CCARDESA

Centre for Coordination of Agricultural Research and Development for Southern Africa

SADC

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY

TOWARDS A COMMON FUTURE

2022

ANNUAL REPORT

The Executive Director
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REMARKS: CCARDDESA BOARD CHAIRPERSON

With pleasure and honor, I welcome you to the CCARDESA Annual Report for 2022. This report provides our stakeholders with an update on what was planned and achieved during the Financial Year 2021. The easing of the travel restrictions from the Covid-19 pandemic enabled CCARDESA to make several progressive strides in achieving the key milestones. The implementation of the 2022 work plan focused on the six thematic areas, thus, (1) Agricultural productivity and food and nutrition security; (2) Resilience to emerging agricultural risks: environmental, climate change, and transboundary pests and diseases; (3) Commercialisation of the agricultural sector and market access; (4) Women, youth and social inclusion; (5) Knowledge and information management, communication and policy support; and (6) Capacity strengthening of CCARDESA and AR4D institutions; as reflected in the new Strategic Plan and a Medium Term Operational Plan.

CCARDESA completed 89 out of the 114 planned outputs, representing a success rate of 78% which was higher than the 75% for the previous year. Key achievements include making available the 47 technologies to farmers, training Lead Farmers, establishing Climate Smart Agriculture (CSA) irrigation facilities and promoting climate resilience cropping systems, developing instruments for mainstreaming the participation of women, youth, physically challenged, and the private sector in CSA and other CCARDESA activities, In addition, CCARDESA developed partnership engagement strategy, validated an Advocacy Strategy and Action Plan for promoting cross border trade in the SADC region, and developed CSA reference materials including a draft CSA handbook, draft CSA training manual, and other major CSA knowledge products. Furthermore, the use of the CCARDESA website was enhanced, leading to a cumulative visit of 38,966 and page views of 90,659. It also successfully facilitated Mid Term Reviews for APPSA and CAADAP-XP4, training of staff and stakeholders, and implementation of resource mobilization activities. Financially, CCARDESA managed to utilize 69% of the financial resources that were budgeted at $3,840,425. The total assets changed from USD1,512,619 in 2021 to 3,133,617 in 2022.

The Board continued to provide strategic guidance and overview to the Secretariat and gave direction to ensure that programs ran smoothly. I would like to commend the many individuals and organizations that contributed significantly to the success of CCARDESA in 2022. The inputs, advice, encouragement and positive criticisms made by partners contributed to the achievements of CCARDESA outputs. Furthermore, I would like to thank the SADC Secretariat, SADC Member States, the National Agricultural Research Systems of SADC Member States, Farmer Organisations, and regional and international organizations for their valuable contributions to the success of CCARDESA in 2022. I also wish to give special recognition to all the development partners, including the World Bank, the European Union, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the International Fund for Agricultural Development (IFAD) for the financial and technical support.

Professor RAZAFINJARA Aimé Lala
CCARDESA Board Chairperson

CCARDESA BOARD MEMBERS

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Chairperson of CCARDESA

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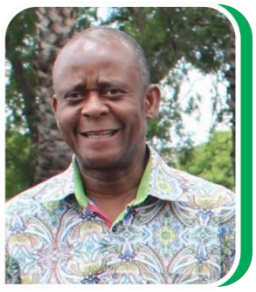

Mr Domingos Gove
Member of HR and Governance Committee

Dr Diana M. Earnshaw
Environment Expert of the Board

FOREWORD: CCARDESA EXECUTIVE DIRECTOR

CCARDESA was established to practically add value to the aspirations of SADC Member States by contributing to improved food security. The Secretariat has the duty to implement the approved work plans in support of the key regional strategic documents such as the SADC Regional Agricultural Policy (RAP), the Regional Indicative and Strategic Development Plan (RISDP), the Comprehensive African Agriculture Development Programme (CAADP), and the Sustainable Development Goals (SDGs). The annual work plans of CCARDESA are organized under six different themes that deal with the priorities of the region (Agricultural productivity and food and nutrition security; Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases; Commercialisation of the agricultural sector and market access; Women, youth and social inclusion; Knowledge and information management, communication and policy support; and, Capacity strengthening of CCARDESA and AR4D institutions).

In 2022, the Secretariat implemented a number of activities and generated various outputs which are described in this report. Partnerships were strengthened with SADC Secretariat, national institutions, regional organizations, and global organizations.

The progress in this report is a result of contributions by many partners and individuals. I would like to thank our partners at the national, regional, and global levels. I also greatly appreciate the guidance from the Board of Directors and the work of the program staff at the Secretariat, who directly worked hard to generate the outputs.

Prof. Cliff Sibusiso Dlamini (Ph.D., MDF., EMBA., CDFA)
Executive Director and Head of Mission

ACKNOWLEDGEMENTS

The following sponsors and partners are acknowledged for their contribution to the work of CCARDESA.

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LIST OF ACRONYMS

AICCRA	Accelerating the Impact of CGIAR Climate Research for Africa
ACCRA	Adaptation to Climate Change in Rural Areas in Africa
AEAS	Agriculture Extension and Advisory Services
AFFAS	African Forum for Agricultural Advisory Services
AfARR	Africa Agriculture Research & Innovation Status Report
AfCFTA	Africa Continental Free Trade Area
AGRINATURA	European Alliance for Agricultural Knowledge for Development
AIRTEA	Strengthening Agricultural Knowledge and Innovation Ecosystem for Inclusive Rural Transformation and Livelihoods in Eastern Africa.
AIS	Agricultural Innovations Systems
AR&D	Agricultural Research and Development
AR4D	Agricultural Research for Development
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASTI	Agricultural Science and Technology
AU	African Union
AUDA	African Union Development Agency
AU-IBAR	African Union Inter-African Bureau for Animal Resources
BMZ	German Federal Ministry for Economic Cooperation and Development
CA	Conservation Agriculture
CAADP	Comprehensive Africa Agriculture Development Programme
CAADP-XP4	Comprehensive Africa Agriculture Development Programme Ex-pillar 4 Project
CCARDESA	Centre for Coordination of Agricultural Research and Development for Southern Africa
CCAFS	CGIAR Research Program on Climate Change, Agriculture and Food Security
CCAA	Climate Change Adaptation in Agriculture
CSA	Climate Smart Agriculture
CIMMYT	Centro Internacional de Mejoramiento de Maíz y Trigo (International Maize and Wheat Improvement Centre)

CGIAR	Consultative Group on International Agriculture Research
GCA	Capacity Gap Analysis
COMESA	Common Market for Eastern and Southern Africa
CORAF	West and Central Africa Council for Agricultural Research and Development
CNRM	Climate-Sensitive Resilience and Natural Resources Programme
CI	Conservation International
CSA	Climate Smart Agriculture
COVID 19	Corona Virus Disease 2019
DeSIRA	Development Smart Innovation and Research in Agriculture
CTA	Technical Centre for Agricultural and Rural Cooperation
EU	European Union
EC	European Commission
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
FAO	Food and Agriculture Organisation of the United Nations
FARA	Forum for Agricultural Research in Africa
FFS	Farmer Field Stories
GA	General Assembly
GCCA+	Global Climate Change Alliance Plus
GCF	Green Climate Fund
GCYN	Global Climate Smart Agriculture Youth Network
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
ICT	Information and Communication Technologies
ICKM	Information, Communication, Knowledge Management
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ISO	International Standard Organization
KM	Knowledge Management
KM4AgD	Knowledge Management for Agricultural Development
LEAP-FSNA	Long Term Europe Africa Research and Innovation Partnership for Food and Nutrition Security and Sustainable Agriculture
M&E	Monitoring and Evaluation
MOU	Memorandum of Understanding

MTOP	Medium Term Operational Plan
MS	Member State
NARES	National Agricultural Research and Extension Systems
NARS	National Agricultural Research System
NDA	National Designated Authority
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
PPF	Peace Parks Foundations
R & D	Research and Development
RAP	Regional Agricultural Policy
RCoL	Regional Centre of Leadership
ReNAPRI	The Regional Network of Agricultural Policy Research Institutes
RFS&NS	Regional Food Security & Nutritional Strategy
RISDP	Regional Indicative Strategic Development Plan
RLAT	Rapid Loss Appraisal Tool
RMSAP	Resource Mobilisation Strategy and Action Plan
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SAA	Sasakawa Africa Association
SDGs	Sustainable Development Goals
STI	Science Technology and Innovationist
S3A	Science Agenda for Agriculture in Africa
S4AC	Science for Agriculture Consortium
SACAU	Southern Africa Confederation of Agricultural Unions
SADC	Southern African Development Community
SAAIKS	Southern Africa Agricultural Information and Knowledge System
SRO	Sub-regional Research Organisation
TA	Thematic Area
TAP	Tropical Agriculture Platform
TC	Technical Committee
TFCA	Trans frontier Conservation Area
TIMPs	Technologies, Innovations and Management Practices
USD	United States Dollar
VA	Vulnerability Assessment
WB	World Bank

EXECUTIVE SUMMARY

Overview

This Report presents a review of progress made by CCARDESA Secretariat, in collaboration with the Member States, in the implementation of the Annual Plan and Budget for the Year 2022. It outlines planned outputs by thematic area and highlights implementation status, achievements, implementation challenges, and recommendations.

Alignment of the Annual Operational Plan to the Strategic Plan

The Annual Work Plan and Budget for 2022 are aligned to the thematic areas of the Long-Term Strategic Plan (2020-2029) which are further articulated in the Medium-Term Operational Plan (MTOP) 2020-2025. The thematic areas are:

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

Analysis of Physical Performance

CCARDESA planned 114 outputs and achieved 89 outputs representing 78% (Figure 1). Most of the activities were planned under Capacity strengthening, which comprised 52 activities/outputs, while social inclusion and commercialization had the least activities and were all achieved.

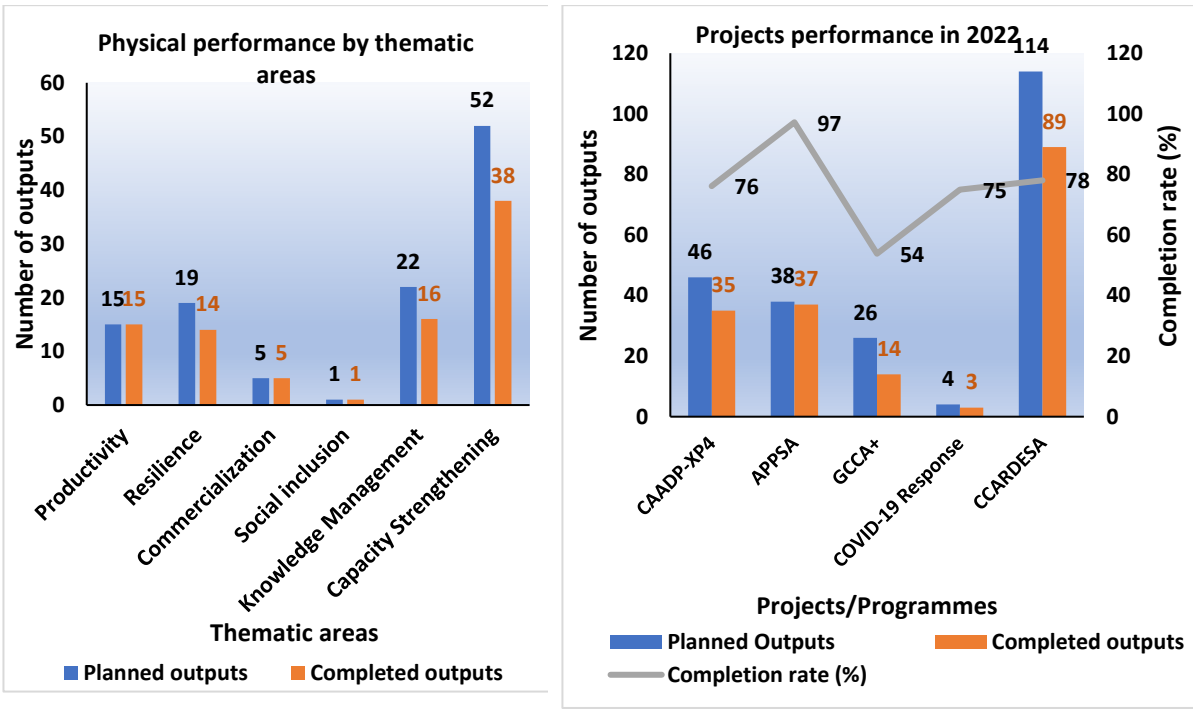


Figure 1: Performance summary under each thematic area and project in 2022

At project level, CAADP-XP4 planned 46 activities, most of which contributed to capacity strengthening of R&D institutions thematic area.

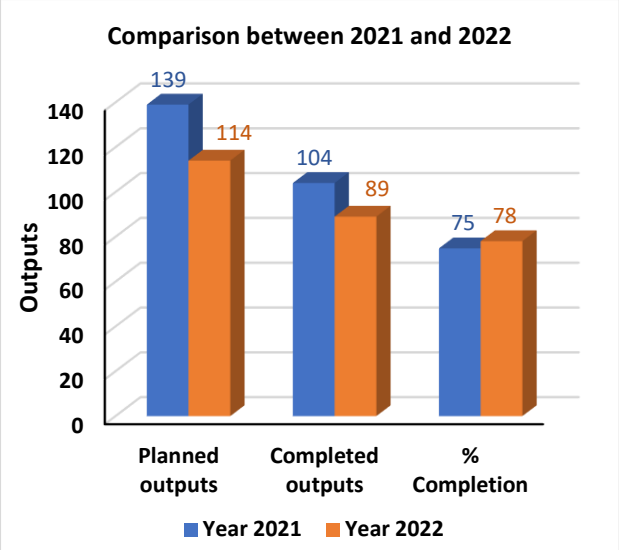
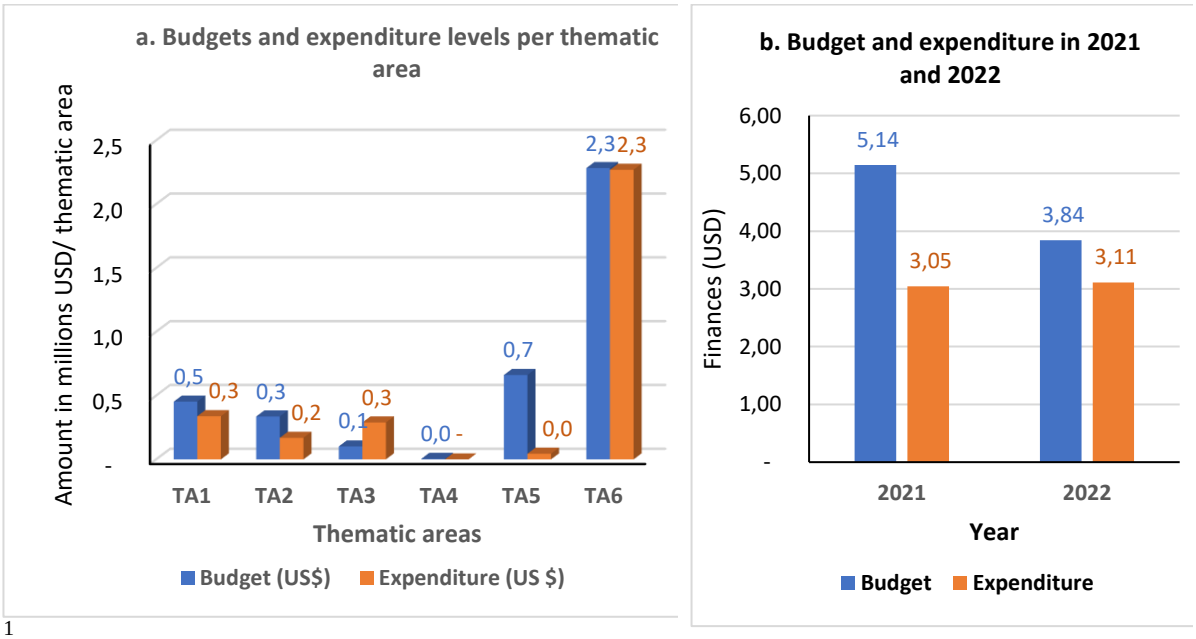


Figure 2: Comparison between 2021 and 2022

The completion rate of project activities in 2022 (78%) was slightly higher than in 2021 (75%). However, 2022 had fewer activities hat 2021 (Figure 2). The relief from travel restrictions due to Covid-19 enabled CCARDESA to improve the percentage completion rates of the planned outputs. However, outputs achieved include the installation of climate-smart infrastructure (thematic area (TA) 2); dissemination of high-yielding and climate resilience technologies (TA1); building capacities of national partners (TA6), and improved outreach (TA5).

Analysis of Financial Performance

Most resources were allocated under thematic area number 6 (Capacity strengthening of CCARDESA and AR4D institutions), seconded by ICKM (TA5). TA4 has the least allocation because it has the least number of outputs to be delivered (Figure 3a). Some of the deliverables under TA4 were mainstreamed in the other thematic areas. There was an improvement in the utilization rate in 2022 (89%) as compared to 2021, which was at 59% (Figure 3b) due to increased activity levels after the covid-19 restrictions were lifted.



[1]

Figure 3: Financial analysis of the year 2022 as compared to 2021

[1] TA1: Agricultural productivity and food and nutrition security; TA2: Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases; TA3: Commercialisation of the agricultural sector and market access; TA4: Women, youth and social inclusion; TA5: Knowledge and information management, communication and policy support; and TA6 Capacity strengthening of CCARDESA and AR4D institutions

Table 1: Highlights of Key Achievements by Thematic Area

#	Thematic Area	Key Achievements
1	Agricultural Productivity and food and nutrition security	▪ 47 technologies made available to farmers (5 improved maize seed varieties,19 nutrition-sensitive technologies; 4 improved cassava varieties and 17 improved agricultural practices ▪ 14,458 beneficiaries reached with new technologies (10,638 in Angola and 3,820 in Lesotho), with 56% of the total beneficiaries being women. ▪ Over 2,000 lead farmers have been trained. ▪ Development of action plans on Aquaculture, agroecology, gender mainstreaming in CSA and private sector involvement in CSA ▪ Jointly developed and submitted the IKI Growing Greener proposal with GIZ, Peace Parks Foundation and Conservation International. The proposal has been approved and CCARDESA will receive €1,562,000 over a 6-year period. ▪ Partnership engagement strategy and action plan developed with stakeholders. ▪ High-value nutritious crops were promoted in Eswatini, Botswana, Mozambique, Zambia and Zimbabwe, while Namibia and Malawi had delayed due to delays in the installation of irrigation facilities.
2	Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases	▪ The establishment of climate-smart irrigation facilities was completed in Botswana (Maun), Zimbabwe (Rushinga), and Zambia (Katapazi and Magugu). The construction of facilities was delayed in Namibia, Malawi, and Magugu in Zambia. The CSA support included procurement of climate resilience seed varieties and inputs. ▪ Climate-smart irrigation facilities were installed in four demonstration sites in Eswatini, Mozambique, Zambia and Zimbabwe, reaching out to over 2580 beneficiaries (70.3% of the target) ▪ The multi-stakeholder forum identified the need for mapping of existing networks as a key priority towards harnessing the existing platforms and networks for scaling of CSA technologies at all levels. ▪ Production and validation of satellite data use study report ▪ Endorsement of an EU DeSIRA initiative on agroecology, bio-solutions, and digitalization for use in Science, Technology and Innovation (STI) in agriculture/agroecological transitions in Africa. ▪ Profiling of best tools for dissemination of CSA interventions. ▪ Action Plan for establishing/strengthening national, regional, and continental CSA platforms identified
3	Commercialisation of the agricultural	▪ Development of a roadmap for priority activities to operationalize the Private Engagement Strategy.

	sector and market access	▪ Validation of an Advocacy Strategy and Action Plan for promoting cross-border trade in the SADC region.
4	Women, youth and social inclusion	▪ Improvement in the participation of women in project activities. Fifty-six percent (56%) of the beneficiaries under APPSA comprised women while the CSA project in Magugu had 45% women involvement and 5% youth out the total of 1,400 beneficiaries. ▪ Development of a gender action plan and a regional Action Plan for mainstreaming and tracking the equitable participation of women, men, youth, and people with disabilities in the SADC region ▪ The signing of a Memorandum of Understanding with the Global Climate Smart Agriculture Youth Network and drafting of the Strategy for operationalizing the MoU.
5	Knowledge and information management, communication and policy support	▪ Development of CSA training materials for farmers and value chain actors. ▪ Development of a draft CSA handbook and other knowledge products, including a brochure on scaling up approaches and tools. ▪ Development of a communique from the Fertiliser policy dialogue. ▪ Review of KM strategies for Botswana, Namibia, Malawi, and Zimbabwe. ▪ Acquisition of ISO standards for knowledge sharing. ▪ Development of a community of practice for enhancing knowledge management for the Agriculture Development Challenge (KM4AgD Challenge) in Botswana, Namibia, Malawi, and Zimbabwe ▪ Facilitated the appointment of three ICKM focal points for Madagascar, Mauritius, and Zimbabwe. ▪ Enhanced website use: A total of 38,966 website visits and 90,659 page views were recorded. ▪ Development of strategic partnerships: Signing of MoUs with ASARECA, AFAAS and the Agricultural Research Council (ARC) of South Africa
6	Capacity strengthening of CCARDESA and AR4D institutions	▪ Facilitation of Mid-Term Reviews of APPSA and CAADAP-XP4 projects leading to a satisfactory rating ▪ Capacity building of CCARDESA staff members: Training of 6 staff members (4M:2F) on project management; 5 on the use of the Monitoring, Evaluation, and Learning (MEL) automated system to enhance timely reporting; and two on gender and Capacity Development for Agricultural Innovation Systems (AIS ▪ Capacity building of NARs: Trained three officers from the Botswana government to enhance their knowledge and skills on aquaculture; 3 NARs from Eswatini, Zambia, and Zimbabwe on the Tropical Agriculture Platform (TAP) Common Framework on Capacity Development for Agricultural Innovation Systems (AIS)

		and M&E experts from the CAADP-XP4 implementing countries on the use of the Monitoring, Evaluation and Learning (MEL) automated system to enhance timely reporting. The system also links the project outputs to the achievement of targets for medium-term and long-term strategies. ▪ Developed an institutional profile and undertook a donor mapping and competitor analysis to guide its resource mobilization efforts in line with the CCARDESA Resource Mobilisation Strategy. ▪ Development of 3 Joint proposals on the Soils Initiative Project, IKI Growing Greener and Food Security Resilience Programme (FSRP) developed. FSRP was approved and implementation was initiated before the end of 2022. ▪ Clean internal Audit reports and external audit reports were produced. ▪ Purchased software to strengthen the operational systems at CCARDESA. ▪ Convening of 3 Board meetings to ensure good governance.

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

This Report presents a detailed review of progress made by CCARDESA in collaboration with the Member States and other stakeholders in implementing the Annual Work Plan 2022 as approved by the Board of Directors. The report outlines the following:

i) Status of implementation of Outputs by thematic area
ii) Key achievements for the year
iii) Challenges encountered.
iv) Plans for 2023

1.2 Background

CCARDESA is a subsidiary organization of the Southern African Development Community (SADC) Secretariat. It was established through a decision of the SADC Council of Ministers in February 2010 and a Charter which came into force on 5 April 2011. CCARDESA has the mandate of coordinating agricultural research and development (R&D) in Southern Africa in furtherance of the objectives and targets set forth by the SADC Member States. The Centre became operational in 2012 and signed a hosting agreement with the Government of Botswana in 2014. The objectives of CCARDESA have been stipulated in the Charter, establishing the organization and reflecting the desires of the SADC Member States. These are:

i) Coordinate and promote collaboration among regional and national agricultural research and development systems (NARS) through regional and international cooperation;

ii) Facilitate the exchange of information and technology among Member States;

iii) Promote partnerships in the SADC region between public, private, civil society and international organizations in R&D;

iv) Improve agricultural technology generation, dissemination and adoption in the region through collective efforts, training and capacity building; and

v) Strengthen research and development in States Parties by mobilizing human, financial and technological resources to implement and sustain demand-driven activities.

The Vision of CCARDESA under its new strategy covering the period 2020-2029 is sustainable agricultural growth and socio-economic development in the SADC. This will be achieved by delivering on its Mission, which is to set the regional research and development agenda, mobilize resources, support capacity development, foster collaboration, and provide agricultural information and knowledge in the SADC region. In the implementation of this medium-term operational plan (MTOP).

1.3 Institutional Arrangement and Governance of CCARDESA

The CCARDESA Charter establishes the institutional framework of CCARDESA with the following responsibilities:

i) States Parties Ministers, which consist of SADC Ministers responsible for Agriculture and Food Security for all SADC Member States. This is the supreme governance structure of CCARDESA is the SADC State Parties Ministers responsible for Agriculture and Food Security, which has the duty of receiving reports of CCARDESA as well as appointing the members of the Board of Directors.

ii) The General Assembly of regional research and development stakeholders from SADC Member States, which meets every two years. The General Assembly has a set of functions that include the approval of the External Auditors of CCARDESA.

iii) The Board of Directors of CCARDESA provides oversight and guides the CCARDESA Secretariat on its general direction and programs. The Board of Directors is composed of 13 voting members and two (2) ex-officio members

iv) The CCARDESA Secretariat performs the day-to-day functions of CCARDESA by implementing the programmes of CCARDESA and performing all tasks of coordination of agricultural research and development in the SADC region. The Secretariat reports to the Board of Directors

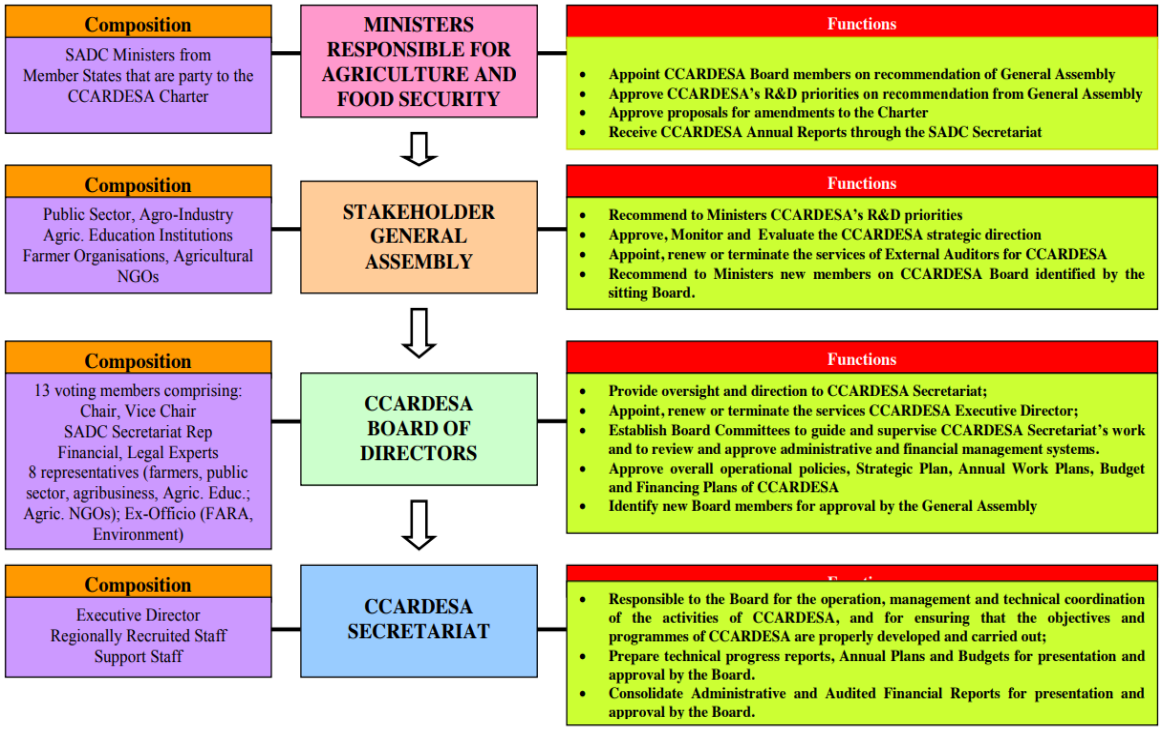


Figure 4: CCARDESA's Institutional Arrangements

1.4 The Long-Term Strategic Plan

The objectives of CCARDESA are achieved through the implementation of research programmes that are defined in the Long-Term Strategic Plan (2020-2029), which was formally approved by the CCARDESA Board in December 2019. The Strategic Plan is a 10-year regional framework setting the priorities and articulating the necessary interventions for enhancing the regional research and development agenda.

The Strategic Plan is well aligned with various relevant SADC policy and strategy frameworks, including the Regional Indicative Strategic Development Plan (RISDP), the SADC Regional Agriculture Policy and other related documents. At the continental level, the Strategic Plan is aligned to the Comprehensive Africa Agriculture Development Programme (CAADP), the Malabo Declaration, and the Science Agenda for Agriculture in Africa. At the global level, the Strategic plan is informed by the Sustainable Development Goals (SDGs), specifically those on poverty, hunger, gender equality, productive employment, climate change and sustainable use of terrestrial ecosystems. The plan is developed within the Agriculture Research for Development (AR4D) paradigm, which puts the needs of farmers and other agricultural value chain actors first. The process was highly participatory, evolving most relevant stakeholders at national and regional levels.

The Long-Term Strategic Plan is implemented through a series of Medium-Term Operational Plans (MTOP), of which the current one covers the period 2020-2024. The Strategic Plan and the MOTP intend to facilitate the delivery of five results which are:

i) Increased agricultural productivity and food and nutrition security;
ii) Sustainable management of natural resources and increased resilience to climate change and other emerging agricultural risks;
iii) Increased commercialization of smallholder agriculture and access to markets;
iv) Gender equality, women empowerment and increased employment and participation of youth and vulnerable groups in agricultural value chains; and
v) Strengthened capacity of regional and national AR4D institutions, farmers and other agricultural value chain actors

The above results will be achieved through the implementation of activities in six thematic areas, this represents the reduced number of thematic areas, concentrating energies to a few high-priority investment areas to achieve maximum impact and these are:

i) Agricultural productivity and food and nutrition security;
ii) Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases;
iii) The commercialisation of the agricultural sector and market access
iv) Women, youth and social inclusion;
v) Knowledge and information management, communication and policy support; and
vi) Capacity strengthening of CCARDESA and AR4D institutions

1.5 Alignment of the Annual Operational Plan to the Strategic Plan

The Annual Work Plan for 2022 is aligned to the thematic areas of the Long-Term Strategic Plan (2020-2029) which are further articulated in the Medium-Term Operational Plan (MTOP)

2020-2025 as given in Section 1.3 above. In pursuing the implementation of the above results and related thematic areas, a number of ongoing programmes and projects were implemented during the year under review, namely:

i) Agricultural Productivity Programme for Southern Africa (APPSA).
ii) Comprehensive Africa Agriculture Development Programme CAADP ex-pillar IV Africa Regional and Sub-regional Organisations for Agricultural Research and Innovation (CAADP-XP4).
iii) Mitigating the impact of COVID-19 on food and nutrition security using Climate Smart Technologies in SADC countries (SADC COVID-19 Response).
iv) Minimizing adverse economic impacts of COVID 19 on the agriculture sector and food systems in SADC and building future resilience to crisis events (GIZ COVID-19 Response).
v) Harnessing Climate-Smart Agriculture (CSA) Practices to Reduce the Impacts of Climate Change in Southern Africa (GCCA+).

A total of 114 outputs were planned for 2022 to contribute towards the results of the thematic areas presented in the MTOP and operationalized by different programmes and projects.

2 ANALYSIS OF PHYSICAL PERFORMANCE FOR THE YEAR

2.1 Analysis of Physical Performance

Table 2: Implementation Status of Annual Outputs by Thematic Area, 2022

#	Thematic Area	# of outputs planned	# of outputs completed	# of outputs not completed	Completion rate (%)
1	Agricultural productivity and food and nutrition security	15	15	0	100.0
2	Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases	19	14	5	73.7
3	Commercialisation of the agricultural sector and market access	5	5	0	100.0
4	Women, youth and social inclusion	1	1	0	100.0
5	Knowledge and information management, communication and policy support	22	16	6	72.7
6	Capacity strengthening of CCARDESA and AR4D institutions	52	38	14	73.1
7	**TOTAL**	**114**	**89**	**25**	**78.1**

2.2 Key Achievements by Key Result Area

This Section presents main achievements by Key Result Area in line with approved 2022 Annual Work Plan and the strategic plan.

2.2.1 KRA 1: Increased agricultural productivity and food and nutrition security

Agricultural productivity remains low in the Southern African region, which suffers from periodic food deficits and malnutrition. A study conducted by SADC shows that about 29.4 million people in the SADC were estimated to be food insecure in the 2018/19 consumption year. The number represented about 14.2% of the total population in 11 SADC countries. The region has, therefore, put in the SADC Action on Food Security to ensure that its citizenry is food secured. The Regional Indicative Strategic Development Plan (RISDP2020- 2030), the Regional Agriculture Policy (RAP) and the Regional Food and Nutrition Security Strategy (FNSS) (2015 – 2025) are some of the instruments that the region is using to address food and nutrition security. In this regard, the region has mandated CCARDESA to spur productivity and production by facilitating the generation and release of improved technologies, amongst other strategic actions.

2.2.1.1 New and existing technologies, and management practices were promoted in Angola and Lesotho

During the year under review, CCARDESA continued to support SADC Member States with the implementation of projects geared to improve the use of existing and new agricultural technologies, innovations, and management practices (TIMPs) while generating new technologies that respond to the current and future needs of the region. The Agricultural Productivity Programme for Southern Africa (APPSA), originally in three countries (Malawi, Mozambique, and Zambia), and now Angola and Lesotho, is one such regional projects which is supported by the World Bank. The first phase, which included three countries (Malawi, Mozambique and Zambia), was implemented from 2013 to January 2020. Angola and Lesotho joined the APPSA Project in 2019 and they are expected to implement the project until January 2025. APPSA Phase 2 is a $50 million IDA and IBRD-financed regional project that aims at *increasing the availability of improved agricultural technologies* through (i) technology generation and dissemination; (ii) strengthening Regional Centers of Leadership (RCoLs); and (iii) coordination and facilitation. In the year 2022, CCARDESA facilitated the implementation of 18 collaborative research and development (R&D) sub-projects in Angola and Lesotho, while 25 more sub-project proposals were finalized, pending commissioning.

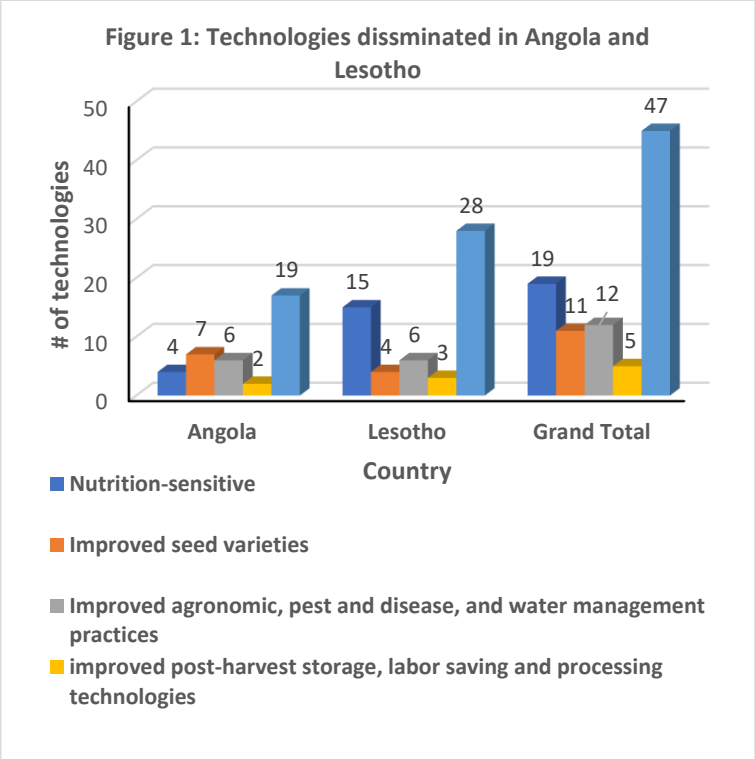


Figure 5: Technologies disseminated in Angola and Lesotho

APPSA project directly promoted a total of 47 technologies (Angola 19 and Lesotho 28) since the commencement of Phase 2. Of these technologies, five are improved maize seed varieties (ZM 521 and ZM523 – in Lesotho), (ZM309, ZM523Y, and ZM523 – in Angola) and two bean seed varieties (NUA 45, Pinto Nodak); 19 nutrition-sensitive technologies; 4 improved cassava varieties (TMS92, TMS02, TMS91, and Precoce de Angola); and 17 improved agricultural practices - Integrated Crop Management, Integrated pest and disease management and post-harvest technologies. The target is to avail 100 technologies by January 2025.

The technologies have reached 14,458 beneficiaries (10,638 in Angola and 3,820 in Lesotho), with 56% of the total beneficiaries being women. In both countries combined, over 2,000 lead farmers have been trained.

Table 3: Number of technologies made available to the farmers up to December 2022

Technology type	Angola		Lesotho		Grand Total
	From shelf	From Phase 1	From shelf	From Phase 1	
Nutrition-sensitive	3	1	15	0	19
Improved seed varieties	4	3	4	0	11
Improved agronomic, pest and disease, and water management practices	4	2	6	0	12
improved post-harvest storage, labor saving and processing technologies	0	2	3	0	5

2.2.1.2 New technologies leading to increased yield in Lesotho

The backstopping mission undertaken in Lesotho by CCARDESA and independent reviewers in July 2022 observed that the new technologies being made available to farmers are leading to increased yields. The demonstration of ZM 521&523 and NUA 45 & Pinto Nodak is one example of the change/ impact experienced following demonstrations in Lead Farmers' fields. The lead and follower farmers testified that ZM varieties are of high quality compared to local varieties in terms of taste and ease of cooking. Agronomic attributes of ZM varieties involve early maturity, high yield, drought tolerant, pest and disease resistant. The farmers testified more than 40% increase in yield with this variety.

Box 1 – Experience from Lesotho

Technologies identified from the shelf: The 28 technologies being disseminated were taken from the shelf. 6 bruchid resistant bean varieties from Malawi and improved sorghum germplasm from ICRISAT have been sourced and will be disseminated starting 2022/23 season.

Dissemination approaches: In Lesotho, the technologies have been disseminated to Extension staff and farmers through training, field days and Farmer Field Schools (FFS) and through exchange visits. On-station and on-farm trials involving lead and follower farmers have also been adopted to disseminate and impart skills to farmers and extension agents. The project hosted an exchange visit initiative between farmer field schools (FFS) from Ha-Seetsa (visitors) under Mahobong resource centre and FFS at Nkoeng (hosts) under Tale resource centre to foster knowledge exchange and learning between smallholder farmers in Leribe district. FFS exchange visits provided an opportunity for farmers to learn about the practices and technologies that other farmers use. APPSA-Lesotho is strengthening promotion of these technologies under a sub-project entitled "Drivers to technology adoption and profitability – dissemination of improved technologies -maize and beans in Lesotho and Angola." Several printing materials were developed and shared including APPSA regional brochures, 2 backdrops summarizing content on NUA 45 and Pinto Nodak bean varieties as well as ZM521 and ZM523. The project also developed 6 pull up banners, 2 telescopic banners, 2 teardrops, branded caps and t-shirts for field days and FFS. A total of 13 videos were developed from which 8 were targeting the regional audience.

National advisory services involved in the dissemination of technologies: Lesotho's extension department is involved in the dissemination of 28 technologies. This has become part of the day-to day extension services, which is an ideal scenario for sustainability.

2.2.1.3 Nutrition-sensitive agriculture integrated into AR4D institutions programs and resilient national and regional food systems in Angola, Eswatini, Lesotho, Mozambique, Zambia and Zimbabwe

CCARDESA supported six member states to promote nutrition-sensitive agriculture through APPSA project in Angola and Lesotho; and through SADC Covid-19 project in Eswatini, Mozambique, Zambia and Zimbabwe.

2.2.1.5 Dissemination of nutrition-sensitive technologies in Angola and Lesotho

Through the CCARDESA-coordinated APPSA Project, Angola and Lesotho are disseminating nutrition-sensitive technologies to farmers. The nutrition-sensitive technologies disseminated in Angola and Lesotho, during the period under review include bean-based recipes using NUA 45 thus: NUA 45 Porridges

1) Plain porridge
2) Bean potato porridge
3) Bean pumpkin porridge

A. NUA 45 Biscuits (two tastes)
   4) Savoury Biscuits
   5) Sweet Biscuits
B. 6) Roasted Bean Flour

The already existing technologies include three improved maize varieties (ZM 521, ZM 523 & VPO 5120) and three common bean varieties (NUA 45, Pinto Nodac & Mkhuzi).

Figure 6: Demonstration of nutritional products in Lesotho

Furthermore, dissemination activities involving demonstrations of soybean products (soymilk, soy-nuts, biscuits, soybean flour, soy roasted flour, soybean scone and cakes, and soybean soup) have been undertaken in Lesotho. There is also a bean-based recipe booklet that has been distributed to nutrition clubs and individual farmers.

2.2.1.6 Provision of fast-growing, high-value, and nutritious vegetables; and associated inputs in Eswatini, Botswana, Malawi, Namibia, Mozambique, Zambia and Zimbabwe

Through the SADC Covid-19 food security project and the Global Climate Chane Alliance Plus (GCCA+) projects, CCARDESA supported the establishment of horticultural fields in six countries under climate-smart irrigated systems. A wide range of vegetable crops was grown, including maize, cucumbers, onion, cabbage, tomato, rape, green pepper, and some fruit trees. Mushrooms were also produced, particularly in Eswatini, while Zimbabwe embarked on fish farming and poultry production, in addition to vegetables and fruits. As at the end of 2022, Namibia and Malawi had not yet started production because the installation of the irrigation systems was not completed.

Figure 7: Production of vegetables in Botswana (left) and Zambia (right)

2.2.2 KRA 2: Sustainable management of natural resources and increased resilience to climate change and other emerging agricultural risks resilience to emerging agricultural risks

Southern Africa remains vulnerable to climate shocks, which have the potential to adversely impact the environment and the production of primary agricultural products which are dependent on climate. The SADC region is experiencing an increase in average temperatures and reduced rainfall due to climate change. This has resulted in increased intensity and severity of droughts, floods, heat waves and mid-season dry spells. The risks posed by climate change-related events have put more pressure on a region that has a high vulnerability to socioeconomic shocks. Under this KRA, CCARDESA is contributing to the objectives of the SADC climate change strategy and action plan and the environment and sustainable development commitments in the SADC RISDP.

2.2.2.1: Supporting the sustainable management of the environment and resilient value chains amongst farmers and other value chain actors

Efforts are being made to strengthen and/or establish Regional CSA Platforms/Networks

CCARDESA has initiated a process to create awareness and build the capabilities of relevant SADC stakeholders on climate-smart agriculture (CSA) concepts to strengthen their abilities to adapt and mitigate emissions of greenhouse gases (GHG) while sustainably increasing agricultural productivity and food security. The thrust is to facilitate the establishment or strengthening of networks to facilitate the exchange of ideas on CSA. During the period under review, various stakeholders were engaged to formulate a regional action plan for establishing platforms for promoting CSA at national and regional levels in Southern Africa. This multi-stakeholder forum identified the need for mapping existing networks as a key priority towards harnessing the existing platforms and networks for scaling CSA technologies at all levels.

CCARDESA Promoting the Role of Agroecology in Sustainable Agricultural Development in the Region

Agroecology is an emerging topic that is receiving increasing attention because of its perceived potential contribution toward sustainable food systems. Some stakeholders are calling for it to be considered as one of the possible production system options that can also contribute towards mitigation and adaptation. However, the regional consensus on this approach has not been established. In 2022, CCARDESA facilitated a regional multi-stakeholder exchange on the role of agroecology in relation to regional resilience and with respect to adaptation and mitigation of climate change. An action plan was elaborated to guide the next steps to raise awareness, promote discussions and generation of evidence to guide consensus on this production approach.

Use of Relevant Earth Sciences Data being promoted to Address Climate Change.

To promote the use of relevant earth observation sciences data in addressing climate change and agricultural development, CCARDESA commissioned a study to map satellite data sources that can be put to use by the regional agricultural R&D community. The findings of this study will help to shape capacity interventions aimed at enhancing the use of earth observations data resources to improve agricultural development and adaptation/resilience to climate change in the SADC region.

EU Engaged in Possible Support on STI in agriculture and on DeSIRA+

CCARDESA engaged the European Commission (EC) on possible new initiatives which may be formulated for implementation in 2023. The engagement explored possible interventions in Science, Technology and Innovation (STI), in agriculture/agroecological transitions in Africa as well as a new follow-up phase of the EU DeSIRA initiative in the continent. CCARDESA endorsed the proposed topics (agroecology, bio-solutions, and digitalization). The EU has scheduled a follow-up consultation to narrow down the possible areas of engagement with CCARDESA and to elaborate on a new programme to be implemented IN 2023.

2.2.2.2: Mitigating the impact of climate change and risk of pest and diseases on farmers and natural resources in Botswana, Malawi, Namibia, Zimbabwe and Zambia

Figure 8: Cabbage production at Hab demonstration site in Maun, Botswana

CCARDESA supported the farmers in Botswana, Malawi, Namibia, Zambia and Zimbabwe to mitigate the impact of climate change through a Global Climate Change Alliance Plus (GCCA+) funded by the EU. The component of the GCCA+ that CCARDESA implemented is entitled "Harnessing Climate Smart Agriculture (CSA) practices to mitigate the impact of climate change on farming systems" and focuses on four outputs (1) enhancing the capacity of SADC MS to integrate climate is change into agriculture programs and investments through promoting climate-smart Agriculture, (2) facilitating access of CSA information products and using it to review agriculture policies, strategies, and programs, (3) value chain actors accessing technologies and innovations that promote CSA practices and (4) Value chain actors acquiring knowledge on CSA technologies and practices. These outputs are aligned with CCARDESA's strategic plan and Medium-Term Operation Plan (MTOP), which are further aligned with the SADC's RISDP and sustainable development goals. The project is mainly contributing to two thematic areas of increasing agricultural productivity and food and nutrition security, sustainable management of natural resources and increased resilience to climate change and other emerging agricultural risks. During the year under review, the project managed to establish irrigation sites for demonstrating CSA technologies in Botswana, Zambia, and Zimbabwe while in Malawi and Namibia, the work was in progress.

2.2.2.3 AR4D institutions are capacitated to support disaster risk reduction initiatives at the national level in Botswana, Malawi, Namibia, Zambia, and Zimbabwe.

Under this key performance area, CCARDESA produced several outputs, including the establishment of six climate smart demonstration sites in Botswana, Malawi, Namibia, Zambia and Zimbabwe through GCCA+, SADC Covid-19, and AICCRA projects. In each of these sites, CCARDESA and its partners designed, supplied and installed solar-powered irrigation facilities for the production of horticultural crops as well as integrated aquaculture enterprises. The sites are being used as learning points for facilitating the out-scaling of climate-smart agricultural practices. The development of knowledge products to aid in the out-scaling and advocacy for climate-smart agriculture is also another key activity for CCARDESA and these products are being shared through various channels, including social media and the

CCARDESA website. Other outputs include the Strengthening or Establishment of Regional CSA Platforms/Networks, Mapping of Satellite Data Sources for enhancing the use of earth observations data resources to improve agricultural development and adaptation/resilience to climate change in the SADC region.

Figure 9: Irrigation system in Zambia (left) and Zimbabwe (right), using water from the borehole.

2.2.2.4 Eswatini, Mozambique, Zambia and Zimbabwe supported to mitigate the impact of Covid-19

During the period under review, CCARDESA continued to support Eswatini, Mozambique, Zambia and Zimbabwe in the implementation of the project "Mitigating the Impact of Covid-19 on Food and Nutrition Security Using Climate Smart Technologies" in order to limit the effects of the pandemic on food security. The dangers posed by the pandemic to food security justified the establishment of this project as an instrument for limiting the impacts. This was a short-duration project - 18 months – commissioned in March/April 2020 with support from the EU. It was closed in May 20022. The choice of the countries was informed by the severity of the COVID-19 and the likely potential impact on the food systems of the different countries in the region. Addressing the crisis required interventions that mitigate the immediate impacts as well as reshaping the food systems to support healthy diets and finally make food production and consumption sustainable.

Figure 10: : Soya beans being grown at Mufumbwe irrigation site, Zambia and *Green maize and onion production in Mozambique*

The project supported the establishment of irrigation facilities at four selected sites in Mozambique, Eswatini, Zambia and Zimbabwe (one in each country). Boreholes were sunk in Eswatini, Zambia and Zimbabwe and they were all equipped with solar-powered submersible pumps to deliver the water to overhead storage tanks. From the storage tanks, the water was delivered to the field through drip irrigation systems. The use of solar power and drip irrigation system are climate-smart approaches. Solar is renewable energy and does not contribute to the emission of carbon into the atmosphere. On the other hand, drip irrigation is a climate-smart practice because of its efficiency in the supply of water to the crops.

The project established horticultural fields in all four countries. A wide range of vegetable crops was grown in the four countries, which included butternut, maize, cucumbers, onion, cabbage, tomato, rape, green pepper, and some fruit trees. Mushrooms were also produced, particularly in Eswatini.

At the time of closing in May 2022, the project had an overall score of 70.3 percent success rate as measured by the number of direct beneficiaries reached against the target. The target was to reach 650 households as direct beneficiaries or approximately 2,870 family members. At the time of closing the project, the number of households reached was 457, giving an approximation of 2,580 family members. Although this was not 100%, it was significant and adequate to consider the overall achievement as very successful. The establishment of the irrigation facilities was very successful, and so was the establishment of vegetable production gardens and the distribution of inputs. The irrigation projects have facilitated the cultivation of high-value and nutritious horticultural crops such as green vegetables, onions, eggplant, tomatoes, and okra, among others.

Figure 11: Commissioning of irrigation facilities at Katapazi demonstration site in Zambia

Selection of a CSA Model Village Site

CCARDESA in the company of the ILRI ESA cluster coordinator, visited Chipata and, working with the Provincial and District Agriculture officials, visited Chief Saili's area, where they selected the site to host the CSA model village. The Chief has allocated 5 hectares of land to be used for setting up a solar-powered irrigation scheme meant primarily to support vegetable production. Other demonstrations to be set up in the village include the management of a communal woodlot and sustainable production intensification modeled after the SIFAZ project that is funded by the EU and implemented by FAO and CIMMYT.

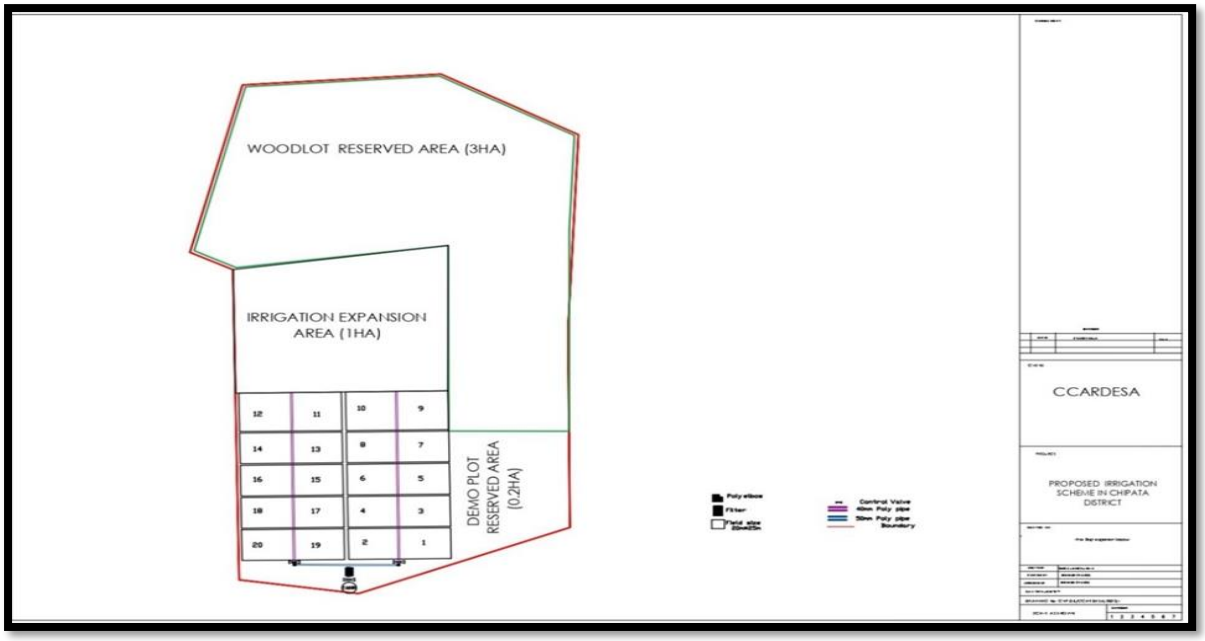


Figure 12: Layout of the CSA Model Site in Magugu village, Chipata, Zambia

2.2.3 KRA 3: Increased commercialization of smallholder agriculture and access to markets

The commercialization of the agricultural sector has the potential to alter the current production practices from a high subsistence level to a highly market-oriented level. The SADC Regional

Agricultural Policy (RAP) recognizes the importance of improved domestic and regional agricultural markets in determining the competitiveness of the region's agriculture and improving incomes for the farmers. However, smallholder farmers currently are unable to effectively participate in lucrative and fair markets due to a range of challenges. CCARDESA strategy is to *promote the commercialization of smallholder agriculture through increasing productivity, value addition, and marketing with an emphasis on commodity chain development. S*everal interventions on commercialization were facilitated during the year under review as given below.

2.2.3.1 Providing foresight on market trends for regional priority agricultural commodities to enhance market-driven production

CCARDESA Facilitated the development of the Cross-border Advocacy and Engagement Strategy

CCARDESA's efforts in 2022 were towards strengthening the enabling environment for regional trade, markets, and trans-boundary commodity movement in order to facilitate the removal of the market-related barriers to regional input and output agricultural markets. Pursuant to this, CCARDESA facilitated a study on the cross-border trade of agricultural inputs to influence policy reform and harmonization in the SADC region. The study findings were shared with CSA stakeholders in a face-to-face meeting. The results of the CSA mapping study were also disseminated at this meeting.

In addition to the above, CCARDESA also embarked on developing an advocacy strategy and action plan to address the observed low cross-border trade among the SADC member states. A draft Advocacy Strategy and Action Plan for promoting cross-border trade were presented for validation by the regional stakeholders. This opportunity was used to share information and consult stakeholders on the broader work that CCARDESA is doing on CSA under various projects. As a result, CCARDESA jointly identified with the CSA stakeholders the best tools to use for the dissemination of CSA in the region.

Figure 13: Strengthening Food Systems Resilience and Agricultural Trade in Southern Africa

2.2.3.2 Supporting the integration of smallholder farmers into value chains and their capacity to access capital to invest in market-driven production

CCARDESA developed the Private Sector Engagement Strategy and Action plan

The SADC region has recognized the importance of the private sector in the commercialization of agriculture. Concomitantly, Member States have also expressed their desire to commercialize agriculture and uplift the performance of smallholder farmers through the engagement of the private sector. In view of this, CCARDESA initiated the development of a private sector engagement strategy and Action Plan during the year under review. The Action plan was validated by the Member States and its implementation was initiated by convening an engagement workshop for the private sector actors involved in CSA in the region.

2.2.4 KRA 4: Gender equality, women empowerment and increased employment and participation of youth and vulnerable groups in agricultural value chains

This is a cross-cutting theme that expresses the desire of CCARDESA Secretariat to be inclusive in its approach to the implementation of its activities. Women, youth, and people living with limitations are of key interest because of the prevailing situation that generally excludes them in development efforts. Equity and fairness is what inform the actions that CCARDESA pursues in line with this thematic area. To support gender mainstreaming efforts, CCARDESA supported the training of 2 officers who have been appointed as gender focal

persons in the organization. As a result, an agenda action plan has been developed for implementation in the organization.

Furthermore, in the reporting period, CCARDESA has applied the principle of inclusiveness to allow for full participation of the different categories. Under the GCCA+, for example, gender analyses were conducted in Malawi and Zambia and provided outputs that indicated that there is a deficiency of information related to gender. An action plan involving training has been developed to address the gender issue. In addition, the project has set aside a condition for all the implementation communities to show that they have identified the socially challenged individuals in the activities of the project.

The CCARDESA CSA mapping study indicated that a significant number of projects in the region lacked gender and social inclusion aspects within them. Given this observation, CCARDESA engaged regional CSA stakeholders on the need to mainstream gender in CSA work, including in agricultural R&D. A regional Action Plan was subsequently developed to mainstream and track the equitable participation of women, men, youth, and people with disabilities in CSA work in the SADC region.

Figure 14: Women and youth implementing the GCCA+ project in Zambia

2.2.4.1 Supporting AR4D institutions to develop interventions that will increase participation of women, youth and other vulnerable groups in agricultural value chains.

CCARDESA facilitated the empowerment of women, youth and vulnerable groups to participate in agricultural value chains in the region. This was done by supporting youths and women from Botswana, Malawi, Lesotho and Zambia to attend meetings where value chains were discussed. In addition, the youths also showcased their technologies and how they are using agricultural value chains to transform their lives. CCARDESA also engaged women and youth organizations to participate in meetings so that they form part of decision and policy-making processes and bodies. The organization has continued to engrave gender trainings in most of its meetings to ensure that there is inclusivity in all CCARDESA programming. This was clearly demonstrated in Lusaka, Zambia when Dr Nawa Mwale held a session on gender inclusivity during the Private Sector and Cross border workshop.

Figure 15: CAADP Youth Network representative participating in the ICKM and Malabo Commitment Awareness Meeting in Botswana

Figure 16: Gender inclusion in CSA, Agroecology and Private Sector

2.2.4.2 Actions taken to encourage women scientists' increased access or participation to either employment in agricultural research or scholarships.

Through APPSA project, CCARDESA is targeting allocating at least 30% of scholarships to women. To date, 3 (27%) females out of 11 candidates have been sponsored for long-term training in Lesotho. Lesotho's 2022/23 training plan has 50% female Scientists earmarked for further training. For the 18 sub-projects under implementation, 6 Principal Investigators are women, whilst 5 are Co-Investigators.

Box 2 - Women in APPSA sub-projects

Farmer Field School sub-project under APPSA stirred by a woman scientist: A sub-project entitled "Drivers to Technology Adoption and Profitability-Dissemination of improved technologies of maize and beans varieties in Lesotho and Angola" has Ms Mokhantso Morahanye from Lesotho as the Principal Investigator (PI) while Dr Kiakanua Manuvanga (male) from Angola is the Co-PI. The sub-project managed to establish Farmer Field Schools (FFS) in Lesotho. The motto of FFS is 'learning by doing', therefore, members were practically involved throughout all stages of crop husbandry in the 2021-22 cropping season. All fifty (50) FFS members from Nkoeng Ha-Makakamela and Malaoaneng Ha-Seetsa under Tale and Mahobong resource centers respectively, graduated in mid-2022. Out of twenty-five (25) graduates from Nkoeng, nineteen (19) were females and six (6) were males. Similarly, there were 25 graduates from Ha-Seetsa comprising of eighteen (18) females and seven (7) males. FFS members were trained on the following: (1) fertilizer and manure application; (2) pest management; (3) harvesting; (4) seed selection; (5) storage; and (5) cooking of NUA 45 bean variety. Following the comprehensive training package, the farmers are now considered experts in their own field.

2.2.5 KRA 5: Strengthened capacity of regional and national AR4D institutions, farmers and another agricultural value chain.

The mandate of CCARDESA in the coordination of agricultural research in the region is premised on the existence of effective and efficient capacity both at its Secretariat and its constituents at the national level. Therefore, having adequate capacity in terms of human capital, physical and financial resources is critical for the effectiveness of the organization. Besides having effective and high-quality personnel with the necessary skills to execute their roles, having accountable governance systems which are responsive to the operating environment is indispensable.

The effectiveness of CCARDESA is also dependent upon the strength of its regional and national actors. Therefore, capacity building to ensure well-resourced institutions at the Secretariat and within the national agricultural innovation system is a prerequisite for agricultural transformation in the SADC region. To discharge its regional mandate, the agency would need to have the capacity to identify required skills and capacities needed by the key sectors and to have the ability to monitor the effectiveness of the regional agricultural R&D investments and generate evidence to guide policy making and enable competitiveness of the regional agriculture in the face the globalization. The interventions given below supported the implementation of this KRA in 2022.

2.2.5.1 Capacity building programmes addressing the gaps identified in NARES identified and supported.

CCARDESA supported the capacity development of Regional Centres of Leadership (RCoLs) through long- and short-term training and construction of research infrastructure. Eleven (11) students from Lesotho are being supported to undertake studies in agricultural sciences, including 3 (Ph.D.), 4 (MSc) and 4 (BSc). Angola has selected 12 candidates for MSc, 10 for Ph.D., and 4 for BSc, who are expected to start training in 2022/23. So far, one PhD and one MSc from Angola have already commenced their studies in Brazil, while the rest are awaiting study visas from the Brazilian government.

On infrastructure development, Angola and Lesotho have officially launched their RCoLs and completed the recruitment of design and supervision firms for their key RCoL infrastructure. However, there have been substantive delays in the commencement of major rehabilitation and construction works. Efforts are being made to ensure that all works can be completed before 2025 with adequate time left for a deferred liability period. Given the late start of works due to delayed recruitment of Project Management Unit (PIU) staff, particularly in Angola and COVID-19 lockdown challenges, the June 2022 ISM advised that all works contracts should be completed by at least 6 to 8 months before project closing date of January 31, 2025. This means all contracts, especially for new buildings and facilities, should be launched at the latest by April 2023 to ensure sufficient construction time. These recommendations have been considered in the countries' revised infrastructure plans.

2.2.5.2 Strengthening governance, management, funding and resource mobilization systems for CCARDESA.

CCARDESA convened two mandatory and one special Board meeting to discuss progress and provide oversight on the running of the Secretariat. The Board came up with decisions that the Secretariat is expected to implement in the year 2023. In operationalizing the Resource Mobilisation Strategy and Action Plan (RMS&AP), which was approved for the period 2021 to 2025 to raise resources for implementing the Strategic Plan and Medium-Term Operational Plan (MTOP), CCARDESA took deliberate actions to engage and mobilize resources. The Secretariat developed an institutional profile and undertook a donor mapping and competitor analysis to guide its resource mobilization efforts in line with the CCARDESA Resource Mobilisation Strategy. The organization also reached out and featured in a number of high-profile dialogues in the region and at the continental level. Some effort was also invested in developing proposals jointly with several partners. The organization jointly developed three proposals; (i) Food Security Resilience Programme (FSRP) developed with an envelope of $5, 000,000 and was approved. The implementation will commence in the year 2023. (ii) Submitted the IKI Growing Greener proposal with GIZ, Peace Parks Foundation and Conservation international to the Offizielle Internetseite des Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz (BMUV). The proposal has been approved, and CCARDESA will receive €1,562,000 over a 6-year period starting from mid-2023; lastly, (iii) the Soils Initiative Project of which if successful will be implemented by the CAADP-XP4 consortium.

Figure 17: The 29th Ordinary Board Meeting in December 2022

2.2.5.3 Establishing and strengthening strategic partnerships

(a) CCARDESA established new regional and national strategic partners to ensure that research investments are aligned to regional and national development priorities

Networking and collaborations constitute major approaches to the work culture of CCARDESA in the region. Formal relations have been developed with strategic partners through the signing of MoUs. During the year under review, CCARDESA signed two Memorandums of Understanding, one with the South African Agricultural Research Council to strengthen collaboration on agricultural research in the region. The second one is with the Global Climate Smart Agriculture Youth Network to ensure women and youth inclusion in all CCARDESA programmes in the region. A draft Strategy for operationalizing the GCSAYN MoU has been developed and is under review.

(b) Enhancing partnerships among multi-stakeholders across sectors to establish sustainable funding mechanisms for AR4D

The Consultative Group on International Agricultural Research (CGIAR) is a consortium of international organizations engaged in research about food security. CGIAR, christened CG, is undergoing some re-structuring. This has led to a move by these centers to operate under one-roof like the One-CG system. The One-CG system recognizes the strategic importance of Sub-regional organizations in agricultural R&D in Africa. As a result, the CG has actively engaged

with SROs on the evolving re-organization of the CGIAR system and the design of new projects to ensure that these stakeholders continue to work together for better outcomes.

Specifically, CCARDESA was invited and participated in the launch of two One-CG Regional Integrated Initiatives (RIIs), which among others, seek to address the impact of climate change in agriculture, namely: (i) the East and Southern Africa Regional Integrated Initiative; on Diversification for Resilient Agrifood systems in East and Southern Africa (ESA), Ukama Ustawi (UU) and (ii) Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA). In both the above initiatives, CCARDESA has been assigned roles in knowledge management and policy engagement as well as to promote the up-scaling of CSA in the region. The Secretariat also took part in the launches of the Regional Integrated Initiatives (RIIs): East and Southern Africa Regional Integrated Initiative to explore collaboration with CCARDESA initiatives. Engagement of SROs is expected to enhance synergy and better impact the initiatives in the sub-region.

(b) Strengthening existing multistakeholder partnerships to develop and implement joint programmes

CCARDESA signed an MoU with the African Forum for Agricultural Advisory Services (AFAAS) and Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) to advance collaboration in East, Central and Southern Africa. A strategy was developed to operationalise the MoU.

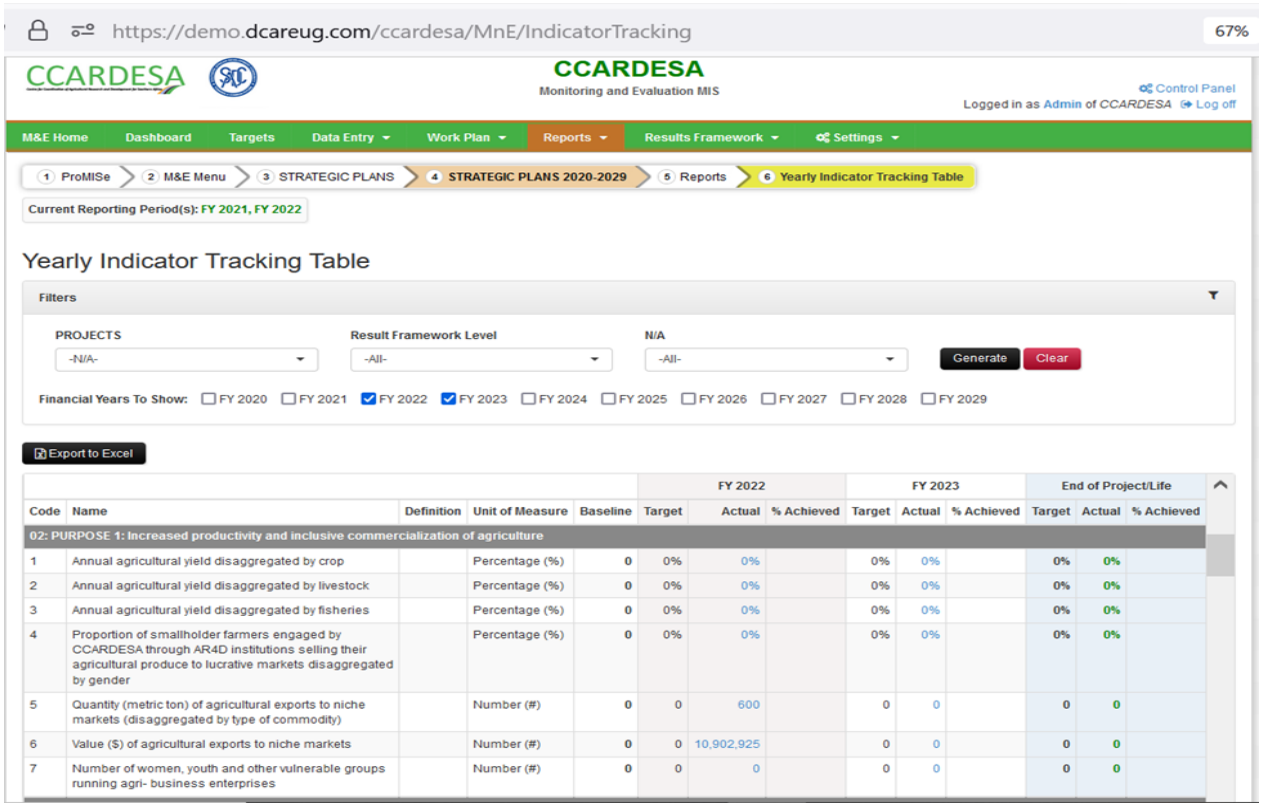
Figure 18: Signing of the tripartite MoU between ASARECA, CCARDESA and AFAAS.

2.2.5.4 Supporting AR4D institutions' programmes

(a) CCARDESA supported MERL systems and their alignment to international best practices.

CCARDESA conducted a Monitoring, Evaluation, and Learning (MEL) system training for selected CCARDESA staff and national partners. The objectives of the training included undertaking capacity building of CCARDESA and countries' M&E specialists in M&E processes, data collection, and standard and functional M&E practices. The training also sought to sensitize countries' M&E specialists on Information, Communication, Knowledge Management, Dissemination, and including the CCARDESA Mobile App that is used by Extension staff at the country level to disseminate advisory information to farmers. Furthermore, the training sought to expose participants to the CAADP-XP4 MEL system and data collection tools and highlighted the Malabo commitments indicators and reporting process.

The participants were taken through the system and showed how the national partners would provide data on certain indicators and generate reports. The system also links the project outputs to the achievement of targets for medium-term and long-term strategies. CCARDESA supported Regional AR4D Institutions to establish and access infrastructure for enhancing the efficient delivery of AR4D projects/programmes in Angola and Lesotho (APPSA)



					FY 2022			FY 2023			End of Project/Life		
Code	Name	Definition	Unit of Measure	Baseline	Target	Actual	% Achieved	Target	Actual	% Achieved	Target	Actual	% Achieved
02: PURPOSE 1: Increased productivity and inclusive commercialization of agriculture													
1	Annual agricultural yield disaggregated by crop		Percentage (%)	0	0%	0%		0%	0%		0%	0%	
2	Annual agricultural yield disaggregated by livestock		Percentage (%)	0	0%	0%		0%	0%		0%	0%	
3	Annual agricultural yield disaggregated by fisheries		Percentage (%)	0	0%	0%		0%	0%		0%	0%	
4	Proportion of smallholder farmers engaged by CCARDESA through AR4D institutions selling their agricultural produce to lucrative markets disaggregated by gender		Percentage (%)	0	0%	0%		0%	0%		0%	0%	
5	Quantity (metric ton) of agricultural exports to niche markets (disaggregated by type of commodity)		Number (#)	0	0	600		0	0		0	0	
6	Value ($) of agricultural exports to niche markets		Number (#)	0	0	10,902,925		0	0		0	0	
7	Number of women, youth and other vulnerable groups running agri- business enterprises		Number (#)	0	0	0		0	0		0	0	

Figure 19: Strategic plan dashboard in the CCARDESA MEL system

(b) Enhancing human capacity in AR4D by facilitating short and long term technical and administrative trainings.

In its quest to broaden the scope of CCARDESA programmes, the organization supported training of Botswana stakeholders on aquaculture best practices which included the production of fingerlings, fish feed formulation, and fish culture pond management with the aim of improving fish productivity and commercialization. In the same vein, women stakeholders were supported to participate in the Apimondia Congress 2022, where they showcased their bee products, interacted, and networked with apiculture stakeholders at a global level. These are some of the untapped sectors that can potentially sustain livelihoods and improve nutrition in the region. CCARDESA supported the participation of three countries in the UNFCCC CoP 27. The knowledge and decisions taken during the CoP 27 will influence national programming and implementation of actions that countries are expected to comply with in addressing the impact of climate change in the region.

(c) Facilitating regional collaboration and mentorship to enhance skills transfer and support for efficient delivery of AR4D projects/ programmes (APPSA)

Collaboration and mentorship are key elements for enhancing the delivery of agricultural research for development projects. The research skills vary from Country to country in the SADC region and are generally inadequate. CCARDESA is facilitating mentoring of the region's pool of scientists through enforcing collaboration and partnerships where junior research partners with seasoned research using a PI/Co-PI model in Angola and Lesotho and also by facilitating the establishment of memoranda of agreement between the regional centers of Leaders (RCoLs) and other institutions. Eighteen collaborative research projects were implemented in Angola and Lesotho, where the researchers paired as PI and Co-PI, and some of these sub-projects involved researchers from Mozambique, Malawi, Zambia and South Africa.

2.2.5.5 Enhancing Capacity of CCARDESA Staff to manage and implement projects.

(a) Training of CCARDESA Staff on Project Management

CCARDESA organized short-term training on project management for 6 (4M:2F) of its staff members to equip them with skills for managing projects and enable the organization to deliver its projects effectively and efficiently. The staff was drawn from departments and units entrusted with technical, finance, and procurement functions. The Prince2 project management training provided trainees with a complete project planning process and methodology that links the tools and techniques in a systematic manner around the ten areas of the Project Management Body of Knowledge. One staff member (M) under Procurement has benefitted from a short-term procurement audit training while two others (both females) completed a 2-weeks training course on Gender and Sustainable Development.

Figure 20: Capacity building of CCARDESA staff on Project Management and Gender

(b) Capacity Development for Agricultural Innovation Systems (AIS)

Two staff members from CCARDESA and three participants from the CAADP-XP4 implementing countries (Eswatini, Zambia, and Zimbabwe) participated in a Training of Trainers workshop on the Tropical Agriculture Platform (TAP) Common Framework on Capacity Development for Agricultural Innovation Systems (AIS), which was facilitated by UNFAO. The overall objective of this training of trainers was to familiarize the agricultural professionals in Africa with the AIS approaches and explore how assessment of AIS can contribute towards strengthening agri-food systems in their respective countries. The trained participants are expected to conduct training in the different countries in the region.

Figure 21: Capacity building of CCARDESA staff and NARES staff on FAO TAP Framework

2.5.5.6 Supporting of Monitoring and Evaluation Functions

(a) CAADP-XP4 Mid-Term Review Facilitated

The CAADP-XP4 Consortium conducted a joint review and planning of activities under the programme. The main objective of the review was to assess the CAADP-XP4 programme implementation progress, take stock of lessons learned, jointly plan for the implementation of the project, and deepen collaboration in 2022. An overall performance score of 60% was allocated to the project. This review showed that the programme had made relatively good progress in achieving the planned targets despite the challenges posed by the outbreak of the COVID-19 pandemic, which forced most of the implementation to be done virtually. This led to financial savings for activities that were initially planned face-to-face.

The consortium resolved to request an extension of the implementation period for the project in order to make up for lost time during the COVID-19 lock-downs. The programme has been granted a no-cost extension for one year up to December 2024. The partners also noted that the programme had been a positive proof of concept that the CAADP-XP4 partners can successfully work together under the existing framework of project governance. The consortium also identified a list of joint activities which needed to be included in their respective 2022 and 2023 Annual Workplans and Budgets. The consortium also undertook joint resource mobilization by developing project proposals such as on soil health and on CSA.

Figure 22: CAADP-XP4 Consortium Mid-Term Review

(b) APPSA Mid-Term Review Executed

A World Bank team, together with counterparts from the Governments of Angola and Lesotho and from the Center for Coordination of Agricultural Research and Development in Southern Africa (CCARDESA), jointly carried out the mid-term review (MTR) for the Agricultural Productivity Program for Southern Africa Angola and Lesotho (APPSA) in November/ December 2022.

The MTR consisted of both a self-assessment by the three implementation parties and a mission to Angola from November 21 to 25, and to Lesotho, from November 28 to December 2. During the mission, the Government of Angola was represented by the Ministry of Finance, the Ministry of Agriculture and Fisheries, the Agriculture Research Institute (Instituto de Investigação Agronómica, IIA), and the Government of Lesotho by the Ministry of Agriculture and Food Security, and the Department of Agricultural Research, in Lesotho. The program included plenary sessions, site visits, technical discussions, and wrap-up meetings with ministerial authorities in Luanda and Maseru, respectively.

The MTR witnessed that the project had made strides to achieve its targets. A total of 18 collaborative research and development (R&D) subprojects were being implemented by both countries together, making available 47 improved technologies (19 in Angola and 28 in Lesotho) and reaching 14,458 beneficiaries (10,638 in Angola and 3,820 in Lesotho), with 56% of the total beneficiaries being women. In both countries combined, over 2,000 lead farmers have been trained. The MTR revealed that the key project targets of 100 technologies, 100% lead farmers aware of the technologies, and 50,000 beneficiaries remain achievable by the end of the Project in January 2025. The overall rating for the project was satisfactory.

(c) AICCRA Mid Term Review

CCARDESA participated in the Mid Term Review facilitated by World Bank in Dakar, Senegal, from 28 November to 03 December 2022. The major objective of the meeting was to review the project's progress and plan for 2023 and beyond. Six AICCRA countries presented consolidated progress reports in achieving the set Project Development Outcomes (PDOs) based on the indicators. The overall rating for the project was satisfactory.

Figure 23: AICCRA Mid-Term Review field trip in Senegal

The MTR set the following key recommendations for consideration by all implementing partners:

- Strengthening links between national Climate Change institutions and parliament
- More investments in impact assessments to strengthen the case for investments in Climate Information Services/Climate Smart Agriculture (CIS/CSA).
- Increase emphasis on bundling multiple services, e.g. including index crops/livestock insurance with CIS services.
- Focus more services on specific value chains, a special emphasis on pastoralists and livestock keepers in general (also, for landscape rehabilitation).

2.2.6 KRA 6: Knowledge and information management, communication and policy support

Knowledge and information are the main products and tools of AR4D that enable farmers and other value chain actors to make informed decisions and act. There are several players in

agricultural research and information sharing, which include development partners, nongovernmental organizations as well as research and extension.

In line with the above, CCARDESA has developed an Information, Communication, and Knowledge Management (ICKM) system and other digital ICT platforms for sharing AR4D information with a broader group of stakeholders. It provides a good tool for sharing relevant regional knowledge products while connecting researchers, extension professionals, communications officers and policymakers. CCARDESA ICKM is the only regional agricultural knowledge hub that covers all SADC Member States and leverages on existing national knowledge and information-sharing initiatives. The key achievements under this KRA for 2022 are given below.

2.2.6.1 SADC Member States Supported with ICKM Initiatives

CCARDESA supported Botswana, Namibia, Malawi, and Zimbabwe participants to participate in the Knowledge Management for Agriculture Development Challenge (KM4AgD Challenge). The KM4AgD Challenge is an initiative aimed at boosting knowledge-based development in AR4D in Africa by developing a community of practice for knowledge management practitioners across Africa. The overall objective is to enable agricultural research and innovation, including extension services, to contribute effectively to food and nutritional security, economic development, and climate change in Africa.

This Challenge takes place annually, and the number of participating countries has been growing. The climax for each annual Challenge is a KM Conference (held in a hybrid format) where participants present their results and receive certificates as "AR4D KM Agents for Sustainable Development". In 2022, Four (4) participants benefitted from the capacity strengthening in Knowledge Management, and they have now become Certified Knowledge Managers.

CCARDESA also provided technical support to Botswana, Namibia, Malawi, and Zimbabwe to refine their Knowledge Management Strategies, which they have since been finalized, and policy briefs developed for the respective countries. CCARDESA participated in the development of the Africa Knowledge Management framework, whose aim is to enhance research and extension collaboration. A draft success story has since been published about the KM4AgD challenge and the Africa Knowledge management framework.

Figure 24: KM4AgD conference in ACCRA, Ghana

2.2.6.2 Strengthening Policy through CCARDESA ICKM systems.

CCARDESA conducted a National Capacity Strengthening event in Tanzania to familiarize the key staff from relevant Tanzania Institutions with Knowledge Management, Data Capture Guidelines in relation to the CCARDESA Themes, and on the Monitoring/Reporting of Malabo Commitments. The institutions that participated in the sensitization included the Tanzania Agriculture Research Institute (TARI), Tanzania Livestock Research Institute (TALIRI), Tanzania Fisheries Research Institute (TAFIRI), Tanzania Forestry Research Institute (TAFORI), Sokoine University of Agriculture (SUA), Ministry of Agriculture (MoA), Ministries of Livestock and fisheries (MLF), National Bureau of Statistics (NBS), Tanzania Meteorological Authority (TMA), and the media. Of the 36 workshop participants who attended the training, 14 were women, and 22 were men. Consequently, the Tanzania participants developed action plans and formed a country community of practice.

Figure 25: ICKM and Malabo Commitment awareness workshop in Tanzania

In the same vein, CCARDESA supported the Botswana Ministry of Agricultural Development and Food Security (MOA) in convening a three (3) days Stakeholder Feedback and

Sensitization engagement on the country's performance on the CAADP or Malabo Commitments. The exchange focused on the results from the 3rd Biennial Review (BR) Performance Report of the African Union Commission on the implementation of the Malabo Declaration on Accelerated Agricultural Growth and Transformation. The meeting also sensitized the local stakeholders on Knowledge Management for Agricultural Development (KM4AgD). The meeting participants included academics, policymakers, planners, media practitioners, representatives from NGOs, and youth organizations, among others. A total of 60 participants attended the meeting. A total of 27 people who attended were female and 33 were male, while 14 were youths representing various youth organizations. This effort was aimed at improving the poor performance of the regional countries based on the results of the 3rd CAADP Biennial Report.

Figure 26: ICKM and Malabo Commitment awareness workshop in Botswana

CCARDESA has also continued holding Information Communication & Knowledge Management Technical working group engagements for the APPSA programme to implement the programme's visibility plan through its various communications platforms. CCARDESA also facilitated the development and validation of Communications Strategies for Regional Centres of Leadership for Cassava and Cassava-based farming systems (Angola) and Horticulture and Horticulture-based farming systems (Lesotho)

2.2.6.3 Reaching Out to More Users

As part of the Continental Knowledge Management & Communication (KMC) Technical Working Group, CCARDESA explored how to link research to the extension and farmers, including on the use of digital tools used in the Research to Extension (R2E) agenda and on the use of digital solutions to bridge the gap between Research and Extension.

Figure 27: Use of digital tools in the Research to Extension (R2E) agenda

CCARDESA broadened its ICKM engagement with Member States by facilitating the appointment of three ICKM focal points for Madagascar, Mauritius, and Zimbabwe. The focal persons were given training on the CCARDESA ICKM system. The ICKM focal persons are an important part of CCARDESA's framework of facilitating the sharing of information and knowledge across the region.

CCARDESA has further widened its network by extending its collaboration with the SADC programmes working on natural resources such as the SADC/GIZ Climate Resilience and Natural Resources Programme (C-NRM), Promoting Sustainable Livelihoods in SADC Transfrontier Conservation Area (TFCAs) (ProSuli) Network, Sustainable Wildlife Management (SWM) Programme, and USAID Resilient Waters Programmes. CCARDESA participated in the SADC TFCA Annual meeting of stakeholders and CCARDESA was tasked to form a community of practice to facilitate lessons learned sharing and information exchange on TFCAs.

2.2.6.4 Website Usage Trends

In 2022, the statistics on traffic and usage of the CCARDESA ICKM system, including the website, the Discussion Groups, and Facebook show a steady growth when comparing the situation at similar periods between January to December 2021 and January to December 2022.

As of December 2022, a cumulative total of 46,604 visited the CCARDESA website 61,115 times, resulting in 107,246 page views (Figure1). A total of 4260 of these visitors were regular users of both the website and the CCARDESA's Southern Africa Agricultural Information and

Knowledge System (SAAIKS) in 2022. This is an improvement compared to the 37,484 users who visited the website 49,734 times in December 2021.

Figure 1 CCARDESA Website Users and No. of Sessions for January-December 2022

2022 **2021**

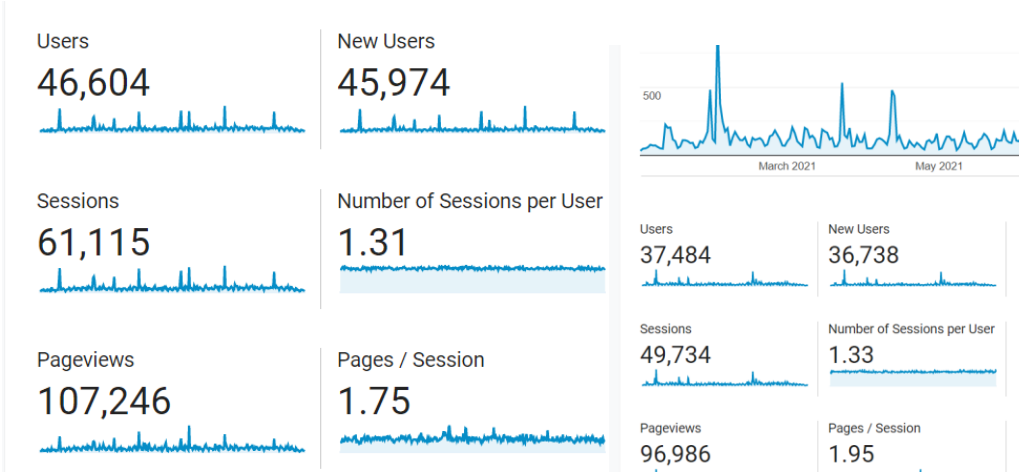


Figure 28: CCARDESA Website users statistics

Comparing the performance of the website users from January to December 2021 and January to December 2022 indicates a 20% increase in the number of website users. Figure 1 above shows statistics from January to December 2022. There was an increase in the number of visitors accessing the CCARDESA website and 88% were new visitors and 12% were returning visitors.

As of December 2022, there were 980 knowledge products on the CCARDESA information platform named SAAIKS. This is an increase of 87 knowledge products compared to 2021, where they were 893.This demonstrates a 9% increase in terms of Knowledge products. CCARDESA shared a total of 187 Facebook posts to 3,013 active Facebook users and 59 News items. There were 80 posts shared on Dgroups to 4,359 active users.

2.2.6.5 Supporting Regional Centers of Leadership on ICKM Initiatives.

CCARDESA continued to facilitate the development of the Cassava and Horticulture Regional Centers of Leadership's Communication Strategies, creating APPSA visibility at the regional level as well as uploading APPSA content onto the CCARDESA ICKM system. The RCoL Communication Strategies were completed and validated in June 2022. The process involved the engagement of a communication consultant who worked with the implementing countries and CCARDESA to improve the draft strategies that were developed in 2021.

About 18 APPSA stories generated by Angola, Lesotho, and CCARDESA were shared at the regional level through CCARDESA's different platforms, such as the website, Facebook, Dgroups, and YouTube. These stories covered activities undertaken under Components 1, 2, and 4 of the projects.

ICKM Lesotho managed to design and distribute information products to the farming communities during APPSA activities. The ICKM team also worked jointly with the

Environment and Social Safeguards specialist to conduct five (5) workshops on Grievance Redress Mechanisms (GRM), targeting Extension Officers, Research Technical Officers, Research Technical Committee (RTC) members, the Horticulture RCoL and PIU members. ICKM Lesotho also assisted the M&E unit by developing digital data collection tools, which utilize mobile and web applications with offline and online capabilities.

Three videos were developed and published during the reporting period. One was developed by CCARDESA from the first dialogue under APPSA Phase 2 on the domestication of the SADC harmonized seed regulatory system that was hosted in South Africa in December 2021. https://youtu.be/Mgz_--patIc. ICKM Lesotho produced two (2) farmer success stories from Mohale's Hoek and Leribe districts. In addition, Lesotho had three (3) of their APPSA activities broadcasted on national television, while four (4) had radio coverage.

3. ANALYSIS OF FINANCIAL PERFORMANCE FOR THE YEAR FOR PROGRAMMES

3.1 Financial Performance by thematic areas and projects

Table 4: Financial Performance by Thematic Area, 2022

	Thematic Area	Budget (US$)	Expenditure (US $)	Variance (US $)	Utilization Rate (%)
1	Agricultural Productivity and Food and nutrition security	452,980	338,152	114,828	75%
2	Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases	336,697	169,159	167,538	50%
3	Commercialization of the agricultural sector and market access	101,624	289,578	(187,954)	285%
4	Women, youth and social inclusion	4,368	-	4,368	0%
5	Knowledge and information management, communication and policy support	661,373	44,634	616,739	7%
6	Capacity strengthening of CCARDESA and AR4D institutions	2,283,384	2,269,707	13,678	99%
	TOTAL	**3,840,426**	**3,111,231**	**729,195**	**81%**

Table 5: Financial Performance by project Area, 2022

	Programme/Project	Budget (US$)	Expenditure (US $)	Variance (US $)	Utilization Rate (%)
1	APPSA	2,074,963	1,544,931	530,032	74%
2	CAADP-XP4	1,438,368	923,433	514,935	64%
3	SADC COVID-19 Response	33,227	-	33,227	0%
4	AICCRA	-	61,578	(61,578)	
5	GIZ CNRM	-	907	(907)	
7	GCCA+	293,867	123,925	169,942	42%
	TOTAL	**3,840,425**	**2,654,775**	**1,185,650**	**69%**

3.2 Overall Financial Performance for CCARDESA

Table 6: Statement of Financial Position at 31 December 2022

	Item	Amount in US$ 2021	Amount in US$ 2022
A	**ASSETS**		
1	Non-Current Assets	7,700	4,662
2	Current Assets	1,504,919	3,128,955
3	**TOTAL ASSETS**	**1,512,619**	**3,133,617**
B	**FUNDS RESERVES AND LIABILITIES**		
4	Capital Grants	7,700	4,662
5	Funds & Reserves	1,482,324	2,977,463
6	Current Liabilities	22,595	151,492
8	**TOTAL FUNDS RESERVES AND LIABILITIES**	**1,512,619**	**3,133,617**

Table 7: Statement of the Financial Performance of CCARDESA for the year ended 31 December 2022

	Item	Amount in US$ 2021	Amount in US$ 2022
1	**Revenue**	**3,086,226**	**3,111,231**
2	Other Income	-	-
3	**Operating Expenses**	**(3,089,264)**	**(3,114,268)**
4	Surplus for the year	(3,038)	(3,038)
5	Other Comprehensive Income	3,038	3,038
6	**Total comprehensive Income**	**-**	**-**

4. GOVERNANCE AND ACCOUNTABILITY

The Joint Meeting of SADC Ministers Responsible for Agriculture & Food Security, and Fisheries & Aquaculture approved the appointment of the following new member of the Board for a period of three years, effective 1 July 2022:

1. Prof **RAZAFINJARA** Aimé Lala from the Republic of Madagascar for the position of Chairperson of the Board
2. Mr. Clemence **BWENJE** from the Republic of Zimbabwe for the position of Public Sector
3. Dr. Frank **KAYULA** from the Republic of Zambia for the position of Farmer Representative
4. Ms. Amanda **CHEMBEZI** from the Republic of Botswana for the position of Civic Society
5. Dr. Relebohile **LEPHEANA** from the Kingdom of Lesotho for the position of Agricultural Research Expert

CCARDESA participated in the meeting of SADC Ministers responsible for agriculture and food security and submitted critical updates on governance and general progress on its work plan.

Two ordinary meetings and one special meeting of the Board were convened during the 2022 financial year. A number of resolutions and directives were passed during the meetings, which were very useful in guiding the Secretariat on technical, financial and administrative matters.

5. CHALLENGES

The following challenges affected the implementation of programmes during the year under review:

- There were delays in the establishment of the CSA Model Village due to administrative challenges, delays by the contractors, and other unforeseen processes that had to be followed before and during the installation of climate-smart irrigation facilities. The delays were felt in AICCRA site in Zambia where the environmental and social screening of the project site had to be done to ensure compliance with the World Bank environmental and social guidelines and national laws. The clearance of the

Environmental and Social Management Plan (ESMP) by the World Bank to guide the mitigation and response to the Environmental and Social risks identified on the site and activities planned under the CSA Model village. Lastly, the clearance of the capital expenditure for setting up the CSA Model Village. In Malawi and Namibia (under GCCA+ project) the delays were from the contractors in installing the facilities. Thontractis led to delays in commencing production at these sites.

- There were delays in the procurement process of recruiting the ICT support officer for the CNRM project.
- Despite the advertisement going out, there was a challenge in the engagement of a consultant to revamp the CCARDESA website and develop training institutions, funding, and an expert database. Few or no companies applied. The advertisement process happened twice, thereby delaying the commencement of the project
- As in the website consultancy, there were delays in the procurement of ICT Based consultant who is supposed to develop ICT-based knowledge products. The first time the advert went out, no firms applied until it was readvertised for the second time.

6. PLANS AND BUDGET FOR 2023

The 2023 annual work plan has a total of 114 activities distributed across the six thematic areas Annex 1), with a total budget of USD4,952,074.91. It's a combination of uncompleted activities that were carried forward from the 2022 financial year and some that are totally new. The majority (36.8%) of the activities planned for implementation in 2023 fall under Thematic Area 6, which has a total of 42 activities, while Thematic Area 4 has the least number of activities. In terms of budget distribution, the largest portion of the budget (59.7%) for the 2023 Work Plan is for the implementation of activities under Thematic Area 6, followed by Thematic Area 1 (14.6%), Thematic Area 2 (12.6%), Thematic Area 5 (9.2%), Thematic Area 3 (3.7%) and Thematic Area 4 (0.1%).

The majority of the activities in the 2023 Work Plan are under the two major projects, namely the APPSA project and the CAADP-XP 4 project, whose budgets respectively account for 45.4% and 33.7% and collectively makeup 79.1% of the budget. The remainder of the activities in the work plan fall under the GCCA+, AICCRA, FSRP, and C-NRM projects, and the remainder to activities related to governance, finance, and administration.

The APPSA project will continue implementating 43 R&D sub-projects, comprising of 18 from the current subprojects under implementation and an additional 25 R&D subprojects to be commissioned in 2023. Technologies that were generated under APPSA phase one will continue to be disseminated by Angola and Lesotho to improve performance under Component one (technology generation and dissemination). Some changes are expected in the APPSA project after completion of the MTR, which is scheduled for November/December 2022.

The activities under CAADP-XP4 will focus on completing the activities that were started in 2022, implementing the various recommendations of the consultancy reports completed in 2021/2, and carrying out various capacity-building activities in the region. There will also be a significant effort towards supporting the activities which were recommended by the medium-term review for the project and activities supporting climate-smart agriculture practices. The

CAADP-XP4 project was designed to close in May 2023 and has made some savings through the virtual delivery of some activities. At the same time, some activities could not be implemented due to the COVID-19 restrictions. Therefore, a request for a no-cost extension has been submitted to the International Fund for Agricultural Development (IFAD) which is administering the programme on behalf of the EU.

The GCCA+ activities in this work plan for 2023 focus on improving food security and adaptation to climate change through the use of climate-smart agriculture. It involves water as a resource, the use of energy to transfer the water from the source to fields, and the application of irrigation principles to produce crops, provide water to livestock, and produce fish. Therefore, the Secretariat is using the Water-Energy-Food (WEF) Nexus approach to deliver the outputs for the project. The other partners in the WEF Nexus are Global Water Platform (GWP) and the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE). The Work Plan has also provided for auditing of the Secretariat at two levels: internal and external. Governance activities, in the form of convening Board meetings, have been included in the work plan.

The C-NRM, AICCRA, and FSRP are new smaller complementary projects focusing on promoting climate agriculture and building resilience. The main objective of the C-NRM is mainstreaming climate change in agriculture and strengthening the cross-border management of natural resources in the SADC region. C-NRM seeks to strengthen the elements of the CCARDESA IKCM system by broadening the amount of information on existing agricultural institutions working on the key commodities that fall within the research mandate of CCARDESA and on making funding opportunities available on the CCARDESA website.

The AICCRA project facilitates collaboration by CGIAR, CCARDESA, SADC, RUFORUM, ASARECA and other collaborators on climate risks for agriculture, risk reduction, and management of key regional agricultural value chains. CCARDESA leads the process of establishing a CSA learning site in Zambia, generates CSA information, facilitates learning and out-scaling of CSA technologies, and advocates for the wide use of CSA approaches in the food systems of the region.

On the other hand, the FSRP focuses on building resilience in the food systems of countries and regions by using smart approaches that circumvent the effects of climate change on agriculture. This regional project involves collaboration with Madagascar in Southern Africa, Ethiopia in East Africa, IGAD and CCARDESA.

The Work Plan also has a number of actions aimed at the mobilization of resources for different projects to support the implementation of the CCARDESA Medium-Term Operational Plan. The resource mobilization efforts are guided by the CCARDESA Resource Mobilisation Strategy and Action Plan, which outlines different approaches for engaging partners and mobilizing resources. Monitoring, Evaluation and Learning has been designed into the execution of projects and has been planned to be implemented in periodic reviews of work plans. The Secretariat's governance and fiduciary activities, such as the convening of Board meetings and implementation of external and internal audits, have also been included in the plan.

Specific activities that will be implemented in 2023 are presented in Annex 1 below.

Annex 1: CCARDESA 2023 Annual Workplan by Thematic Area

Thematic Area 1: Agricultural productivity and food and nutrition security
Outcome 1: Agricultural productivity and food and nutrition security in priority commodities increased
Activities
1.1 Convene partners & develop joint proposals
1.2 Produce flagship publications on: Africa Status Report on research and innovation
1.3 Develop and implement action plan based on the findings of the case studies to inform the operations of the multi-stakeholder partnerships
1.4 Facilitate Regional Writeshop for development of R&D Proposals
1.5 Facilitate peer review and scoping studies of the fourth set of R&D proposals to enhance the quality of science
1.6 Facilitate a regional review to complete the third set of R&D proposals
1.7 Facilitate virtual regional proposals endorsement workshop
1.8 Facilitate convening of the Regional Steering Committee Meeting
1.9 Attendance at strategic meetings and conferences
1.10 Develop technical documents to guide the implementation of best practices in R&D projects
1.11 Regional Review and Planning Meeting
1.12 Facilitate scientific and exchange visits when required
1.13 Facilitate collaboration and peer learning between Phase 1 & Phase 2 countries
1.14 Facilitate Scientific & Partners Conference
1.15 Facilitate development of Concept Notes for the 4th set of R&D proposals
Thematic Area 2: Resilience to emerging agricultural risks: environmental, climate change and transboundary pests and diseases
Outcome 2: AR4D institutions and value chain actors capacitated in building resilience to climate change and sustainably manage natural resources as well as trans-boundary pests and diseases
Activities
2.1. Strengthen existing climate-relevant Thematic Working Groups (TWGs)and national multi-stakeholder innovation platforms, linking them with regional, continental & external global platforms
2.2. Broker partnerships on climate relevant satellite data/ information provision from the European partners
2.3 Train country Stakeholders on resource mobilisation and management in conjunction with international experts
2.4 Establish, operationalize linkages and broker international exchange and cooperation in support of climate-relevant innovation
2.7 Identify and promote best bet and promising Climate Smart Agricultural (CSA) technologies for out scaling
2.8 Establish CSA Model Village
2.9 Consultation with SADC Disaster Risk Reduction (DRR) and other DRR actors
2.10 Facilitate development of emergency action plans
2.11 Facilitate and monitor activity implementation
2.12 Provide technical assistance to partners on the implementation of CSA technologies
2.13 Carry out a survey to identify and document regional and national platforms that promote CSA
2.14 Advocate for the establishment of CSA platforms

2.15 Support national partners to test, adapt and release CSA technologies and management practices
2.16 Disseminate the most promising CSA technologies through national partners
2.17 Support the establishment of irrigation systems and associated CSA infrastructure and provide CSA inputs in model sites
2.18 Provide technical support to national partners towards implementation of project activities
2.19 Facilitate study of the SADC and AU Early Warning Systems and assess their potential adoption by FSRP participating countries
2.20 Validate the Capacity Gap and the SADC & AU Early Warning Systems study
2.21 Share and promote Compendium of SADC-level DACs as provided in the regional study supported by APPSA
2.22 Facilitate inception meetings for the establishment of new RCoL
2.23 Facilitate needs assessment for the establishment of RCoLs
2.24 Facilitate the development of a regional FFS Curriculum for CSA
2.25 Promote a Compendium of technologies developed by existing RCoLs
2.26 Facilitate assessment of technical and infrastructural capacities of NARS to conduct research on NRM and climate change related issues
2.27 Validation of capacity assessment report
Thematic Area 3: Commercialisation of the agricultural sector and market access
Outcome 3: AR4D institutions supported to improve the investment and trade environment that will both deepen and sustain market linkages and improve financing of smallholder farmers
Activities
3.1. Convene a Regional Private Sector Engagement Workshop
3.2 Provide technical support to national and regional organisations to strengthen capacity for quality control of agricultural inputs and products, to increase cross border trade
3.3 Conduct training and organize technical assistance and policy analysis
3.4 Convene policy dialogues at regional and continental levels linking the outcomes from the various levels
Thematic Area 4: Women, youth and social inclusion
Outcome 4: Women, youth and vulnerable people are empowered and play a meaningful role in agricultural value chains
Activities
4.1 Produce best practice guidance notes based on experiences of the SROs
Thematic Area 5: Knowledge and information management, communication and policy support
Outcome 5: Effective engagement and contribution of key stakeholders within the national agricultural innovation system at regional level
Activities
5.1 Undertake high level policy dialogues and strategic meetings
5.2 Develop and operationalise knowledge management strategies including guidelines for data capture at national, regional and continental level
5.3 Develop, operationalise and maintain an interoperable KM platform
5.4 Develop Knowledge products with various stakeholders for dissemination via knowledge platforms
5.5 Design and implement a joint programme communication and visibility strategy
5.6. Participate in strategic events of similar fora and share information and experience of the program
5.7 Promote RCoL and APPSA visibility
5.8 Facilitate development and promotion of templates for APPSA Communication products
5.9 Upload APPSA content onto the CCARDESA ICKM system

5.10 Increase awareness of available improved technologies in the region
5.11 Develop Policy Briefs and advocacy plan on seed policy harmonisation
5.12 Facilitate language translation during APPSA events and interpretation of technical documents to ensure effective communication
5.13 Facilitate dialogue on domestication of the harmonised seed regulatory seed system for SADC
5.14 Facilitate finalisation and operationalisation of (MIS) in implementing countries
5.15 Disseminate CSA knowledge products
5.16 Revise the current tracking system and monitor and analyse the use of knowledge products
5.17 Advocate for the climate smart policies and agriculture investments that promote upscaling of CSA practices
5.19 Develop new formats OF knowledge Products
5.20 Digitalize and maintain training data base
5.21 Develop and maintain Funding Database
5.22 Conduct Media Training on climate change resilience, tourism, biodiversity conservation and natural resource management
5.23 Enhance the capacity of public institutions and private firms to provide climate service delivery models
5.24 Monitoring and Visibility
5.25 Development of ag-data hubs and decision support systems
Thematic Area 6: Capacity strengthening of CCARDESA and AR4D institutions
Outcome 6: Efficient functioning of governance, management, funding and resource mobilisation systems of CCARDESA and AR4D institutions capacitated
Activities
6.1 Recruit and maintain staff
6.2 Upgrade Operational systems
6.3 Develop accountability framework
6.4 Establish portals for funding opportunities and coordinate/facilitate the process of responding to calls together with AR4D actors
6.5 Establish a fund for equitable support in proposal development including international expertise
6.6 Organise joint program review and planning meetings at different levels
6.7 Develop a guide for project implementation and coordination
6.8 Customise existing MEL systems to ROM in collaboration with IFAD and EU partners (including development of KPIs & targets)
6.9 Programme planning, coordination and governance
6.10 Establish staff and partners development plan. Conduct staff and partners capacity building/skills enhancement programs on selected disciplines
6.11 Undertake trainings on program MEL
6.12 Carry out routine Technical backstopping / monitoring visits (including independent reviewers)
6.13 Facilitate a training on planning, establishment, field layout, statistical designs and management of field trials
6.14 Facilitate training on data management and statistical analysis
6.15 Facilitate training on DNA extraction, genotyping and analysis of molecular data
6.16 Facilitate Language training (Portuguese) for project staff
6.17 Outsource Environmental and Social Safeguards Services on a need's basis
6.18 Facilitate a regional M&E training for scientists
6.19 Convene M&E and Communication working group meetings

6.20 Facilitate completion of Mid-term review
6.21 Joint World Bank/CCARDESA Implementation Support Missions
6.22 Project Coordination & PIU staff
6.23 Office equipment
6.24 Project Coordination Costs
6.25 External Audit
6.26 Internal Audit
6.27 Provide CSA trainings based on the needs assessment
6.28 Provide technical support to national partners towards implementation of project activities
6.29 Carry out regular monitoring of national level implementation of project activities
6.30 Conduct impact assessment
6.31 Project Coordination
6.32 Carry out expenditure verification audits
6.33 Out-scaling of CSA technologies and Project Coordination
6.34 Recruitment and maintain Project Officer
6.35 Build capacity in three focus countries of public and private sector next users to support implementation of CSA technology packages
6.36 Convene a 2 day awareness creation conference on CSA knowledge, approaches, and tools
6.37 IT Support Officer
6.38 Administration support cost
6.39 Facilitate recruitment of staff (Advertising, Selections & Travel)
6.40 Procure office & ICT equipment including software
6.41 Undertake Monitoring and evaluation missions - Joint CCARDESA/World Bank Support missions
6.42 Facilitate regional review and planning meeting