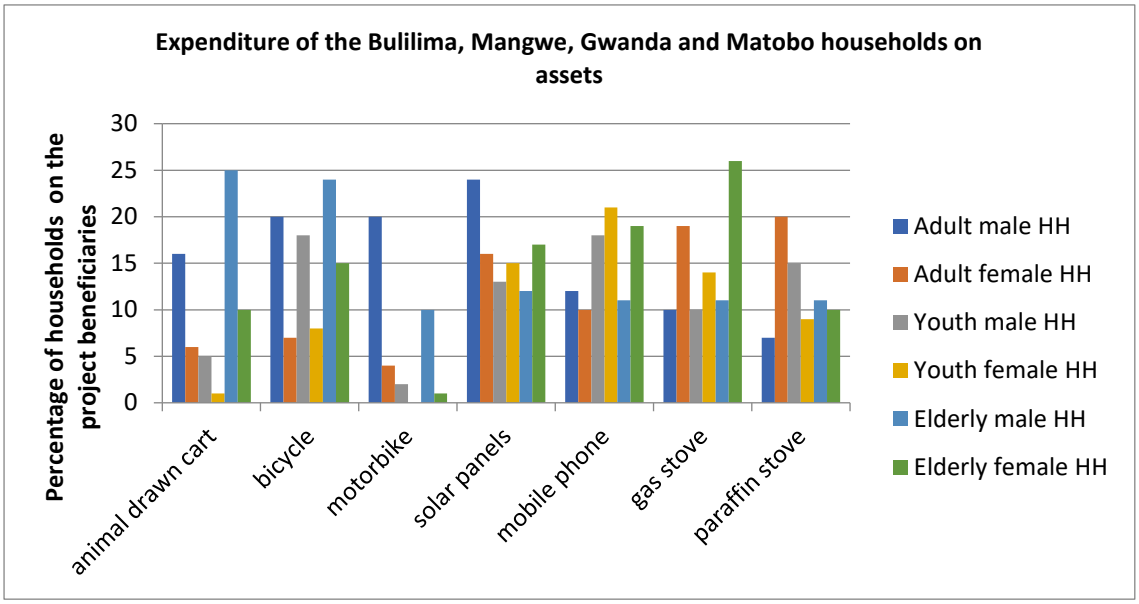


Figure 0-8: Bulilima, Mangwe, Gwanda and Matobo household expenditure on moveable assets

Agriculture activities at the scheme

- **Agronomic practices**

The participants highlighted that they practice subsistence farming and that the following agronomic practices are practiced in the area:

- Crop rotation
- Bucket watering system
- Manual weeding and harvesting
- Irrigation agriculture
- Rain fed agriculture
- Retained seed planting
- Mulching using tree leaves and crop residues

Cropping & harvest

The cropping calendar is developed and shared by Agritex officers and the beneficiaries begin their land preparations, put together contributions for seed or seedlings and begin planting. All planting should begin at the same time for pest control and harvest management. At present in the gardens there are maize and sugar beans. Due to the small size of the farming area, this will mostly be for immediate consumption with a few sales to neighbours. Sugar beans can be dried and stored for household use when we are way past harvest. Maize if produced in sufficient quantities is sometimes sold to the GMB. It is harvested collectively. Other crops grown by the community members include carrots. Rape, onion, tomatoes, cabbage, beetroot, lettuce, tsunga, cornflower. Figure 5-12 shows nursery and maize at the irrigation scheme and table 5-11 shows estimated crop yields.

Figure 0-9: Irrigation scheme nursery (left) and maize field (right)

Table 0-10 Estimated crop yields

Crops	Crop Recovery Rate (%)	Projected Three Year Production (Mt/ha)					
		Year 1		Year 2		Year 3	
		Gross Yield	Net Yield	Gross Yield	Net Yield	Gross Yield	Net Yield
Maize	95	5	4.75	6.5	6.18	8	7.60
Sunflower	90	2	1.80	2.3	2.07	2.5	2.25
Sugar Beans	90	1.5	1.43	2	1.90	2.5	2.38
Groundnut	90	2.5	2.25	3.5	3.15	4.5	4.05
Garlic	90	2.5	2.38	4	3.80	6	5.70
Ginger	90	15	13.50	17.5	15.75	20	18.00

Sales and marketing of produce and cattle

There is no formal means of transporting the village business units produce, it is often carried on foot, using donkey drawn carts or bicycles to the area of the market. Livestock like donkeys and cattle are used as draught power to pull carts. The absence of a motorized vehicle has his greatly affected the quantity of produce that can be transported by the community members. The other challenge faced is that because production is uniform (everyone grows the same crops at once), and most of the farm produce is perishable, they face severe losses when they fail to find a large market to absorb their harvested produce. Beneficiaries would like training in; marketing, creating market linkages through networking with green grocers even as far as Bulawayo, value addition to perishable farm produce such as drying and packaging or other preservation means such as pickling and tinning. The livestock market is lucrative but however during dry and drought period cattle are sold for lower prices due to weight loss and fear of the farmer from losing the cattle because of death from hunger.

Market linkages

There is no formal means of transporting the village business units produce, it is often carried on foot, using donkey drawn carts or bicycles to the highway (8km away) to travel to either Gwanda, Plumtree,

Mapisa and Bulawayo town. This greatly affects the quantity of produce that could be transported by the irrigation scheme members. The other challenge faced is that because production is uniform (everyone grows the same crops at once), and most of the farm produce is perishable, they face severe losses when they fail to find a large market to absorb their harvested produce. The livestock is sold among themselves and through auction system under Mangwe Rural District Council and Abattoirs.

Ethnicity/language

Local languages spoken in the area include Ndebele, Zulu, Kalanga and Suthu.

Water supply and conveyance

The communities are abstracting water from boreholes or rivers which are 6km away. They use scotch cart to transport water from the boreholes or rivers to the dip tanks. Most farmers in the targeted districts rely on rainfed agriculture. risk of water shortages in the middle of a cash crop period. There are boreholes with bush pumps that are used to supply community members with water for domestic uses. 85% of the population indicated absence of water for livestock and irrigation during dry season or drought period.

Health status of the area

Most prevalent diseases in the area are diarrhoea, malaria, schistosomiasis, sexually transmitted infections (STIs). The diseases may not only possess the risk to employees but may add risk to the local people near the project site. The average HIV prevalence of Gwanda, Mangwe, Bulilima and Matobo districts stands at 21.9%. The incidence rate per 1000 people for diarrhoea is 41.5, for dysentery its 0.9 and for schistosomiasis its 2.1.

Transport and communication

The most common modes of transport in the area include vehicles, carts, motorbikes, bicycles. Communication is being done by broadcast (television and especially radio), group (video, CDs, audio-cassettes, posters), and Interpersonal channels (community leaders, contact farmers, extension workers).

Gender Based Violence (GBV)

Gender based violence data collection was a combination of both qualitative and quantitative /approaches that include household visits, document review, focus group discussions, key informant interviews and face-to-face interviews with community based organisations, NGOs and other organisations working on GBV service provision in the area. Prior to the implementation of the field research, a desk review was conducted to consolidate the existing data and information on GBV in

Gwanda, Bulilima, Matobo and Mangwe District Councils. Due to the sensitivity of data collection on GBV, enumerators were trained on how to handle this information to ensure the safety and confidentiality of the individual. The data collection was aimed at identifying knowledge, attitudes and practices around GBV, services availability, referrals, access challenges and prevalence rate of gender-based violence. Targets were community members and key informants, including multi-sectoral service providers and religious leaders.

5.15.1 Key findings

The GBV analysis baseline assessment revealed the following trends related to GBV in the area:

a) **Gender based violence Statistics** – In year 2024, GBV prevalence rate 39.4% for Matabeleland South.
b) **Barriers and challenges** - Mostly Gender Based Violence cases are often concealed by families and community leaders.
c) Most frequent types of GBV - intimate partner and domestic violence, physical violence, harassment in public spaces, child marriage and denial of resources
d) **At-Risk Groups** - women and girls headed households were identified as particularly vulnerable and at risk of GBV.
e) The level of responsiveness by the police, community elders and elected leaders remains low in addressing rape and GBV cases at community level.

Table 0-11: Municipality of Gwanda carrying out gender based violence awareness

5.15.2 GBV service providers in the area

To provide services such as medical treatment, psycho social support and legal services to Gwanda, Bulilima, Mangwe and Matobo community survivors of Gender Based Violence, some organisations have been established for example:

a) There are **clinics** and districts hospitals in all districts which provide treatment and assistance to survivors of gender based violence.

b) **Zimbabwe Women Lawyers association** which is a non-profit making organization which fights for justice and equality for abused women. Zimbabwe Women Lawyers Association provides legal aid and education to women in the area.

c) **One Stop Centre (OSC)** at Gwanda Provincial Hospital that provides emergency medical treatment, medical, legal and psychosocial services for free.

d) **Zimbabwe Republic Police,** Police stations in Gwanda, Bulilima, Matobo and Mangwe

e) **Churches** which include Roman Catholic, Christ Embassy, Seventh Day, Reformed Church in Zimbabwe, Brethren Christ

f) **Local grievance redress committee**

5. PROJECT ALTERNATIVES

This ESMP study sought to consider possible alternatives to the proposed project for the ACRES in Gwanda, Bulilima, Mangwe and Matobo 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 farmers along the Zimbabwe Botswana boarder will continue to lose their livestock crossing to Botswana and being shoot to kill and sometimes stolen. 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 enhancement of livestock and crop production in Gwanda, Bulilima, Mangwe and Matobo 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, fertiliser distribution and crop production. Improved cattle husbandry, fodder and pasture development will lead to mitigation of conflicts arising from livestock crossing to Botswana and 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 mitigating crossing to Botswana, 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. The enhanced crop production will lead to improved food security, nutrition and sustainable livelihood. The intervention of agroforestry practices and introduction of drought resistant grass and pasture varieties will enhance the rangeland management therefore creating green zones along Zimbabwe side of Zimbabwe Botswana Boarder. Thus the project has significant environmental, social and economic benefits for the targeted communities in Gwanda, Bulilima, Mangwe and Matobo as it will enhance household incomes.

Beneficiaries acknowledge that the project will help improve their livelihoods through mitigating the climate induced drought challenges which include losing cattle that crosses to Botswana looking for

water and green pastures, poor cattle husbandry practices and inadequate infrastructure for cattle dipping and fodder production and disease limit the productivity and health of livestock. The absence of village business units and water boreholes limit the crop production and livestock water points. 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 crop production, 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 Gwanda, Bulilima, Mangwe and Matobo 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. Gwanda, Bulilima, Mangwe and Matobo has existing potential of for livestock and crop 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 and crop production 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 tree and 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 crop production component evaluated various crops, with a focus on eco-friendly methods that reduce water usage and chemical waste. The selected water technologies aim to produce high-quality crop yields 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, drilling and installation of solar powered boreholes, fodder production, and crop production, is tailored to address the specific needs of Gwanda, Bulilima, Mangwe and Matobo district. This integrated approach is essential for achieving the desired outcomes of improved livestock health, enhanced productivity, and value addition in the agriculture value chain.

Site Options: The chosen sites were selected based on their suitability for cattle husbandry, crop, fodder production, availability of ground water during dry season and being not an elephant's corridor. 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, crop 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**.

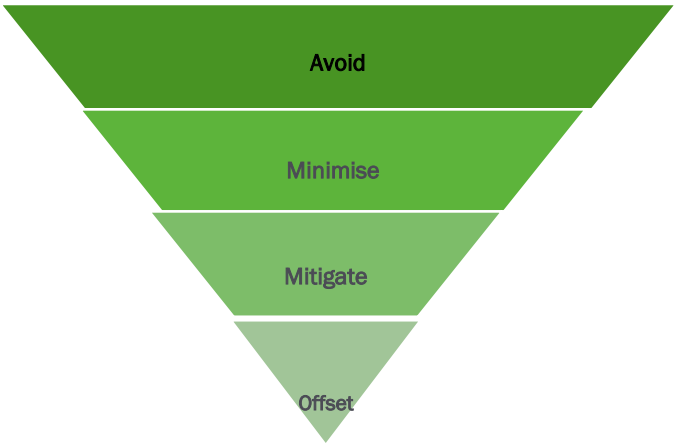


Figure 10. The Mitigation Hierarchy

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 Gwanda, Bulilima, Mangwe and Matobo 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 agriculture 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 Gwanda, Bulilima, Mangwe and Matobo.

6. MAJOR ENVIRONMENTAL AND SOCIAL IMPACTS AND CLIMATE CHANGE RISK

6.1 Positive Environmental Impacts

Water availability for Livestock and Humans

One of the primary environmental challenges in Zimbabwe, similar to many regions in sub-Saharan Africa, is water scarcity and erratic rainfall patterns. The project tackles these issues through several key initiatives. First, it includes the rehabilitation and construction of multipurpose solar-powered boreholes and water troughs, which not only ensure reliable water supply for livestock but also contribute to improved water availability for domestic use and agriculture. By reducing the distance to water sources from 6-10 km to nearby facilities, the project significantly enhances water accessibility, thereby improving hygiene and health conditions in beneficiary households.

Enhance Rangeland Management and Biodiversity conservation

Furthermore, the project incorporates climate-smart agricultural practices such as climate-smart rangeland management and the development of 100 hectares of pastureland. These efforts aim to mitigate land degradation, control runoff and erosion, and improve soil fertility. By implementing conservation practices around dip tanks and borehole areas, the project promotes sustainable land use and agricultural productivity. Additionally, the introduction of agroforestry programs and the planting of fruit trees contribute to biodiversity conservation and enhanced water quality through improved percolation and groundwater recharge.

Efforts toward climate-smart agriculture and rangeland management can mitigate environmental degradation. Practices like soil conservation, water management, and sustainable pasture development contribute to biodiversity conservation and resilience to climate change.

Environmental Conservation

Implementation of sustainable practices such as rotational grazing, water conservation, and waste management can mitigate environmental degradation. The ACRES intervention integrating rotational grazing and water conservation practices significantly enhances environmental conservation efforts in Zimbabwe. By implementing rotational grazing, the project promotes sustainable land use practices that prevent overgrazing and soil degradation. This method allows pastures to recover and regenerate, improving soil fertility and reducing erosion risks. Concurrently, water conservation measures such as water harvesting and efficient irrigation systems optimize water use, particularly in arid regions, thereby safeguarding local water resources and enhancing resilience against drought. Together, these strategies under ACRES foster a balanced ecosystem, supporting biodiversity, carbon sequestration, and overall environmental health in the targeted areas. This can lead to the preservation of natural resources, biodiversity conservation, and improved ecosystem services (IUCN, 2017).

Improved Animal Health and Productivity

Rehabilitation of dip tanks and the drilling of solar-powered boreholes will ensure disease control and a consistent water supply, enhancing animal health and productivity. The ACRES intervention focusing on the rehabilitation of dip tanks and drilling of solar-powered boreholes significantly enhances animal health and productivity in Zimbabwe's agriculture value chain. By rehabilitating dip tanks, the project ensures regular cattle dipping, crucial for controlling tick-borne diseases that can devastate livestock health and productivity. Additionally, the installation of solar-powered boreholes provides reliable access to clean water, mitigating the risk of waterborne illnesses and dehydration among livestock. These improvements not only promote better overall health for cattle but also increase productivity by reducing disease-related losses and ensuring sufficient water supply for grazing and drinking, ultimately supporting sustainable growth within the local agricultural economy.

Genetic Improvement

Distributing 14 bulls of superior genetics will enhance livestock quality, leading to better meat and milk production. The ACRES intervention of distributing bulls with superior genetics significantly contributes to cattle genetic improvement by introducing superior breeding stock into local herds. These bulls are selected for traits such as disease resistance, growth rate, and meat quality, which are crucial for enhancing the productivity and resilience of cattle in Zimbabwe. By mating these bulls with local cows, the program aims to gradually enhance the overall genetic profile of the cattle population, leading to increased productivity, better adaptation to local environmental conditions, and ultimately improving the livelihoods of farmers through higher yields and more resilient livestock.

Fodder Availability

Developing 100 hectares of pasture and emphasizing fodder conservation will ensure livestock have adequate nutrition throughout the year. The ACRES intervention of developing 100 hectares of pasture and emphasizing fodder conservation is pivotal for ensuring year-round livestock nutrition in Zimbabwe. By expanding pastureland, the project addresses the critical need for sustainable grazing areas, reducing overgrazing pressures on existing land. Moreover, emphasizing fodder conservation techniques such as silage production and haymaking enhances feed availability during dry seasons when natural forage is scarce. This dual approach not only supports increased livestock productivity and resilience to climate variability but also promotes sustainable land use practices essential for long-term agricultural viability in the region.

Community Environmental Stewardship

Training communities on conservation practices will increase awareness and implementation of sustainable practices, benefiting both the environment and livestock. The community training program under ACRES focuses on imparting essential conservation practices within Zimbabwe's agriculture value chain, yielding significant positive outcomes. By educating local stakeholders on sustainable land management, efficient water use, and integrated pest management, the project enhances agricultural productivity while safeguarding natural resources. This training fosters, a deeper understanding of environmental stewardship, empowering communities to adopt practices that mitigate environmental degradation and promote biodiversity conservation. As participants apply these principles in cattle dipping, fodder production, and hide processing, they contribute to improved crop yields, healthier livestock, and enhanced livelihoods, thereby fostering sustainable development across the region.

6.2 Positive Social Impacts

Economic Development and Livelihoods

Socially, the project is expected to have transformative effects on local communities, particularly in the project districts where livelihoods are heavily reliant on rain-fed agriculture and livestock. Improved agricultural productivity not only ensures food security but also increases household incomes through surplus produce sales. This economic upliftment is crucial for poverty reduction and improving overall living standards. Increased production and export of agriculture products can lead to a rise in GDP, job creation, and income generation for local communities (World Bank, 2020).

The project aims to enhance the agriculture value chains, which can significantly boost local economies. By improving livestock productivity and the quality of leather products, it creates opportunities for income generation among farmers and small-scale entrepreneurs. Increased market access and product competitiveness can lead to higher incomes and improved livelihoods, particularly for rural communities' dependent on agriculture.

Poverty Alleviation: The project can alleviate poverty by providing livelihood opportunities to smallholder farmers and rural communities involved in cattle rearing and leather production. This can lead to improved standards of living and reduced dependency on subsistence agriculture (FAO, 2018).

Inclusivity

The project prioritizes gender equality and youth empowerment by ensuring that at least 35% of beneficiaries are female-headed households and that 50% of training efforts are directed towards women and youth. This approach not only addresses gender disparities but also enhances the capacity of marginalized groups to participate actively in economic activities and decision-making processes within their communities. Social Inclusion: The project can foster social inclusion by empowering marginalized groups such as women and youth. Providing equal access to resources, training, and market opportunities can promote gender equality and youth empowerment, contributing to social cohesion and community development (IFAD, 2021).

Employment opportunities

Moreover, the establishment of community-level demand-driven feedlots and aggregation centres creates employment opportunities and fosters local entrepreneurship. By supporting agri-business and value chain enhancement, including the development of an online market platform for leather products, the project facilitates market access and improves the competitiveness of small and medium enterprises (MSMEs) in the agricultural sector.

Infrastructure Development

Infrastructure improvements such as the rehabilitation of dip tanks, construction of water troughs, and installation of solar-powered boreholes contribute positively to local infrastructure. These enhancements not only benefit livestock management but also improve water access for communities, potentially reducing water-related diseases and improving overall health.

Knowledge Transfer and Skills Development

Training programs and knowledge exchanges, as part of the project's components, empower local communities with skills in sustainable agricultural practices, agri-business management, and product quality standards. This transfer of knowledge strengthens local capacities, enhances productivity, and fosters innovation within the agriculture sector. Investing in the agriculture value chain can promote skill development among local communities. Training programs on modern farming techniques, leather processing, and business management can empower individuals with valuable skills, enhancing their employability and entrepreneurship (UNDP, 2019).

Enhanced Livestock and Crop value chains: Training on quality standards and market linkage will improve the quality of leather products, making them more competitive in the market. By equipping stakeholders with comprehensive knowledge on assessing and improving hide quality, the project not only ensures that Zimbabwean hides meet international standards but also enhances their market competitiveness globally. Concurrently, the development of feed lots under ACRES fosters improved cattle management practices, ensuring healthier livestock and higher-quality hides. Together, these efforts contribute synergistically to bolstering the entire agriculture value chain in Zimbabwe, fostering sustainable economic growth and increased export potential for the country's agricultural sector.

Market Expansion: Supporting exhibitions and knowledge-exchange visits will expose local producers to new markets and best practices, expanding their business opportunities. By enhancing infrastructure, modernizing production practices, and improving market linkages, ACRES will create new avenues for local farmers and processors to access broader domestic and international markets. This expansion will not only increase export potential but also stimulate local economies, improve livelihoods, and foster sustainable growth across Zimbabwe's agriculture value chains. Creating an

online platform for leather products will provide broader market access and direct sales opportunities, increasing revenues for producers.

Improved efficiency and profitability of cattle husbandry: Developing feedlots and aggregation centres will streamline livestock management and market access, improving efficiency and profitability for farmers. By implementing targeted strategies such as improved fodder production, cattle dipping to control diseases, and optimizing hide processing techniques, the project seeks to boost livestock health, productivity, and the quality of finished products. These initiatives not only aim to increase yields and reduce losses but also enhance market competitiveness and profitability for local farmers and stakeholders involved in the value chain. Through sustainable practices and technological advancements, ACRES aims to create a more resilient and profitable livestock sector, contributing to economic growth and stability in the region.

Improved Dairy Production: Supporting dairy farmer groups will improve dairy product quality and production processes, particularly benefiting women and youth involved in these activities. By providing training in modern farming practices, such as improved animal husbandry techniques and sustainable fodder production, ACRES empowers these groups to optimize milk production. Access to veterinary services and quality inputs ensures healthier livestock, resulting in higher milk yields with improved nutritional content. Moreover, capacity-building in milk handling and processing equips women and youth with the skills to produce dairy products of superior quality, meeting market standards and increasing their incomes. This comprehensive support not only enhances product quality but also fosters economic empowerment and social inclusion among marginalized groups within the dairy sector.

6.3 Climate Change Adaptation

In response to climate change challenges, ACRES will promote 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, ACRES 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 ACRES 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.

6.4 Environmental Negative Impacts

The ACRES Project, encompasses a series of interventions aimed at revitalizing Zimbabwe's agriculture industries. While the project intends to bolster economic growth and livelihoods, it also carries significant negative social and environmental impacts that must be carefully considered.

Loss of Biodiversity: The rehabilitation of dip tanks and installation of solar-pumped boreholes often involve clearing of land and disruption of natural habitats. This can lead to fragmentation of ecosystems and loss of biodiversity, affecting local flora and fauna species dependent on these

habitats potentially contributing to biodiversity loss through several pathways. Increased demand for cattle grazing areas might lead to habitat fragmentation and degradation, particularly in ecologically sensitive regions. Intensive livestock farming practices, if not managed sustainably, could result in soil erosion, water pollution from runoff containing agricultural chemicals, and overexploitation of natural resources such as water for irrigation or feed production. Furthermore, the expansion of agricultural land and infrastructure associated with the project could encroach upon natural habitats, displacing native species and disrupting local ecosystems. Effective environmental management strategies, including stringent land use planning and sustainable agricultural practices, are crucial to mitigate these potential impacts and promote biodiversity conservation alongside economic development.

Soil and Chemical Pollution: Agricultural intensification through pasture development and fodder conservation may require the use of chemical inputs such as fertilizers and pesticides. Improper application or runoff can result in soil degradation and contamination, impacting soil health and productivity in the long term. Increased agricultural activities such as intensified fodder production might involve the use of chemical fertilizers and pesticides, which, if improperly managed, can leach into the soil, affecting its fertility and contaminating groundwater. Additionally, practices like cattle dipping, essential for disease control but involving chemical treatments, could contribute to chemical residues entering the soil and nearby water bodies if not carefully monitored and disposed of. These interventions, while beneficial for agricultural productivity, necessitate stringent environmental management to mitigate the risks of soil and chemical pollution.

Air Quality: Intensive livestock farming, especially in concentrated feedlot areas, can lead to increased emissions of ammonia, methane, and other gases. These contribute to air pollution and greenhouse gas emissions, exacerbating climate change and affecting local air quality. Construction work, especially if not managed with proper dust control measures, can release particulate matter into the air, leading to respiratory issues and reduced air quality. Moreover, increased cattle production results in higher quantities of dung, which, if not appropriately managed through efficient waste disposal systems, can emit methane and ammonia gases. These gases contribute to air pollution and can exacerbate local air quality issues, posing health risks to both livestock and nearby communities. Effective environmental management practices, including dust suppression techniques and waste management protocols, are crucial to mitigate these impacts and ensure sustainable development under ACRES.

Environmental Degradation: Despite efforts towards sustainability, intensive agricultural practices in the agriculture value chains can lead to environmental degradation. Soil erosion, loss of biodiversity due to land clearing, and chemical pollution from agrochemicals (e.g., pesticides, fertilizers) pose risks to ecosystems and wildlife habitats. Improper waste disposal and inadequate pollution control measures can exacerbate these impacts. Intensified cattle ranching and increased fodder production can lead to deforestation as land is cleared for grazing and cultivation. Moreover, improper management of cattle dipping facilities and waste disposal could contaminate water sources, affecting both aquatic ecosystems and local communities reliant on clean water. Additionally, if not carefully monitored, increased agricultural activity may contribute to soil erosion and degradation, reducing land fertility over time.

Water pollution

Increased water demand from livestock and agricultural activities, coupled with climate variability, can strain local water resources. Over-extraction from boreholes and surface water sources may lower water tables, impacting groundwater availability and quality. Contamination from agrochemical runoff poses risks to water quality, affecting both human consumption and ecosystem health. For instance, increased cattle dipping, a key component aimed at controlling tick-borne diseases, could introduce chemical residues from acaricides into water bodies if proper disposal and management practices are not strictly adhered to. Similarly, intensified fodder production might involve the use of fertilizers and

pesticides, potentially leading to runoff into nearby water sources during rain events. Effective implementation of Environmental and Social Management Plans (ESMPs) is crucial to mitigate these risks, ensuring that agricultural practices under ACRES do not compromise water quality in the region.

The drilling of boreholes and construction of water troughs can alter local hydrology and groundwater systems. Increased sedimentation and chemical runoff from nearby agricultural activities can degrade water quality, affecting both human and animal consumption and potentially harming aquatic ecosystems.

Waste Generation: Large-scale hide processing and feedlot operations generate significant quantities of organic waste, including animal waste and processing by-products. Improper management of these wastes can lead to odour issues, soil contamination, and contribute to greenhouse gas emissions if not properly treated. By focusing on improving livestock management techniques such as proper cattle dipping and waste disposal strategies, ACRES aims to reduce environmental contamination from agricultural runoff and improper disposal of hides and other by-products. Through training programs and infrastructure development for efficient waste management, the project seeks to enhance local capacity to handle waste sustainably, thereby minimizing water and soil pollution while promoting cleaner production practices within the agriculture value chain in Zimbabwe.

Loss of Flora and Fauna

The ACRES interventions, particularly in the agriculture value chain, could potentially have adverse effects on local flora and fauna. Increased agricultural activities such as expanded fodder production might lead to habitat loss or fragmentation, impacting indigenous plant species and disrupting natural ecosystems. Additionally, intensive cattle dipping practices could introduce pollutants into local water sources, affecting aquatic life and biodiversity. The processing of hides, if not managed properly, could result in waste disposal issues, potentially contaminating soils and further disturbing local wildlife habitats. These activities necessitate careful planning and implementation of Environmental and Social Management Plans (ESMPs) to mitigate these potential negative impacts on the environment and biodiversity.

6.5 Negative Social Impacts

Social Exclusion and marginalization

The project's implementation may inadvertently exacerbate social inequalities within communities. In some cases, the project's benefits may not reach marginalized groups, including women and youth, leading to social exclusion and disparities in access to resources and opportunities. By focusing resources and support on specific sectors or groups involved in the value chain, there is a risk of marginalizing or neglecting other community members who may not directly benefit from these interventions. This selective assistance can lead to increased social stratification, where those connected to or benefiting from the project may experience improved economic status and social standing, while others could face exclusion or reduced opportunities, widening the gap between different segments of the community. Additionally, if the project inadvertently disrupts traditional livelihoods or community cohesion without adequate mitigation measures, it could further strain social dynamics and contribute to increased social tensions or inequalities.

Health and Safety Risks

Exposure to agrochemicals, inadequate sanitation, and poor hygiene practices can lead to health issues such as respiratory ailments, skin diseases, and waterborne illnesses. Rehabilitation activities around dip tanks could expose communities to physical harm during the construction phase, when the construction site is not properly secured. Additionally, the operation of feedlots might increase environmental pollution through waste disposal and potential water contamination, affecting local communities' access to clean water sources and posing risks to livestock and human health. The use

of agrochemicals and handling of livestock in intensive farming operations pose risks to farmers. Exposure to pesticides, poor ergonomic practices, and zoonotic diseases can lead to chronic health issues among farmers. Proper training, safety protocols, and environmental management practices are crucial to mitigate these risks and ensure the sustainable development of the agriculture value chain in Zimbabwe.

Human and Wildlife conflict

The Project districts are located in areas which were initially used for ranching of wild animals and some species such as Kudu, hyenas, warthog, impalas, elephants. Therefore, fodder production and water provision for livestock will increase the human and wildlife conflicts since these wild animals we also be attracted to the improved sites

Occupational Health & Safety: Occupational health risks are prevalent among livestock farmers and workers in related infrastructure construction. Construction sites will generate noise, dust and machinery can harm workers' health. Unsecured structures and equipment pose risks of falling on the workers.

Animal Health and Genetic Loss: The genetic enhancement efforts under ACRES could significantly impact animal health positively by selectively breeding for traits that improve disease resistance, productivity, and overall resilience. However, there is a potential risk of genetic erosion if the focus narrows too sharply on a few desirable traits, potentially reducing overall genetic diversity within the livestock populations. In addition, reduced genetic diversity reduces animal resilience to diseases leading disease outbreaks and posing risks to livestock productivity and sustainability. This could leave animals more vulnerable to future diseases or environmental changes that were not anticipated during the breeding process. Therefore, while genetic enhancement holds promise for enhancing animal health and productivity, careful management and monitoring of genetic diversity are crucial to mitigate risks of genetic loss and ensure long-term sustainability of the livestock populations involved.

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.

HIV/AIDS and Social Dynamics: In communities heavily reliant on migrant labour, such as those involved in the leather and beef industries, the project 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. Enhanced access to dip tanks may attract larger gatherings of cattle owners and workers, potentially increasing social interactions and mobility, which could inadvertently facilitate the spread of HIV/AIDS if proper health education and prevention measures are not implemented concurrently. 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. 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.

Conclusion

The Agricultural Conflict Resolution and Enhanced Sustainable Livelihoods Project (ACRES) presents a complex array of negative social and environmental impacts alongside its economic development

objectives. From biodiversity loss and soil pollution to human health risks and social displacement, these impacts underscore the importance of robust environmental and social management and comprehensive mitigation strategies. Addressing these challenges requires careful planning, community engagement, and adherence to the ESMP to minimize adverse effects on both the environment and local communities.

6.6 Climate Change Impact on the Project Area

Climate change significantly impacts Gwanda and Matobo, Mangwe and Bulilima districts located in the semi-arid region of Zimbabwe. 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 Bulilima, Gwanda, Mangwe and Matobo. 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.

6.7 Project Contribution to Climate Change and Associated Risks

The Zimbabwe Agricultural Conflict Resolution and Enhanced Sustainable Livelihoods (ACRES) holds potential to significantly impact climate change dynamics in Gwanda, Bulilima, Mangwe and Matobo districts. Through its focus on livestock production support and associated activities, such as crop production and pastureland development, ACRES 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, ACRES 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, ACRES has the potential to mitigate its environmental footprint while fostering resilient agricultural systems in these vulnerable districts.

6.8 Identifying Vulnerable Groups

Through discussions with the communities and a review of literature, including the ZIMVAC Reports (2021), marginalised (vulnerable) groups were identified for Gwanda, Bulilima, Mangwe and Matobodistricts 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:** HIV/AIDS is prevalent in Matobo, and although individuals with the virus have faced discrimination in the past, the availability of antiretrovirals 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 Matobo, Mangwe, Bulilima and Gwanda reporting a rate of 16% and drug and substance abuse at 12% (Zim Vac, 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 Gwanda, Bulilima, Mangwe and Matobo are headed by the elderly, with an average household size of 4.4. In Matobo, 22% of households are elderly-headed, with an average household head age of 49.4 years.
- **Child-Headed Households:** In Matobo, Bulilima, Mangwe and Gwanda, 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 Matobo, Bulilima, Mangwe, Gwanda, 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 ACRES comprehensively identify and address the needs of all vulnerable groups, promoting inclusivity and equity in the agriculture value chain.

6.9 Potential Risks that could affect the ACRES 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 agriculture 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).

6.10 Activities that could contribute cumulative impacts on Project activities

The ACRES could have cumulative effects on its impact. Here are the key areas of focus along with references to support this understanding:

In Gwanda, Bulilima, Gwanda and Matobo, various ongoing development activities may have cumulative effects on the project impacts.

i. Current Agricultural Practices and Land Use:

- In Matabeleland South, 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, such as the rangeland development project in Konjeni implemented by FAO, can have a positive cumulative effect on ACRES. This project complements ACRES by adding components that enhance the overall impact and sustainability of agricultural development efforts in the region.

V. Ground water

- Borehole drilling can lead to the depletion of groundwater resources, especially in areas where water is already scarce. Overuse of fertilizers can lead to soil nutrient imbalances, reducing soil health and fertility over time. Pesticides and fertilizers can leach into groundwater and surface water, causing contamination that affects aquatic ecosystems and drinking water sources. The use of pesticides can also harm non-target species, including beneficial insects, birds, and aquatic life, leading to a decline in biodiversity.

- Contaminated water sources can lead to health issues, including gastrointestinal diseases and long-term health effects from pesticide exposure. Competition for dwindling water resources can lead to conflicts among communities, especially in agricultural regions.

ENHANCEMENT/MITIGATION MEASURES AND COMPLEMENTARY INITIATIVES

Improving the environmental and social performance of the ACRES project in Gwanda, Bulilima, Mangwe and Matobo particularly in the agriculture 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 modernizing the agriculture value chain infrastructure. This includes upgrading beef marketing places, community slaughter shades and hide processing facilities. Additionally, 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. 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. Microfinance schemes or revolving funds 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 **Skill 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, agroforestry, and organic farming 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:** Implementing affirmative action programs to ensure equal participation of marginalized groups in project activities is essential. 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.

7.2 Mitigation Measures for Adverse Environmental Impacts

Loss of Biodiversity- Flora and Fauna

To mitigate the loss of flora and fauna, the ACRES project should conduct comprehensive surveys to identify endangered species and sensitive habitats and species, allowing for the implementation of measures such as habitat restoration, and strict adherence to zoning regulations to minimize habitat fragmentation. Implement strict habitat conservation measures, that minimise destruction of animal/bird habitats will helps preserve biodiversity. Avoiding construction or agricultural activities in sensitive ecosystems and adhering to land use planning that prioritizes biodiversity conservation are essential. Implementing mitigation hierarchy principles, including avoidance, minimization, and compensation, can offset unavoidable impacts on flora and fauna, ensuring long-term ecological sustainability. Should it be necessary, establish biodiversity offset programs can help compensate for any unavoidable impacts.

Soil Chemical Pollution

To mitigate soil chemical pollution, the ACRES project should prioritize the use of organic farming practices and integrated pest management techniques to minimize reliance on chemical inputs. Proper storage, handling, and disposal of agrochemicals should be strictly regulated to prevent leaching and runoff into soil and water systems. Regular soil testing and monitoring for contamination incidences should be conducted, with prompt remediation measures implemented if pollution is detected. Training local farmers on sustainable agricultural practices and promoting the use of eco-friendly alternatives can also significantly reduce chemical pollution.

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 Pollution

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. Establishing appropriate grassed sites for disposal of dip effluent to minimize run-off into the nearby streams will reduce water pollution. The DVS and EMA recommend use of soakaways for dip effluent. 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.

Waste Generation

To mitigate waste generation, the project should prioritize waste reduction strategies such as promoting the use of recyclable materials and encouraging composting of organic waste. Implementing waste segregation at source and establishing community recycling programs can minimize the amount of waste sent to landfills. Proper management of hazardous wastes, including safe storage and disposal, ensures that pollutants do not enter the environment. Educating stakeholders on the importance of waste management and incentivizing sustainable practices can foster a culture of environmental responsibility. Contractor should follow their EMPs to manage waste generated from their activities.

Deforestation and Land Degradation

Implementing land-use planning measures such as zoning for agricultural and conservation purposes will regulate land use and prevent unplanned deforestation. Encouraging agroforestry practices, such as integrating trees into pasturelands, will restore degraded land while providing additional income for farmers. Establishing community-managed reforestation projects with incentives for tree planting will restore forest cover and mitigate soil erosion.

These measures collectively aim to minimize environmental impacts associated with the ACRES project, promoting sustainable development and biodiversity conservation in the affected regions.

7.3 Mitigation measures for the Social Impacts

Exclusion and Marginalization

To mitigate the risk of exclusion and marginalization, the project will prioritize inclusive stakeholder engagement at all stages. This includes consulting with local communities, traditional leaders, and marginalized groups to ensure their concerns and needs are heard and integrated into project planning and implementation. Transparent decision-making processes and equitable distribution of project benefits will be emphasized to promote social cohesion and prevent marginalization. The project will capacitate all staff, traditional leadership and local NGOs to mainstream GESI principles and develop promotional materials to encourage inclusivity.

Social Conflicts
Facilitating multi-stakeholder dialogues and conflict resolution mechanisms will address grievances and promote peaceful coexistence. Engaging local communities in participatory decision-making processes and ensuring transparent communication about project activities will build trust and reduce tensions. Resolving land tenure disputes through legal frameworks or community consensus-building processes will provide clarity and security for land rights. The project will also implement the GRM (Appendix 1) from the project inception.

Community Health and Safety
The project will implement rigorous health and safety protocols to protect the community. This includes providing training on safe agricultural practices and handling of chemicals used in cattle dipping and pastures. Through implementation of PMP communities will be trained and encouraged place to promptly address any accidents or health emergencies by seeking help.

Occupational Health Risks
To address occupational health risks, the project will enforce strict adherence to occupational safety standards. This includes providing personal protective equipment (PPE) to workers involved in cattle dipping and hide processing activities. Regular training sessions on safe handling practices and health hazards associated with chemical exposure will be conducted. Monitoring of occupational health conditions and providing access to medical check-ups will ensure early detection and management of any occupational health risks among workers.

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 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 agriculture 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.

HIV/AIDS and Social Dynamics:
The project will implement comprehensive HIV/AIDS awareness and prevention programs in collaboration with local health authorities and community organizations. This includes providing education on safe practices and promoting access to healthcare services, including testing and counselling. Sensitization campaigns will aim to reduce stigma associated with HIV/AIDS, fostering supportive social dynamics within the community. Gender-sensitive approaches will be integrated to

address specific vulnerabilities and ensure equitable access to project benefits and resources. Regular monitoring and evaluation will track progress and adapt strategies to evolving social dynamics and health needs.

Table 12. 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	Educate and build awareness	Monthly	Construction Supervisor E&S District environmental officer

					Use existing waste dumps			
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 Wet cleared sites & working area to reduce dust	Display notices Sensitize workers		Construction supervisor EMA, District PCU
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	Negative	6-12 months	Localised	moderate	Vehicle to remain on existing roads	Sensitization of drivers and workers	Monthly	Construction supervisor

around construction site(C12)					and designated parking at sites. Reduce movement on site revegetate			
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	Positive	Long term	Localised	significant	No mitigation	Value chain training	Quarterly	

quality in beef value chain (OM6)								
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 hubs and dip tanks (OM9)	Negative	Low to medium	Localised	low	Waste management practices Recycling	Waste management	quarterly	E & S 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 - Each dip tank will	Education and awareness	Monthly	

					discharge approximately 10000 litres of wate water			
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	HIV campaign s	Every quarter	District health facilities staff , DPIC, Traditional Leadership

					Provision of periodic Counselling and testing			
Occupational Health and Safety (OM17)	Negative				Health and safety guidelines at project facilities Availa first aid kits at facilities Sensitise communities on use of equipment Prohibit access to risky areas and equipment	Proper equipment use First aid skills	Yearly or every six months	E&S Relevant committees
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	MoED
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

7.4 Environmental and monitoring plan

The overall objective of environmental and social monitoring for the ACRES Project in Matabeleland South 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 ACRES 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 XX 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 ACRES Project aims to minimize its environmental and social footprint, promoting sustainable development in Matabeleland South districts.

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.

Public consultations were held at Tshitshi, Ramakwabane river in Mangwe District, Shashe river, Tuli river and Sebasa Village in Gwanda district, Sibomvu village, Masendu Central Villager and Tsukuru village in Bulilima Ditsrict, Nkubi Borehole and Bhakawe Village in Matobo. 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, Ndebele, 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 stakeholder engagement process will continue throughout the project lifecycle, as needed and defined in the Stakeholder Engagement Plan.

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.

The list of people consulted is provided as annex 2 to this report.

8.5 Summary of key risks/impacts presented by stakeholders

a) Economic and Market Challenges
Stakeholders have raised concerns about the economic challenges faced by crop and livestock farmers. These include low prices for livestock and hides, and the exploitation by buyers due to distant markets.

Responses and Registers:
The project's main objective is to ensure viability of livestock farming. It will address these issues by facilitating access to fair markets, providing pricing information, and supporting value addition for hides to enhance quality and marketability.

b) Water and Infrastructure Issues

Water scarcity and deteriorating infrastructure are critical issues impacting crop and livestock production and community well-being. Stakeholders have highlighted the need for reliable water sources and rehabilitation of dip tank and livestock facilities. They indicated lack of access to clean water and having to travel long distances to fetch water.

Responses and Registers:
The project will prioritize the restoration and rehabilitating existing dip tanks and constructing boreholes and water toughs and implementing water conservation measures to ensure sustainability. Efforts will also focus on improving livestock handling facilities. Maintenance of infrastructure will be an integral part of the project to ensure there is sustainability beyond project funding.

c) Disease and Health Issues

Livestock health is severely affected by disease outbreaks, particularly January disease, and the lack of adequate fodder. These issues lead to high mortality rates and economic losses for farmers.

Responses and Registers:
The project will implement comprehensive disease management programs, including regular vaccination and treatment campaigns. Additionally, it will promote the cultivation of drought-resistant fodder crops to ensure a steady supply of livestock feed. The project will work closely with the farmers to ensure that their own practises such as "not dipping cattle", and moving cattle between different regions without full inspection, change in order to reduce spread of disease.

d) Social and Community Support Issues

Farmers frequently highlighted droughts as a significant risk. Additionally, non-cattle owners who attended the meetings felt excluded by the project. Stakeholders emphasized the need to include non-cattle owners in some of the project's interventions to promote social cohesion within the community.

Responses and Registers:
The project will extend support to all community members, potentially including them in fodder production or other related activities. The program will employ drought mitigation strategies through enhanced livestock production, the provision of solar-powered boreholes, and the diversification of livelihood programs targeting women and youth.

Conclusion

Stakeholders presented key risks and impacts related to economic challenges, water and infrastructure issues, disease and health problems, and the need for social support. The government will use these insights to design the ACRES project to address market access, improve water and infrastructure, enhance livestock health, and provide comprehensive community support.

Consultations that need to continues through the project life are listed in the table below;

Table 13. 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	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.

			extension officers.				
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 microfinance institutions	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 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 implementation of enhancement and mitigation measures and the completion of the monitoring program require to clearly establish responsibilities among the various organizations involved in project implementation and operation. Ultimately the Borrower is responsible for monitoring and reporting on achieved results, but it may need to be assisted in the implementation of the ESMP by the project team and external consultants. Consequently, the ESMP shall identify the responsibilities of the Bank, the Borrower, the implementing agencies and other stakeholders in applying the ESMP, particularly the monitoring program. In addition, the ESMP shall propose support to the organizations that may have insufficient capacities to fulfil their obligations. This support could be provided through various means including technical assistance, training and/or procurement.

Overview of the Ministries involved in ACRES

The Zimbabwe Agricultural Value Chain Enhancement Project (ACRES) will be implemented over a period of five (5) years with the involvement and participation of five government ministries namely, Ministry of Finance, Economic Development and Investment Promotion (MoFEDIP); Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD); Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED); and Ministry of Youth, Arts, and Culture. Their mandates are described below.

Ministry of Finance, Economic Development Investment Promotion (MoFEDIP)

MoFEDIP's mandate is to formulate, coordinate and monitor the implementation of national development plans, macro-economic policies, to effectively mobilise, allocate, manage and account for public resources. The MoFEDIP also mobilizes domestic and international financial resources through the negotiation and conclusion of grant and loan agreements with private, bilateral and multilateral financial partners. The proposed project is a result of the mobilization function and contributes to the implementation of the National Development Strategy 1 (NDS1) through the promotion of 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)

The Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD) is dedicated to promoting and maintaining a viable, appropriately mechanized agriculture sector, especially in the context of a changing climate. Its functions include formulating, reviewing, and implementing effective agricultural policies, developing strategies to ensure food self-sufficiency and security as well as export capabilities, and designing strategies and guidelines for enterprise or industry-specific policy objectives. These efforts are executed through the Ministry's various technical departments and collaboration with key players in the agricultural sector

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

The Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED) aims to create a conducive and enabling environment that supports vibrant micro, small, and medium enterprises (MSMEs) and cooperatives. The Ministry is responsible for formulating and implementing policies for MSME and cooperative development, as well as developing a legal and regulatory framework to support these enterprises.

Ministry of Youth, Arts, and Culture (MYAC)

The Ministry of Youth, Arts, and Culture is tasked with formulating and establishing policy frameworks that promote the development of youth, sports, arts, and recreation. It also institutionalizes and enforces good corporate governance in youth, sports, and arts programs to attract and ensure the full participation of individuals and corporate entities.

9.1 Project Implementation And Management Structure

The Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD) will be the Project's Executing Agency (EA), through the existing Programme Management Unit (PMU). The PMU is housed in the Ministry of Finance, Economic Development and Investment Promotion (MFEDIP), and has vast experience in the management of the Bank and other Donor-funded projects. The PMU is composed of the following seven (7) core staff (i) Programme Manager (PM), (ii) M&E Specialist, (iii) Budget and Finance Officer, (iv) Procurement Officer; (v) Senior Procurement Specialist, (vi) Programme Officer, and (vii) Programme Assistant Finance Officer. The Government shall recruit an Assistant PM to beef up the capacity of the PM and will be responsible for management of the Bank-funded ACRES. The PMU shall be responsible for all aspects of project management, including planning, procurement, finance management, results monitoring and evaluation and environmental and social safeguards. The APM (ACRES) shall also oversee the implementation of this Project.

The Ministry of Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD), the Ministry of Women Affairs, Community, Small and Medium Enterprises Development (MWACSMED) and the Ministry of Youth, Arts and Culture will be the Implementing Agencies (IAs). The two ministries of MLAFWRD and MWACSMED 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 Ministry of Youth, Carts and Culture will have a focal person who will be responsible for representing the ministry at national coordination level. The two ministries aforementioned, will assign dedicated staff to implement the project and these will include a:

i Project Coordinator (PC)
ii Social and Environmental Specialist, (E&S at MLAFWRD PCU)
iii Accountant
iv Subject Matter (Technical) Specialist (TS)
v Monitoring and Evaluation (M&E) Officer, and
vi Procurement Officer.
vii Environmental and Social Safeguard Specialist

The 2 project coordinators will report to the PM at the MFED for consolidation of project reports.

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 (Dip tank Rehabilitation and Soil Conservation)
iv Rural Infrastructure Development Agency (RIDA)
v MWACSMED focal person
vi MYAC focal person.

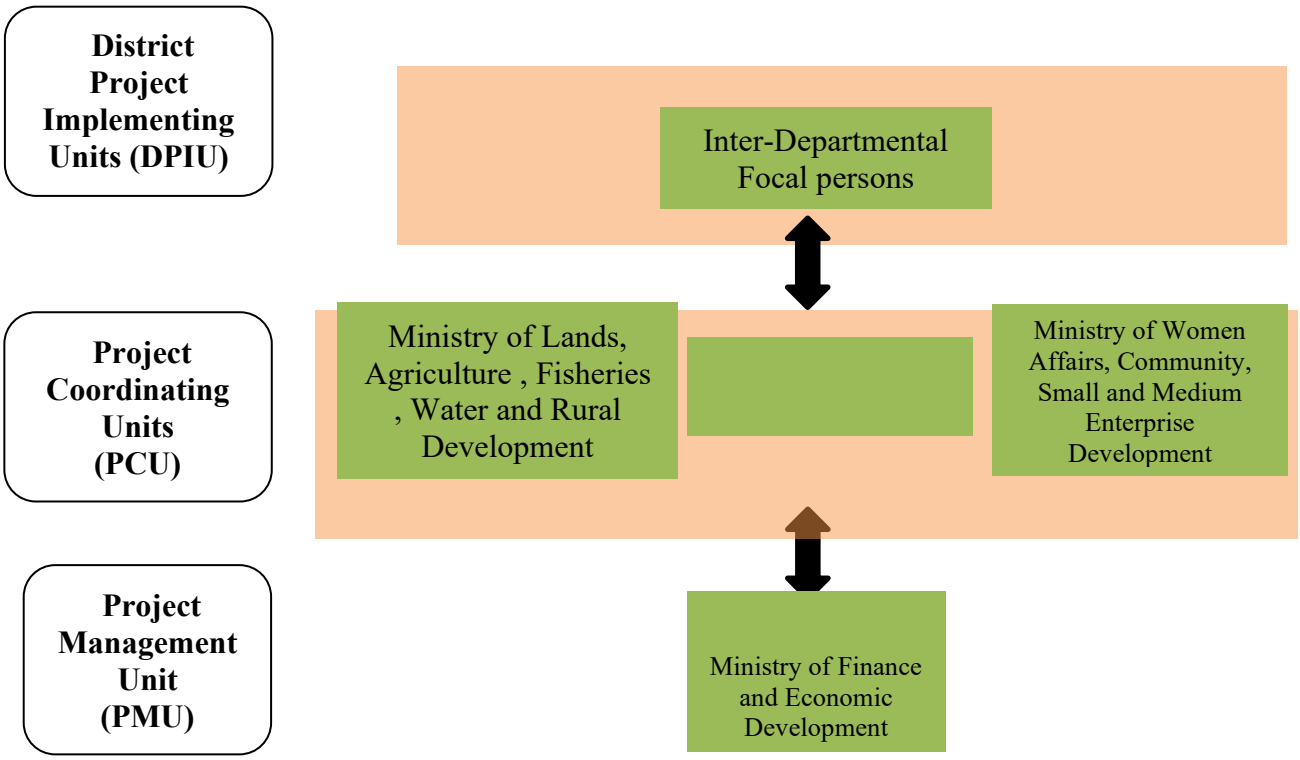
9.2 Procurement Arrangements: Procurement financed by the Bank for the project, will be carried out in accordance with the "Procurement Policy for Bank Group Funded Operations", dated 2015 and following the provisions stated in the Financing Agreement. Specifically, the Bank's PMP shall be used for procurement of large value contracts. For lower value contracts, the procurement will be in line with Public Procurement and Disposal of Public Assets Act [Chapter 22:23] 2018. Accordingly, the PMU within the Ministry of Finance shall undertake all procurement within the project. Considering the current workload of the team, the review is being carried out to assess the capacity to take one another project. The PMU may need to be augmented with additional procurement officer to support the project. The PMU should consider advanced procurement for any additional staff identified from the assessment of PMU capacity.

9.3 Financial and Audit Arrangements: *PMU Managed Resources - Component 1 and 3*: The PMU within MOFED will lead on Financial Management with the support of the Africa Capacity Building Foundation (ACBF). Under the existing project management arrangements, the financial management aspects, inclusive of the management of direct disbursements, are managed within the PMU. The Special Account is managed by the African Capacity Building Foundation (ACBF) under an agreement between the Bank, the Government of Zimbabwe and the ACBF. The PMU and ACBF have extensive experience in the management of AfDB-funded projects including several ongoing projects (SEDWY, ADRIFI II, Institutional Support for State Enterprise Reform Project and SACAGE among others). The ACBF has reorganized to address concerns the Bank and PMU raised with regard to late submissions of justifications and input to the quarterly interim financial reports. Steps to address these concerns include the reorganization of accounts staff to manage the projects. The mission raised concern about the staffing arrangements within the PMU and requested the PMU to undertake an internal assessment to ensure they have adequate capacity in relation to the additional projects that will come on board, currently the staffing capacity meets the minimum requirements.

Reporting: The PMU will be responsible for preparing the quarterly interim financial reports that will be submitted to the Bank within 45 days of the end of the quarter. The PMU will also prepare the annual financial statements that will be submitted to the auditor for review. ACBF will be responsible for submitting the reconciliation of the Special Account and Bank Statements to the PMU, on a monthly basis.

Auditing: The annual financial statements prepared by the PMU, will be audited by an independent private audit firm. The audit report, comprising audited financial statements inclusive of auditor's opinion and management letter, will be submitted to the Bank no later than 6 months after the end of the financial year. The cost of the audit will be borne by the project.

Disbursement Arrangements: The project would primarily make use of the Bank's (i) Direct Payment, and (ii) Special Account (SA) disbursement methods in accordance with Bank rules and procedures as applicable in the Disbursement Handbook 2020 Edition, as amended from time to time. The other two methods approved by the Bank (Reimbursement and Reimbursement Guarantee) will also be available if required. ACBF will manage the Special Account on behalf of the Government of Zimbabwe. The PMU will prepare the Direct Payment requests together with the supporting documentation and submit them to the ACBF for review and payment processing.



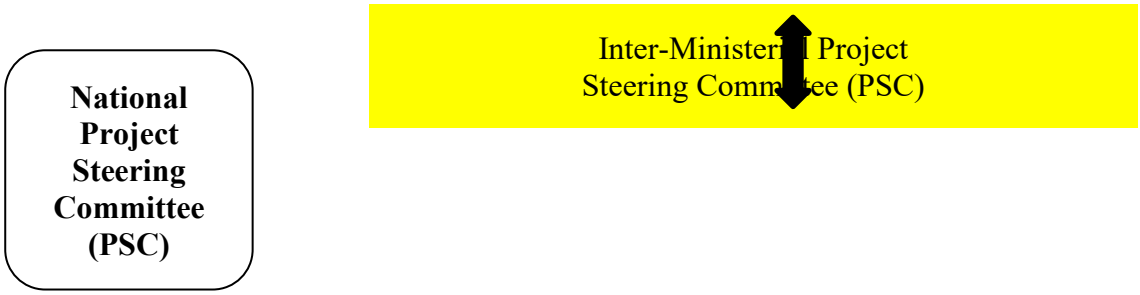


Figure 13. Proposed Institutional Structure for ACRES

9.2 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).

Figure 7 shows the proposed institutional arrangements. The three IAs MLAFWRD and MWACSMED as the implementing agencies of ACRES will establish the Project Coordinating Units. Each ministry will staff the PCU and coordinate project activities at national level. The PCUs will be based in Harare. Given the overall responsibility of the MLAFWRD PCU for the ACRES, 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 ACRES 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 PCUs 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 *14.* Institutional Roles and responsibilities for implementing the ESMP describes the proposed Roles and Responsibilities for implementing ACRES.

Table 14. 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 stakeholders on ESMP objectives and best practices - Capacity for monitoring	PCUs PMU SES	RDCs DPIUs Community leaders	Envi and Social safeguard consultant or EMA
	Stakeholder engagement - Informing and Consultations - Finalize grievance mechanism	SES DPIUs	Community leaders M&E-PCU	Consultant for GRM
Implementation Stage	**Compliance and enforcement** - ensuring compliance with E & S regulations - Implementing Mitigation measures	SES TS- DPIUs	EMA M&E- PMU M&E-PCU	Contractors and Sub-contractors And if needed consultant
	Monitoring and reporting - Regular monitoring - Documentation and reporting - Annual performance Audits	M&E-PCUs TS- DPIUs	EMA M&E- PMU	Independent E and S auditor for the annual performance A
	Corrective actions - Identifying non-compliance or unexpected impacts - Adjusting mitigation measures	E&S	PC-PCU M&E-PCU	E&S Consultant if required
Operational	**Ongoing monitoring and evaluation** - Continuous monitoring - Maintenance of env and social safeguards	E&S M&E-PCUs 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 - - Document lessons and best practices	PC-PCU PM-PCU	AfDB Local office	PCU teams PMU team
Post-Closure Stage	**Post implementation Monitoring** - Post closure monitoring to ensure long-term stability - Address any residual impacts	SES	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	SES TS- DPIUs	Local leadership M&E-PCU	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 ACRES 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 training 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**:* includes 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 15. 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	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
Data analyses to assess effectiveness	Operational phase	Training	M&E- PCU M&E-PMU	External E & S Auditors		

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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 and audit	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) and the associated documents i.e. the SEP, PMP and Grievance Mechanism. 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. **Table *16*** provides an estimate of the timeframes for implementation of key components.

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.

Table 16. 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 – 4 intense in the first 18 months	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 ACRES project, covering all its components over a five-year period in the Gwanda, Bulilima, Mangwe and Matobo districts. Based on experience from similar projects, the estimated cost for implementing the ESMP's recommendations is approximately US$0.53 million.

Table 17. ESMP Budget for Gwanda, Matobo, Mangwe and Bulilima Districts

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

Phase	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Preconstruction Phase mitigation measures	$18,500					18,500
Construction phase Measures	$15,000					15,000
Operation and maintenance phase awareness and Monitoring activities	$ 12,000	$12,000	$12,000	$12,000	$15,000	$60,000
Capacity Building	$ 15,000	$ 5,000	$ -	$ 5,000	$ 6.325	$ 31,325
Stakeholder Management plan	$ 17,200	$17,200	$17,200	$8,600		$ 150,000
Grievance redress Mechanism	$ 30,000	$20,000	$20,000	$15,000	$25 000	$ 105 000
Pest management	$ 30 000,00	$20 000,00	$15 000,00	$20 000,00	$20,000	$95,000
Decommissioning						$30,000
SUB total						$504,825
Contingency 5%						$ 25,175
GRAND TOTAL						**$530 000**

12 PROJECT DECOMMISSION PLAN

Decommissioning for the ACRES 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.

Cost Estimates for the Decommissioning Plan:

i Assessment and Planning:	**For the four Districts**
- Infrastructure and site assessment:	$4,000
- Development of decommissioning plan:	$1,000
- Stakeholder engagement and consultation:	$1,000
ii. Dismantling and Removal:	
- Dismantling non-functional infrastructure:	$2,000
- Removal and transportation of materials:	$2,000
- Recycling and disposal of waste:	$2,000
iii. Site Rehabilitation:	
- Soil and water testing	$1,000
- Land rehabilitation and restoration:	$3,000
iv. Environmental Monitoring:	
- Continuous monitoring during decommissioning:	$3,000
- Post-decommissioning environmental assessment:	$3,000
5. Social Considerations:	
- Community engagement and support:	$1,000
- Development of exit strategy:	$2,000
6. Documentation and Reporting:	
- Documentation of decommissioning activities:	$2,000

- Final reporting and compliance verification:	$3 000
Total Estimated Cost	**$30,000**

This budget provides an estimate of the financial requirements for decommissioning ACRES, 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 ACRES 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 ACRES project primarily revolve around land degradation, water resource depletion, and pollution. Fodder production and crop 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. 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 ACRES 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 ACRES 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.

Conclusion

The ACRES 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 ACRES 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 ACRES Project Preparation Mission - July 2025

No	Full Name	Title	Organisation
1.	Prof Obert JIRI	Permanent Secretary	Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD)
2.	Margiretta MAKUWAZA	Acting Chief Director	Ministry of Finance, Economic Development and Investment Promotion (MoFEDIP)
3.	Clement T. BWENJE	Chief Director	Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD)
4.	Bernard MUPURIRI	Director	MoFEDIP
5.	Enia D. RUGARE	Acting Director – International Cooperation Department	MoFEDIP
6.	Agatha MAKUNGANYA	Snr Economist	MoFEDIP
7.	Nathan NKOMO	Chief Director, Civil Protection	Ministry of Local Government & Public Works (MoLGPW)
8.	T. NYAMUSA	Economist	MoFEDIP
9.	Rutendo NYAHODA	Deputy Director, Department of Livestock Production and Development	MLAFWRD
10.	Nyasha W. PARIMWA	Senior Economist	MLAFWRD
11.	Bhekilizwe NCUBE	Deputy Director	ARDAS
12.	Lester MURADZI	A/Deputy Director	ARDAS
13.	Lester MURADZI	A/Deputy Director	MLAFWRD ARDAS / LUP & HORT
14.	Kundai MAKUKU	Director	MLAFWRD - ARDAS
15.	Washington KATIYO	Director	MLAFWRD ARDAS
16.	Taurai MAJA	A/Deputy Director	MLAFWRD - WASH
17.	Elhadji Moussa ADAM	Director -Business Services and Operations	African Capacity Building Foundation (ACBF)
18.	Abdrahamane DICKO	Director – Programs and Impact	ACBF
19.	Spencer BOKOSHA	Head of Finance	ACBF
20.	Thulani MKHOSANA	Grants and Compliance Officer	ACBF
21.	Taurai MACHONA	Accounting Officer	ACBF
22.	Patience JAMBAYA	Finance Associate	ACBF
23.	Eneida FERNANDES	Country Manager	World Bank
24.	Agnes MWEEMBE	Economist	MoFEDIP
25.	David MUNEMO	Procurement Specialist	MoFEDIP
26.	Ratidzai MACHAWIRA	M & E Specialist	MoFEDIP
27.	Borniface CHIYANGWA	Budget & Finance	MoFEDIP
28.	T VHEZHA	Economist	MoFEDIP
29.	Martin MARINGA	Economist	MoFEDIP
30.	Lawrence CHIWARA	Economist	MoFEDIP
31.	Jeremiah VUTETE	Accountant	MoFEDIP

No	Full Name	Title	Organisation
32.	Bornface CHIYANGWA	Budget and Finance Officer	MoFEDIP PMU
33.	Ratidzai MACHAWIRA	M & E Specialist	MoFEDIP PMU
34.	David MUNEMO	Procurement Specialist	MoFEDIP PMU
35.	Tatenda Yvette NYAKUNU	Programme Officer	MoFEDIP PMU
36.	Winstone MURAMBIWA	Economist	MLAFWRD
37.	Nqobizita A. MPOFU	Economist	MLAFWRD
38.	Nyasha DENHERE	DD - SBP	MLAFWRD
39.	Shamiso CHIKOBVU	DD – Projects & Prog	MLAFWRD
40.	Endronica MASUKU	Economist	MLAFWRD
41.	Mary MHAKA	Horticulture Specialist	MLAFWRD
42.	Sipiwe MABAYA	Conservation Specialist	MLAFWRD
43.	Tadiwanashe GODZONGERE	WASH Officer	MLAFWRD
44.	Tsitsi MAFIRAKUREVA	Land Use Planning Specialist	MLAFWRD - Agritex
45.	Sinikiwe SITHOLE	Livestock Officer	MLAFWRD - Agritex
46.	Ability MAFUNDA	Economist	MLAFWRD - BDMT
47.	Nyaradzo P. SAMAKANDE	VET Officer	MLAFWRD - VET
48.	Jacqueline CHIKARATE	Agronomist	MLAFWRD ARDAS/Crops
49.	Bernard HAMURA	Land Officer	MLAFWRD
50.	Sunny NJORORO	Engineer	MLAFWRD
51.	Alec CHILONGA	PLO – Mat South	MLAFWRD
52.	Luke MAPILIYAO, Dr.	DLO - Mangwe	MLAFWRD
53.	Olivia CHIBGWE	Principal Liaison and Advocacy	MoLGPW
54.	Ruth R. SAURAMBA	A/DDC	MoLGPW
55.	Jacqueline CHIKARATE	Agronomist	ARDAS Crops
56.	Shupikai SIBANDA	Provincial Director	ARDAS
57.	Moffat NCUBE	DAFO	ARDAS
58.	Nolwazi MATHUTHU	District Accountant	RIDA
59.	Caroline ZINDOGA, Dr.	GVO	DVS
60.	Caroline S. MOYO	Veterinary Extension Officer	DVS
61.	Richard SIBANDA	D/A	DVS
62.	Siphoesihle SIBANDA	A/CAHI	Veterinary
63.	Tauya MAVEDZENGE	P/E Epidemiologist	Veterinary
64.	Dalubuhle NCUBE	Field Analogy	Veterinary
65.	Eugune K. MOYO		Veterinary
66.	Nqobizita NYONI	Administrative Officer	Ministry of Youth (MYEDVT)
67.	Nozipho DUBE	Administrative Officer	Ministry of Women (MWACSMED)
68.	R. NCUBE	A/Provincial Secretary, Mat South (Gwanda)	Office of the President (OPC) *(Chair)*
69.	Lubelihle VUNDLA	Administrative Officer	OPC
70.	Neville B. DUBE	Officer	OPC
71.	T. Aaron	Officer	OPC
72.	P. HLABISO	Officer	Auditor General Office
73.	M NYATI	Provincial Director	DVT
74.	Sikhalazo DUBE	Projects Coordinator	ILRI

No	Full Name	Title	Organisation
75.	Farai George MANZIRA	Engineer/Manager	Zimbabwe National Water Authority (ZINWA)
76.	Joshua B. JELE	Technical Officer	ZINWA
77.	Simon M MAKONDE	Officer	MOD
78.	Shepherd MPOTEGWA	PIE	DOI
79.	Andreas MOYO	Farmer – Co Member	Irrigation Scheme
80.	Rich SIBANDA	Farmer	Irrigation Scheme
81.	Daniel NCUBE	Farmer	Irrigation Scheme
82.	Limakatso SEBATA	Farmer	Irrigation Scheme
83.	Margaret NDLOVU	Farmer	Irrigation Scheme
84.	Kudakwashe ZHOU	Farmer	Irrigation Scheme
85.	Alithabeloe SEBATA	Farmer	Irrigation Scheme
86.	Daniel KANKONYADA	Village Head	Village Head
87.	Phillip NGWENYA	Villager	Mzila Village
88.	Smick NKOMO	Villager	Villager
89.	Able NKOMAZAWA	Villager	Villager
90.	Butboy SIBANDA	Villager	Villager
91.	Foster MPOFU	Villager	Villager
92.	Mdenka NKOMO	Villager	Villager
93.	LA SIBANDA	Villager	Villager
94.	Khulekhani TSHUMA	Villager	Villager
95.	Khungelani NKOMAZANA	Villager	Villager
96.	Johannes NCUBE	Villager	Villager
97.	Nkosani NDLOVU	Villager	Villager
98.	Richard NCUBE	Villager	Villager
99.	Prosper VUNDLA	Villager	Villager
100.	Richard SIBANDA	District Attendant	Villager
101.	Mando TSHUMA	Villager	Villager
102.	Oswald CHISHANGA	Executive Director	Save Our Environment Trust
103.	Hillary MUGOTA	Legal Officer	Zimbabwe Environmental Law Association (ZELA)
104.	Prince KUIPA, Dr.	Chief Economist	Zimbabwe Farmers Union (ZFU)
105.	Zvidzai MABURUTSE	Country Representative & SAF Cluster Humanitarian Lead	Oxfam Zimbabwe
106.	Newton CHARI	Business Development Manager	Oxfam Zimbabwe
107.	Nyasha KUREBWA	Cluster Safeguarding Advisor	Oxfam Zimbabwe

ANNEX 3 SPECIFIC PROJECT SITES VISITED IN GWANDA, BULILIMA, MANGWE AND MATOBO –

Matshongwana VBU site in Mangwe

Maninji VBU in Gwanda

Shashe River in Gwanda (Border Zimbabwe-Botswana

Tsukuru VBU in Bulilima

Focus group Disscussion at Tshitshi

Tshitshi Feedlot(mangwe)

Livestock entry points, crossing the river to Bostwana

Stakeholder engagements in Matobo

ANNEX 6 - 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)