

## Environmental and Social Sustainability Framework for the Centre for Coordination of Agricultural Research and Development in Southern Africa (CCARDESA)



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## **EXECUTIVE SUMMARY**

The Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA) is a regional research organization that was established in 2010 by 15 SADC member states. Part of CCARDESA's mission is to coordinate research, technology generation, and adoption for sustainable agricultural development through effective partnership and capacity building. CCARDESA recognizes that its programmes of work must not have a negative impact on the environment and society to ensure sustainability, hence the development of this Environmental and Social Sustainability Framework (ESSF). The Framework sets out the guiding principles, standards, and procedures that will be used to ensure that CCARDESA's work has a positive impact on the environment and society. The ESSF is based on the UN Sustainable Development Goals (SDGs), particularly SDG1 (No Poverty), SDG2 (Zero Hunger), SDG5 (Gender Equality), SDG8 (Decent Work and Economic Growth), SDG12 (Sustainable Consumption and Production), SDG13 (Climate Action), SDG14 (Life Below Water), and SDG15 (Life on Land).

The primary goals of the ESSF are: (i) Protection and conservation of biodiversity and natural resources, (ii) sustainable use of resources, (iii) reduction of pollution and environmental impacts, (iv) mitigation of climate change and adaptation to its impacts, (v) creation of decent work and promotion of social inclusion, (vi) protection of the health, safety, and security of communities, (vii) promotion of gender equality and prevention of gender-based violence, (viii) protection of land tenure rights, prevention of displacement and reasonable resettlement (where necessary), and (ix) protection of cultural heritage. To achieve these goals, CCARDESA will focus on integrating environmental and social sustainability into all its programmes and activities, developing, and implementing policies and procedures that promote sustainability, providing training and capacity building to farmers and other stakeholders and monitoring and evaluating its progress towards sustainability. CCARDESA will also work with its partners to develop and implement environmentally friendly and sustainable agricultural practices. This will include promoting the use of renewable energy and other sustainable technologies, supporting research and development to find new ways to improve agricultural productivity while reducing environmental impacts and raising awareness of the importance of sustainability among farmers and other stakeholders.

The ESSF will be implemented through a variety of mechanisms, including Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plans (ESMPs), Stakeholder engagement and Monitoring and Evaluation (M&E). ESIAs will be conducted for all CCARDESA projects that have the potential to have significant environmental or social impacts. SEMP's will be developed for all projects that require an ESIA. SEMP's will outline the measures that will be taken to mitigate the environmental and social impacts of the project. Stakeholders will be engaged throughout the project cycle, from the planning stage through to implementation and monitoring. Stakeholder engagement will help to ensure that the project's environmental and social impacts are identified and addressed. Monitoring and evaluation will be used to track the project's progress against its environmental and social objectives. Monitoring and evaluation will also identify any emerging issues that need to be addressed.

Achieving environmental and social sustainability will benefit CCARDESA, its partners, and the broader community in several ways. The benefits include improved environmental and social sustainability, reduced environmental and social risks, increased community support for CCARDESA's work, improved project outcomes, and an increase in CCARDESA's reputation and credibility.

The ESSF is a living document that will be updated as CCARDESA's work evolves. By implementing this framework, CCARDESA is committed to ensuring that its work has a positive impact on the environment and society.

## **ACRONYMS AND ABBREVIATIONS**

AICCRA	Accelerating Impacts of CGIAR Climate Research for Africa
CAADP-XP4	Comprehensive Africa Agriculture Development Programme ex Pillar 4
CCARDESA	Centre for Coordination of Agricultural Research and Development in Southern Africa
CGIAR	Consortium of International Agricultural Research Centers
ESIA	Environmental and Social Impact Assessments
ESMP	Environmental and Social Management Plan
ESSF	Environmental and Social Sustainability Framework
FAO	Food and Agriculture Organization of the United Nations
FSRP	Food Systems Reliance Program
GCCA+	Global Climate Change Alliance Plus
M&E	Monitoring and Evaluation
MTOP	Medium Term Operational Plan
RAP	Regional Agricultural Policy
RISDP	Regional Indicative Strategic Development Plan
SADC	Southern African Development Community
SDG	Sustainable Development Goal
SEMP	Social and Environmental Management Plan
UNEP	United Nations Environment Programme

## **INTRODUCTION**

The Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA) was established in 2010 by the Southern African Development Community (SADC) Member States as a subsidiary organization of SADC, with a mandate of coordinating agricultural research in Southern Africa. It supports a range of initiatives that promote technology generation, dissemination, and adoption. This is in line with the Regional Indicative Strategic Development Plan (RISDP) of SADC, the Regional Agricultural Policy (RAP), the Comprehensive Africa Agriculture Development Programme (CAADP) and the Malabo Declaration. The goal of CCARDESA is to contribute to improved regional food security and livelihoods. As a sub-regional research organization, CCARDESA fosters inter-country collaboration in the region and links Southern Africa to other regional, continental and global organizations.

CCARDESA priorities are articulated in the CCARDESA long-term Strategy (2020-2029) and Medium-Term Operational Plan (2021-2025) which are informed and aligned to the key SADC Policies and strategic documents. CCARDESA recognizes that its activities and programmes must be environmentally and socially sustainable to ensure that the interventions do not have adverse impacts on society and the environment. CCARDESA is implementing various interventions to build the capacity of the region to adapt to climate change and improve resilience of the food systems of the region. This is pursued through various programmes, such as the Comprehensive Africa Agriculture Development Programme ex Pillar 4 (CAADP-XP4) programme, the Global Climate Change Alliance Plus (GCCA+) project, Food Systems Reliance Program (FSRP) and the Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) project.

CCARDESA recognizes that implementation of its activities and all other Research and Development (R&D) projects must consider and mainstream the important cross-cutting issues of gender, health and nutrition, poverty, climate change and environment. Although the observance of environmental and social safeguards is a mandatory requirement in the execution of its research and development projects, CCARDESA lacks an institutional environmental and social sustainability framework to guide its operations. It is on this background that this Environmental and Social Sustainability Framework was developed.



## **Rationale for developing the environmental and social sustainability framework.**

The Centre for Coordination of Agricultural Research and Development for Southern Africa has found it crucial to develop this environmental and social sustainability framework because it would help the organization to:

- i. **Identify and manage its environmental and social risks.** CCARDESA's work in agricultural research and development can have a significant impact on the environment and on the social fabric of the Southern African region. By adopting an environmental and social sustainability framework, CCARDESA will identify and manage these risks, and ensure that its work is done in a way that is both environmentally and socially responsible.
- ii. **Improve its environmental and social performance.** An environmental and social sustainability framework can help CCARDESA to improve its environmental and social performance by setting clear goals, developing, and implementing plans, and monitoring and reporting on its progress.
- iii. **Augment the trust of its stakeholders.** CCARDESA's stakeholders include academic and research institutions, farmers, government agencies, businesses, and civil society organizations. By adopting an environmental and social sustainability framework, CCARDESA seeks to demonstrate its commitment to sustainability, and reinforce the trust of its stakeholders.
- iv. **Comply with environmental and social regulations.** There are several environmental and social regulations that apply to CCARDESA's work. By adopting an environmental and social sustainability framework, CCARDESA wants to ensure that all its programmes and activities comply with these regulations.

## **Operational definitions of key terms**

For the purposes of this framework, the following definitions shall apply:

### **Sustainability:**

*“Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.”* (UN World Commission on Environment and Development)

**Environmental Sustainability:**

*“a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs nor by our actions diminishing biological diversity” (Morelli, 2011)*

**Social sustainability:**

*“the ability of a community to develop processes and structures which not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community.” (Business Dictionary)*

**Environmental and social impact:**

*“any change, potential or actual, to the physical, natural, or cultural environment, and related impacts on surrounding communities and workers, resulting from a project or program, including direct, indirect, cumulative and transboundary impacts and the impacts of associated facilities, and including both adverse and beneficial impacts” (GEF, 2019)*

**Environmental and social safeguards:**

*“policies, standards, and operational procedures designed to identify, avoid, mitigate, and minimize adverse environmental and social impacts that may arise from the implementation of development projects. ESS also have a pro-active dimension to try to increase chances that development projects deliver better outcomes for people and the environment.” (WWF, 2022)*

**Environmental and social risk:**

*“a combination of the probability of a certain hazard occurrence and the severity of impacts resulting from such an occurrence” (GEF, 2019)*

**Environmental and social impact assessment:**

*“an assessment of the project or program’s potential environmental and social impacts and risks that is appropriate to the nature and scale of the potential impacts, including comprehensive environmental and social impact assessments for projects with significant risks, strategic or regional impact assessments for programs, and more limited assessments for projects of limited scope and potential impact” (GEF, 2019)*

**Biodiversity:**

*“the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”* (WFP, 2021)

**Impact Mitigation:**

*“the process of planning for disasters and having a way to lessen negative impacts”* (Lutkevich, 2023)

**Safeguard Standards:**

*“a defined and measurable level of performance that must be achieved in relation to a particular criterion”* (FCMC)

**CCARDESA’s vision for Environmental and Social Sustainability**

CCARDESA believes that sustainable development can only be achieved through the integration of environmental and social concerns into all aspects of its work.

CCARDESA’s vision is to be a leading organization in the field of environmental and social sustainability in the agricultural sector. CCARDESA will achieve this vision by:

- i. **Adopting a comprehensive environmental and social sustainability framework.** This framework will guide CCARDESA’s work in all aspects of agricultural research and development, from the design of projects to the implementation of results.
- ii. **Involving stakeholders in the development and implementation of CCARDESA’s sustainability framework.** CCARDESA will work with researchers, farmers, government agencies, businesses, and civil society organizations to ensure that its sustainability framework meets the needs of all stakeholders.
- iii. **Monitoring and reporting on progress towards sustainability.** CCARDESA will regularly monitor and report on its progress towards sustainability, so that CCARDESA can learn from its experiences and improve its work over time.

CCARDESA believes that by adopting a comprehensive environmental and social sustainability framework, it can make a positive contribution to the sustainable development of the Southern African region.

## **Objectives of CCARDESA's Environmental and Social Sustainability Framework**

CCARDESA's Environmental and Social Sustainability objectives are to:

- i. **reduce pollution:** CCARDESA will reduce pollution from its programmes, projects, and activities by:
  - developing and implementing plans to reduce the use of pesticides and inorganic fertilizers.
  - promoting the use of cleaner production technologies.
- ii. **conserve resources:** CCARDESA will promote the conservation of resources such as water, land, and energy by:
  - using water more efficiently.
  - reducing the amount of land that is cleared for agricultural production.
  - using renewable energy sources.
- iii. **protect biodiversity:** CCARDESA will promote the protection of biodiversity by:
  - creating or restoring wildlife corridors.
  - protecting endangered species.
  - promoting sustainable agriculture practices.
- iv. **promote gender equality:** CCARDESA will promote gender equality by:
  - increasing the number of women involved in agricultural research and development.
  - providing training and support to women farmers.
  - ensuring that women have equal access to agricultural resources.
- v. **promote the creation of decent jobs:** CCARDESA will promote the creation of decent jobs by:

- supporting the development of small and medium-sized enterprises in the agricultural sector.
- providing training and skills development.
- promoting fair labour practices.
- safeguarding human health and lives by identifying and implementing the controls necessary to eliminate hazards and risks.

These are just some examples of CCARDESA's Environmental and Social Sustainability objectives. The specific objectives will vary depending on the specific activities of CCARDESA. However, these objectives provide a good starting point for developing a comprehensive environmental and social sustainability framework.

Importantly, CCARDESA's environmental and social sustainability framework is not only about reducing negative impacts, but it is also about creating positive impacts. Proper implementation of the ESSF can have the following positive impacts:

- Improved quality of life for farmers and rural communities.
- Enhanced food security and nutrition.
- Protection of the environment for future generations.
- Building a more sustainable society.

## **GUIDING PRINCIPLES**

The CCARDESA Environmental and Social Sustainability Framework is guided by the UN Sustainable Development Goals (SDGs), specifically SDGs 1 (end poverty), 2 (end hunger), 3 (good health and wellbeing), 5 (gender equality), 7 (Affordable and clean energy), 8 (decent work and economic growth), 9 (industry, innovation and infrastructure), 12 (responsible consumption and production), 13 (climate action), 14 (Life below water), and 15 (life on land).

CCARDESA's commitment towards these SDG goals are as follows:

## **SDG 1: End poverty**

Poverty is one of the many challenges faced by SADC countries, especially among people who reside in rural areas. This is due to low agricultural production and productivity due to over-reliance on rainfed agriculture in the face of climate change, poor land/soil and water management and consumption of non-diverse diets. As a result, CCARDESA programmes seek to support agricultural programmes that are aimed at ending poverty. Sustainable agriculture can be a powerful tool for ending poverty. By protecting the environment, increasing crop yields, reducing input costs, creating jobs, and improving food security, sustainable agriculture can help to lift millions of people out of poverty.

## **SDG 2: End hunger**

This SDG seeks to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. Hunger and food nutrition insecurity are related to poverty, thus addressing both SDG 1 and SDG 2 go hand in hand. Sustainable agriculture has the potential to end hunger through adopting practices that use less water, reduce soil erosion and land degradation, prevent loss of biodiversity and reduce greenhouse gas emissions.

## **SDG 3: Human health and wellbeing**

CCARDESA can contribute to improving the health and well-being of the people and the environment in Southern Africa, while also advancing its own mission and vision. This can be achieved through incorporating health and nutrition aspects into its agricultural innovations, such as improving crop varieties, enhancing soil fertility, and reducing post-harvest losses. Another approach would be to strengthen the capacity of farmers and other stakeholders to prevent and manage pests and diseases that affect crops, livestock, and human health. Finally, supporting the empowerment of women and youth in agriculture, who often face greater challenges and vulnerabilities in accessing resources, services, and opportunities, and who play a vital role in ensuring household food security and nutrition, can also ensure human health and wellbeing.

## **SDG 5: Gender equality**

All programmes at regional and national level need to be gender sensitive and to be mindful of the need to increase the participation of youth in agricultural value chains. It is also important to cater for the special needs of vulnerable groups such as people with disabilities and those living with HIV/AIDS. Women are often the primary farmers in developing countries (including

Southern Africa), and they play a vital role in food production. However, women often face discrimination in the agricultural sector, which can limit their access to resources, markets, and decision-making. Addressing gender inequality in the agriculture sector can help to improve food security, increase productivity, and protect the environment. Sustainable agriculture can help to increase women's incomes, which can give them more economic power and independence.

### **SDG 7: Affordable and clean energy**

CCARDESA can support the adoption of renewable energy sources and technologies in the agricultural sector, such as solar irrigation, biogas digesters, and biomass briquettes. These can reduce greenhouse gas emissions, enhance energy security, and lower energy costs for farmers and rural communities. CCARDESA can also facilitate knowledge sharing and capacity building on best practices and innovations in renewable energy among its member states and stakeholders. CCARDESA can promote the integration of energy efficiency and conservation measures in its research and development projects. This can involve conducting energy audits, implementing energy management systems, and applying energy-saving techniques and equipment. By doing so, CCARDESA can minimize its environmental footprint, optimize its resource use, and demonstrate leadership and accountability in environmental and social sustainability.

### **SDG 8: Decent work**

Addressing SDG 8 will help create a more prosperous and equitable future for the Southern African region. This can be achieved through several initiatives such as developing new crop varieties that are more resistant to pests and diseases, and that can withstand drought and other climate stresses. These new varieties can help to increase agricultural productivity, which can lead to increased employment and income opportunities. Secondly, the use of sustainable agriculture practices such as crop rotation, water conservation, and organic fertilizers, can help to protect the environment and improve the quality of agricultural products. Additionally, increasing the number of women and youth that are involved in agricultural research and development can empower them and improve their economic opportunities.

### **SDG 9: Industry, innovation, and infrastructure**

SDG 9, which focuses on building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation, is another useful principle to guide CCARDESA's environmental and social sustainability. Some ways for CCARDESA to contribute to SDG 9

include developing and implementing green technologies and practices that reduce greenhouse gas emissions, enhance resource efficiency, and minimize waste and pollution in the agricultural sector, and supporting smallholder farmers and rural communities to access affordable, reliable and sustainable energy sources, such as solar, wind and biogas, that can improve their productivity and livelihoods.

### **SDG 12: Sustainable consumption and production**

Sustainable consumption and production refer to “the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations”. CCARDESA supports several practices aimed at promoting sustainable consumption and production. These include developing water-efficient irrigation systems, promoting the use of compostable materials such as food scraps and yard waste, reducing the use of pesticides and inorganic fertilizers and developing and implementing plans to conserve biodiversity.

### **SDG 13: Climate action**

The aim of this SDG is to take urgent action to combat climate change and its impacts. In addition to the initiatives highlighted under SDG 12 above, CCARDESA is already involved in climate change discussions and programmes and will ensure that they integrate climate action in their planning. More importantly they will ensure that they build the capacity of individuals and institutions that participate in their programmes to work in ways that achieve climate change adaptation and mitigation. These include developing and promoting drought-resistant crop varieties that can withstand periods of drought, promoting the use of renewable energy sources, such as solar and wind power, in agricultural production, smart agriculture practices such as zero or minimal tillage to conserve soil moisture in drought stricken areas or planting practices that conserve soil moisture, and developing and promoting climate-resilient infrastructure, such as flood-resistant dams and seawalls.

### **SDG 14: Life below water**

This framework seeks to conserve and sustainably use aquatic resources for sustainable development. The important aspect of life below water for CCARDESA is that of developing and promoting sustainable aquaculture practices that can help to protect aquatic ecosystems and



ensure that fish populations are not overexploited. This includes reducing the use of harmful fishing practices, such as bottom trawling, which can damage aquatic habitats, promoting the use of cleaner production technologies in aquaculture and fisheries, reducing the amount of waste that is produced from aquaculture industries and developing and promoting sustainable coastal development practices.

### **SDG 15: Life on land**

This SDG seeks to protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. CCARDESA recognizes that increasing agricultural productivity may require expansion into existing forest and other natural ecosystems. To ensure that SDG 15 is addressed, CCARDESA will promote sustainable agricultural practices through agricultural intensification rather than extensification. For example, it might be necessary to incentivize the preservation of portions of natural vegetation on every farm. Communities will be encouraged to engage in community forestry to restore degraded forest areas. Communal forest areas also need to be sustainably managed so that communities can access forestry resources from them.

### **SCOPE**

This Environmental and Social Sustainability Framework applies to all CCARDESA programmes and projects, implementing partners, executing agencies, contractors and any other stakeholders that may be involved in project implementation under CCARDESA. The framework must be read along with all other relevant strategies and policies of CCARDESA. Furthermore, the framework should adhere to all applicable SADC regional and national environmental legislation and the Handbook on Environmental Assessment Legislation in the SADC Region (Walmsley & Tshipala, 2007), provides a detailed account of such. Should the implementation of the framework turn out to be insufficient, CCARDESA will endeavor to liaise with the executing agency or contractor to address any shortcomings.

### **HOW THE FRAMEWORK WAS DEVELOPED**

The framework was developed by a group of 10 experts from diverse fields including agriculture, natural sciences, natural resources management, and environmental science during a 5-day workshop that was organized by CCARDESA. The workshop was held in Johannesburg, South

Africa from 15 -19 May 2023. The experts came from South Africa, Botswana, Eswatini, Lesotho, and Zambia. A list of these experts and their affiliations is provided in Annex 1.

### **Determination of the applicable environmental and social safeguards**

To determine the environmental and social safeguards that are relevant to CCARDESA’s program of work, a review of its long-term strategic plan (2020-2029) and its medium term (2021-2025) operational plan was conducted. The review involved identifying the key thematic areas of CCARDESA, their strategic objectives and all their associated strategic activities. The thematic areas are indicated in Figure 1, below. Thereafter, the potential environmental and social risks associated with all its activities were enumerated through group exercises that involved brainstorming sessions and report backs and discussions with the whole group.

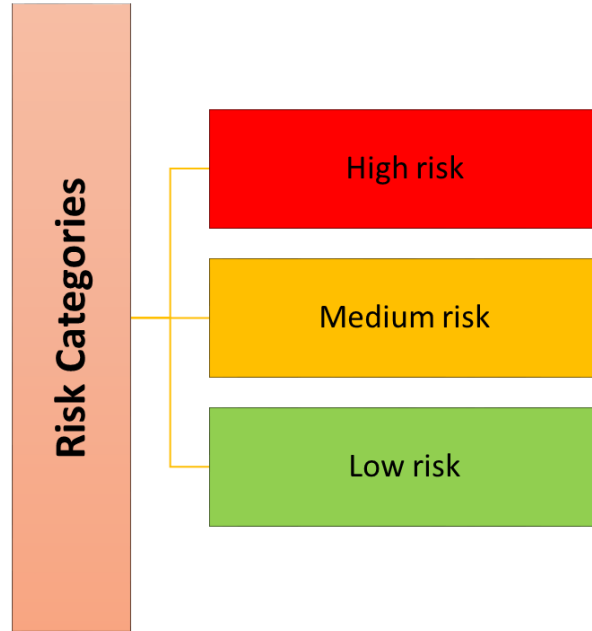
## **CCARDESA'S THEMATIC AREAS**

- Agricultural productivity and food and nutrition security
- Resilience to emerging agricultural risks: environmental, climate change and transboundary diseases and pests
- Commercialisation of the agricultural sector and market access
- Women, youth and social inclusion
- Knowledge and information management, communication and policy support
- Capacity strengthening of CCARDESA and AR4D institutions

**Figure 1:** CCARDESA’s key areas of focus as per its long-term strategic plan 2020-2029

### **Categorization of potential environmental and social impacts and risks**

The experts adopted the FAO (2022) risk categorization framework, which places risks into three broad categories: High risk, Medium Risk and Low Risk (Figure 2). These categories are informed by the nature, probability, extent and significance of the risk. The criteria for each risk category were also adopted from the FAO framework.



**Figure 2:** The three categories of risk for environmental and social impacts

*Assessment requirements for projects under the three risk categories*

Based on established principles of best practice, the following shall apply for programmes and projects that fall into the different risk categories.

*High risk*

For programmes that fall under the high-risk category, a full environmental and social impact assessment (ESIA) shall be conducted. This shall include impacts on biodiversity, climate, ecosystems, human health and livelihoods, etc. A comprehensive impact mitigation plan shall be prepared along with clear budgets and timelines for implementation. Independent experts and/or environmental audits shall be engaged to monitor projects for compliance with the mitigation plan(s).

*Medium risk*

For projects of medium risk, CCARDESA shall require a limited environmental and social impact assessment. Clear measures to minimize, mitigate and monitor the identified impacts and risks associated with the program shall be clearly indicated and adhered to.

### *Low risk*

Environmental and social impact assessments will not be required for low-risk programmes save for adherence to standard good practices to avoid adverse effects on the environment.

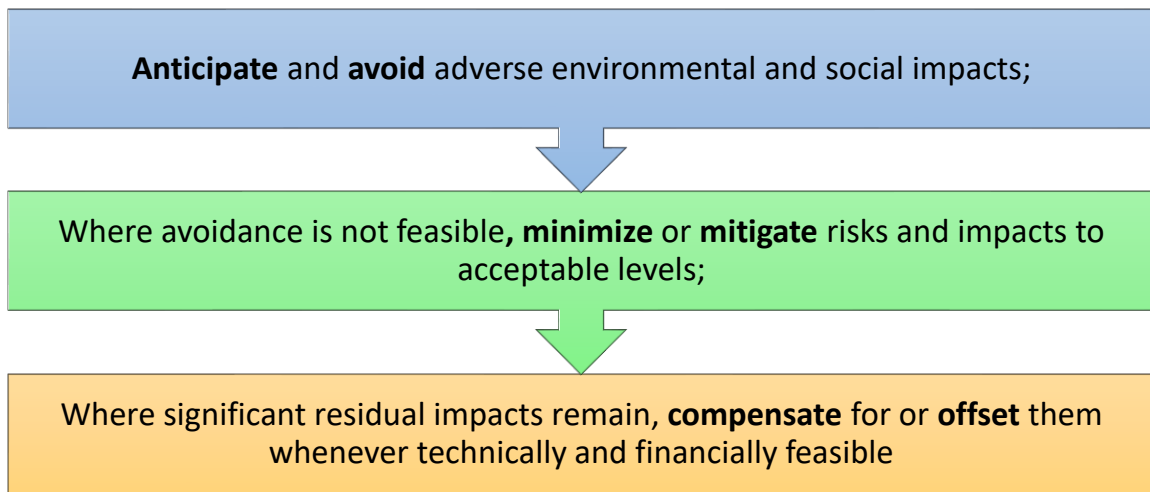
### *The environmental and social safeguards standards*

The identified potential impacts and risks associated with CCARDESA activities were matched to the corresponding environmental and social safeguards of the FAO framework for environmental and social management as well as that of the GEF policy on environmental and social safeguards (GEF, 2019). Thus, the experts determined that the following environmental and social safeguard standards are relevant to CCARDESA:

- Biodiversity conservation, and sustainable management of natural resources
- Resource efficiency and pollution prevention and management
- Climate change and disaster risk reduction
- Decent work
- Community health, safety and security
- Gender equality and prevention of gender-based violence
- Land tenure, displacement, and resettlement
- Cultural heritage

### **Mitigation of potential environmental and social impacts of CCARDESA activities**

To determine appropriate mitigation measures for the environmental and social impacts and risks associated with each of the activities that CCARDESA undertakes, the following established mitigation hierarchy (Figure 3) was adopted and is recommended for all CCARDESA programmes and projects.



**Figure 3:** established hierarchy for mitigation of environmental risks (Adopted from FAO, 2022)

## **ENVIRONMENTAL AND SOCIAL SAFEGUARD STANDARDS OF THE FRAMEWORK AND THEIR REQUIREMENTS**

### **Biodiversity conservation, and sustainable management of natural resources**

#### **Introduction**

CCARDESA is committed to conserving and managing biodiversity and natural resources in a sustainable way, as part of its environmental and social sustainability framework. Biodiversity conservation means protecting and enhancing the diversity of life on Earth for the benefit of current and future generations. Sustainable management of natural resources means using them wisely and responsibly, without depleting or degrading them for selfish purposes (Iyyanki & Valli M, 2017). Agriculture can have negative impacts on biodiversity, such as habitat loss, pollution, and greenhouse gas emissions, due to the increasing demand for food from a growing human population. Therefore, it is essential to adopt agricultural practices that maintain or increase crop yields and quality, while minimizing environmental damage. This includes using soil management systems that preserve soil health and fertility, and livestock management strategies that reduce greenhouse gas emissions and improve animal welfare (Obaisi et al., 2022). CCARDESA programmes aim to improve agricultural productivity and market access for farmers in the SADC region, while ensuring that biodiversity and natural resources are not compromised.

## Objectives

Under the Biodiversity conservation, and sustainable management of natural resources standard, the CCARDESA ESSF aims to:

- ensure the conservation of biological diversity,
- achieve sustainable use of its components and other natural resources, and
- ensure that there is fair and equitable sharing of the benefits arising from the utilization of genetic and other natural resources.

## Requirements

Concerning biodiversity conservation and sustainable management of natural resources CCARDESA shall achieve environmental and social sustainability through the following:

1. Advocating and lobbying for political and institutional support for biodiversity conservation and sustainable management of natural resources.
2. Undertaking resource mobilization and using innovative funding mechanisms to ensure that there is sufficient funding for biodiversity and natural resource management programmes.
3. Increasing access to and use of appropriate technologies to conserve and protect biodiversity through minimizing and bridging the digital divide through empowerment, capacity building programmes and technology transfer.
4. Supporting educational and curriculum reforms that enhance biodiversity conservation and the sustainable management of natural resources.
5. Strengthening public-private (and community) partnerships to enhance collaborative efforts for protection of biodiversity and sustainable management of natural resources.
6. Avoiding and minimizing deforestation, forest degradation and land degradation through sustainable forest and land management practices (including sustainable reforestation programmes)
7. Avoiding and minimizing biodiversity loss through implementing landscape conservation approaches, strengthening *ex-situ* conservation programmes, and compensation through biodiversity offsets.

8. Minimizing genetic contamination through application of appropriate control measures including legislative and policy instruments.
9. Avoiding and minimizing the loss of indigenous varieties and breeds through strengthening of *ex-situ* conservation programmes.
10. Improving access to and appropriate use of technologies through empowerment, capacity programmes and technology transfer.
11. Adoption of alternatives and less energy and resource intensive technologies and practices.
12. Reducing the use of inorganic fertilizers through adoption of organic fertilizers and other environmentally friendly alternatives.
13. Avoiding and minimizing air, land and water pollution through the use of ecologically sound alternatives.
14. Preventing the spread of invasive and alien species through application of control measures including legislative/policy approaches such as strengthening phytosanitary measures and surveillance programmes.

## **Resource efficiency and pollution prevention and management**

### **Introduction**

Resource efficiency and pollution prevention and management are important concepts and practices aimed at minimizing the negative impact of human activities on the environment. These approaches focus on reducing waste generation, optimizing resource use, and preventing or minimizing pollution throughout various sectors of society, including industries, agriculture, and households. Adopting resource efficiency and pollution prevention measures, can lead to conservation of natural resources, reduced greenhouse gas emissions, protection of ecosystems, and promotion of sustainable development.

### **Objectives**

The objectives of resource efficiency and pollution prevention and management (REM/PPM) as a means for ensuring environmental and social sustainability in agriculture are to:

- Reduce the wastage of water, food and other resources.

- Reduce water and soil pollution.
- Reduce greenhouse gas emissions.
- Reduce land degradation.

### Requirements

CCARDESA programmes and projects shall seek to improve resource efficiency and prevent pollution through the following:

1. Avoiding and minimizing air, soil, and water pollution through the adoption of pollution prevention and management strategies.
2. Reducing water wastage by using more efficient irrigation systems.
3. Avoiding and minimizing soil depletion and land degradation through the adoption of sustainable land and soil management practices, such as minimum tillage, contour ploughing, etc.
4. Reducing the accumulation of solid waste through the promotion and adoption of sustainability conscious practices, such as recycling, reusing, repurposing, etc.
5. Reducing greenhouse gas emissions and carbon footprint through promoting the adoption of green technologies such as the use of renewable energy and hybrid vehicles.
6. Integrating inorganic and organic fertilizers to enhance the natural soil's fertility over time.
7. Reducing the use of pesticides by promoting and adopting alternatives such as biological control and the use of polycultures.

## **Climate change and disaster risk reduction**

### Introduction

Climate change and disaster risk reduction are two of the most pressing challenges facing agriculture today. Climate change is already causing more extreme weather events, such as droughts, floods, and heat waves, which are disrupting agricultural production and threatening food security. Disaster risk reduction is essential for reducing the impact of these events and protecting the livelihoods of farmers and other agricultural workers. By integrating climate change and disaster risk reduction into agricultural practices, CCARDESA seeks to ensure that



agriculture is more sustainable and resilient in the face of climate change. This is essential for ensuring food security for present and future generations.

### Objectives

Under the climate change and disaster risk reduction standard, CCARDESA seeks to:

- Reduce greenhouse gas emissions.
- Mitigate the impacts of climate change.
- Build resilience to disasters.

### Requirements

To achieve its objectives for climate change and disaster risk reduction, CCARDESA shall:

1. Facilitate adaptation to climate change through developing new agricultural practices that are more resilient to climate change, such as drought-resistant crops and water-efficient irrigation systems.
2. Reduce greenhouse gas emissions by using more sustainable agricultural practices, such as reducing the use of pesticides and fertilizers, and promoting crop rotation and cover cropping.
3. Build resilience to disasters through developing early warning systems, disaster preparedness plans, and risk-transfer mechanisms, such as insurance.

### Decent work

#### Introduction

Decent work is defined by the International Labour Organization (ILO) as "work that is productive, freely chosen, secure, healthy, and socially and environmentally sustainable." It is essential for ensuring that agriculture is sustainable and that the livelihoods of farmers and other agricultural workers are protected. The agricultural sector is a source of livelihood for over 85 percent of rural people. However, the sector is characterized by significant decent work deficits (FAO, 2022). The deficits include, but are not limited to, marginalization of women and youths, alienation of men in agricultural production, use of child labour and omission of small-scale farmers in marketing strategies. CCARDESA recognizes that these deficits need to be addressed

to ensure that agriculture is sustainable and that the livelihoods of farmers and other agricultural workers are protected. This is essential for ensuring food security for future generations and for building a more just and equitable world.

### Objectives

CCARDESA seeks to ensure that there is cooperation and collaboration among men, women, and youth in the uptake of agricultural interventions especially at small-scale level using a decent work approach. The key objectives are to:

- Support small-scale farmers in accessing agricultural resources and to improve their access to markets.
- Protect farmer's rights.
- Promote gender equality.
- Provide farmers with all necessary training and education.

### Requirements

To achieve its objectives for decent work, CCARDESA shall:

1. Advocate for policies that give small-scale farmers access to land, water, and other necessary resources to ensure that they can produce enough food to meet the needs of their families and communities.
2. Assist farmers with gaining access to markets and ensuring that they get a fair price for their agricultural products so that they can earn a decent living.
3. Promote gender equality to ensure that women and men have equal opportunities in agriculture and that they can contribute to the development of their communities.
4. Improve the uptake of agricultural interventions and technology to reduce dependence on manual labour. This will include providing farmers with training and education so that they can adopt new agricultural practices that are more sustainable and productive.
5. Advocate for the protection of farmers' rights, such as the right to organize, bargain collectively, and receive fair wages and benefits.

## **Community health, safety and security**

### **Introduction**

Community health, safety and security are essential for ensuring environmental and social sustainability in agriculture. CCARDESA seeks to increase agricultural productivity and food and nutrition security, with a special focus on smallholder farmers and priority commodities. This will be achieved by promoting the adoption of existing and new technologies, innovations and management practices for increased productivity and nutrition-sensitive agriculture. The Community health, safety and security safeguard standard recognizes that programme activities can increase community exposure to health and safety hazards as well as other negative impacts. Potential negative impacts affecting health and safety may arise from a broad range of supported activities including air, water & sanitation issues, use and management of hazardous materials, chemicals and wastes, impacts on natural resources and ecosystems. The framework addresses the need to avoid, and where avoidance is not possible, to minimize and mitigate health and safety-related risks and impacts that may arise due to agricultural activities. When communities are healthy, safe, and secure, they are more likely to adopt sustainable agricultural practices. This can help to protect the environment, improve human health, and ensure food security for future generations.

### **Objectives**

Under the CCARDESA ESSF, the Community health, safety and security standard has the following objectives:

- to ensure the safe use of pesticides,
- to prevent the spread of infectious diseases,
- to reduce noise and dust pollution, and
- to promote healthy eating habits

### **Requirements**

To ensure Community health, safety, and security, CCARDESA shall:

1. Support the development and implementation of policies, standards, and regulations that ensure safe and sustainable agricultural practices.

2. Work with farmers to ensure that they are using pesticides safely and effectively. This may include providing training on how to apply pesticides correctly, how to protect themselves from exposure, and how to dispose of pesticides properly.
3. Assist farmers to prevent the spread of infectious diseases, such as cholera and typhoid, by promoting good hygiene practices, such as handwashing and the use of latrines.
4. Assist farmers to reduce noise and dust pollution from agricultural activities, such as using quieter machinery or protect their ears when using loud machinery and planting trees to help block noise and dust.
5. Promote healthy eating habits, such as eating plenty of fruits and vegetables, to help reduce the risk of chronic diseases, such as heart disease and cancer.
6. Minimize health risks associated with the use of mobile phones through promoting compliance to health and safety standards.
7. Minimise loss of livelihoods and enhance good nutrition by supporting farmers to produce both cash and non-cash crops.
8. Minimise the explosion of insect pests and diseases by reducing the extent and size of monocultures.
9. Minimise air, soil, and water pollution by using biological and alternative pesticides and regulatory legislation.

## **Gender equality and prevention of gender-based violence**

### **Introduction**

The fifth Sustainable Development Goal aims to eliminate gender inequality in all its forms. One way to achieve this is to increase agricultural productivity and ensure sustainable food production. This is important because agriculture is a major source of employment and income for women and youth. Considering that land is mostly owned by men, there is need to provide women and youth with access to land. Another challenge is that women and youth often lack the capital to invest in agriculture. This challenge can be addressed by providing them with financial assistance and training in agricultural production. It is also important to raise awareness of the issue of child labor and to work towards eliminating it. Through this framework, CCARDESA will provide

technical assistance to women and youth farmers and advocate for policies that support gender equality in agriculture.

### Objectives

CCARDESA aims to create a sustainable agricultural production environment where women and youth are treated with dignity and respect, and where they have the same opportunities as men. Hence, this framework seeks to:

- Promote gender-transformative approaches to change the social norms and structures that perpetuate gender inequality.
- Prevent gender-based violence by providing support to survivors of violence, working to change the attitudes and behaviors that lead to violence, and holding perpetrators accountable.
- Empower women and youth through giving them the tools they need to participate fully in agricultural production and to make decisions about their own lives.

### Requirements

CCARDESA will achieve its objectives through:

1. Working with communities to challenge the idea that men are superior to women, and that women are only good for domestic work. This can be done through education and awareness-raising campaigns.
2. Supporting women and youth's leadership in all spheres of society, including agriculture, by providing training and mentorship opportunities for women and youth, and by advocating for policies that support their participation in leadership roles.
3. Advocating for the enforcement of child protection laws to eliminate the engagement of child labor in agricultural production.
4. Working to ensure that women and youth have equal access to education, healthcare, land, credit, and other resources. This will be done through advocacy, policy work, and direct service provision.
5. Working to change the attitudes and behaviors that lead to gender-based violence, such as the idea that men have the right to control women's bodies. This can be done through education and awareness-raising campaigns.

6. Advocating for the holding of perpetrators of gender-based violence accountable, both through the criminal justice system and through social sanctions.
7. Minimizing disruption of the social fabric that leads to resistance of agricultural interventions uptake by engaging men and assuring them of their household headship role.

## **Land tenure, displacement, and resettlement**

### **Introduction**

**Land tenure** refers to the relationship between people and land. It encompasses the rights, responsibilities, and interests that people have in land. Secure land tenure is essential for sustainable agriculture because it provides farmers with the incentive to invest in their land and to manage it sustainably. Agricultural programmes and projects, by their nature, involve extensive use of land resources. Subsequently, such programmes and projects involve the acquisition of land and/or restrictions on land use, as well as effects on land tenure. Such interventions can lead to significant adverse impacts on individuals and communities if they are implemented inconsiderately or irresponsibly.

**Displacement** occurs when people are forced to leave their homes and land. This can happen due to a variety of factors, including natural disasters, development projects, and conflict. Displacement can have a devastating impact on people's lives, including their livelihoods, food security, and access to healthcare.

**Resettlement** is the process of resettling people who have been displaced. It can be a complex and challenging process, and it is important to ensure that the needs of the displaced people are met. Resettlement can be a positive opportunity for sustainable agriculture if it is done in a way that respects the rights of the displaced people and that promotes sustainable land management practices.

Overall, secure land tenure can encourage farmers to adopt sustainable practices, such as using less water and pesticides. Displacement can be an opportunity to resettle people in areas where they can practice sustainable agriculture. And resettlement can be used to create new agricultural communities that are more resilient to climate change and other environmental challenges.

However, it is important to note that land tenure, displacement, and resettlement can also have negative impacts on the environment and society. For example, insecure land tenure can lead to overgrazing and deforestation. Displacement can lead to social unrest and conflict. And resettlement can disrupt traditional cultures and ways of life. Therefore, it is important to carefully consider the potential environmental and social impacts of land tenure, displacement, and resettlement before implementing these measures. By carefully planning and implementing these measures, it is possible to use them to achieve environmental and social sustainability in agriculture. Hence, CCARDESA aims to ensure that involuntary resettlement in projects or programmes that it supports or implements are avoided wherever possible. Where resettlement and/or displacement leads to significant adverse impacts, CCARDESA will ensure that appropriate compensation is provided.

### Objectives

Through the framework, CCARDESA aims to ensure that the livelihoods and living standards of people are not negatively impacted by its programmes through ensuring secure land tenure, minimizing the displacement of people and ensuring appropriate resettlement, where absolutely necessary.

### Requirements

CCARDESA will achieve its objectives through:

1. Ensuring that all forms of tenure on land and natural resources are recognized and respected including informal or customary land tenure rights.
2. Avoiding displacement and resettlement activities and where such are unavoidable, ensure that these are planned and implemented collaboratively with the meaningful and informed participation of those affected.
3. Avoiding and minimizing the negative effects of CCARDESA's programmes and activities on the livelihoods and living standards of persons belonging to marginalized, disadvantaged and vulnerable groups, during land expropriation, consolidation, investment, rural development programmes and land reforms.
4. Avoiding infringing on tenurial rights of others, particularly vulnerable and marginalized groups and populations including those that may not be currently protected by law (e.g.

indigenous peoples tenure rights, women and children rights to land, customary tenure), when recognizing or allocating tenure rights to land and other natural resources.

## **Cultural heritage**

### **Introduction**

Cultural heritage is critical in the attainment of sustainability goals and objectives. Traditional knowledge can be used to develop sustainable agricultural practices that are adapted to local conditions. For example, traditional knowledge of plant and animal species can be used to develop integrated pest management practices, and traditional knowledge of water management can be used to develop irrigation systems that are more efficient and less harmful to the environment. A culture that values respect for the land and for nature is more likely to adopt sustainable agricultural practices. However, it is also important to be aware of the potential challenges of using cultural heritage to promote sustainable agriculture. For example, it can be difficult to translate traditional knowledge into modern agricultural practices. Nevertheless, the potential benefits of using cultural heritage to promote sustainable agriculture are great. By incorporating cultural heritage into environmental and sustainability frameworks, it is possible to create a more sustainable future for agriculture that is also more equitable and just.

### **Objectives**

Through this framework, CCARDESA aims to ensure that its programmes and projects respect people's cultural norms and traditions and where possible, incorporate cultural practices that promote environmental and social sustainability in agriculture.

### **Requirements**

CCARDESA will achieve its goals by:

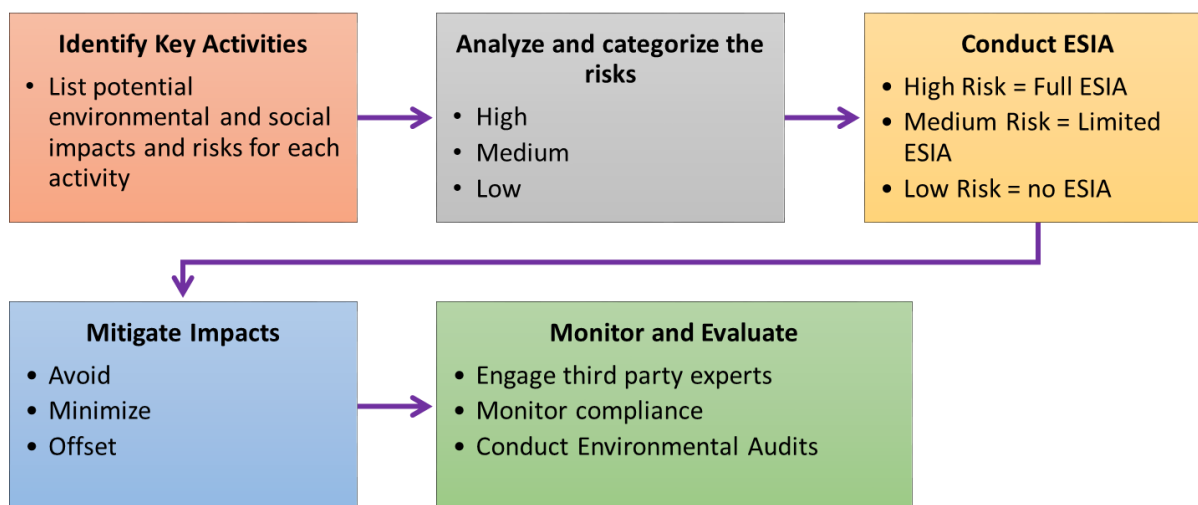
1. Reducing the loss of indigenous crop varieties by promoting the propagation and seed banking of such varieties.
2. Ensuring gender balanced programmes to minimize and mitigate against male alienation in agricultural activities.
3. Increasing the use of technology to prevent poor uptake of sustainable agricultural interventions.



4. Addressing cultural norms and practices that promote child labour through awareness raising and capacity building.

## OPERATIONALIZATION OF THE FRAMEWORK

CCARDESA shall ensure that all its programmes and projects adhere to the principles and standards set by this framework. Each project and programme shall be subjected to a process of identification of all potential environmental and social impacts and risks. The identified environmental and social impacts shall be categorized into high, medium, or low risk, following the criteria described in this framework. Appropriate assessment needs will be conducted as laid out in this framework. Mitigation of all identified risks and impacts shall be clearly defined, budgeted for and a clear implementation plan shall be stated. Third party audits of all projects and programmes shall be conducted to ensure compliance to their predetermined mitigation plans. This workflow is summarized in figure 4, below.



**Figure 4:** schematic presentation of processes involved in operationalization of the environmental and social sustainability framework for CAADP-XP4 projects.

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## ANNEXES

### Annex 1: List of contributing experts and their affiliations

Name of Expert	Key Areas of Expertise	Affiliation	Country
Prof. Absalom M. Manyatsi	Agricultural and Biosystems Engineering, Land and Water Management	University of Eswatini	Eswatini
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Dr. Gillian Kabwe	Agroforestry, livelihoods, Small-scale Farming	Copperbelt University	Zambia
Dr. Meshack. N. Dlodlu	Plant Systematics, Ecology, Conservation of Plant Genetic Resources	University of Eswatini	Eswatini
Dr. Relebohile J. Lepheana	Veterinary Science, Disease Surveillance and Epidemiology	Ministry of Agriculture, Marketing and Food Security	Lesotho
Dr. Wisdom M. Dlamini	Climate Change, Geoinformatics, Environmental Science, Ecology	University of Eswatini	Eswatini
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Mr. Kaala B. Moombe	Environmental Science, Forestry	Center for International Forestry Research	Zambia
Ms. Shiluva C. Nkanyani	Agricultural Economics, Agricultural Development	FANRPAN	South Africa
Mr. Sivumelwano A. Nyembe	Environmental Education	AMADI university College	Eswatini