



Centre for Coordination of Agricultural Research & Development for Southern Africa



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CHAIRPERSON'S REMARKS

The creation of CCARDESA has answered the call of the regional agricultural stakeholders who realised the need for working together to tackle regional challenges for a common goal of food security and joint prosperity as a region. Working together has allowed the regional actors to join forces, talents and other resources to attain mutually agreed targets.

The few years of CCARDESA's existence has confirmed the feasibility and benefits of regional collaboration to tackle common challenges. This approach also reinforces the ideals of the SADC regional economic community of fostering regional integration by embracing one another and joining forces to defeat our common challenges that breed food insecurity and poverty. Experiences from running collaborative programmes has provided valuable lessons to improve this regional dream.

The year 2017 is a unique year in which the CCARDESA Secretariat demonstrated resilience in surviving a very challenging environment where resources were meagre. Sub-regional research organisation managed to mount relevant activities which were demanded by the stakeholders such as capacity building interventions towards tackling climate change in agriculture. The Secretariat also managed to partner with other stakeholders to deliver very important information and knowledge sharing events such as the African Extension Week held in Durban.

The year 2017 was also a unique period when new Board members took their positions in the

Board to make important decisions to keep the organisation focused and viable in the wake of resource challenges. The Board guided the process of strengthening governance and institutional guidelines to seal procedural gaps, more importantly, to ensure consistent compliance to laid down procedures. It will be in order for me to commend my fellow Board Members for their dedication in guiding the Secretariat to navigate a slippery terrain as it embarked on austerity measures to give the organisation a chance. Members of the Board demonstrated real commitment by putting the needs of the organisation first.

The Board has successfully overseen that the organisation fulfils the expected fiduciary requirements. The SADC Member States are highly commended for the support and commitment they displayed by committing more financial resources to ensure that the organisation continues to serve its regional mandate.

Finally, I wish to thank the tireless effort and sacrifice by the staff at the CCARDESA Secretariat and their dedication to serve the region despite the challenges, this made it easy for the Board to perform its role.

I have no doubt that CCARDESA has achieved some relative stability and the provision of contributions by SADC Member States is a much needed morale booster to this important regional investment that will keep things moving to the service of the stakeholders.

Dr Catherine Mungoma
Chairperson of the CCARDESA Board

BOARD MEMBERS



Dr. Catherine MungomaCHAIRPERSON



Prof. Abednego Dlamini
VICE CHAIRPERSON
CHAIR OF PROGRAMMES
COMMITTEE AND AUDIT, RISK
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FOREWORD: EXECUTIVE DIRECTOR



CCARDESA has continued to deliver its mandate of fostering collaboration among research and development stakeholders to contribute towards addressing regional food security and prosperity.

This report covers CCARDESA's activities which are anchored upon the aspirations of the organisation's Medium Term Operational Plan (MTOP). The MTOP in turn derives its focus from key strategic regional documents such as the SADC Regional Agricultural Policy (RAP), the Regional Indicative and Strategic Development Plan (RISDP), the Comprehensive African Agriculture Development Programme (CAADP).

The negative impact of climate change on the lives of the farmers in the region particularly small holder farmers is very visible. This report highlights the efforts of CCARDESA towards capacitating regional stakeholders with agricultural information and possible tools towards adapting to climate change. The on-going effort of positioning the organisation as a regional hub for agricultural information is also covered as an important intervention aligned to CCARDESA's mandate.

CCARDESA also actively engaged with other players to respond to emerging issues such as the Fall Army Worm, the Science Agenda for Agriculture in Africa and the promotion of investment in smallholder wheat production in the region. Efforts on these are also covered in this report.

The Secretariat's strategic move to expand the World Bank supported Agricultural Productivity Programme for Southern Africa (APPSA) in the region has also picked momentum. The impressive list of collaborative projects under this programme in the current three beneficiary countries is continuing to inspire other countries in the region to emulate them.

The organisation also managed to resiliently weather the challenges of limited human and financial resources to CCARDESA. The Secretariat also managed to make significant progress in fulfilling fiduciary requirements which raised the confidence of the SADC MS to pledge resources to support CCARDESA.

The critical moral and financial support pledged by the member States has been a game changer towards the survival of the organisation. That coupled with the wisdom and commitment of the Board allowed the organisation to gradually turn the corner and continue with its important regional role. The low staff compliment and the sacrifice of staff within the Secretariat has been a critical factor in ensuring the survival of the organisation. This report gives a brief account of the organisation's achievements and lessons learnt. The valuable role of international development partners cannot be under played and they need to be applauded for a keen interest in seeing the success of CCARDESA as a regional project.

It is my sincere belief that the region is better off with CCARDESA than without it. Therefore, it is important for all stakeholders to work towards ensuring the success of this regional investment.

Dr Simon Mwale
[Acting Executive Director]

ACKNOWLEDGEMENT

CCARDESA acknowledges the following sponsors and partners for their contribution to the work of CCARDESA.









IFAD

RECHERCHE ET LE DEVELOPPEMENT AGRICOLES



































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ABBREVIATIONS AND ACRONYMS

AHC-STAFF Africa Human Capital in Science, Technology & Agripreneurship for Food

Security Framework

AGRA Alliance for a Green Revolution in Africa

AnGR Animal Genetic Resources

APPSA Agricultural Productivity Programme for Southern Africa

AU-IBAR African Union Inter-African Bureau for Animal Resources

CA Conservation Agriculture

CAADP Comprehensive Africa Agriculture Development Programme

CCARDESA Centre for Coordination of Agricultural Research and Development for

Southern Africa

CIMMYT Centro Internacional de Mejoramiento de Maíz y Trigo (International Maize

and Wheat Improvement Centre)

COMESA Common Market for Eastern and Southern Africa

CTA Technical Centre for Agricultural and Rural Cooperation

EU European Union

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

GA General Assembly

GDP Gross Domestic Product

GiZ Deutsche Gesellschaft für Internationale Zusammenarbeit

ICT Information and Communication Technologies

IFAD International Fund for Agricultural Development

IFPRI International Food Policy Research Institute

M&E Monitoring and Evaluation

MDTF Multi - Donor Trust Fund

MOU Memorandum of Understanding

MTOP Medium Term Operational Plan

NARS National Agricultural Research Systems

NEPAD New Partnership for Africa's Development

NGO Non-Governmental Organisation

R & D Research and Development

RAP Regional Agricultural Policy

RCoL Regional Centre of Leadership

RISDP Regional Indicative Strategic Development Plan

RUFORUM Regional Universities Forum for Capacity Building in Agriculture

S3A Science Agenda for Agriculture in Africa

S4AC Science for Agriculture Consortium

SADC Southern African Development Community

SRO Sub-regional Research Organisation

USD United States Dollar

WB World Bank

This report covers activities implemented in 2017 under the five thematic areas of the CCARDESA Revised Medium Term Operational Plan of CCARDESA (MTOP) (2015-2018).

Under the Thematic Area for Farmer **Empowerment** and Market Access. CCARDESA Secretariat initiated a review of agricultural policies and extension strategies of countries in the region to assess the extent to which countries have mainstreamed climate change adaptation into their policies and strategies. Based on observed gaps, some Member States such as Botswana, Malawi and Zimbabwe were engaged to facilitate their mainstreaming of climate change adaptation into their national policy and agricultural programmes.

Initiatives implemented under the Thematic Area for Research and Technology Generation include; the elaboration of three pilot collaborative project proposals on climate proofing of the value chains for sorghum, maize and rice value chains respectively, for Botswana-Lesotho, Malawi-Zambia-Zimbabwe Madagascar-Mozambique. and Notable progress was also achieved in developing funding proposals to enable Angola and Lesotho to join the Agricultural Productivity Programme for Southern Africa (APPSA) under the World Bank support. An assessment on the feasibility of increasing smallholder wheat production was undertaken in order to reduce imports in regional countries which have untapped wheat production potential such as Zambia, Mozambique, Tanzania and Madagascar. To improve farmer access to quality seed for key crops, CCARDESA facilitated engagement among some countries (Malawi-Mozambique-Zambia) harmonisation of their seed policies to expedite the alignment of their national policies with the adopted regional framework.

Under the Thematic Area for Information, Communication and Knowledge Management (ICKM), The CCARDESA ICKM System was strengthened by mobilising content for the information portal developed by CCARDESA called the Southern Africa Agricultural Information and Knowledge System (SAAIKS).

Implemented activities under the Thematic Area on Institutional Development and Capacity Building, included capacitation of the stakeholders in regional countries to address some identified capacity needs. To that effect, a total of 403 participants benefitted from CCARDESA capacity building interventions and about 35% of these beneficiaries were female. Some of the content covered during the trainings included: knowledge translation, statistical planning, analysis and error reducing techniques. proposal development resource mobilisation, value chain analysis, climate change adaptation and climate smart agriculture.

Based on the foreseen funding challenges at the beginning of the year, significant effort was devoted by the Secretariat towards resources mobilisation with strategic partners through development of concept notes and proposals and joint implementation of activities. Some of the targeted topics for proposal development included; adaptation to climate change, agricultural intensification, control of the Fall Army Worm and reduction of post-harvest losses. Regional stakeholders were engaged on the implementation of the Science Agenda for African Agriculture (S3A) in the region and on the sustainable utilisation of farm animal genetic resources. CCARDESA co-hosted strategic events such the African Agricultural Extension Week and the Global Conference on Climate Smart Agriculture to promote the dissemination of information to end-users.

Some activities in the 2017 Work Plan were seriously delayed (30%) particularly those

under the MDTF and APPSA funded projects. Slow response by Member States to finalise project proposals also affected the implementation of the pilot projects on climate change adaptation. Despite the above challenges coupled with the limited human capacity at the Secretariat, notable strategic

activities were nonetheless implemented in 2017 which created good visibility for the organisation.





1.0 PROGRAMMES AND PROJECT IMPLEMENTATION

1.1 INTRODUCTION

The Centre for Coordination of Agriculture Research and Development for Southern Africa (CCARDESA) was formed in 2010 and launched in 2011. This sub-regional research organisation (SRO) was created to coordinate and facilitate agricultural research and development (R&D) in the Southern Africa Development Community region. The SRO became technically operational in 2013 with the recruitment of its key personnel.

The focus of the work of CCARDESA is targeted at smallholder farmers who form the majority of the famers in the region. The population of SADC which was estimated at 327,180 000 in 2016 (SADC, 2016) lives in the rural areas. The majority of the region's population (70%) depends on agriculture for food, income and employment (SADC, 2015). This makes agriculture important to the region's overall development agenda in terms of social and economic growth, poverty reduction, food security, gender equity and nutrition.

CCARDESA's vision of "A food secure and prosperous Southern African region with vibrant rural livelihoods" and its mission "to promote innovative research, technology generation and adoption for sustainable agricultural development through effective partnership and capacity building", therefore, aligns well with the development ideals of the region.

This R&D organisation was created as a subsidiary organisation of Southern African Development Community (SADC). Therefore, the focus of its technical programmes are guided by the SADC' strategic documents such the revised Regional Indicative Strategic Development Plan (RISDP), the Dar-es-salaam Declaration on Agriculture and Food Security, the Regional Agricultural Policy (RAP), the SADC Food and Nutrition Security Strategy (2015-2015) and the SADC Industrialisation and Strategy and Road Map (2015-2020).

Other topical global and continental issues relevant to CCARDESA include: the Sustainable Development Goals, the Paris Climate Convention, AU Agenda 2063, Science, Technology and Innovation Strategy for Africa (STISA-2024), Science Agenda for Agriculture in Africa (S3A) and the Livestock Development Strategy for Africa (LiDeSA 2015-2025). Cross cutting issues related to the environment, gender, HIV/AIDS and involvement of youth the use of ICT are taken on board in shaping programmes of the organisation.

1.2 BACKGROUND ON THE 2017 WORK PROGRAMME

The 2017 CCARDESA Annual Work plan and Budget addressed priorities outlined in the revised Medium Term Operational Plan (MTOP for 2016 -2018). These activities were aimed at addressing the low agricultural productivity, food insecurity and malnutrition as well as high levels of poverty in the SADC region. The main thrust of the activities in the 2017 work plan focused on building capacity at national levels to address the threat posed by climate change to food security in the region.

Technical activities implemented in 2017 were under the following thematic areas of the Medium Term Operational Plan for CCARDESA (2014-2018):

Thematic Area 1: Farmer empowerment and market access.

Thematic Area 2: Research and technology generation and farmer demand-driven advisory

services and innovation systems.

Thematic Area 3: Knowledge, information and communication.

Thematic Area 4: Institutional development and capacity building.

1.3 OVERVIEW OF THE 2017 WORK PLAN

Activities implemented in 2017 covered three broad areas namely: 1. Programmes/Technical activities, 2. Human resources, and 3. Governance, visibility and resource mobilisation. The report's priorities are linked to the CCARDESA MTOP's Impact pathway and other important SADC regional policies and strategies, especially the Regional Agricultural Policy (RAP). The report focuses on providing achievements (outputs and outcomes) for technical activities implemented under each thematic area. The achievements under Thematic Area 5 are covered under matters related to governance, visibility and finance.

1.3.1 OVERVIEW OF PRIORITY TECHNICAL ACTIVITIES

Activities of the Thematic Area on research and technology generation and farmer demand-driven advisory services were on the coordination of ACCRA and APPSA R&D activities such as facilitating collaboration on harmonisation of seed legislations to promote improved access to quality seed by farmers as well as implementation of some small bilateral projects on promotion of wheat production and the sustainable utilisation of animal genetic resources.

The second important Thematic Area addressed dealt with the improvement of the CCARDESA Information, Communication, and Knowledge (ICKM) system. This entailed plans to improve the existing knowledge sharing web portal known as the Southern African Agricultural Knowledge System (SAAIKS) and to mobilise content into the portal as well as initiate the improvement of the organisational website.

The third ranked priority Thematic Area which is dealing with institutional development and capacity building issues included activities aimed at capacitating officers from the national agricultural research and extension system through short-term training by exposing them to information on climate change adaption and it's financing as well as improving some specific identified skills necessary for their routine R&D work.

Under the Thematic Area for Farmer Empowerment and Market Access, which was ranked fourth, there were plans to empower stakeholders with knowledge and skills for resilience against climate change using extension services as an entry point to transfer skills to farmers.

1.3.2 GOVERNANCE, VISIBILITY AND RESOURCE MOBILISATION

To provide oversight over activities of the Secretariat one extra-ordinary and two ordinary Board meetings were planned. Production of a number of knowledge products was planned to increase visibility of the organisation and to disseminate information to stakeholders. Resource mobilisation efforts were also planned through joint effort with partners to develop concept notes and proposals as well as to engage with development partners.

This report provides an overview of the broader issues that each thematic area is meant to address and outlines actual milestones achieved in the 2017 Work Plan under a given thematic area. These activities and thematic areas are aligned to the Revised Medium Term Operational Plan for CCARDESA.

1.4 TECHNICAL HIGHLIGHTS

1.4.1 THEMATIC AREA 1: FARMER EMPOWERMENT AND MARKET ACCESS

The intentions of this thematic area is to respond to the fact that the majority of the farmers in the region are smallholders. Due to their low resource base these stakeholders often have to contend with numerous physical and socio-economic constraints such as limited technical skills, poor access to markets and market information, credit and other resources, which inevitably impacts negatively on their production and productivity. Therefore, the expectation on the focus of interventions deployed under this thematic area is on promotion of regional efforts to empower and strengthen farmers and their organizations to become effective partners in the development and implementation of the agricultural R&D agenda, and to enhance their access to markets.

Smallholders due to their low resource base are also most vulnerable to the effects of climatic change. Lack of relevant information is often a key limiting factor to these stakeholders and the extension services in different countries are a major conduit through which farmers can access information and knowledge about climate change adaptation and related approaches such as climate smart agriculture. Therefore, capacitating extension services provides an entry point towards empowering farmers with information and knowledge to adapt against climate change. Hence, CCARDESA interventions primarily targeted extension services. Below are highlights of the progress made on various projects under this thematic area:





Sharing Climate relevant information at the CCARDESA Booth during the Africa Extension Week

Climate-smart practices in agricultural value chains were promoted:

- 1) 2 Member States (MS) projects started being implemented, these will include in the final steps the elaboration of investment proposals by the countries. These 2 MS project teams involving 5 MS in all (Botswana Lesotho, Malawi, Zambia and Zimbabwe) were capacitated on proposal writing through ongoing implementation support. Additionally, one MS (Madagascar) was also capacitated on proposal writing.
- 2) Development of 1 more project idea (for submission to the Global Climate fund, GCF) was initiated in partnership with CCAFS, CCARDESA, SACAU, FANRPAN and 3 MS (Malawi, Tanzania and Zambia).
- Development of an additional proposal was initiated between ILRI/CCAFS and CCARDESA
- 4) 8 pilot projects were started in five MS, 2 in Botswana and Lesotho for the Sorghum value chain and 6 in Malawi for the Maize VC.

1.4.2 THEMATIC AREA 2: RESEARCH AND TECHNOLOGY GENERATION AND FARMER DEMAND-DRIVEN ADVISORY SERVICES AND INNOVATIONS

The key thrust in this Thematic Area is on facilitating the generation of improved and more efficient technologies as well as promoting the provision of farmer demand-driven advisory services and innovation systems. This entails improving the efficiency of disseminating market oriented technologies through knowledge-sharing and the spreading of best practices across member countries via collaboration. Greater cooperation and coordination is necessary and critical towards accelerating the required development and transformation of the agricultural sector in the SADC region. Collaboration of different agencies and multi-disciplinary teams to exploit complementarity from the actors in two or more countries is premated.

is promoted.



Participants at the Botswana Workshop on dry season management for livestock and

Climate Change Adaptation in Sebele, Gaborone

In 2017, focus of activities under the Thematic Area on research and technology generation and farmer demand-driven advisory services were to cover the following: coordination of climate change adaptation related research under the ACCRA programme; expansion of the APPSA programme; facilitating dialoque on harmonization of seed legislations among three countries (Malawi, Mozambique and Zambia) in order to promote improved access to quality seed by farmers; as well as implementation of some small bilateral projects on promotion of smallholder wheat production and management of farm animal genetic resources in the region including management of the CCARDESA Multi-Donor Trust Fund (MDTF) funded sub-grants.

In 2017, CCARDESA attained the following key achievements:

a) Two Member States Engaged to join the APPSA Programme

- CCARDESA engaged the governments of Angola and Lesotho to join the APPSA initiative. Under this programme, countries are assisted to access low interest loans and grants through the World Bank (WB) to invest in agricultural projects.
- 2. CCARDESA facilitated preparation of project proposals by both countries in liaison with the World Bank. The projects are expected to take off in 2018.

b) Provision of Financial Support to 7 CCARDESA Sub-grants Disrupted

- 1. The suspension of funding to CCARDESA by the key donor affected the support that CCARDESA could provide to its 7 MDTF supported grantees. CCARDESA has maintained contact with the grantees.
- CCARDESA terminated MDTF support to the Agricultural Management and Early Warning Information (AMEWI) project but CCARDESA has continued to provide moral support to the project.
- AMEWI project co-hosted with CCARDESA a national training to educate small scale livestock farmers on adaptation and resilience to climate change for Botswana stakeholders on 9-10 March, 2017. CCARDESA also facilitated AMEWI to exhibit its product at the Agricultural Extension Week in Durban, South Africa.

c) Promoted of Sustainable Utilisation of Farm Animal Genetic Resources in the Region

- 1. As the sub-regional focal point for issues related to management of farm animal genetic resources (AnGR), CCARDESA convened a stakeholder consultative forum to identify priority activities to implement to promote sustainable utilisation in the region.
- 2. The stakeholders among others identified the need for CCARESA to facilitate collaborative projects on conservation and characterization of transboundary breeds in the SADC region.
- 3. Stakeholders raised concern at the inhumane and unsustainable slaughter of donkeys for export of hides to the Far-East. Stakeholders also called for relevant research to be undertaken on donkeys and to sensitive stakeholders on appropriate sustainable measures to pursue for optimising benefits to donkey owners in the SADC region.



d) Contributed to the Regional Engagement on Agricultural Intensification in Africa

- 1. CCARDESA was part of the ProIntensAfrica (ProIA) collaborative initiative (http://www.intensafrica.org/) between Europe and African research organisations that came to an end in in March, 2017. The ProIA project among others characterised 4 possible pathways towards intensification of agriculture in Africa and identified 4 different pathways leading to sustainable intensification: A) Conventional b) Eco-Technical c) Agro-ecological d) Organic pathways.
- 2. CCARDESA hosted a d-groups discussion on the issue of intensification in agriculture based on ProIA outputs.
- 3. A number of knowledge products developed on this matter are available through the project website and through the CCARDESA SAAIKS portal.
- 4. The project also successfully contributed to the EU-AU High -Level Policy Dialogue (HLPD) towards shaping a road map to guide research and innovation to address Food, Nutrition Security in Sub-Saharan Africa.



Promoted regional investment in smallholder wheat production

- 1. The demand for wheat is growing exponentially due to increasing incomes and changing dietary habits associated with rapid urbanization in the SADC region. Most of the regional countries are using hard earned foreign revenue to meet this growing demand through imports despite potential to complement imports with domestic production in some countries.
- To address this challenge, CCARDESA facilitated development of a review report on the feasibility of boosting domestic wheat production in the region through engaging smallholder farmers to grow wheat in some regional countries with untapped potential for wheat production.
- 3. The report has **confirmed untapped potential** in the following countries; **Madagascar**, **Mozambique**, **Tanzania and Zambia** and to a limited extent Lesotho as well as Zimbabwe the latter whose wheat sector legacies were affected by domestic challenges.
- 4. In December, 2017, CCARDESA convened a multi-stakeholder regional consultation towards the development of a regional wheat investment strategy.
- 5. An **engagement of regional policy makers** is planned for 2018 to consider the strategy.





Participants at the SADC Seed Harmonisation Workshop in Johannesburg

- 1. CCARDESA engaged the Three APPSA countries (Malawi, Mozambique and Zambia) countries to promote the domestication of national seed laws in-line with the SADC Harmonised Seed Regulations. This will support farmers' better access to quality seed at more affordable prices through improved seed trade, this effort was also meant to ensure that the SADC Variety Catalogue would contain more than just maize varieties.
- 2. Experience sharing and review of the status of the seed policy harmonisation processes in the region was done to gauge support needed to speed up the alignment processes at national level.
- 3. **The three countries were facilitated** to effectively integrate seed policy harmonisation issues into national planning and implementation to facilitate seed availability and affordability.
- 4. National action plans were also developed to support seed harmonisation.
- 5. Since then, **awareness workshops** have also been conducted by the respective countries in Malawi and Zambia.

1.4.3 THEMATIC AREA 3: KNOWLEDGE, INFORMATION AND COMMUNICATION

Lack of information is often a key limiting factor to agricultural stakeholders and the extension services in different countries are major sources through which farmers can access information and knowledge about climate change adaptation and related approaches such as climate smart agriculture. However, availability of suitable extension materials on emerging issues is often limited. The use of ICTs offers opportunities of sharing targeted information products over a wide area to a large audience. CCARDESA has a vision of being a regional knowledge hub for agricultural information by developing and disseminating knowledge products to suit particular regional audiences. Below are highlights of the progress made on various activities under this thematic area:

The technical activities in the 2017 Work Programme gave priority to interventions under the Information, Communication and Knowledge Management (ICKM) Thematic Area followed by the Thematic Area on Research Technology Generation and Advisory Services. Focus on the ICKM Thematic Area was on establishing an effective information and knowledge management system, through which CCARDESA would facilitate the sharing of various types of information and knowledge materials as well as promote the wide use of social media channels in agriculture. An overhauling of the CCARDESA website was to be initiated to improve the dissemination of agricultural information and interaction with stakeholders.

Under the Information, Communication and Knowledge Management (ICKM) Thematic Area, CCARDESA attained the following key achievements in 2017:

- 1) A baseline study on all elements needed for the CCARDESA ICKM system was finalised. Based on this Consultancy Report on Modernisation of the CCARDESA ICKM system- some quick fixes were implemented and the detailed assessments will be done in the next phase of the assignment
- 2) Existing CCARDESA library documents were moved from the CCARDESA website into the new ICKM platform called the Southern Africa Agricultural Information and Knowledge System (SAAIKS) (http://saaiks.net/)
- 3) **Drafting of knowledge products** based on CCARDESA outputs such as regional studies to make their findings accessible to the regional stakeholders was initiated.
- 4) A training module on climate change adaptation adapted from materials developed by GIZ for dissemination via the CCARDESA ICKM platform.
- 5) **Blogging** was used to promote CCARDESA products found on the website and activities conducted by CCARDESA. i.e. annual reports, brochures, R&D project summaries, **9 success stories** from APPSA projects and the regional seed workshop blog.
- 6) A consultant was engaged to produce at **least 24 CCAA/CSA knowledge products** and these are to be finalised in 2018.

- 7) Additional knowledge products were produced and disseminated through the CCARDESA ICKM platform i.e. the CCARDESA tomato story (in the SADC Success Stories Volume 2), CCARDESA ICKM flyer, 'Tackling Climate Change in Agriculture' training package (11 modules) and 2 training workshop reports, AgriBusiness workshop report and presentation, Regional ICKM report, 2 conference papers and 2 presentations for the African Extension Week, 1 presentation for the Global CSA conference, 1 presentation at the FANRPAN regional dialogue.
- 8) A total of **400 knowledge products** developed in collaboration with knowledge management focal persons in about 10 Member States **were up-loaded into the CCARDESA ICKM system**.
- 9) Overall, 12 Member States (MS) were engaged in the ICKM system (2016: 10), By end of 2017 a cumulative total of 470 knowledge products had been uploaded and disseminated (i.e. an increase from 90 at end of 2016 to 380 in 2017).
- 10) An ICKM monitoring system was established with Institutional processes strengthened to position CCARDESA as a regional knowledge broker for CCAA/CSA and AR&D more broadly within the reporting period, e.g. through outreach and visibility events, CCARDESA internal social media training, A blogging pipeline was developed.
- 11) The regional ICKM community of practice continued to be facilitated, including direct engagement with national ICKM focal points. Overall, 12 MS are engaged in the ICKM system.
- 12) A total of 2701 people visited the CCARDESA ICKM online platform in 2017
- 13) Over **8,000 stakeholders** accessed information through the CCARDESA information management systems/tools.
- 14) Social media engagement increased within the period (By end of 2017 CCARDESA had 748 Facebook followers, an increase of 20% from 2016 (622) and 2730 dgroup members, indicating an increase of 37% from 2016 (1995)) thereby, strengthening the position of CCARDESA as regional knowledge broker for CCAA/CSA and AR&D through promoting its ICKM system at regional events and through social media to improve its visibility, invite feedback and buy-in for further development.



Conducted Conferences and Outreach events including raising on awareness on the RAP

- Engagement was initiated with national policy makers in 2 countries (Zimbabwe and Malawi) to support the inclusion of climate change related elements of the RAP in national policy frameworks.
- 2) About 31 participants from Botswana MoA were sensitised about CCAA/CSA and RAP (6 female, 25 male, 10 youth)
- 3) Overall, enhanced awareness of the SADC MS of climate related elements of the RAP which is leading to increased engagement of CCARDESA in national agriculture policy processes.
- 4) Work on supporting the finalisation of the national CSA framework, to ensure domestication of the RAP-related climate change content was started for Malawi and Zambia.
- 5) CCARDESA participated with presentations and Exhibition Booths in the African Extension Week (organised by AFAAS), the booth was visited by 145 registered participants (57 female, 88 male, 34 youth) as well as the 4th Global CSA Conference (organised by NEPAD) with CCARDESA Exhibition visited by 98 registered participants (37 female, 61 male, 35 youth);

1.4.4 THEMATIC AREA 4: INSTITUTIONAL DEVELOPMENT AND CAPACITY BUILDING

Having strong and effective institutions is critical towards the generation of appropriate technology and its dissemination to ensure increased agricultural productivity. Effective institutions can make strong individual contributions to the process of increasing agricultural productivity. Individual NARS institutions within the region require capacity strengthening and in some cases they need to undertake institutional reforms and change processes to be effective. Periodic capacity building to enable NARS scientists and extension agents to effectively participate in regional research and extension activities is essential, especially on emerging issues. Capacity strengthening under this thematic area also focuses on promoting good practices and partnerships as well as mobilisation of resources.

A summary of various capacity building initiatives under this thematic area are given below (Table 1). A total number of 403 participants benefitted from the capacity building initiatives undertaken by CCARDESA in 2017 and at least 35.7% of these beneficiaries were females.

In 2017, the following key achievements in terms of capacity building were attained:

Capacities of SADC member states (MS) to Integrate Climate Change Aspects into Agricultural Programmes and Investments were Increased

- 1) 3 Member States (MS) regional project proposals were worked on, 2 were finalized and are being implemented.
- 2) Capacity building (training) on proposal development was conducted for 6 MS (Botswana, Lesotho, Madagascar, Zimbabwe, Malawi, Zambia). This included how to write fundable proposals. A Global Climate Fund (GCF) project idea with CCAFS, CCARDESA, FANRPAN, SACAU and MS representatives was developed and submitted for internal GIZ vetting before it can be submitted to the GCF.
- 3) In collaboration with CCARDESA, ILRI and CCAFS, a funding proposal for climate resilient livestock development was prepared.
- 4) Overall, the capacity of CCARDESA to mobilise climate-related financial resources for the SADC Region has been strengthened.
- 5) **Botswana elaborated a proposal to the GCF for** climate finance readiness support to set up the National Designated Authority (NDA).

Member States trained on climate change adaptation in agriculture and sensitised on the RAP

- 1) Three trainings involving a total of 8 MS (Malawi, Lesotho, Zambia, Tanzania, Madagascar, Namibia, Zimbabwe, Botswana) were conducted in South Africa, Namibia and Zimbabwe with participants from extension and research using the developed training package on CCAA/CSA as well as being informed of the RAP on 'Tackling Climate Change in Agriculture'.
- 2) In an AgriBusiness Forum/BUAN Workshop in Botswana, **98 participants were trained** on Climate Change Adaptation for dryland management of livestock during (45 female, 53 male, 56 youth);

Facilitated Training of NARES staff in Different Technical Areas

3) National Agricultural Research and Extension System (NARES) staff trained in Malawi, Mozambique and Zambia was done in various areas identified after a training needs assessment (Table 1).

Table 1 Summary of Capacity Building Events Undertaken by CCARDESA in 2017

No	TRAINING	TARGET	FEMALES	MALES	TOTAL
1.	Dry season management for livestock on Climate Change Adaptation for Livestock management and promoting the regional CCARDESA Information and knowledge management system, in collaboration with Botswana University for Agriculture and Natural Resources (BUAN) and Agribusiness Botswana in March 2017	Botswana Small- scale and youth farmers	39	53	98*
2.	CCARDESA Seminar on Climate Change Adaptation and the CCARDESA Information Communication and Knowledge Management System –SAAIKS in March 2017	Botswana Agricultural Departments	7	25	32
3.	Internal training for CCARDESA Secretariat implemented on use of social media and content mobilisation for knowledge management in May 2017	Secretariat Staff	9	5	14
4.	Member State proposal writing for climate proofing pilot projects (Madagascar) in June 2017	Partners involved in the Madagascar proposal	5	6	11
5.	Training on Climate Change Adaptation and Environmental Safe guards in Sept 2017	Ministry of Agriculture, Research and Extension Services and Farmers Unions: Namibia	14	9	23
6.	Training on Climate Change Adaptation and Environmental Safe guards in Sept 2017	Ministry of Agriculture, Research and Extension Services and Farmers Unions: Zimbabwe	9	21	30
7.	National trainings on: Statistical analysis, Development of scientific products, Information packaging and translation, Statistical analysis, Knowledge translation: Proposal development and resource mobilisation from Aug to Oct, 2017.	NARS scientists and technology dissemination specialists (Malawi, Mozambique and Zambia)	61	140	201
	Grand Total		144	256	403

^{*} There were 6 participants who didn't specify their gender in the meeting registration record.





2.0 PARTNERSHIPS AND INSTITUTIONAL DEVELOPMENT

The nature of the work conducted by CCARDESA requires working with others to realise its objectives. Therefore, building strong partnerships with strategic organisations is essential for implementing activities in conjunction with partners. In this respect, CCARDESA carried out some of its 2017 activities with strategic partners to advance its regional R&D mandate.

CCARDESA worked with several partners such as FARA, FANRPAN, NEPAD and AFAAS to host strategic events in the region. The following are highlights of some of the activities implemented jointly with partners in 2017.



CCARDESA's Regional Response to the FAW Infestation

4) CCARDESA participated in regional and continental consultations to develop strategies for the control of the Fall Army Worm (FAW) (Spodoptera frugiperda) which also affected the SADC region. CCARDESA initiated the development of research proposals on the control of the FAW by leveraging the APPSA resources to roll out the trials in the participating APPSA countries (Annex 1).

Regional roll out of the Science Agenda for Agriculture in Africa (S3A)

CCARDESA convened a regional consultative forum for Chief Directors of the National Agricultural Research Institutes and other stakeholders and also facilitated the national S3A consultation in Malawi which was selected as one of the tier-one pilot countries to provide national information towards preparation of a continental proposal for IFAD support.

Partnership with FARA, AFAAS and other SROs (Science for Agriculture Consortium)

CCARDESA engaged in a consultative process supported by the World Bank to explore an institutional arrangement of the future Science for Africa Consortium (S4AC) which will bring together FARA, AFAAS and the 4 SROs (ASARECA, CCARDESA, CORAF and NASRO) into a new institutional arrangement.

Partnership to Prepare proposal for the Green Climate Fund

CCARDESA partnered with GIZ, CCAFS, SACAU and FANRPAN to develop a concept note for submission to the Green Climate fund.



3.0 FINANCIAL PERFORMANCE

Table 2. Statement of the Financial Position of CCARDESA as at 31st December 2017.

Statement of Financial Position as at 31 December 201	7	
Figures in US Dollars	2017	2016
Assets Non-Current Assets		
Property, plant and equipment	5,495	20,478
Other financial assets		571,331
		591,809
Current Assets Cash and cash equivalents	824,342.	261,055
Recoverable from non-exchange transactions	22,381	22.381
Recoverable from exchange transactions	1,460,078	1,435,459
		1,718,895
Total Assets	2,312,296	2,310,704
Current Liabilities		
Accrued expenses and payable	1,898,029	1,875,252
Net Assets	414,267	435,452
Represented by		
Reserve Fund	594,300	970,767
Operating Funds	(7,050)	(7,050)
Other Funds	(244,700)	(528,265)
Member States Contributions	71,717	-
	2,312,296	435,452

Table 3. Statement of the Financial Performance of CCARDESA as at 31st December 2017.

Statement of Financial Performance as at 31 December 20	17	
Figures in USD	2017	2016
Revenue Donor Grants	1,119,944	1,375,246
Other income		56,109
		1,431,355
Expenditure		
Secretariat Core activities	974,341	(1,056,773)
Programs	145,603	(373,045)
Total Expenditure	1,119,944	(1,429,818)
Surplus before financial income and expense		
Financial Income	-	
Financial Expense	-	(5,607)
Net financial (expense)	-	
Surplus after financial income and expense	0	(3,710)

In 2017, the Secretariat's total budget inclusive of that of implementing partners for the year ending December 2017 was USD 3,361,050. The Secretariat spent 33% (USD 1,117,674) of its annual budget at the close of the financial year in December 2017. This low level of funds utilisation was attributed to lack of the expected disbursement of funds from the MDTF and the Member States.

An external audit for 2017 which focuses on the institution's transactions and business conduct in 2017 was not done at the time of reporting. Therefore, unaudited interim 2017 figures from the Secretariat Finance reports were used in the statement of the financial position (Table 2) and statement of financial performance (Table 3) as at 31st December 2017. An internal audit was also not carried out during the year 2017 due to budget constraints. The slow flow of funds to support the implementation of programmes led to the adoption of cost saving measures were which led to a reduction in the number of staff at CCARDESA. The hiring of staff for some key positions was also deferred. Prioritisation was done to focus on high impact activities which could be done with minimal costs.

4.0 CORPORATE GOVERNANCE

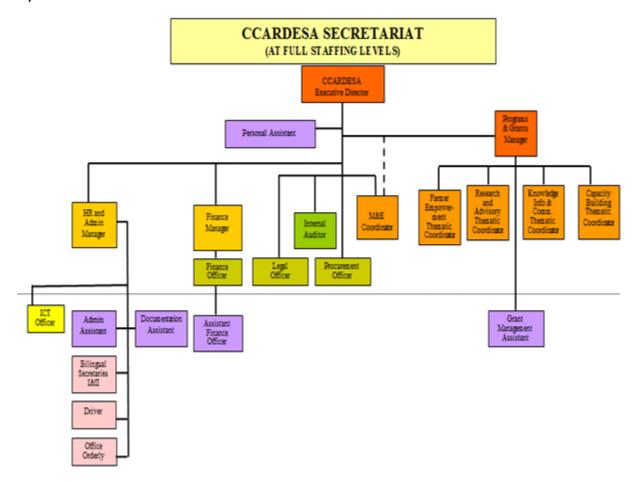
CCARDESA accounts to its stakeholders through its governance structure which allows for the participation of various agricultural research and development stakeholders at all levels. This four-layer structure consists of: 1) the SADC Ministers responsible for Agriculture and Food Security, 2) the General Assembly, 3) the Board of Directors and 4) the CCARDESA Secretariat. The SADC Ministers responsible for Agriculture and Food Security sit at the apex of the structure to provide policy direction to CCARDESA. This forum also approves nominees to serve in the CCARDESA Board. CCARDESA is a subsidiary organisation of the SADC Secretariat and the meetings of these SADC Ministers are coordinated by the SADC Secretariat at which CCARDESA issues and updates are presented and discussed by the Ministers. The Ministers typically have 1-2 meetings every year as scheduled or extraordinary meetings each year depending on the issues at hand.

According to the CCARDESA Charter which established CCARDESA, the General Assembly has to meet every two years. The Board also holds 2 ordinary meetings annually and extra-ordinary meetings when necessary. Otherwise, the Secretariat routinely engages the Executive Committee of the Board and Board Committees engage virtually to deal with urgent matters. The following governance issues were achieved in 2017.

- 1. Three meetings of the CCARDESA Board of Directors were convened in 2017. The meetings considered several issues pertaining to the technical work of the Secretariat, financial management, work plans, budget as well as general administrative matters.
- 2. The Board of Directors made important approvals and decisions to guide the Secretariat such as the review of grants, and HR and Finance manuals to ensure compliance to laid down procedures therein.
- 3. The funding challenges that CCARDESA experienced since 2016 were presented to the SADC Ministers who set a task force to investigate the situation at CCARDESA and recommend a way forward.
- 4. CCARDESA implemented recommendations of the Ministers except those constrained by funding.
- 5. The SADC Ministers finally pledged (1.2 Million USD annually) to support CCARDESA for a period of 3 years to stabilise the organisation and urged members to pay up their contributions.
- 6. The Board approved a joint Science Week and General Assembly in 2019 in partnership with FARA to be held in Eswatini. The 1st CCARDESA General Assembly met in 2014 and couldn't not be held in 2016 due to resource constraints.



Figure 1 Organogram of CCARDESA Secretariat (under ideal staffing level)



5.0 CURRENT STAFF AT THE CCARDESA SECRETARIAT

At some point in 2017, the staff compliment at CCARDESA was 21 and of this number, 7 people work under the GIZ-ACCRA programme (Table 4).

Table 4. Staff at CCARDESA Secretariat in 2017

	Vacant	
	Executive Director	
	Dr Simon Mwale	
	Programme & Grants Manager	
	(Acting Executive Director)	
Mr Tsuna Gwara*	Mr. Justin Rumanyika*	Mr Grem Salima
Finance Officer	HR and Admin Manager	Procurement Officer
Dr Baitsi Podisi	Dr Monica Murata	Mr. Samson Ojesi*
Research Thematic Coordinator	APPSA Project Coordinator	Monitoring & Evaluation Coordinator
Ms Gaselabotlhe Moesi	Ms Futhi Magagula	Ms Botho Maapatsane
Administrative <i>Clerk*</i>	APPSA Programme Officer	Assistant Admin. Officer
Ms Thapiso Ramaselesele*	Mr Leatile Lefenya	Mr Chipo Ngandu*
ICT- Intern	Grants Management Assistant	Environmental Science Intern
Ms Malita Malyenkuku	Ms Thato Matsetse	
Admin- Intern	Office Assistant	
	GIZ STAFF	
Ms Sarah Beerhalter	Dr Wiebke Foerch	Mr Nathaniel Mtunji
ACCRA Programme Manager	ACCRA Programme Advisor	ACCRA Programme Advisor
Mr Dydimus Zengenene	Ms Ellen Machao	Mr Nelson Ediretse
ACCRA – Information Communication and Knowledge Management Advisor	ACCRA – Administration and Finance Officer	ACCRA - Driver
Mrs Gabriele Christmann — ACCRA Finance Officer		

^{*} Left CCARDESA in the course of 2017.

Six CCARDESA personnel left during the course of 2017, their contracts could not be renewed as a cost containment measure for the Secretariat. Some critical positions remained vacant due to insufficient resources. This affected the ability of the organisation to develop and implement its programmes (Figure 1 and Table 4).

6.0 CONCLUSION

The annual progress and achievements of CCARDESA show the maturation of the SRO which is increasingly viewed by several research development stakeholders as a strategic player to partner with. The portfolio of R&D projects has grown significantly and covering very important emerging issues such as climate change adaptation and dealing with emergency issues related to pests and diseases. The notable growth of the APPSA programme with a list of 77 collaborative projects (Annex 1) and its expansion to other countries is expected to positively impact on regional efforts of addressing food and nutritional security. The improvement of the information, communication and knowledge system will also go a long way in improving access and dissemination of agricultural information to the different users.

While good outputs have been achieved, the institution has also encountered resource challenges which had an effect on the recorded results. Resource constraints also limited the Secretariat from filling key positions and from engaging needed services in some critical roles like internal audit and M&E.

Nonetheless, CCARDESA acted creatively, to harness strategic partnerships to execute its work plan and maintained good visibility in spite of the resources challenges. The effort invested in developing proposals as well as the positive commitment by Member States to support the CCARDESA Secretariat financially will strengthen and enable the Secretariat to execute its mandate for the benefit of the region.

7.0 OVERIVEW OF THE 2018 WORK PLAN

The work plan for 2018 will continue to follow the five Thematic Areas of the revised CCARDESA MTOP. In view of the resource challenges that the SRO faced in 2017, more effort will be deployed towards resource mobilisation in 2018 as part of a turn—around approach to moving the organisation forward. The end of 2018 also marks the end of the first CCARDESA MTOP (2014-2018). Therefore, deliberate activities towards documenting lessons learnt and developing a long term strategy for CCARDESA and MTOP-2 (2019-2023) will be undertaken to take the organisation forward. Activities related to climate change adaptation will take more prominence as well as improving information, communication and knowledge management system and dissemination to create visibility for the organisation. The Thematic Area 4 on Research and Technology Generation and farmer-driven advisory services will take a larger share of the budget. A good number of activities will be done in-house for cost effectiveness. Besides pursuing strategic partnerships, CCARDESA will continue to give due attention to good institutional governance and topical regional and global developmental issues.

An outline of some of the key activities planned for 2018 is given below:

- 1. Promote the domestication of the elements of the Regional Agricultural Policy into the national agricultural policies and extension strategies.
- 2. Facilitate the implementation of 2 pilot projects on climate proofing of the maize and sorghum value chains
- 3. Convene a regional scientific conference to disseminate research outputs from the APPSA programme
- 4. Facilitate the joining of the APPSA programme by Angola and Lesotho
- 5. Develop several knowledge products with a bias towards climate smart agriculture
- 6. Promote small holder wheat production in the region
- 7. Implement improvements to the CCARDESA ICKM system
- 8. Implement capacity building in line with the needs to the NARS in the member states
- 9. Enhance partnership with AFAAS and other members of the Science for Agriculture consortium
- 10. Strengthen CCARDESA capacity for monitoring and evaluation of programmes
- 11. Support seed policy harmonisation in the region with a focus on the three APPSA countries.
- 12. Mobilise resources for programme implementation
- 13. Promote CCARDESA visibility through the use of various media channels in particular social media.
- 14. Build the capacity of CCARDESA to serve as a platform for sharing of information
- 15. Support dissemination of research outputs and extension information
- 16. Facilitate the up-scaling and out-scaling of best agricultural practices
- 17. Support SADC countries in the implementation of SADC RAP/ nutritional strategy/RISDP/ CAADP
- 18. Enhance network and partnerships in agriculture education and training
- 19. Develop CCARDESA long term strategy and MTOP-2
- 20. Finalise the CCARDESA gender policy
- 21. Implement Governance activities (Produce external audit report and convene Board meetings)
- 22. Fill selected positions at the Secretariat.

ANNEX 1: LIST OF PROJECTS IMPLEMENTED IN 2017

CCARDESA Competitive Grants projects

- 1. Agriculture market information and early warning system
- 2. Conservation agriculture and development of smart sprayer for smallholder farmers
- 3. Development of a solar dryer for small scale mopane worm harvesters in Southern Africa
- 4. Promotion of ecosystem-responsive integrated urban farming practices in the livestock, vegetable and fish production systems
- 5. Improving village chicken productivity to increase income and food security in Tanzania and Mozambique
- 6. Enhancing capacities for milk collection and processing in the agro-pastoral and peri-urban farming systems for improved livelihoods
- 7. Efficacy and delivery methods of novel combined vaccines against respiratory poultry diseases in Tanzania and Zambia

Donor Funded Projects

- 8. IFPRI Virtual Information Platform
- 9. Management of farm animal genetic resources (AnGR)
- 10. Africa human capital in science, technology & agripreneurship for food security framework (AHC-STAFF)
- 11. SADC adaptation to climate change in rural areas in Southern Africa, transregional
- 12. ProIntense Africa
- 13. Wheat for Africa: Enhancing Smallholder Wheat Productivity through Sustainable Intensification in Wheat based Farming Systems of Rwanda and Zambia, (SWPSI)
- 14. Information, Communication and Knowledge Management

Agricultural Productivity Program for Southern Africa (APPSA) Projects

Cycle 1 (2013)

PROJECT CODE	PROJECT TITLE	LEAD COUNTRY
	MAIZE	
MZ-P01-2013	Improving nutritional quality in maize in Mozambique, Zambia and Malawi.	Mozambique
MZ-P02-2013	Disseminating improved maize varieties and agronomic practices among smallholder farmers.	Zambia
MZ-P03-2013	Development and improvement of inbred lines tolerant to major storage pests.	Zambia
MZ-P04-2013	Improvement of integrated maize / dairy production systems.	Malawi
MZ-P05-2013	Improvement of post-harvest management practices in maize.	Malawi
MZ-P06-2013	Development of maize varieties resistant to major diseases in Mozambique, Malawi and Zambia.	Mozambique
MZ-P07-2013	Screening and promotion of Striga tolerant maize varieties in Malawi, Mozambique and Zambia.	Malawi
MZ-P08-2013	Maize germplasm collection and characterisation for climate change adaptation.	Malawi
MZ-P09-2013	Improving water use efficiency in maize production.	Malawi
	RICE	
RC-P01-2013	Rice germplasm collection and characterisation.	Mozambique
RC-P02-2013	Development of improved rice varieties.	Mozambique
RC-P03-2013	Enhancing productivity of improved rice varieties through the development of integrated crop management practices.	Mozambique
RC-P04-2013	Promotion and dissemination of improved rice technologies for sustainable production.	Mozambique
RC-P05-2013	Strengthening rice seed delivery system for enhanced production among smallholder farmers.	Zambia

PROJECT CODE	PROJECT TITLE	LEAD COUNTRY
	LEGUMES	
LG-P01-2013	Improving bean productivity in low soil fertility and drought prone areas.	Mozambique
LG-P02-2013	Developing bean varieties for high Fe and Zn with resistance to ALS and CBB.	Zambia
LG-P03-2013	Adaptation and promotion of bruchid resistant bean varieties in Malawi, Mozambique, and Zambia.	Malawi
LG-P04-2013	Improving groundnut productivity in low soil fertility and drought prone areas of Mozambique, Malawi and Zambia.	Mozambique
LG-P05-2013	Breeding groundnut Varieties for multiple disease resistance, for quality and food market access in Mozambique and Zambia.	Zambia
LG-P06-2013	Strengthening food legume seed delivery systems in Malawi, Mozambique, and Zambia.	Zambia
LG-P07-2013	Up-scaling improved soybean production and utilisation for enhanced nutrition and income generation.	Zambia
LG-P08-2013	Developing high yielding soybean varieties that are resistant to major diseases and with preferred market traits.	Zambia
LG-P09-2013	Developing high yielding varieties and sustainable management practices for improved cowpea production.	Zambia
LG-P10-2013	Development and promotion of improved pigeon pea varieties for increased and sustainable production.	Malawi
LG-P11-2013	Enhancing dissemination of food legume based technologies for increased production.	Zambia
	SORGHUM	
SG-P01-2013	Promoting the adoption of improved management practices for increased Sorghum production in Zambia.	Zambia

Cycle 2 (2014)

PROJECT CODE	PROJECT TITLE	LEAD COUNTRY
	MAIZE	
MZ-P10-2014	Investigating the occurrence of Maize lethal Necrosis Disease in Malawi, Mozambique and Zambia.	Malawi
MZ-P11-2014	Improving maize productivity and family income through cow's animal traction and organic fertilizer.	Mozambique
MZ-P12-2014	Improving and Sustaining Maize and Cowpea Productivity and Production among Smallholder Farmers in Malawi and Mozambique.	Mozambique
MZ-P13-2014	Improving maize and bean yields through the increased farmer accessibility to integrated disease and pest management (IPDM) technologies for major pests and diseases of maize and common bean in Malawi, Mozambique and Zambia.	Malawi
	RICE	
RC-P06-2014	Participatory evaluation of improved rice varieties to increase productivity in Malawi, Mozambique and Zambia.	Malawi
RC-P07-2014	Improving rice productivity in saline soils and drought prone areas.	Mozambique
RC-P08-2014	Improving Surface Irrigation Drainage Water Reuse for Rice Production.	Malawi
RC-P09-2014	Improving Smallholders Rice Productivity and Livelihood through Introduction of Rice — Duck based Farming System in Mozambique and Malawi.	Mozambique
	LEGUMES	
LG-P12-2014	Evaluation and dissemination of improved cowpea varieties in Mozambique and Zambia for enhanced food security, family nutrition and income.	Mozambique
LG-P13-2014	Efficacy of soil amendment with agricultural lime in reducing aflatoxin contamination in groundnuts in Malawi and Zambia.	Malawi
LG-P14-2014	Development of common bean and cowpea with aluminium tolerance.	Zambia
LG-P15-2014	Enhancing agro-processing and market access of food legume products for smallholder farmers in Zambia, Malawi and Mozambique.	Zambia
LG-P16-2014	Screening common bean varieties with improved biological nitrogen fixation for yield and quality.	Malawi

Enhancing utilisation and marketability of groundnut /bambara nut through processing and improved post-harvest practices.	Zambia
Development of common bean and cowpea with bruchid tolerance.	Zambia
MULTIPLE CROPS	
Enhanced resilience to seasonal dry spells in rainfed soya, maize and upland rice using silicon-based fertiliser.	Zambia
Evaluation of pesticide residues in legume and cereal cropping systems in Zambia, Malawi and Mozambique.	Zambia
Improving grains storage structures for smallholder farmers in Mozambique and Zambia.	Mozambique
Reducing Mycotoxin Contamination of Maize, Groundnuts and Beans to Improve Food Safety Enhance Health and Trade.	Zambia
CONSERVATION AGRICULTURE	
Herbicide weed control and performance among smallholder farmers practicing Conservation Agriculture.	Zambia
Developing conservation agriculture maize-legume systems for smallholder farmers in Malawi, Mozambique and Zambia.	Mozambique
Improving Soil Fertility and Reducing Green House Gas Emissions using Biochar in Conservation Agriculture.	Zambia
Evaluation of trade-offs of tradition and partial adoption of CA systems for improved food security and incomes.	Zambia
Disease and Pest Challenges in Maize Production under Conservation Agriculture Cropping Systems: What do we learn?	Malawi
	through processing and improved post-harvest practices. Development of common bean and cowpea with bruchid tolerance. MULTIPLE CROPS Enhanced resilience to seasonal dry spells in rainfed soya, maize and upland rice using silicon-based fertiliser. Evaluation of pesticide residues in legume and cereal cropping systems in Zambia, Malawi and Mozambique. Improving grains storage structures for smallholder farmers in Mozambique and Zambia. Reducing Mycotoxin Contamination of Maize, Groundnuts and Beans to Improve Food Safety Enhance Health and Trade. CONSERVATION AGRICULTURE Herbicide weed control and performance among smallholder farmers practicing Conservation Agriculture. Developing conservation agriculture maize-legume systems for smallholder farmers in Malawi, Mozambique and Zambia. Improving Soil Fertility and Reducing Green House Gas Emissions using Biochar in Conservation Agriculture. Evaluation of trade-offs of tradition and partial adoption of CA systems for improved food security and incomes. Disease and Pest Challenges in Maize Production under Conservation

Cycle 3 (2016)

Project Code	PROJECT TITLE	Lead Country	
CASSAVA			
CV-P01-2016	Pathogens limiting cassava culture in Angola, Mozambique and Zambia: epidemiology and integrated pest management measures.	Angola	
CV-P02-2016	Molecular characterisation of released cassava varieties and selected clones in Angola, Mozambique and Zambia.	Zambia	
CV-P03-2016	Cassava germplasm collection, characterisation and conservation.	Angola	
CV-P04-2016	Evaluation of cassava genotypes tolerant to abiotic stress in Angola, Mozambique and Zambia.	Angola	
CV-P05-2016	Cassava quality, processing and utilisation: The influence of the variety and environment.	Zambia	
	LEGUMES		
LG- P19-2016	Scaling up of high yielding cowpea varieties and technologies in Mozambique, Malawi and Zambia.	Mozambique	
LG- P20-2016	Use of pigeon pea and sorghum crop residues in goat feeding.	Mozambique	
LG- P21-2016	Improving seed availability of high yielding and resilient groundnut varieties in Mozambique, Malawi and Zambia.	Mozambique	
LG- P22-2016	Phenotypic and molecular characterization of common bean varieties released in Malawi, Mozambique and Zambia.	Malawi	
LG- P23-2016	Enhancing the International Competitiveness of Small to Medium Sized Legume and Cereal Processing Enterprises through Facilitating the Adoption of Quality Assurance (QA) programs.	Malawi	
LG- P24-2016	Development and Dissemination of a Manually Operated on-the-ridge Planter of Food Legumes.	Malawi	
LG- P25-2016	Promoting Cowpea Productivity and Production through use of high Phosphorous use efficiency Cowpea Cultivars in Zambia, Mozambique and Malawi.	Zambia	
LG- P26-2016	Development of a cowpea based weaning food.	Zambia	
LG- P27-2016	Multi-Crop food legume germplasm collection and characterization in Malawi, Mozambique and Zambia.	Zambia	
LG- P28-2016	Harnessing and unlocking the potential of local cowpea, bambara nut and Pigeon pea diversity for improved livelihoods of farmers and increased adaptive capacity to climate change for smallholder farmers in Malawi, Mozambique and Zambia.	Malawi	

Project Code	PROJECT TITLE	Lead Country	
CLIMATE SMART AGRICULTURE incl. CONSERVATION AGRICULTURE			
CS-P01-2016	Optimising maize- cowpea intercropping systems productivity and water use resilience to climate change in Zambia and Mozambique.	Zambia	
CS-P02-2016	Mainstreaming climate smart agriculture through sustainable solar- powered micro-irrigation for sustainable small scale business development.	Zambia	
CA-P06-2016	Evaluating sustainable intensification opportunities for improved labour productivity using mechanised conservation agriculture in central Mozambique and Malawi (SIMECAMM).	Mozambique	
	MAIZE		
MZ-P14-2016	Promoting use of modern multipurpose hand-tools both for planting seed and applying fertiliser, and maize sheller as part of smallholder-farm mechanization in Malawi, Mozambique and Zambia.	Malawi	
MZ-P15-2016	Development and diffusion of an on-spot fertilizer applicator for smallholder farmers in Mozambique and Zambia.	Zambia	
MZ-P16-2016	Development of maize varieties tolerant to drought and heat by use of double haploid technology as a mitigation to climate change in Malawi, Mozambique and Zambia.	Malawi	
MZ-P17-2016	Establishing core collections of example varieties and drought tolerance thresholds for maize to promote SADC seed trade.	Zambia	
MZ-P18-2016	Assessment solar drying for reducing post-harvest losses in maize – a case of rural smallholder farmers in Malawi Mozambique and Zambia.	Malawi	
	RICE/SORGHUM		
RC-P10-2016	Dissemination of rice production technology to women in rural families and supplementation of rice sub-products in orphan children in Mozambique, Malawi and Zambia.	Mozambique	
SG-P02-2016	Strengthening the Sorghum seed delivery for enhanced production among smallholder farmer in Mozambique and Zambia	Zambia	
	OTHER TOPICS		
SP-P01-2017	Enhancing National and Regional Capacity in Fall Armyworm (Spodoptera frugiperda) Management and Research in Malawi, Mozambique and Zambia	Malawi	
SP-P02-2017	Drivers to Technology Adoption and Profitability for Cereals and Food legumes in Malawi, Mozambique and Zambia	Mozambique	
SP-P03-2017	Development and Adaption of Appropriate Mechanisation Technologies for Selected Legumes in Smallholder Production	Zambia	
Total		77	



Centre for Coordination of Agricultural Research & Development for Southern Africa Centre De Coordination De La Recherche Et Du Développement Agricole De L'afrique Australe Centro para a Coordenação da Investigação e Desenvolvimento Agrário na África Austral