

ASARECA Council of Patron Ministers' Summit

PROCEEDINGS



**May 2nd - 4th, 2019
Kampala, Uganda**

© 2019 Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)

Correct citation

ASARECA, 2019. ASARECA Council of Patron Ministers' Summit, 2019. PROCEEDINGS - ABRIDGED VERSION

Fair use policy

This publication may be reproduced with the intention of increasing its availability to those who need it. ASARECA encourages fair use of reproduced materials. Proper citation is requested

Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)

Plot 5, Mpigi Road

P. O. Box 765, Entebbe, Uganda

Tel: +256 414 320 556, +256 414 321 885

Email: asareca@asareca.org

Website: www.asareca.org

Organising Committee:

Hon. Vincent B. Ssempijja, Dr. Stephen Mugo, Prof. Jean Jacques Mbonigaba Muhinda, Dr. Paswel Marennya, Dr. Leah Ndungu, Dr. Enock Warinda, Dr. Drake Mubiru, Elijah Lutwama, Miriam Kyotalimye, Ben Moses Ilakut, Jolly Basemera, Moses Odeke, Rachael N. Musisi, Julius Mwijusya, Ronald Makaire, Connie Acayo and Charlotte Kemigisha

Editors: Prof. Jean Jacques Mbonigaba Muhinda, Dr. Paswel Marennya, Dr. Enock Warinda, Miriam Kyotalimye, Ben Moses Ilakut, Moses Odeke

Design/Layout: Peter Mugeni

Cover Photo: ASARECA General Assembly comprising Patron Ministers, Business Committee and Board of Directors join Rt. Hon. Dr. A. M. Kirunda Kivejinja (centre), Uganda's 2nd Deputy Prime Minister and Minister of East African Community Affairs, in a group photo during the Summit

Table of contents

List of Acronyms	3
Acknowledgments	5
SUMMIT SPEAKERS	8

01. MEETING OF THE BUSINESS COMMITTEE OF THE ASARECA GENERAL ASSEMBLY	12
Meeting Summary	13
ASARECA governance and organizational reforms	14
1.0 Introduction	14
2.0 Admission of Republic of the Congo to ASARECA	22
3.0 The New ASARECA Board of Directors (2019 – 2021)	23
4.0 ASARECA's Strategy and Results Framework (2019 – 2028), and Medium Term Operational Plan 1	25
5.0 Closed session of the new Board of Directors	28
6.0 Meeting of the Committee of Director Generals	29
7.0 Report of Induction Meeting of the New Board	31

02. ASARECA COUNCIL OF PATRON MINISTERS' SUMMIT	33
Summit Summary	34
8.0 Agriculture in Uganda and the value of regionally coordinated research	35
9.0 Harnessing Partnerships for Regional R4D: Key Achievements and Prospects for the Future	37
10.0 Remarks by IGAD	41
11.0 Remarks by COMESA	43
Official Opening of the ASARECA Council of Patron Ministers' Summit	45
12.0 Welcome Remarks	46
13.0 Remarks by the African Union	49
14.0 Opening Address	51
15.0 Key Note Speech: Harnessing the Power of Global Collaboration to Improve Africa's Food Security in the face of Climate Change	54

16.0	Sustainable Agricultural Intensification through Conservation Agriculture: Institutional, Market and Policy Enablers	58
03. MINISTERIAL AND DEVELOPMENT PARTNERS' PANEL DISCUSSION ON CONSERVATION AGRICULTURE-BASED SUSTAINABLE INTENSIFICATION		60
17.0	Summary of the Ministerial Panel Discussion	61
	Comments and Reactions from the Plenary	66
18.0	Development Partner Panel on Commitments to Regionally Coordinated	67
	Summary of the Development Partner Panel Discussion	68
	Full Panel Discussion	69
	Questions from the plenary	73
19.0	Concluding Statement on the Panel Discussions	75
0.4 RATIFICATION OF ASARECA'S NEW GOVERNANCE FRAMEWORK AND JOINT COMMUNIQUE		76
20.0	Ratification of ASARECA's New Governance Framework	77
21.0	The Joint Communiqué on CASI and Regional AR4D	78
22.0	Celebrating 25 years of ASARECA	81
23.0	ASARECA Board of Directors Receive Recognition for Exemplary Service	82
24.0	Statements of Commitment to ASARECA by Ministers responsible for Agricultural Research for Development in Eastern and Central Africa	84
	Patron Ministers' Summit Closing Statement	87
05. PROGRAMS OF ACTION FOR INSTITUTIONALIZING CONSERVATION AGRICULTURE-BASED SUSTAINABLE INTENSIFICATION (CASI) IN EASTERN AND SOUTHERN AFRICA		88
Future AR4D Priorities: Panel Discussion by the Director Generals of Research from SIMLESA Country NARs and Executive Secretary, ASARECA		90
Closing remarks		213
Field visit to Kalongo Sub County, Nakasongola District		216

List of Acronyms

ACIAR	Australian Center for International Agricultural Research
AGRA	Alliance for a Green Revolution in Africa
AR4D	Agricultural Research for Development
ARC	Agricultural Research Corporation, Republic of the Sudan
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
A-SRF	ASARECA Strategy and Results Framework
AUC	African Union Commission
CAADP	Comprehensive Africa Agriculture Development Programme
CDGs	Committee of Director Generals
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Centre
CGIAR	Consultative Group on International Agricultural Research
COMESA	Common Market for Eastern and Southern Africa
CPM	Council of Patron Ministers
DeSIRA	Development Smart Innovation through Research in Agriculture
EAAPP	East African Agricultural Productivity Project
EAFF	Eastern Africa Farmers Federation
ECAATP	East and Central Africa Agriculture Transformation Project
EIAR	Ethiopian Agricultural Research Institute
FARA	Forum for Agricultural Research in Africa
FOFIFA	Centre National de la recherche Appliquée au développement Rural
HLAP	High-Level Advisory Panel
ICER	Internally Commissioned External Review
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGAD	Inter-Governmental Authority on Development
ILRI	International Livestock Research Institute
IRRI	International Rice Research Institute
INERA	Institut National pour l'Etude et la Recherche Agronomiques
ISABU	Institut des Sciences Agronomiques du Burundi
KALRO	Kenya Agricultural and Livestock Research Organization
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MTOP	Medium Term Operational Plan
NARI	National Agricultural Research Institutes
NARL	National Agricultural Research Laboratories
NARO	National Agricultural Research Organization Uganda
NEPAD	New Partnership For Africa's Development
QAAFI	Queensland Alliance for Agriculture and Food Innovation
RAB	Rwanda Agricultural Board
RCoE	Regional Centres of Excellence
RoC	Republic of Congo
SIMLESA	Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern & Southern Africa
SISTA	Supporting Implementation of a Science-Led and Climate-Relevant Agricultural Transformation in Africa
TARI	Tanzania Agricultural Research Institute
USAID	United States Agency for International Development



ASARECA Executive Secretary, Prof. Muhinda (centre) and key speakers compare notes during the Summit



Right: Attentive delegates during the opening session



The Outgoing Chairperson, Dr. Ambrose Agona (r) handing over instruments of power to the incoming Chairperson, Dr. Abubakr Hussein (c), the Director General of ARC Sudan.



ASARECA Patron Ministers brief the media on CASI and ASARECA Strategic directions



ASARECA's incoming Board of Directors reciting the Oath of Office. The Oath was administered by Signum Advocates

Acknowledgments

The ASARECA Council of Patron Minister's Summit marked the conclusion of the governance and management reform process in ASARECA. The year 2019 was strategic for launching a reformed and revitalized ASARECA because it is the year ASARECA marks a Silver Jubilee since it was established.

The need for a strategic review of ASARECA's governance first became apparent in 2014 when the management realised that although ASARECA had enjoyed a substantial resource base during Operational Plan I (OPI 2008 -2013), resource commitments for Operational Plan II (OPII 2014 – 2018) were not forthcoming as had been previously anticipated. This threatened the ability of the Secretariat to maintain its high-caliber workforce to deliver OPII.

At the time, ASARECA had been subjected to several internal and external evaluations which illuminated an institution of stellar performance, at least from a technical viewpoint. The inability to raise resources to deliver its mandate at a time when its impact was undisputable and sector financing favourable, had to be a function of underlying systemic issues that needed to be carefully addressed.

The ASARECA Board of Directors, working with then Interim Executive Secretary, Prof. Francis Wachira, took a bold decision to undertake the Internally Commissioned External Review (ICER) of ASARECA's programme and institutional performance across the board. The ICER revealed the need to rethink ASARECA's strategic direction and governance and proposed a number of recommendations for reform.

ASARECA appreciates the financial and technical support received from various development partners during the reform process. Special acknowledgement goes to the World Bank technical support team comprising the Task Team Leader, Ms Bremala Nathan, Dr. Tekola Dejene and Dr. Sarah Simmons for their keen supervision during this period.

We would like to acknowledge the work done by Dr. Cyprian Ebong, the Interim Executive Secretary (2017-18) in kick-starting the implementation of the reforms. ASARECA sought support from FARA, led by Dr. Yemi Akinbami, to prepare a White Paper on governance reforms. The contributions made by FARA are highly appreciated.

We would like express gratitude to the High-Level Advisory Panel (HLAP) comprising H.E. Rhoda Peace Tumusiime (leader); and members; Dr. Paul Mafuka, Dr. Ephraim Mukisira, Mr. Stephen Muchiri, Dr. Ambrose Agona and Prof. Jean Jacques Mbonigaba-Muhinda. Established in 2018, the HLAP was charged with engaging ASARECA's Patron Ministers, the African Union and the Secretary Generals of the Regional Economic Communities (COMESA, EAC and IGAD) to appreciate the new strategic direction ASARECA was taking. Besides, the HLAP provided an oversight role in the process of selecting the new Board of Directors.

We would like to say a big thank you to ASARECA's outgoing Board of Directors, namely: Dr. Ambrose Agona, Ir. Dieudonné Nahimana, Dr. Mandefro Nigussie, Dr. Geoffrey Mkamilo, Dr. Abubakr Hussein, Prof. Amand Mbuya

Kankolongo, Mr. Tsegay Berhane Ghebremariam, Dr. Eliud Kiereger, Dr. Aime Lala Razafinjara, Dr. Victor Silvano Bennet, Dr. Patrick Karangwa, Dr. Armand Claude Mvila, Dr. Joseph Mureithi, Mr. Siméon Alfred Rakotomamonjy, Dr. Chilot Yirga, Dr. Theogene Rutagwenda, Mr. Stephen Vincent Muchiri, Mr. Richard Sahinguvu, Prof. Lilia Rahajaharitombo Rabeharisoa, Mr. Zubeir Ibrahim Mohammed, Dr. Getachew Belay and Dr. Jimmy Wilson Smith.

We commend the work done by ASARECA's National Focal Persons (NFPs) in mobilizing constituents and reactivating the Business Committees of ASARECA's General Assembly in the respective countries. These include; Negusse Abraha, Prof. Patrick Tshilenge Djim, Dr. Foustine Peter Wandera, Prof. Faisal Mohamed Ahmed Elhag, Mr. Simeon Rakotomamonjy, Mr. Sylodie Bizimana, Dr. Evelina Jovita Lukonge, Dr. Vicky Ruganzu, Dr. Tesfaye Shimbir, Dr. Imelda Kashaija, Mr. Bryan Elwich John and Dr. Jean de Dieu Nzila. The NFPs are foot soldiers appointed by the Director General in Member Countries as ASARECA liaisons. Through the facilitation of NFPs, a Select Committee of the Business Committee of the General Assembly was constituted. It comprised Prof. Joseph Bigirimana, the President of the General Assembly; Dr. Eve Kasirye-Alemu, the Vice President; Prof. Ntengua S.Y. Mdoe; Dr. Ferdu Azerefege; Dr. Mélance Ntunzwenimana; Dr. Nicholas Hitimana; Pastor Jimmy Kato Towe Modi; Prof. Elly Sabiiti; Prof. Adrien Kalonji-Mbuyi; Prof. Lenah Nakhone Wati; Mr. Andriamparany Ranoasy; Mr. Huruy Asghedom and Dr. Jean de Dieu Nzila. Under the leadership of Prof. Bigirimana, the Select Committee coordinated the selection ASARECA Board of Directors in line with the criteria set out in the White Paper.

The one constant throughout the reform process was the Director General of NARO - Uganda, Dr. Ambrose Agona, who took over the mantle as Chairperson of the ASARECA Board of Directors just as the institution had entered the most turbulent season in its history. Dr. Agona's delivery of the Council of Patron Minister's Summit is highly appreciated.

We would like to thank the Australian Centre for International Agricultural Research (ACIAR) under the leadership of Dr. Peter Horne for funding the SIMLESA project and for having confidence in ASARECA's competence to convene the Patron Ministers to receive evidence on Conservation Agriculture Based Sustainable Intensification (CASI) technologies. Thank you for making your team comprising Dr. Leah Ndungu, the Regional Manager Africa, Dr. Eric Huttner, and Ms Alis Okonji available to backstop preparations for the Summit.

We are grateful to partners from CIMMYT; Dr. Paswel Marenja and his predecessor, Dr. Mekuria Mulugetta for their support in delivering the Summit. They wouldn't have done this without the full backing of the CIMMYT Director General, Martin Kropff; the Socio-Economics Program Leader, Dr. Olaf Erenstein; the Programme Manager, Dil Rahut; CIMMYT regional representative for Africa, Dr. Stephen Mugo; and the Communications Manager, Jerome Bousset. Collectively, this team ensured that the evidence from SIMLESA was synthesized and packaged to increase awareness on the benefits of CASI. SIMLESA would not have been a success without the guidance it received from its project steering committee made up of Dr. John Dixon, Dr. Eric Craswell, Dr. Daniel Rodriguez and Dr. George Mburathi. The SIMLESA Country coordinators; Bedru Beshir, Dr. Charles Nkonge, Dr. Grace Timanyenchi Munthali, Domingos José Brás Dias, Dr. Pascal Rushemuka, Dr. John Sariah, and Dr. Drake Mubiru who were the force behind the implementation of SIMLESA projects on the ground. They were supported by a host of other CIMMYT Scientists including Moti Jaleta, Isaiah Nyangumbo, Rahma Adam and Michael Misiko.

We are indebted to ASARECA Patron Ministers, COMESA, IGAD and the AU leaders for taking time-off their busy schedules to participate in the Summit.

We say a big thank you to Hon. Vincent Bamulangaki Ssempijja, the Minister for Agriculture Animal Industry Fisheries-Uganda; the Permanent Secretary, Pius Wakabi Kasajja; and all ministry staff for a job well done in hosting the Summit.

Appreciation to the local organizing committee made up of Dr. Drake Mubiru, Ronald Makaire, Connie Acayo, Charlotte Kemigyisha and Julius Mwijusya. Special thanks to ASARECA staff—Dr. Enoch Warinda, Elijah Lutwama, Prof. Donald Kugonza, Miriam Kyotalimye, Ben Moses Ilakut, Moses Odeke, Jolly Basemera, Annet Wanyana, Rachael Namuzibwa, Daniel Mwesige, Robert Kabasi, Ronald Dongo, Zainab Kyeyune, Flavia Mubiri, Beatrice Otimong and Sam Ochom for their teamwork and dedication. We wish also to thank Peter Mugeni for the state-of-the art Designs and Layout for the Summit information products.

Finally, we thank all the presenters and speakers for sharing their valuable insights and expertise during the Summit.

To all our stakeholders across the continent, we pledge total commitment to the realization of the commitments made during the Summit.



Prof. Joseph Bigirimana

Country Representative IRRI Burundi and
President of the ASARECA General Assembly



Dr. Abubakr Hussein

DG ARC Sudan and Chair of the ASARECA Board of Directors



Prof. Jean Jacques Mbonigaba-Muhinda

Executive Director, ASARECA

SUMMIT SPEAKERS



Rt. Hon. Dr. A. M. Kirunda Kivejinja, 2nd Deputy Premier and Minister of East Africa Community Affairs of the Republic of Uganda



Prof. Joseph Bigirimana, President, ASARECA General Assembly



Hon. Mrs. Rhoda Peace Tumusiime, Chairperson, High-Level Advisory Panel on ASARECA governance reforms



H.E. Amb. Josefa Leonel Correia Sacko, Commissioner for Rural Economy and Agriculture, African Union Commission



Hon. Vincent Bamulangaki Ssempijja, Minister, Agriculture, Animal Industry and Fisheries, Republic of Uganda



Pius Wakabi Kasajja, Permanent Secretary, Agriculture, Animal Industry and Fisheries, Republic of Uganda



Dr. Ambrose Agona, Director General, National Agricultural Research Organization (NARO -Uganda)



Prof. Abubakr Hussein, Director General, Agricultural Research Corporation, Republic of Sudan



Prof. Jean Jacques Mbonigaba-Muhinda, Executive Secretary, ASARECA



Hon. Dr. Déo-Guide Rurema,
Minister of the Environment,
Agriculture and Livestock,
Republic of Burundi



Mr. Amanuel Negassi Hagos,
Advisor, Minister of Agriculture,
State of Eritrea



Hon. Dr. Kaba Urgessa, State
Minister Natural Resources
Management, Ministry of
Agriculture, Federal Republic of
Ethiopia



Prof. Hamadi Iddi Boga, PhD,
Principal Secretary, Agriculture
Research, Ministry of Agriculture
and Irrigation - Kenya



Hon. Onyoti Adigo Nyikwec,
Minister for Agriculture and
Food Security, Republic of South
Sudan



Mr. Jean Claude Boukono,
Director of Ministers Cabinet,
Ministry of Scientific Research
and Technical Innovation,
Republic of the Congo (RoC)



Mr. Ndambu Mwalanga Odon,
Secretary General for Scientific
Research and Technology of the
Democratic Republic Congo



Mr. Felix Paulo, Secretary General,
Ministry of Agriculture and Food
Security, Mozambique



Dr. Wilkson Makumba, Director,
Department of Agricultural
Research Services, Ministry of
Agriculture, Irrigation and Water
Development, Malawi



Ambassador Dr. Kipyego Cheluget, Assistant Secretary General (Programmes), COMESA



Dr. John P. Kabayo, Coordinator, IGAD Drought Resilience Initiative in the Horn of Africa Region



Dr. Martin Kropff, Director General, International Maize and Wheat Improvement Centre (CIMMYT)



Dr. Peter Horne, General Manager, Country Programs, ACIAR



Dr. Tracy McCracken, USDA/USAID SPS Technical Advisor for East Africa



Dr. Tekola Dejene, World Bank Lead Consultant, Representative and a Member of the Bank's support missions to ASARECA



Dr. Yemi Akinbamijo, Executive Director, Forum for Agricultural Research in Africa (FARA)



Dr. Leah Ndungu, Regional Manager for Africa, ACIAR



Dr. George Bigirwa, Vice President, Program Development and Innovations - Alliance for a Green Revolution in Africa (AGRA)



***Birungi Korutaro, Country Team
Leader – Uganda***



***Dr. Stephen Mugo, CIMMYT
Regional Representative
for Africa and Country
Representative for Kenya***



***Dr. Olaf Erenstein, Socio-
Economics Program Director,
CIMMYT***



***Dr. Paswel Marennya, SIMLESA
Coordinator, CIMMYT***



***Dr. Simon Mwale, Executive
Director, CCARDESA***



***Dr. Eric Huttner, Research
Program Manager for Crops,
ACIAR***



***Dr. Eliud Kiereger, Director
General, Kenya Agriculture and
Livestock Research Organization
(KALRO)***



***Dr. Olga Fafetine, Director
General, IIAM Mozambique***



***Dr. Imelda Kashaija, Deputy
Director General, NARO Uganda***



01

MEETING OF THE BUSINESS COMMITTEE OF THE ASARECA GENERAL ASSEMBLY



Meeting Summary

The General Assembly (GA) of ASARECA consists of all Members duly admitted to the Association and registered. The Business Committee acts as its Electoral College and is made up of five individuals drawn from institutions in each Member State in good standing.

The May 2019 meeting of the Business Committee of the ASARECA General Assembly was attended by the Members of the Select Committee of the Business Committee, Members of the outgoing and incoming Board of Directors, Director Generals of the National Agricultural Research Institutes, Members of the High-Level Advisory Panel on ASARECA governance reforms (HLAP), National Focal Persons, and ASARECA Secretariat. The meeting sought to: (i) deliberate on ASARECA governance and organizational reforms, (ii) formally admit the Republic of the Congo into the Association; (iii) confirm the new ASARECA Board of Directors; (iv) deliberate and approve the revised ASARECA Constitution and Governance Manual; (v) discuss the ASARECA 10 year strategy (2019-2028) which defines the AR4D priorities for agricultural transformation in the ECA sub-region; and (iv) witness the technical handover by the outgoing Board of Directors to the incoming Board. The meeting also involved two parallel sessions: A closed meeting of the new ASARECA Board of Directors; and the meeting of the Committee of Director Generals of National Agricultural Research Institutes (NARIs) in ASARECA member countries.

Since 2017, ASARECA has been implementing reforms aimed at strategically re-positioning its governance and management functions as a prerequisite for delivering better and quality services to its clientele. Some of the key milestones achieved include: (i) Setting up of the HLAP; (ii) completion of the White Paper on ASARECA's governance reforms, which provided guidance to the reform process; (iii) preparation of the new Constitution



Since 2017, ASARECA has been implementing reforms aimed at strategically re-positioning its governance and management functions as a prerequisite for delivering better and quality services to its clientele.



and Governance Manual; (iv) de-briefing meeting for ASARECA National Focal Persons and re-Constitution of the Business Committees at Country level; (v) Constitution of a select Committee to select the members of the new ASARECA Board of Directors; and (vi) nominations of new members of the ASARECA Board of Directors.

The Summit provided the platform for bringing the whole reform process to a logical conclusion through: (i) Approval of the revised Constitution and Governance Manual by the General Assembly; (ii) confirmation of the new ASARECA Board of Directors; (iii) and technical hand over by the outgoing BOD to a new Board. The Republic of the Congo (RoC) was formally admitted to the Association during this meeting.

ASARECA governance and organizational reforms

Jean Jacques Mbonigaba-Muhinda, Ambrose Agona, Rhoda P. Tumusiime and Joseph Bigirimana

1.0 Introduction

The year 2019 marks 25 years since ASARECA was established by the Director Generals of the National Agricultural Research Institutes of 10 countries in the Eastern and Central Africa region: Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda. The membership of the Association has since grown from 10 to 12 countries with the Republic of South Sudan coming on board in December 2011 and Republic of the Congo in December 2018 and formally admitted in 2019.

The 12 Member States cover an area over 8.5 million Sq Km and host a population of more than 350 million people, most of whom are rural dwellers pursuing agricultural livelihoods covering an area of about 300 million hectares of land. Agricultural production in the ECA sub-region accounts for 43% of the regional gross domestic product and the role of agricultural research in livelihoods transformation cannot be understated. ASARECA hence develops and implements policies and programmes aimed at widening and deepening co-operation among its Members States in agricultural research, innovation, extension, capacity development, policy and knowledge and information sharing for the mutual benefit of all the stakeholders in the agricultural sector.

ASARECA's Silver Jubilee coincides with the completion of the implementation of governance and management reforms and the launch of its new Strategy and Results Framework (A-SRF: 2019-2028) and its first Medium Term Operational Plan (MTOPI: 2019-2023).

Over the last 25 years, ASARECA has coordinated implementation of AR4D projects that have directly

benefitted over 8 million people who accessed and adopted new varieties of selected commodities, livestock breeds, seeds, disease and pest management packages; extension and veterinary services. Over the period, however, the AR4D environment in which ASARECA was operating evolved, necessitating ASARECA to strategically reposition itself in order to efficiently deliver its mandate.

Between 2014 and 2016, several ASARECA stakeholders demanded governance and management reforms to enable ASARECA redefine its niche and strategically reposition within the redefined AR4D landscape to deliver quality services to its clients. In 2016, the ASARECA Board of Directors took a proactive decision to undertake an Internally Commissioned External Review (ICER) to assess ASARECA's programme performance as well as the effectiveness of its governance structures. The analysis on needed reforms is outlined in the Internally Commissioned External Programme Management Review (EPMR, 2016); in the In-depth Fiduciary Review Report and the Fiduciary Action Plan (FAP, 2017-2018) and in several evaluation reports commissioned internally and by development partners over the Operational Plan I period.

The reviews made several positive observations but also highlighted reforms in governance, management and ownership/commitment by member countries and RECs. The reform areas are as summarized below:

Reforms to strengthen governance

- Strengthened ownership of ASARECA by Member Countries, Business Committees and RECs;
- A General Assembly that's more efficient,

cost effective and that addresses higher level strategic issues;

- A Board of Directors that is cost effective, transparent, accountable to stakeholders and avoids the perception of an inherent conflict of interest;
- Governance and management structures consistent with internationally acceptable standards/practices

Reforms to strengthen management

- Lean and affordable Secretariat with the optimum strength and skills required to respond to the revised mandate as stipulated in the A-SRF (2019-2028).
- Enforcing compliance to internationally acceptable code of Ethics and Standards;
- Strengthening fiduciary management capacity (financial, procurement and audit);
- Revision of the ASARECA Operations Manual to strengthen internal controls;
- Institutional re-branding to reflect a re-positioned and refreshed ASARECA.
- Strengthening capacity of human resources in various areas;

Ownership by the Regional Economic Communities (RECs)

- Ensuring closer ties with the RECs, mainly by serving as a technical arm;
- ASARECA derives its agenda from the RECs priorities;
- Joint Programme design and development;
- Collaboration to deliver on the continental developmental frameworks (CAADP/ Malabo commitments, Agenda 2063, etc.).

1.1 The Reform Implementation Process

To implement the required reforms, the Secretariat,

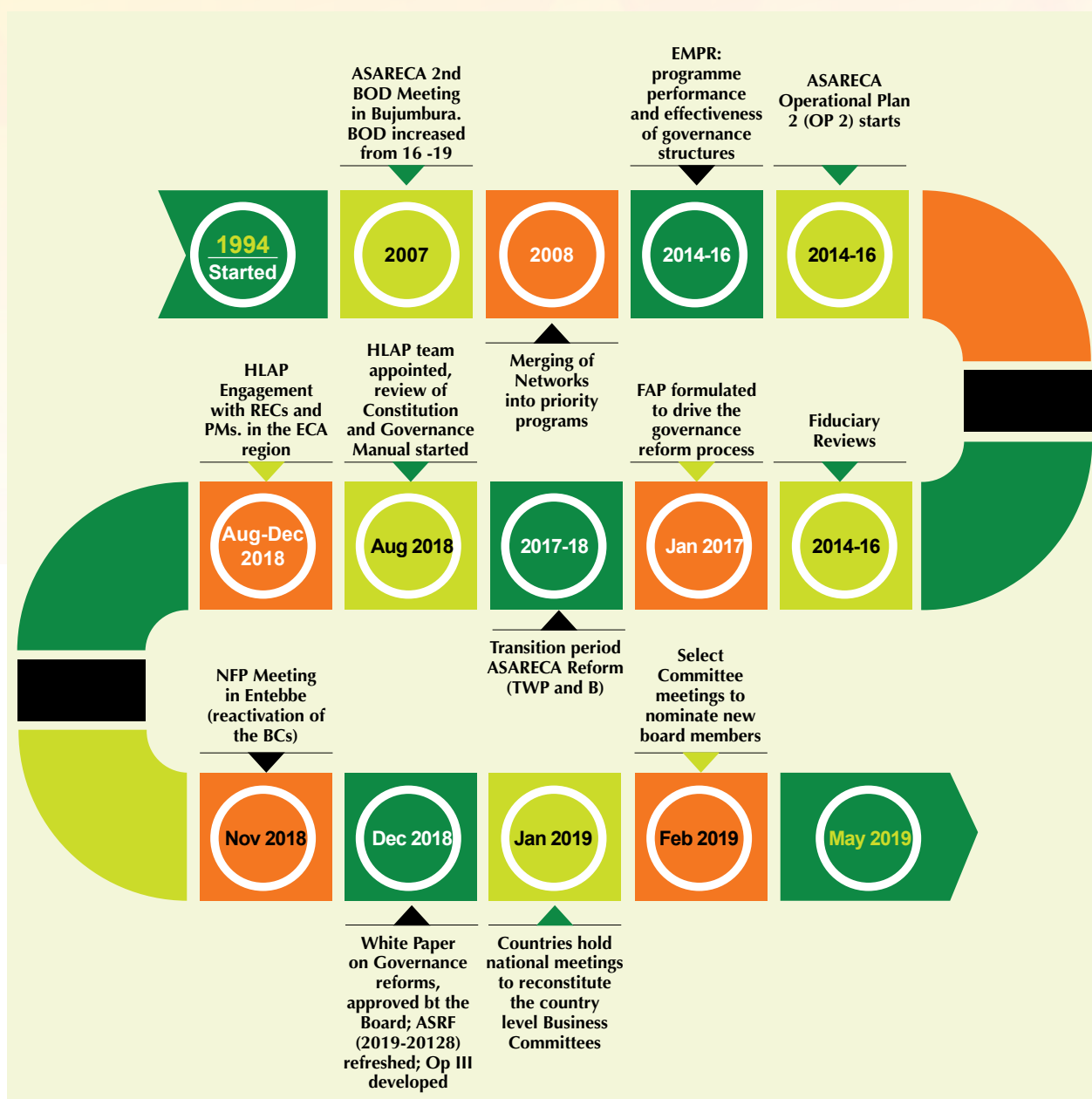
the BOD and Development Partners with the leadership of the World Bank agreed to a roadmap known as the Transition Work Plan, and which was operationalized through the Fiduciary Action Plan (FAP) to enable the Secretariat carry out the above reforms to strategically reposition itself in the current AR4D environment beyond 2018.

As part of operationalizing the FAP, the following mutually reinforcing processes were undertaken concurrently:

- Conducting a function and institutional review of the Secretariat;
- Development of a White Paper to inform and guide the governance reforms;
- Review of the Constitution and Governance Manual based on the recommendations of the White Paper;
- Institution of a High-Level Advisory Panel (HLAP) and engagement of the HLAP with RECs and Patron Ministers;
- Reactivation of the National Business Committees of the General Assembly through the ASARECA National Focal Persons
- Establishment of a select committee of the Business Committee of the GA to spearhead the process of selecting the new BOD of ASARECA
- Nomination of the new BOD by the Select Committee

Key reform milestones:

Establishment of the HLAP; (ii) development of white paper, (iii) revision of the Constitution and Governance Manual; (iv) reactivation of the Business Committees (BCs) at country level; (v) Select Committee established to nominate new Board Members; (vi) endorsement and ratification of ASARECA new governance framework.

Figure 1: Key Milestones in ASARECA Governance

1.2 The High-Level Advisory Panel on ASARECA Governance Reforms

As part of the implementation of the reform process, the Board of Directors appointed a High-Level Advisory Panel (HLAP) in August 2018 to provide support and guidance to the Secretariat to implement the reforms.

The HLAP which was chaired by H.E. Rhoda P.

Tumusiime and other members included: Dr. Ephraim Mukisira from Kenya and former DG of KALRO, Prof. Paul Mafuka from the DRC and former DG of INERA, Mr Stephen Muchiri, CEO of the Eastern Africa Farmers Federation (EAFF), Dr. Ambrose Agona, Director General of NARO and outgoing Chairperson of the ASARECA Board of Directors, and Prof. Jean Jacques Mbonigaba Muhinda, the current Executive Secretary of ASARECA.

The HLAB Terms of Reference were to:

1. Review the revised Constitution and Governance Manual for relevance to the new strategic direction as stipulated in the revised ASARECA Strategy and Results Framework (2019-2028).
2. Lobby Chief Executives of the Regional Economic Communities (RECs) namely the Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC) and Intergovernmental Agency for Development (IGAD) for integration of ASARECA in the respective RECs.
3. Lobby for political patronage by Ministers responsible for Agriculture and/or Scientific Research in ASARECA Member States.
4. Identify nominees for appointment as members of the Board of Directors.
5. Support ASARECA in facilitating an Extraordinary Meeting of the current Board of Directors.
6. Support ASARECA in facilitating the inaugural meeting of the Patron Ministers to receive and endorse the new governance structure.

The HLAB contributed to the review of ASARECA's governance instruments and held discussions with the African Union Commissioner in charge of Rural Economy and Agriculture (AUC-DREA); the Secretary Generals of RECs (COMESA, IGAD and EAC); and the Ministers responsible for agricultural research in most Member States (e.g. Burundi, Rwanda, Kenya, Ethiopia, DRC, Eritrea and Uganda).

The key outcomes of the consultations with the AUC-DREA, Patron Ministers and RECs included:

1. The AUC-DREA pledged to support ASARECA play an increasing role in delivering its TIMPs geared at optimizing agricultural productivity as per the Malabo declaration;
2. The Patron Ministers of ASARECA in the

countries visited by the HLAB, affirmed their support to the current reforms geared at strengthening ASARECA's capacity to deliver its mandate in the region. In particular, the Ministers affirmed that:

- They are fully supportive of a move to a leaner, more industry driven Board structure.
- As individuals, they would play a more active role as Patron Ministers of ASARECA.
- They would continue to partner with ASARECA to define the priority research for development agenda for the region.
- They would continue to make available the expertise within the NARS to deliver the region's priority agenda.
- They would work with the Director Generals of research to ensure payment of all membership fee arrears.

In turn, ASARECA was asked to:

- Clearly demonstrate its value proposition to the countries and the return on investments.
 - Provide leadership in responding to national priorities affecting its member countries such as the Fall Army Worm out-break.
 - Consider a paradigm shift in the regional priority research agenda.
3. The RECs expressed interest in working with ASARECA as a technical arm that supports them to deliver on regional agriculture investment plans. COMESA indicated its willingness to be the lead REC in the collaboration with ASARECA. RECs have experience with technical arms that are delivering results in other areas besides AR4D; these would provide the precedence needed to guide on how ASARECA could become a technical arm. In some instances, such a decision might require a legal opinion, action from the REC's governance organs and could take time to realize (e.g. EAC). However,

all RECS affirmed that there are potential immense benefits and synergies in collaborating with ASARECA. It was agreed that:

- The ASARECA Secretariat should hold meetings with the respective RECs to agree on the key areas for collaboration.
- ASARECA reviews the MoUs with AUC, COMESA and EAC and enter into an MoU with IGAD indicating areas for collaboration. (The process of reviewing or formulating the MoUs with the RECs and the AU-DREA is currently in advanced stages).
- The RECs would be available to participate in ASARECA Board of Directors meeting as guided by the new governance structure to provide ASARECA the political clout it needs and to assist it in mobilizing resources from development partners.
- The RECs would welcome ASARECA to be part of Steering Committees of key regional agriculture programs.

- Business and entrepreneurship development;
- Technology generation and transfer;
- M&E, knowledge and information management;
- Policy, markets and institutions;
- Partnership development and resource mobilization;
- Programme management;
- Legal and governance; and
- Finance and audit;

The diversity in skills sets would ensure that the Association benefits from its members in all spheres of governance. The new BOD structure would also reflect diversity in terms of language, geographic location, gender and age without overlooking the need for inclusion and a more lean membership. In a bid to secure effective governance, the composition of the Board of Directors was reduced to 13 non-executive directors serving a term of three years, renewable once.

1.3 The Key Recommendations of the ASARECA Governance White Paper

The white paper was prepared with the leadership and support of the Forum for Agricultural Research in Africa (FARA) and the Global Forum on Agricultural Research (GFAR). The white paper provided guidance on a range of governance related reforms. The main reforms which had an overarching implication to the institution's Constitution and Governance Manual were those related to the Board of Directors, the Council of Patron Ministers and the General Assembly.

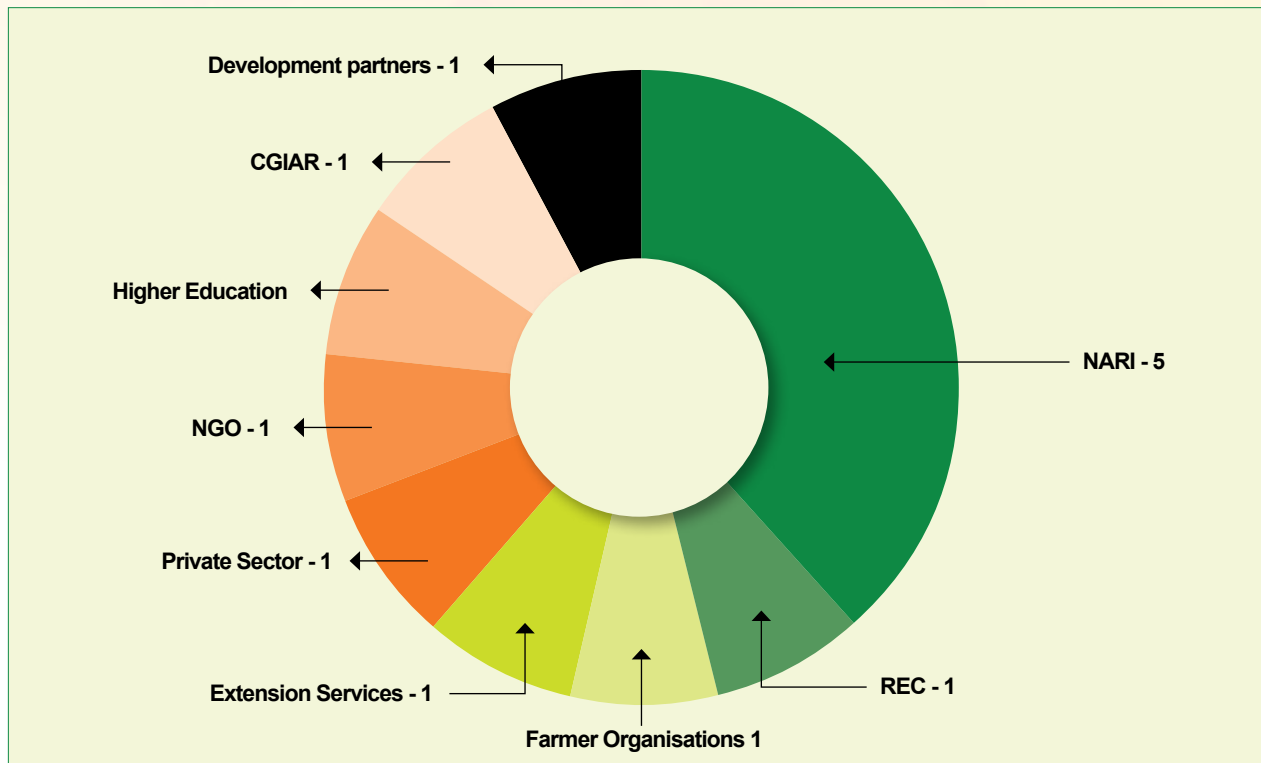
As per the recommendations of the White Paper, the new BOD would be reconstituted into an industry driven structure by ensuring that the overall membership reflected a holistic set of expertise and skills for AR4D, mainly:

- Capacity strengthening;

The other key aspect of reform at Board level was the revival of a Board performance assessment. In order to assess the effectiveness of the Board and continuously improve on its performance, the Board will be evaluated and subjected to periodic assessments such as:

- a. Self-evaluation (the Board collectively evaluating its performance annually)
- b. Peer evaluation (Board members evaluating one another)
- c. Chairpersons' evaluation of the Board members
- d. Board members' evaluation of the Chairperson
- e. General Assembly evaluation of the Board of Directors
- f. External evaluation commissioned by the General Assembly every five years.

The proposed reforms to the General Assembly are geared towards delivering a more structured and organised

Figure 2: The Composition of the ASARECA BoD

General Assembly. Going forward, the General Assembly will be constituted by organizations and not individuals. The organisations will be duly admitted and registered as such by the Secretariat. The register of members of the Association will be developed, updated and kept at the Secretariat. Hence, the General Assembly will be constituted by registered members of the Association, Board members and the Business Committee. The modalities of running the General Assembly will remain, posing no further implications on the Constitution. However, it is anticipated that the Secretariat working with the Board will devise means of ensuring more cost effective General Assemblies that don't drain the Association's resources while ensuring that deliberations focus on strategic issues.

At the level of the Council of Patron Ministers (CPM), the White Paper focused on the need to have a more active Council in relation to the governance

of ASARECA. The reforms focused on reviving the roles of the Patron Ministers and ensuring their active involvement in achieving the vision, mission and objectives of the Association. This calls for:

- Continuous sensitization of the CPMs on their roles, responsibilities and benefits of their participation in ASARECA governance.
- Regular communications and contact with the CPMs to ensure constant flow of information to the CPMs.
- Holding meetings for the CPMs and ensuring decisions are effectively implemented.
- Implementation of interventions for engaging the CPM, i.e. one staff could be assigned to support the governance function.

Membership in the Association is now based on organizations/institutions [except for Honorary members]

in order to ensure that the Association's vision and mission lives beyond individuals. Furthermore, ordinary members will also be expected to pay membership fees. In the past, only the core members (the National Agricultural Research Institutes) made contributions. This is to ensure that the Secretariat can meet its operation costs with minimal reliance on grants from development partners. The payment of membership fees is a pre-requisite to become a registered member.

The new and revised Governance Manual clearly states the membership benefits including rights and privileges by membership category. The entitlements to the core members of the Association; include Membership to the Business Committee and Plenary of the General Assembly; the opportunity to be elected as Chairman of the Board of Directors; Membership in the Board of Directors; Voting rights; Hosting rights for meetings of the institutions of the General Assembly; Research, funding and capacity building opportunities; and Publications. While the entitlements to ordinary members include the opportunity to be elected as Vice Chairperson of the Board of Directors; opportunity to serve on the Technical Committees of the Association; and the opportunity to serve as rapporteurs of meetings of the institutions of the General Assembly.

The revised Governance Manual has also provided for a clear procedure for appointing and endorsing new members to the Board of ASARECA. The recommendations of the White Paper were only approved and shared with the ASARECA Board of Directors during the 27th BoD meeting.

1.4 Reactivation of the Business Committees of the General Assembly

After receiving endorsement from the 27th Board of ASARECA meeting to implement the recommendations of the White Paper, the Secretariat moved to engage the national focal persons to spearhead the process of

reactivating the Business Committees of the ASARECA General Assembly in each country. A meeting of ASARECA's National Focal Persons was held in November 2018 to update the NFPs on their role in the governance reform process and agree on the process and timelines. The Business Committees were reactivated in all eleven ASARECA member countries. One Business Committee was established in the Republic of the Congo (RoC) in January 2019. The key output of country Business Committee meeting was a select nominee per member country to the "Select Committee." The Select Committee constitutes the Electoral College that nominated the new Board members of ASARECA. A parallel process was initiated to input the approved reforms in the revised ASARECA Constitution and Governance Manual in order to reflect international corporate governance practices.

1.5 The Select Committee

In February 2019, a meeting of the Select Committee was held in Uganda (Entebbe), attended by the President of the GA, Prof. Joseph Bigirimana (Chair), Vice President of General Assembly Bureau (Dr. Eve Kasirye Alemu - Uganda), Pastor Jimmy Kato Towe Modi from South Sudan, the Secretary), country delegates and representatives of the HLAB. The meeting aimed at selecting institutions from which the ASARECA Board of Directors would be nominated. The Select Committee served as the Electoral College of the GA Business Committee.

The objectives of the Select Committee were to:

- Make nominations of the stakeholder categories for new ASARECA Board members
- Review the selected stakeholder category nominees to ensure that all pre-requisite skills are catered for and that the nominees meet the criteria outlined in the White Paper
- Support the secretariat in contacting the selected nominees
- Work with the HLAB to ensure that the process was duly concluded

The February meeting achieved its objectives and the Committee continued to work remotely with the Secretariat until the Members of the new ASARECA Board of Directors were finally selected.

1.6 The Re-branding of ASARECA

The governance reform processes were undertaken as part of a broader re-branding campaign to revive ASARECA's corporate image and expand visibility among critical stakeholders. In the past, ASARECA's reputation had been damaged, leading to loss of trust by key stakeholders. To leverage on internal reforms implemented during the transition period, ASARECA embarked on a re-branding campaign to revive its corporate image and raise its' visibility among AR4D stakeholders, mobilize financial resources, and seek partnerships.

As a first step towards re-branding, a consultative brand Interrogation and perception feedback process was launched towards the end of November 2018. The consultations culminated into a Brand Audit and Internalization workshop in Entebbe, December 5-6, 2018 that was attended by 26 stakeholders from different member states. The outcome of the workshop

was a definition of ASARECA's new Brand Vision, Value Proposition and Promise. This and other critical brand aspects, informed ASARECA's Branding Strategy and Implementation Plan that was completed in December 2018. The strategy guides the rolling out of a re-branding campaign. ASARECA's visual appearance has also been revamped, including development of a new website (www.asareca.org). The re-branding campaign is going hand in hand with resource mobilization.

ASARECA has also developed a new Strategy and Results Framework (2019-2028) and MTOP (2019-2023) which effectively responds to the proposed governance and management reforms in its implementation approach in order to appropriately respond to the demands of its clients. Throughout this process, ASARECA has received support from the Board of Directors including the Director Generals of its member NARIs, development partners, FARA and its wider stakeholder community.

Decision: Following this presentation, the Business Committee unanimously approved the revised Constitution of the Association for Strengthening Agricultural Research in Eastern and Central Africa.



The Select Committee which undertook the process of nominating the new Board of Directors

2.0 Admission of Republic of the Congo to ASARECA

In 2018, the Republic of the Congo formally applied to join the Association. The application was presented to the 27th Board of ASARECA meeting for review and approval. The Board approved the request of the Republic of the Congo to become the 12th ASARECA Member and submitted the application to the Business Committee which unanimously endorsed the admission of RoC as a Core Member of ASARECA.

Given that ASARECA was mandated to be the regional coordinator of the Eastern and Central Africa Agriculture Transformation Project (ECAATP), and given that RoC was not a member of ASARECA then, the Management was advised that it was necessary to fast track the admission of RoC into the Association, and to ensure that it gets the same status as the other countries in the Governance Structure of the Association. Furthermore, the Republic of Congo is located in the Central Africa sub-region and experiences the same challenges that call for regional collaboration in agricultural research for development.

Based on the foregoing, ASARECA Management and the Board of Directors initiated the process of enlisting RoC into the Association. Without the risk of flouting the Statutory Procedures, the Management took appropriate procedures as laid down in the ASARECA Constitution and Governance Manual. The Chairman of the Board sent a formal invitation letter dated 4th October 2018 to the Minister responsible for agricultural research, under whose docket ECAATP falls for RoC to join ASARECA.

In her application dated 12th October 2018, the RoC Minister de la Recherche Scientifique et de l'innovation Technologique, Hon. Martin Parfait Aimé Coussoud Mavoungou stated that like most States in the Eastern and Central Africa Region, the Republic of Congo intends to develop and implement appropriate strategies to transform its economy by relying on the agricultural sector. She further noted that ASARECA, whose aim is to catalyze generation and cross-border transfer of agricultural technologies and innovation is an important institution in the drive for agricultural transformation. The minister noted that RoC would participate fully in the World Bank led ECAATP Project which ASARECA had been selected to coordinate. For these reasons, RoC expressed desire join ASARECA as a member and pledged to work alongside other Members to achieve its objectives.

The application was presented to the 27th ASARECA Ordinary Meeting of the Board of Directors' held on 12th - 15th December, 2018 by the Chairperson of the ASARECA BoD, Dr. Ambrose Agona. As per procedure laid out in the Governance Manual, Dr. Agona consequently presented the application of RoC and the decision of the Board for formal endorsement to the Business Committee meeting of the ASARECA GA held on Thursday 2nd May 2019.

RoC hence became the 12th and newest member state of ASARECA and her formal admission was subsequently announced by the Chair of the ASARECA Council of Patron Ministers, Hon. Vincent Bamulangaki Ssempijja, the Minister of Agriculture, Animal Industry and Fisheries of the Republic of Uganda during the Summit of the CPM held on Friday 3rd May 2019.

3.0 The ASARECA Board of Directors (2019 – 2021)

The profiles of the nominees to the new Board of Directors of ASARECA were presented by the President of the ASARECA GA to the Business Committee of the ASARECA GA which unanimously approved the new Board members. This section presents the profiles for the new members of the ASARECA Board of Directors (2019 - 2021).

Category #1: Regional Economic Communities (RECs) representative



Ambassador Dr. Kipyego Cheluget

PhD Political Science

He is currently working with COMESA as the Assistant Secretary-General (Programmes). As a representative for the Regional Economic Communities (RECs), Dr. Cheluget brings on board wealth of experience and skills in policy, trade and regional markets.

Category #2: CGIAR Representative



Dr. Robin Buruchara

PhD Plant Pathology

He is currently working with CIAT as the Director of the Pan Africa Bean Research Alliance (PABRA), a collaborative multi-country and multi-institutional, interdisciplinary research and development partnership. As a representative for the Consultative Group on International Agricultural Research (CGIAR), Dr. Buruchara brings on board skills in research, resource mobilization, partnership and networking.

Category #3: NARIs Representative



Dr. Yona Baguma

PhD Molecular Biology

He is currently the Deputy Director General at the National Agricultural Research Organisation, (NARO), Uganda. During his service, Dr. Baguma has developed skills in financial management, human resources management and project development and implementation. Dr. Baguma currently serves on a number of national, regional and global boards. He is an accomplished innovative ethical researcher and transformative leader.



Dr. Geoffrey Mkamilo

PhD in Production Ecology and Resource Conservation

He is the Director General and Chief Research Officer at the Tanzania Agriculture Research Institute (TARI). Dr. Mkamilo has extensive research experience including with internationally funded projects and has worked as a Principal Investigator/Coordinator in several projects in collaboration with international institutions such as IITA, CIAT, NRI, and ASARECA.

**Dr. Hussein Abubakr***PhD*

He is the Director General of Agriculture Research Council (ARC). He has experience in working on projects funded by the World Bank, IFAD and FAO.

**Eng. Dieudonne Nahimana***BA. Agricultural Engineering*

He is the Director General of Institut des Sciences Agronomiques du Burundi. He has expertise in agricultural engineering and research management.

**Dr. Yirga Tizale Chilot***PhD Natural Resources/
Economics*

He is the Deputy Director General for Administration and Capacity Building at Ethiopian Institute of Agricultural Research (EIAR). He has expertise in agricultural economics research and technology transfer.

Category #4: Sector Representatives

**Bol Andrew Wieu Riak***MSc. Agricultural Extension
and Rural Development*

He is the Head of the Department of Agricultural Extension and Rural Development at the Upper Nile University, South Sudan. He also lectures in areas of Agricultural Extension Education, Communication, Methods and Rural Development. In addition, he supervises students' research and research projects.

**Prof. Patience Mshenga***PhD Agribusiness Mn't*

She is the Chairperson, Department of Agricultural Economics and Agribusiness Management, Egerton University, Kenya. She has over 15 years experience of lecturing, research and community engagement.

**Ms. Regina Kayitesi***Master's in Rural Development
& Food Security*

She is the Marketing Manager for the Chamber of Agriculture & Livestock, and the Private Sector Federation in, Rwanda. She is an experienced value chain, Agriculture Extension and Post-harvest.

**Ms. Elysée Mvumbi***BSc. Diploma Agricultural
Economics*

She is the Monitoring and Evaluation Officer at the National Extension Service. She has experience in planning and monitoring of activities, including establishing dashboards of performance indicators for implementation of agricultural extension programs in the Democratic Republic of the Congo.

**Mr. Eric Hermann Raparison***Master's in Comparative Law*

Mr. Eric Hermann is currently working as the National Coordinator of the Civil Society Platform SIF or "Sehatra Iombonana an'ny Fananantany" in the land sector. He has extensive experience in land-use and local governance in Madagascar.

4.0 ASARECA's Strategy and Results Framework (2019 – 2028), and Medium Term Operational Plan 1



Dr. Enock Warinda

Theme Leader – Knowledge Management and M&E, ASARECA

4.1 Background

The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) has re-examined its strategic focus and niche in the crowded agricultural research landscape and developed a 10-year ASARECA Strategy and Results Framework (A-SRF) for the period 2019-2028.

The agricultural research for development (AR4D) environment in which ASARECA was formed has changed dramatically over its 25-year existence. In particular, various developments have taken place in the national, regional and global arena; while several of its collaborating partners and Member States have grown in AR4D capacity and have also revised their strategies and development plans providing new potential areas of future collaboration. Besides new regional, continental and global frameworks and development programmes have emerged; the institutional landscape in which ASARECA operates has become increasingly congested with both competitive and collaborative pressures; and the need for rapid transformation of African agriculture has gained significant political support at the national, regional and continental levels.

Because of these changes, ASARECA has re-examined its strategic focus and niche in the crowded agricultural research landscape and developed a 10-year ASARECA Strategy and Results Framework (A-SRF) for the period 2019-2028. The A-SRF is designed to reposition ASARECA strategically to deliver transformative agricultural research outcomes and impact in the ECA sub-region.

The implementation of ASARECA's past strategic and operational plans went through different challenges occasioned by a fast-changing and complex socio-economic and institutional environment affecting the implementation of programmes and projects in one way or another. These challenges notwithstanding, ASARECA was able to accomplish major achievements.

4.2 ASARECA's Vision, Mission and Core Values

Vision: A transformed Eastern and Central Africa agricultural sector supporting improved livelihoods, sustained economic growth and inclusive development.

Mission: To contribute to increased productivity, commercialization and competitiveness of the Eastern and Central Africa agricultural sector through strengthening, catalyzing and coordinating agricultural research for development.

Core Values: Inclusivity, Accountability, Transparency, Transformative, Sustainability, Subsidiarity and Integrity

4.3 What the Repositioned ASARECA will do Differently

To deliver on the above mandate, ASARECA has repositioned itself as the sub-regional “Go to Service Provider of Choice” for AR4D products and services.

ASARECA understands that agricultural transformation requires an integrated delivery approach across an ecosystem of partnerships. While various initiatives exist in the agricultural sector across the ECA sub-region, there is limited integration and coordination in execution and investments by governments, development partners, private sector and implementing partners. In this regard, this A-SRF is designed to reposition ASARECA strategically to perform a higher level facilitative, supportive, coordination and advocacy role to enhance sustainable agricultural transformation, sustained economic growth and inclusive development in the ECA sub-region.

The ASARECA of this A-SRF is positioned as an innovative convener, partnership broker, strategic catalyser, process facilitator, effective communicator and efficient coordinator of priority regional AR4D initiatives. To achieve this, ASARECA is positioned strategically to improve the relevance, effectiveness and efficiency of the sub-regional AR4D leading to significant improvement in value for money in the delivery of inclusive and sustainable agricultural transformation, development outcomes and impact. ASARECA will achieve this by supporting the attainment of economies of scale and scope in the conduct of priority regional research and by significantly reducing duplication and misalignment of efforts and resources while improving efficiency in delivering regional AR4D outcomes and impact.

In this regard, therefore, the mandate of the repositioned ASARECA is to:

- a. Identify regional research priorities and opportunities through credible, authentic and participatory on-going strategic visioning processes.
- b. Commission, broker and manage strategic research

- c. Nurture pathways for on-time delivery, spillover and scaling up of regional agricultural research results to deliver agricultural outcomes and impact.
- d. Mobilize, allocate and manage regional AR4D investments to support generation of regional agricultural research public goods and services.
- e. Monitor and evaluate returns on AR4D investment and repackage lessons and best practices to inform decision making processes and action.

4.4 Repositioned ASARECA's Value Proposition and Value addition

To deliver on the above mandate, ASARECA is repositioned as the sub-regional “Go to Service Provider of Choice” for AR4D products and services. In this regard, ASARECA's Value Proposition designed to enable it to contribute significantly to the accelerated sustainable agricultural transformation and growth for shared prosperity and improved food and nutrition security and livelihood of the ECA people is “Strengthening, catalyzing and coordinating the ECA sub-regional agricultural research for development initiatives by strengthening and integrating capacities; supporting and coordinating development and scaling up of technologies and innovations; advocating for an enabling environment, functional markets and institutions; and managing and communicating knowledge and information.

ASARECA has a comparative advantage and proven capability, built over the years, to add value and to significantly improve value for money in the delivery of high-quality demand-driven regional research results to support the attainment of inclusive and sustainable agricultural transformation outcomes and impact in the ECA sub-region.

4.5 Thematic Areas of Focus

The ASARECA stakeholders and partners have identified what it should do as a sub-regional organization and rationalized it into four thematic areas of focus and four

corresponding strategic results/intermediate outcomes as indicated below. While these thematic areas have some similarities with what ASARECA has historically sought to do, the approach, success drivers, strategic focus and the expected outcomes differ significantly from the past themes and programmes as evidenced by “What ASARECA has chosen to do under each thematic area of focus; how it will do it; and the level at which it will do it in line with the principle of subsidiarity”.

1. Transformative Capacity Strengthening and Integration

This thematic area focuses on strengthening and integration of different types of AR4D capacities and competencies at systemic, organizational and individual levels to support and contribute significantly to the attainment of inclusive and sustainable agricultural transformation in the ECA Member States.

2. Agricultural Transformation Technologies and Innovations

This thematic area focuses on supporting and coordinating the development and adaptation of technologies and innovations to address priority regional agricultural transformation challenges; development of approaches, methods, tools and pathways for enhancing uptake and widespread utilization of technologies, innovations and management practices; enhancing scaling up of priority integrated regional agricultural value chains; and supporting development of private sector-driven agribusinesses and entrepreneurship.

3. Enabling Policy Environment, Functional Markets and Transformative Institutions

ASARECA has made a significant contribution in policy analysis and advocacy in the past and, therefore, this thematic area builds on past successes and lessons learned. The focus for this thematic area is, therefore, to support and advocate for the creation of an enabling environment, establishment of functional and structured regional markets and strengthening of regional institutions.

4. Knowledge and Information Management

This thematic area of focus builds on the lessons and experiences from ASARECA's past knowledge and information initiatives to advocate for and explore ways through which data, information, knowledge and tools relevant for AR4D can increasingly be placed in the public domain. This thematic area, therefore, focuses on improving management and access to reliable and update data, information and knowledge to inform agricultural transformation decision making processes and action in the ECA sub-region.

4.6 Strategic Alignment

ASARECA's four thematic areas of focus are well aligned to the major ongoing regional and continental initiatives. ASARECA is hence strategically positioned to contribute significantly to the development and implementation of national, regional, continental and global frameworks including;

- a. National Agricultural and Food Security Investment Plans
- b. CAADP 10-year Results Framework
- c. Continental frameworks and programmes
- d. Global Frameworks and Initiatives
- e. Regional Economic Community's Strategies and Policies

4.7 Strategy and Results Framework Implementation Arrangements

ASARECA will develop two detailed medium-term operational plans (MTOPs) covering the period 2019-2023 and 2024-2028. In order to ensure proper alignment and harmonization with the A-SRF, the MTOPs shall be developed using a nesting approach that links the strategic results and the intervention-strategies for better outcome mapping and impact orientation. ASARECA shall also develop and operationalize a rigorous and continuous participatory monitoring, evaluation and learning system capable of tracking the implementation of the A-SRF and the MTOPs.

5.0 Closed session of the new Board of Directors

The closed session of the new Board of Directors of ASARECA held on Thursday 2nd May 2019 was attended by the members of the incoming Board of Directors, the High-Level Advisory Panel (HLAP) and the ASARECA Secretariat. The purpose of the session was to appoint a Chairperson who would perform key functions during the meeting of the Council of Patron Ministers.

The Board of Directors is one of the ASARECA governance organs (Constitution Article 12) and comprises 13 voting members in good standing (Article 24) as per the provisions of the Constitution. According to the Governance Manual (page 20&37), the Chairperson of the Association also referred to as the Chairperson of the Board of Directors as appointed under Article 24 of the Constitution is elected from among the Core Members of the Association, i.e. any one of the five Director Generals of Research nominated to the Board.

For the period 2019 – 2021, the core members of the Board are Burundi, Ethiopia, Sudan, Tanzania and Uganda. The position of the Chair and Vice Chair can be held for a term of three years renewable once upon re-election for a further term of two years. To maximize inclusion, the Chairperson and Vice Chairperson cannot come from the same Member State.

Ordinarily the appointment of the Chairperson was the function of the Nominations and Governance Committee which had not yet been constituted. To bridge the gap, H.E. Mrs. Rhoda Tumusiime taking note of the business of ASARECA and the need for institutional memory, invited the Directors to nominate two people for the position of Chairperson. The 5 Directors representing the NARIs nominated Dr. Yona Baguma (Uganda) and Dr. Abubakr Hussein (Sudan).

A vote was cast and Dr. Abubakr Hussein, Director General of the Agricultural Research Corporation (ARC) of the Republic of the Sudan was elected as the Chairperson of the new Board of Directors 2019-2021 having obtained a majority of the votes cast.

On the other hand, the Vice-Chairperson of the Board is elected by the Board of Directors from among the ordinary members upon nominations submitted by the Nominations and Governance Committee (Governance Manual, Page 39). The appointment of a Vice Chair was postponed to the next meeting of the Board of Directors during which a Nominations and Governance Committee would be constituted with its first line of business being to nominate two candidates for the position of Vice Chairperson from among the ordinary members for consideration by the full Board.

The Board of Directors can delegate its authority to Board Committees, thus providing an avenue for maximizing the efficiency and execution of its functions. A Board Committee is constituted by not less than 4 members who are assigned based on their skills sets and the functions to be served by the Committee. The ASARECA Board will have four committees, namely; (i) Audit and Finance Committee; (ii) Programmes Committee; (iii) Nominations and Governance Committee; and (iv) the Executive Committee. The business of constituting the Board Committees was also deferred to a later date.

6.0 Meeting of the Committee of Director Generals

6.1 Introduction

The governance reform process at ASARECA recommended that the new Board of Directors includes only five (out of the 12) Director Generals of the National Agriculture Research Institutes. These 5 members (who include Burundi, Ethiopia, Sudan, Tanzania and Uganda) are expected to fully represent all the 12 NARIs.

The new model excludes 7 DGs of the NARIs from representation on the Board. Taking into account the formation of the Association, the governance reforms stipulated in the White Paper recommends that a Committee of Director Generals of the NARIs be set up to keep the NARIs abreast with the activities of the Association as well as the recommendations from the Board of Directors. ASARECA anticipates that DGs who represent the other DGs/NARIs in the Board shall provide the Committee with regular updates on the matters related to the performance of the Association. This Committee has been provided for in the ASARECA's MTOPI: 2019-2023.

Rationale for a CDGs

What does ASARECA Gain?

- i. ASARECA operates through the NARIs, since establishing satellite offices in each member country is wasteful financially and contrary to ASARECA's core principle of subsidiarity.
- ii. Given that ASARECA is not domiciled in all its member countries, maintaining direct interface with the Council of Patron Ministers and the National Agricultural Research System (NARS) across all member countries can only be done through the NARIs via the offices of the DGs.
- iii. The Committee of Director Generals (CDGs) provides an easy mechanism for holding ASARECA accountable across all member governments besides enjoying their continued patronage and commitment as members and founders.
- iv. The CDGs is the most viable mechanism for

following up and accessing core member contributions and subscriptions.

What do the Director Generals Gain?

- i. Platform for ensuring equitable representation of all member countries in ASARECA's programme of work
- ii. Platform for sharing national priorities where regional collaboration in research is imperative to devise quick solutions
- iii. Ease transfer of technologies for research
- iv. Ensure quality and relevance of collaborative R4D efforts to national priorities
- v. Easy mechanism for fundraising for regionally relevant research
- vi. Regionally interlinked AR4D information system
- vii. Regional testing up-scaling and technology delivery systems

6.2 The Composition of the ASARECA Committee of Director Generals (CDGs)

The membership of the CDGs comprises all the substantive sitting DGs of the NARIs of the 12 ASARECA member states. They shall appoint the: i) Chairperson; and (ii) Secretary, as deemed appropriate to facilitate their deliberations.

6.3 Objective/Purpose of the CDGs

The over-all objective of the Committee of Director Generals (CDGs) is to serve as a forum for all the DGs of the NARIs (including sitting and non-sitting

members on the Board) specifically to: (i) Enable them actively contribute to the governance of ASARECA by working closely with the National Focal Persons among other things; (ii) Staying abreast of the performance of the Association on its core Mandate; and (iii) Adequately advising the five sitting Board Members prior to, during and after Board meetings.

6.4 Modality of Operation

The Committee will primarily function as a technical, and not a governance organ of the Association. The NARIs shall finance activities of the Committee. However, for activities requested for by the Association, the Committee shall be facilitated by the Secretariat (for fully paid up members). In order to minimize costs, it is anticipated that the meetings of the Committee shall be held virtually. However, at least one face-to-face meeting will be facilitated annually (as need arises) by ASARECA.

6.5 Proposed Functions

The Committee shall perform the following proposed functions:

1. Nominate the five DGs of the NARIs to represent the rest of the DGs in the subsequent Boards. The selection of these representatives will be based on the agreed objective criteria as defined in the Constitution and the Governance Manual, especially: (i) ensuring research strength; (ii) relevant field of specialization/competence linked to the Institution's strategy; (iii) geographical representation – Eastern vs. Central Africa; and (iv) Language – Anglophone vs. Francophone.
2. Regularly review and guide the performance of ASARECA's programmes/projects. This will be achieved through regular consultations with the National Focal Persons, preferably bi-annually or annually, and providing feedback to the Secretariat for corrective action and learning.
3. Actively participate in identification and implementation processes of regional projects. This will include: (i) thorough review of Concept Notes and Proposals to ensure regional coverage; (ii) regular participation in Programme Reviews as members of the Expert Review Panel; and (iii) represent and inform the Secretariat of any new source of funding/collaboration with their scientists/institutions.
4. Provide full support in resource mobilization for enhanced implementation of the ASARECA Strategy and Results Framework (A-SRF:2019-2028) and its Medium-Term Operational Plan (MTOP I: 2019-2023). The Committee shall share with ASARECA information about any potential resource mobilization opportunities within or outside their countries that ASARECA can leverage on to access funding to support programme implementation.
5. Act as "Ambassadors of Good will" for ASARECA especially in regional and international meetings, workshops and conferences that they will participate in. Where possible, the Committee would inform the Secretariat of such fora in advance so as to ensure effective planning and representation.
6. Regularly update the ToR of the Committee.

6.6 Decisions of the First CDGs Meeting

1. The CDGs's roles, operations and legal standing should be clarified
2. The nature and frequency of meetings and funding mechanisms should be clarified.
3. This committee of 7 DGs will work as a check on the 5 DGs and could be a powerful tool of the Association, to audit the performance of the 5 DGs on the Board.
4. The Interim leadership of the Committee will be:

Position	Person Chosen	Nominator	Second
Chairperson	Prof. Kankolongo	UGANDA	KENYA
Secretary	Dr. Victor Silvano	UGANDA	DRC

7.0 Report of Induction Meeting of the New Board

The first induction meeting of the new ASARECA Board of Directors served to orient the Board on the expectations and aspirations of the Association during their tenure of office. The induction was undertaken immediately after the inauguration of the Board and the official ratification of the ASARECA Constitution and Governance Manual at the first sitting of the Council of Patron Ministers' Summit.

The session provided tailored information to the Board of Directors on (i) ASARECA's governance structure and Secretariat operations including the staffing structure; (ii) the funding and finances of ASARECA; (iii) the ASARECA 10-year strategy (2019-2028) that sets the roadmap for agricultural transformation in the ECA sub-region; and (iv) ASARECA Medium Term Operation Plan 3 (2019-2023) that sets out the initial implementation path of the strategy. The meeting ended with the new Board members taking their oath of office.

The session started with welcome remarks by the Chairperson Board of Directors, followed by presentations on; the governance structure, A-SRF (2019-2028) and the first Medium Term Operational Plan (2019 -2023); a brief on the work plan and budget for the fiscal year 2019 delivered by the Executive Secretary of ASARECA; a brief on the external audit report for the fiscal year 2018 delivered by Elijah Lutwama, ASARECA Head of Finance. The meeting deliberated on governance policies and procedures, Board functions and roles, Board Committees and their functions and procedures, Board remuneration and assessment of Board performance. The meeting also received remarks from representatives of development partners in attendance, the Program Management Specialist, Office of Economic Growth (OEGI), USAID Kenya and East Africa, Mary T.K. Onsongo and Dr. Tekola Dejene of the World Bank, Washington DC Office. Below are the highlights of the meeting:

The meeting touched lightly on governance policies and procedures, Board functions and roles, Board Committees and their functions and procedures, Board remuneration and assessment of Board performance.

The meeting also received remarks from representatives of development partners in attendance, the Programme Management Specialist, Office of Economic Growth (OEGI), USAID Kenya and East Africa, Mary T.K. Onsongo and Dr. Tekola Dejene of the World Bank, Washington DC Office. Below are the highlights of the meeting.

- The welcome remarks from the new Chairperson, ASARECA Board of Directors, Dr. Abubakr Hussein of ARC Sudan stressed the importance of building on the works of the old Board of Directors to ensure that ASARECA moves to greater heights.
- The Executive Director reported that the Secretariat had only 14 staff but was in the process of recruiting two theme leaders. All national staff were currently on short term contracts but discussions with IFAD were in final stages and contracts would be issued in June 2019.
- The Executive Secretary informed the meeting of changes to the 2019 Work Plan and Budget occasioned by delays in the ECAATP Project and funding from the European Union and IFAD which had not been reflected in the document approved by the Board in December 2018.

The Executive Secretary also noted that Board self-evaluation was essential for ASARECA's repositioning and advised the Board Members to adopt assessment tools that suit them.

- ASARECA will play a significant role in coordinating the ECAATP Project including identification of regional research priorities, collaborative development of TIMPS, Co-financing of regional sub-projects, coordinating regional policy harmonization, M&E and knowledge management among others.
- Despite the delayed start of projects, the Secretariat was being funded with a bridge fund approved by the Board of Directors in December, 2018 and later abridged by the Executive Committee of the Board of Directors in April, 2019.
- The merger of the Finance and Audit Committees of the Board was deemed improper and the two committees will be separated into two.
- KPMG had been approved as the Association's auditors for the year 2019
- The incomes and expenses of the Association for the year 2017/18 had increased from USD 1,390,367 to USD 2,233,030; and USD 1,220,346 to USD 1,809,149 respectively
- Outstanding membership contributions due from member countries had increased to a tune of USD 440,081 by end of December 2018. It is hoped that the renewed commitment by Patron Ministers will lead to payments.
- The leasehold property worth USD 258,604 owned by the Association had not been developed to date and its value was depreciating. There is need for resource mobilization to develop the leasehold property. It was further anticipated that the Ministers would deliver on their commitments to pay the membership fees.
- The lack of commitment in the form of member state contributions created a bad impression with donors. There is need to demonstrate a



ASARECA is at a stage of resource of resource mobilization and re-branding with development partners and other stakeholders. The Board needs to support this process if ASARECA's is to realize the funding needed to fulfill its mandate.



move towards more self-reliance

- The allegations of fraud at ASARECA are history and the decision to submit a proposal to USAID for funding was now upon the Secretariat
- ASARECA is at a stage of resource mobilization and re-branding with development partners and other stakeholders. The Board needs to support this process if ASARECA's is to realize the funding needed to fulfill its mandate.
- The new Board of Directors will ensure proper documentation of the operations and decisions of the Board.
- ASARECA's governance had been reformed in view of past experiences and the new Board will work in an effective and efficient manner to push ASARECA forward.
- The new Board of Directors took their oath of office which was administered by Mr. Patson Arinaitwe, a Partner at Signum Advocates, based in Kampala-Uganda. The new Board swore and affirmed that they would diligently execute their responsibilities to the best of their abilities.
- In closing, Dr. Abubakr appreciated the wise counsel of the Development Partners and requested the Board of Directors to be ASARECA's best ambassadors.



02

ASARECA COUNCIL OF PATRON MINISTERS' SUMMIT



Summit Summary

The ASARECA Council of Patron Ministers

The Council comprises the Ministers responsible for agricultural research in ASARECA member countries. It provides overall guidance to regional collaborative programs, confers the legal authority to the institution as the signatory of the Constitution of ASARECA, and also provides political patronage to the ASARECA Board of Directors. This political support is what enables ASARECA to be truly representative of all the elements of the NARS in the respective countries and ensures that regional research stays aligned to national priorities and features in the national policy agenda to ensure adequate, stable and timely funding.

Purpose of the Inaugural Summit

The ASARECA Council of Patron Ministers was convened to:

- Elect the Chair of the Council of Patron Ministers during a dinner on the evening of 2nd May 2019
- Receive and sign the revised Constitution of ASARECA.
- Inaugurate the new Board of Directors of ASARECA.
- Receive the new Strategy for regional AR4D and express renewed commitment to regionally coordinated AR4D.
- Receive evidence from the SIMLESA (Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa) project on the impact of Conservation Agriculture-Based Sustainable Intensification (CASI) technologies.
- Participate in a Ministers' panel discussion on CASI and the required policy actions needed to institutionalize it.
- Engage with development partners on commitments to ASARECA and AR4D in general.

Expected outcomes of the Summit

- Renewed commitment to regional AR4D including funding commitments.
- Revitalized ownership of ASARECA by member governments.
- A new Board of Directors of ASARECA inaugurated.
- Joint Ministerial Communiqué on CASI outlining the policy priorities needed to take it to more farmers throughout the region.

Summit Organizers

- Government of Uganda, through the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF).
- Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA).
- The International Maize and Wheat Improvement Center (CIMMYT).
- Australian Center for International Agricultural Research (ACIAR).
- National Agricultural Research Organization (NARO-Uganda).

8.0 Agriculture in Uganda and the value of regionally coordinated research



Pius Wakabi Kasajja,

*Permanent Secretary, Ministry of Agriculture,
Animal Industry and Fisheries, Uganda*

The ASARECA Council of Patron Ministers has existed since the inception of ASARECA but this Summit is the first time the Council has come together as a body to provide overall guidance to ASARECA. Allow me to thank your Excellencies for demonstrating such a high level of commitment to a regionally coordinated approach to research for development.

I am reliably informed that the Patron Ministers took time off yesterday to elect a Chair of the Council and will over the course of this day:

- Receive and sign the revised Constitution of ASARECA
- Inaugurate the new Board of Directors of ASARECA
- Receive the new strategy for regional AR4D and express renewed commitment to regionally coordinated AR4D
- Receive evidence on the impact of Conservation Agriculture-Based Sustainable Intensification (CASI) generated by the SIMLESA project and deliberate on the required policy actions needed to institutionalize it.

The choice of SIMLESA as the regional flagship project to showcase in this Summit with a focus on Conservation Agriculture-Based Sustainable Intensification was a great choice given the high cost of land degradation to our economies as a whole. In Uganda, 4-12% of gross national product is lost due to a combination of soil erosion and nutrient loss; Soil nutrient loss in Uganda is estimated at 87

kg nutrients per hectare per year. Malawi loses 20 tons of soil per hectare each year due to erosion; translating into yield losses of 4-25% per year and the situation is not any different for any of the other countries represented here.

If we are to reverse these trends and realise an agricultural-led transformation agenda in the face of climate change, high population pressure and shrinking land size, then farming practices must become more sustainable. This is consistent with African designed and international notions of development including the UN Sustainable Development Goals and Agenda 2063.

Uganda's agricultural production system is diverse and spread within 10 Agricultural Production Zones (APZs). The zones are characterized by different farming systems determined by soil types, climate, landforms, socio-economic and cultural factors. Poor agricultural land management, increased extreme weather events, and population pressure have escalated land degradation in all the APZs. However, the APZs experience varying levels of vulnerability to climate-related hazards

(e.g. drought, floods, storms, pests and diseases) due to differences in biophysical, socio-economic and policy related factors. Agriculture is the sector most vulnerable to climate change due to its high dependence on climate and weather. Climate projections show that agricultural systems will suffer from climate change, thus, threatening food production systems and therefore the livelihoods and food security of millions of people.

Total dependence on rain-fed agriculture and poor soil health coupled with land degradation increases vulnerability of farming systems and predisposes rural households to food insecurity and poverty thus eroding their productive assets and weakening their coping strategies and resilience. Increasingly, the onset, duration and intensity of these rains vary considerably from year to year, while the frequency and intensity of the extreme weather events such as drought and floods are on the increase with devastating impacts on the national economy and the livelihoods of the people. Drastic and innovative measures are needed to help farmers and consumers cope with the changes in emerging and projected weather patterns. To address this challenge, the Government of Uganda has developed programs e.g. the Climate Smart Agriculture (CSA) Program, as a strategy to enhance the country's agricultural development and growth in a changing climate.

Key Challenges faced by Uganda farmers rotate around Production, Productivity, Value Addition and Competitiveness of our Products, but we shall pay more attention to opening land on time, inadequate agricultural labour, small land holdings and disjointed commodity value chains for purposes of this Summit.

We are glad Science has come up with technologies and approaches that incorporate Agriculture Transformation and Conservation

seeking sustainable pathways for proper land-use. The approaches will go a long way in mitigating Climate Change. As Leaders in Africa, we need to pay special attention to Policies that address ecosystems in view of the economic question amidst rapid population Growth and Climate Change.

We need to establish sound regulatory framework, create incentives for increased investment in green economic activity, utilize sustainable goods and services, prioritize Government investment and expenditure in areas that stimulate key green economy sectors and increase investment in education and building capacity in support of the green economy.

I thank the organizing committee for this Summit; the Australian Centre for International Agricultural Research (ACIAR) and the International Maize and Wheat Improvement Centre (CIMMYT) for joining the Association for Strengthening Agricultural Research In Eastern and Central Africa and the Ministry to make this event possible. I also want to commend the implementers and coordinators of the Sustainable Intensification of Maize-Legume cropping systems for food security in Eastern and Southern Africa (SIMLESA) project not just for generating the research evidence that will be considered in this Summit but also for making it available to policy makers and the wider public.

As I end, I implore us as a region to collaborate through our institution ASARECA, towards strengthening national agricultural research capacity and effectiveness and in implementing a regional strategy for AR4D and research related training.

I wish us all a fruitful Summit.

9.0 Harnessing Partnerships for Regional R4D: Key Achievements and Prospects for the Future



Prof. Jean Jacques Mbonigaba-Muhinda,

Executive Secretary ASARECA

9.1 Introduction

This year 2019, ASARECA marks her Silver Jubilee in regional Agricultural Research for Development (AR4D) leadership since its inception in 1994. Beyond the Silver Jubilee, ASARECA and its partners regard 2019 as the year to start implementing its new Strategy and Results Framework (A-SRF: 2019-2028), its first Medium Term Operational (MTOP-I: 2019-2023), and the re-branding of ASARECA corporate image.

Over the last two and a half decades, ASARECA's operations have been guided by two strategic plans: the ASARECA long-term strategic plan of 1997; and the second ASARECA strategic plan (2007-2016).

The second strategic plan had two operational plans: operational plan 1 (OP I: 2008-2013) and operational plan 2 (OPII: 2013-2018). These Strategic Plans were to the largest extent funded through the Multi Donor Trust Fund (MDTF). However, OPII was prematurely interrupted in 2015.

9.2 Overview of the A-SRF 2019 – 2028

During the development of the new A-SRF, ASARECA has redefined its niche and set clear priority areas with a regional focus so as to remain relevant in the changing AR4D environment; reposition itself to continue providing support in transforming the sub-regional agriculture; re-examine its effectiveness, visibility, impact and sustainability and to identify and articulate areas of comparative advantage that it can leverage on to offer high quality research products and services. ASARECA has also articulated its vision, mission, mandate, core values and thematic areas of focus.

9.3 Key Achievements for the OP I period 2008 -2013

ASARECA is currently finalizing evaluation of its achievements for the OPII period (2014 – 2018). During the OP I period (2008 – 2013) for which ASARECA's achievements have been evaluated and documented investments within the countries focused on the generation of technologies, innovations and management practices (TIMPs) of priority commodities along value chains; dissemination and uptake of appropriate TIMPs; enhancing capacity strengthening and partnerships development at the systemic, organizational and individual level; policy analysis, advocacy; reforms and enhancing access to markets; mitigating effects of climate change; enhancing market linkages and trade (national and regional); communication, information and knowledge management. 836 technologies, innovations and management practices (TIMPs) were developed and disseminated among farmers. Of these 364 were disseminated through ASARECA core projects to meet farmers needs and demands; 472 TIMPs through regional agricultural productivity programs (EAAPP) and 67 were shared among participating countries.

At least 1,000 ha were dedicated to support the production of basic, pre-basic and certified seed with over 800 tons of quality seed of selected crops produced including for maize, rice and wheat. As a result maize yields improved from 0.5 tons/ha to 1.2 tons/ha to 3.2 tons/ha (under EAAPP) and at least 5,000 ha of highly degraded land were reclaimed. In the area of capacity building, 150 Students benefited from ASARECA-supported long term training (15 PhDs, 112 MSc. and 19 Diplomas). Another 60,000 men and women received short-term training in various AR4D aspects and agronomic practices. In addition, 400 assorted infrastructure/facilities provided to partner institutions including but not limited to renovation of lab facilities and screen houses and acquisition of lab equipment.

Over 228,348 rural households benefited directly from ASARECA-supported interventions. This translates to over 1.37 million individuals across all the participating countries. Direct benefits enhancement in food security status and incomes. For instance a regional project focusing on enhancing agricultural water productivity in seven of the ASARECA member countries led to increase in incomes for households and organized farmer groups – the Burundi watershed organized farmers generated US\$ 17,358, while organized farmers in Eritrea generated US\$ 91,000 and the Kenya beneficiaries generated US\$ 24,000.

ASARECA also invested resources towards a more enabling agricultural sector in the region. At least 89 policies, laws, regulations and standards were analyzed across different participating countries and value chains. 39 of these were presented for legislation or dialogue and a total of 37 policy options were approved by national legislative bodies, EAC and COMESA. These included the EAC seed policy harmonisation agreement, various national seed policies and regulations, standards for root and tuber crops, the seed potato standard, the COMESA seed trade regulations, the COMESA biosafety policy,



ASARECA has redefined its niche and set clear priority areas with a regional focus so as to remain relevant in the changing AR4D environment; reposition itself to continue providing support in transforming the sub-regional agriculture; re-examine its effectiveness, visibility, impact and sustainability and to identify and articulate areas of comparative advantage that it can leverage on to offer high quality research products and services.



etc. ASARECA also contributed to the generation and management of knowledge and information. Over 700 information packages were developed and shared with over 1 million targeted stakeholders through at least 250 information delivery pathways. These included project performance reports, peer reviewed journal articles, documentaries, targeted manuals, tools and guidelines, assorted newsletters, etc.

9.4 Regional R&D Partnerships

In execution of its mandate, ASARECA has engaged with various partners at national, regional, continental and global level. Over 280 partnerships were formed and or strengthened to support priority AR4D at the national level. Through these partnerships, ASARECA has delivered regional public goods and services for its clients within the ECA sub-region; mobilized regional collective action and resources to address AR4D challenges; developed and disseminated assorted TIMPs for adoption; established an enabling policy environment that promotes trade and market access through review of policies, laws and

regulations and provided improved access to up-to-date and reliable knowledge and information.

9.4.1 Regional AR4D Flagship Project – EAAPP

ASARECA coordinated the implementation of the East African Agricultural Productivity Project (EAAPP) in Ethiopia, Kenya, Tanzania and Uganda. The key achievements of EAAPP included establishment of Regional Centres of Excellence (RCoE) for Cassava (Uganda), Dairy (Kenya), Rice (Tanzania), and Wheat (Ethiopia); implementation of 23 regional projects across all 4 countries; enhanced regional specialization and collaboration across the 4 countries, with inter-country collaboration rising from 10 to 63%. In addition, over 344 new TIMPs were developed by RCoEs; 156 of these disseminated (with 67 across national boundaries). Adoption of new varieties, breeds, and selected management practices by farmers increased from 35% to 53% while the land under improved cultivars rose from 2,755 to 12,807 ha.

This was mainly attributed to substantial access to and production of planting materials and farmer awareness. These benefits have led to the development of a follow-on project, the Eastern and Central Africa Agricultural Transformation Project (ECAATP). ASARECA has been selected to coordinate ECAATP, a new World Bank-supported project on Eastern and Central Africa Agricultural Transformation on behalf of six participating countries (Kenya, Rwanda, Uganda, Burundi, DRC and the RoC). ECAATP will cover a wider scope of value chains and besides productivity; it will also focus on enhancing transformation of agriculture in the region.

The Regional Coordination function is anticipated to enhance joint generation and dissemination of priority regional public goods beyond national borders. ASARECA will focus on the key areas identified by the countries, especially those regarded as cost-effective (e.g. coordinating exchange of TIMPs and germplasm across national borders).

The countries expect that regional coordination through ASARECA will facilitate technical and capacity exchanges among all the Regional Centres of Leadership (RCoLs); accelerate the development of new regional TIMPs; enhance upscaling of priority TIMPs; facilitate technical change at the farm level; foster entrepreneurship and innovation; and save money and time by eliminating duplication of efforts.

9.4.2 Regional AR4D Flagship Project – SIMLESA

The Sustainable Intensification of Maize Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) is funded by ACIAR and implemented by CIMMYT, ASARECA and other partners in Ethiopia, Kenya, Malawi, Mozambique and Tanzania with Rwanda and Uganda as spillover countries. In the first phase of SIMLESA, ASARECA coordinated the M&E and gender mainstreaming components.

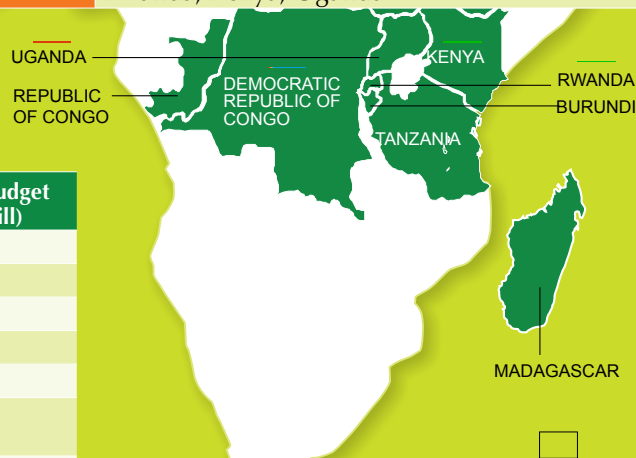
Several workshops were convened for M&E and Gender specialists, policy makers and implementing partners to build capacity on the same and dialogue on implications of the research evidence generated. In the second phase, ASARECA had the responsibility of policy advocacy. ASARECA participated in the synthesis of Policy Briefs on impacts of CASI and in a Writeshop to develop the Policy Briefs which were then disseminated in a high level policy makers forum in 2015.

ASARECA followed-up on the implementation of policy actions proposed in the joint Communiqué that was signed in October 2015, in Entebbe, Uganda. Meetings were held with the Ministers responsible for agriculture in Ethiopia, Kenya, Mozambique, Rwanda, Tanzania and Uganda to guide on a phased implementation of the action points in the short and medium-term plans of the respective Ministries of Agriculture.

ECAATP thematic areas of focus by country

Commodity/Thematic area	Countries
Diary	Burundi, Kenya, Rwanda, Uganda
Cassava	Burundi, DRC, Kenya, Republic of Congo, Rwanda, Uganda
Rice	Burundi, DRC, Kenya, Uganda
Wheat	Kenya, Uganda
Oil Crops	DRC, Republic of Congo, Uganda
Beans	Burundi, DRC, Kenya, Republic of Congo, Rwanda, Uganda
Poultry	Kenya, Republic of Congo, Uganda
Land Husbandry	Rwanda, Kenya, Uganda

Commodity or thematic area	ECAATP budget (US\$ mill)
Uganda	US\$ 100
Rwanda	US\$ 30
Kenya	US\$ 30
DRC	US\$ 100
Burundi	US\$ 45
Republic of Congo	US\$ 10
Total	US\$ 315



Tanzania is also anticipating to finalize their documentations and join these 6 countries

9.5 Future Prospects

In addition to the priorities outlined in the SRF, ASARECA will be focusing on the following in the foreseeable future:

- Engage potential Development Partners, Patron Ministers and Regional Economic Communities on resource mobilization to A-SRF's Medium Term Operational Plan (MTOP1, 2019-2023).
- Engage Member States on their commitments to the Association
- Finalize and operationalize engagement modalities with AU and RECs with the aim of being recognized as a technical arm of the RECs (COMESA, EAC, IGAD, ECCAS) on R&D matters.
- Coordination of planned regional AR4D programs
- Eastern and Central Africa Agricultural Transformation Project
- Supporting Implementation of a Science-Led and Climate-Relevant Agricultural Transformation in Africa (SISTA/DeSIRA)
- Fall Army Worm (FAW), etc

10.0 Remarks by IGAD



John Patrick Kabayo,

Coordinator, IGAD Drought Resilience Initiative in the Horn of Africa Region

I would like to begin by thanking ASARECA for organizing this very important meeting of the Council of Ministers, to discuss the repositioning of ASERECA for accelerated African agricultural transformation.

I would also like to thank ASARECA most sincerely for inviting IGAD to participate in this meeting; and for giving us an opportunity to make some remarks. I feel highly honoured and privileged to be giving these remarks on behalf of my boss, H.E. Amb. Eng. Mahboub Maalim, Executive Secretary of IGAD. His Excellency was unable to be here because of other commitments.

We strongly believe that this meeting is an ideal Platform, in which Africa's agricultural development challenges and the opportunities for our region, can be constructively discussed. And I feel particularly privileged for this opportunity to join such a wonderful mix of decision makers, experts, researchers and other key actors and stakeholders, who are here to participate in this endeavor.

Let me now, for the benefit of those who may not be familiar with IGAD, briefly talk about what IGAD is and what it does. IGAD, or (in full) the Inter-Governmental Authority on Development, comprises 8 Member States, namely: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. The IGAD region has an area of approximately 5.2 million km² and a population of



IGAD is familiar with - and highly appreciative of - the work that ASARECA does. Backed by our mutual recognition of our complementarity and respective comparative advantages, IGAD and ASARECA are currently involved in consultations, discussing the possibilities and modalities of collaboration, which we hope will soon crystallize into a Memorandum of Understanding that will guide our cooperation in the years to come.



about 250 million people. IGAD is one of the 8 RECs that form the building blocks of the African Union. IGAD was created and established in 1986, initially as the Intergovernmental Authority on Drought and Development (IGADD) to address the severe and persistent droughts and desertification that ravage the Horn of Africa region.



We are impressed by the spirit of rejuvenation and the hopeful strategic plans that have been declared by ASARECA, as evidenced by the thematic phrase ‘repositioning ASARECA for accelerated African Agricultural transformation’, which comes as a breath of fresh air, inspiring hope in Africa’s Agriculture and research.



The organization was revitalized in 1996 and renamed the Intergovernmental Authority on Development (IGAD). Its mandate was expanded to incorporate a broad development agenda, covering food security, environment protection, peace and security and economic and social development, in order to address the specific needs of the region.

To execute the purposes and obligations of its mandate, IGAD has 4 divisions at Headquarters, dealing with Agriculture and Environment; Peace and Security; Economic Cooperation, Social Development and Regional Integration and Administration and Finance. In addition to the work being done at the IGAD Headquarters, IGAD established a number of specialized institutions, including CEWARN, which is based in Addis Ababa and deals with conflict resolution; the Climate Prediction and Applications Centre, ICPAC, which is based in Nairobi and serves the region with a variety of climate services; ICPALD, which is also based in Nairobi and deals with Pastoral areas and Livestock development; there are various programmes, special projects and initiatives, such as the drought resilience initiative, IDDRSI, based in Djibouti; and the regional health programme IRRAP, which is based here in Uganda; the security sector programme based in Addis Ababa; and several cross-

border development projects and interventions, which have been initiated and are being implemented throughout the IGAD Member States– all guided, at the higher outcome level, by the pursuit of the goals of achieving peace, prosperity, sustainable resilience and regional integration.

IGAD is familiar with - and highly appreciative of - the work that ASARECA does. Backed by our mutual recognition of our complementarity and respective comparative advantages, IGAD and ASARECA are currently involved in consultations, discussing the possibilities and modalities of collaboration, which we hope will soon crystallize into a Memorandum of Understanding that will guide our cooperation in the years to come. We are impressed by the spirit of rejuvenation and the hopeful strategic plans that have been declared by ASARECA, as evidenced by the thematic phrase ‘repositioning ASARECA for accelerated African Agricultural transformation’, which comes as a breath of fresh air, inspiring hope in Africa’s Agriculture and Research.

Developing our region will, indeed, be a partnership endeavor– and among the areas of common engagement between IGAD and ASARECA, which will be harmonized with our mutual aspirations will be to mobilize and equip scientists to focus science, technology and their interest on the principal challenges of our time on top of that agenda, will be food insecurity amid worsening ecological circumstances and the necessity to optimize the productivity of our resources.

As I conclude, I would like to join others who spoke before me, in congratulating ASARECA as it celebrates its Silver Jubilee; and to look forward to a future of constructive engagement and success in our joint endeavor to serve our region.

I thank you all most sincerely for listening.

11.0 Remarks by COMESA



Ambassador Dr. Kipyego Cheluget,

Assistant Secretary General- Programmes, COMESA Secretariat

On behalf of the Common Market for Eastern and Southern Africa (COMESA), I thank you for inviting COMESA to join you today to participate in this very important meeting that is shaping the future of Agricultural Research and Development in Eastern and Central Africa.

It is indeed a pleasure and honor for me to make these remarks especially before this gathering of highly distinguished and eminent personalities on behalf of the Secretary General of COMESA.

As you all know, COMESA is the largest Regional Economic Communities (REC) in Africa, with 21-Member States. Its mission is to achieve sustainable economic and social development in all Member States through increased regional cooperation and integration in all fields of development including, among others: (i) Industry and Agriculture, (ii) Trade and Investment facilitation; (iii) Peace and Security; (iv) Gender and Social Affairs; (v) Environment and Natural Resources. It has a population of over 543 million people, with global trade in goods worth US\$ 235 billion. COMESA forms a major market place for both internal and external trading.

Article 134 of the COMESA Treaty encourages cooperation among its member states in agriculture (among other things) leading to effective utilization of existing national agricultural research and extension institutions on a network basis for the benefit of the common market and leading Agricultural Research for Development (AR4D) institutions such as Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA); thus, enabling agricultural

research to play a leading role in promoting market/income generation-oriented agriculture;

In executing its mandate, COMESA works in collaboration with other Regional Economic Communities (RECs), Member States, partners in Agricultural Research for Development; Civil Society Organizations; Non-Governmental Organizations; Private Sector and Development Partners, to achieve its goals with respect to promotion of trade, agricultural development, gender, peace and security.

COMESA also takes cognizance of the fact that challenges to agricultural development in Africa require concerted and thoroughly planned efforts to exploit the opportunities for scientific and technological revolution in agricultural sciences, that must be implemented to unlock the agricultural transformation on the continent.

ASARECA is an institution that COMESA is proud to be associated with. It has a longstanding relationship with COMESA having implemented together some joint actions over the last 15 years especially in the areas of agricultural research, extension and training for mutual benefits of their Member States.

I am pleased to note that in the recent past, COMESA and

ASARECA have implemented joint programmes approved by the COMESA Council of Ministers, especially in the areas of the Seed Trade Harmonization Regulations, climate change adaptation and biotechnology for some ASARECA countries as well as the regional CAADP Investment Programme.

One of the key lessons learnt from these joint initiatives is that they do deliver a lot of mutual benefits but also require concerted efforts to achieve accelerated progress towards agricultural transformation in Africa.

COMESA is currently in advanced stages of reviewing the existing Memorandum of Understanding with ASARECA to reflect new areas of collaboration in agricultural research for development, capacity building and knowledge and technology transfer which are aligned with the new ASARECA Strategy and Results Framework. We hope to sign this memorandum of cooperation in the coming weeks, and having a stronger and cordial working relationship with ASARECA in the near future. We would like to take this opportunity to re-affirm our commitment in working with ASARECA and having ASARECA as our technical arm on AR4D.

It is gratifying to see you, the Honorable Patron Ministers gathered here today to renew your commitments to supporting ASARECA for it to play its rightful leading role in transforming agriculture in the sub-region. Resource mobilization is key for R&D to support agriculture transformation. COMESA therefore, calls upon the countries and Development Partners to prioritize funding of ASARECA's Programmes.

We recognize that it is in our interest to form strategic partnerships for implementation of AR4D to foster economic integration. In this regard, we pledge to continue undertaking collaborative research for agricultural development programs with ASARECA for



One of the key lessons learnt from these joint initiatives is that they do deliver a lot of mutual benefits but also require concerted efforts to achieve accelerated progress towards agricultural transformation in Africa.



the mutual benefit of our stakeholders.

I am pleased to note that COMESA is implementing the Agenda 2063 which advocates for a prosperous Africa, inclusive growth and sustainable development, and whose strategic goals include modernizing agriculture for increased productivity and production. The African leaders through the Malabo Declaration on Accelerated Agricultural Growth and Transformation recommitted to the CAADP agenda as an important component of African development. Part of our agenda today is to deliberate on how to achieve resilience and sustainability in African farming systems. I commend ASARECA, CIMMYT, ACIAR and their country partners for convening these discussions. The multi-institutional collaboration that has made this meeting and the planned discussions if possible should be sustained.

As I conclude, ASARECA as you all know will be celebrating 25 years of coordinating agricultural research in Eastern and Central Africa. Allow me therefore, to congratulate ASARECA on this auspicious occasion of its Silver Jubilee.

I wish you very fruitful deliberations and I thank you for your kind attention.

Official Opening of the ASARECA Council of Patron Ministers' Summit



Rt. Hon. Dr. A. M. Kirunda Kivejinja (right), Uganda's 2nd Deputy Prime Minister and Minister of East African Community Affairs delivers his address at the Summit.



Above: Host Minister, Hon. Vincent B. Ssempijja addressing delegates

Left: Hon. Dr. A. M. Kirunda Kivejinja confers with dignitaries.



12.0 Welcome Remarks



Hon. Vincent Bamulangaki Ssempijja (MP),

Minister of Agriculture, Animal Industry and Fisheries, Uganda

I greet you all on behalf of the Ministry of Agriculture, Animal Industry and Fisheries and welcome you to this inaugural Summit of the ASARECA Council of Patron Ministers.

The important role of agriculture to our region cannot be over emphasized and so I would like to take a few minutes to share with you highlights of Uganda's agricultural sector.

The population of Uganda is projected to double by 2050 but agricultural productivity increases have stalled in recent years (at 2.2%) – below the population growth rate (3.2%), and well below the Comprehensive Africa Agriculture Development Programme (CAADP) target (6%). We are hence doubling our efforts to assure food security in the future. And as we all know, no country has sustained a rapid transition out of poverty without raising productivity in its agricultural sector.

Most of Ugandan agriculture is smallholder based, with farm holdings of 5ha or less accounting for 96 percent of all farms in Uganda. Fortunately, smaller farms in Uganda are generally more productive and are projected to become even more efficient and commercially viable if well supported. The key policy question in the Ugandan context is how to shift as many smallholder farmers as possible out of subsistence agriculture into commercially oriented farmers who target markets for their input procurement and output supply; and how to raise material input use and access to agricultural services including extension, credit, finance, mechanization and water for irrigation.

Given that the opportunities for opening up new land

to agriculture are limited due to a rapidly growing population which will require more food at lower prices, the government of Uganda is now focusing its attention on productivity-inducing public investments targeted at the smallholder level.

This is not to say that we are ignoring the 4% in commercial farming; we are aware that this type of farmer when provided with an enabling investment climate that reduces the costs of doing agribusiness is able to access the most important production and marketing support services (capital, inputs, technical and market knowledge, and marketing contacts) on their own and as a sector we are committed to providing that conducive business environment.

Our approach to boosting farm productivity and accelerating smallholder commercialization is multi-sectoral and holistic; combining input subsidies through the Operation Wealth Creation Programme (OWC); investments in rural infrastructure, finance and energy to unlock markets and value addition; addressing land ownership and tenure bottlenecks to ensure a more flexible land market; in addition to support to research, innovation, technology transfer and advisory services and the strengthening of institutions. This approach requires coordinated delivery by many ministries and agencies, thus the coordination and leadership by the Ministry of Finance, Planning and Economic Development and from the Office of the Prime Minister have been critical.

Ugandan farmers enjoy two main advantages: a free market environment where prices are not artificially inflated by government policy. A Ugandan farmer will hence get the 'right price' as long as he is able to enter the right market, meets the requirements and has the capacity to negotiate and access to information. These conditions may not always be met especially if our smallholder farmer is left to operate in isolation without private or public sector led investment support or a combination thereof.

Secondly, the Ugandan farmer is gifted by nature and enjoys above average rainfall amounts and the opportunity to plant at least twice a year. Unfortunately, this advantage is also threatened by climate change and increasing levels of land degradation and loss of soil fertility. As a sector, we are hence moving to create further advantage for our farmers in the areas I mentioned before. For example, works on the north-eastern corridor (Kenya-Uganda-Rwanda) and the northern corridor that links northeastern Democratic Republic of the Congo, southern Sudan, and Uganda are unlocking cross-border trade opportunities and are set to bring about significant dividends for agricultural growth in Uganda and the whole east African region. These investments in trunk roads are being complemented by investments in rural feeder roads to address the significant price variations in agricultural produce within similar agro-ecological zones occasioned by poor rural road infrastructure.

I am aware that this Summit brings together the ASARECA Council of Patron Ministers and other stakeholders in the agricultural sector to discuss regional agricultural research for development. Investing in agricultural research and advisory services is necessary to raise smallholder agricultural productivity, in addition to reducing the various risks faced by smallholders ranging from weather events to pests and diseases. Past investments in research and advisory services in Uganda have yielded significant benefits.

Over the years 2008 – 2014, ASARECA partnered with over 290 institutions in the region to deliver a range of regional public goods and services with significant positive spill-over effect especially among farmers. An evaluation of the impact of ASARECA R4D work showed significant contributions in the areas of food security and nutrition, incomes, productivity, ecosystem services and resilience, the enabling environment for sector actors, knowledge management and networking of the region's scientists to foster innovation, and institutional development. As a host government, we have inevitably been a principal beneficiary.

One of ASARECA's various long-term partnerships has been with CIMMYT on implementation of the Sustainable Intensification of Maize Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) project which is funded by the Australian Center for International Agricultural Research (ACIAR). Basing on the evidence from the SIMLESA, we are expecting a particular focus on conservation agriculture based sustainable intensification (CASI) in this Summit. I would hence like to conclude by pointing out some of the things that the Uganda government is doing to support a sustainable approach to farming.

The government of Uganda's Vision 2040 commits to intensify environmental control measures such as CASI to halt the decline in soil fertility. In turn, one of the objectives of the national agricultural policy is to ensure sustainable use and management of agricultural resources by promoting sustainable land management and conservation agriculture technologies and practices among other actions. The government of Uganda has initiated several reforms to the extension system in the country to increase farmers' access to new knowledge and technologies such as CASI. In 2018 alone, the ministry established 90,000 demonstration farms for various priority commodity value chains countrywide under the extension policy and strategy and early this year provided vehicles and motorcycles to the extension

workforce to enable them reach more farmers.

Our national agricultural extension strategy set a target of 12,036 as the minimum extension workforce needed in the public sector for an agricultural revolution to be effected. Government plans to recruit 5,000 of these and so far 3,811 have been recruited and deployed under our single spine extension system. The Ministry is also evolving different extension service delivery models in partnership with civil society and private sector towards a pluralistic extension service delivery system that will be coordinated and regulated by government to fill the other gap.

The government through NARO has also developed an implementation guide for CASI for use by our extension workforce. The uptake of conservation agriculture can be challenging when farmers do not have access to appropriate mechanization. Available estimates indeed show that only about 10% of Ugandan farmers employ some form of mechanisation with about 8% using draft animal power (DAP) and another 2% using tractors.

This is a major factor contributing to low levels of production, productivity, commercialisation and value addition. The government has hence recently established the department of agricultural infrastructure, mechanization and water for agricultural production within MAAIF which will work closely with the senior agricultural engineers being recruited in every district to promote mechanization of smallholder agricultural value chain processes right from field production to processing.

On Thursday 7th March, H.E. the President of Uganda also commissioned earth moving equipment, 284 tractors and implements for use by farmers. The machinery is being managed on a cost sharing basis where farmers contribute money for fuel and MAAIF pays costs of maintenance and operators.

Government also has plans to set up 13 regional referral

centres for mechanization and irrigation of which two are now completed; Agwata (Dokolo district) and Buwama (Mpigi district) mechanization workshops. In the next financial year, four (4) other regional centers will be established in Mubende, Mbale, Arua, and Hoima districts. The regional mechanization centers will extend technical services to users of agriculture mechanization technologies as well as support to tractor hire services.

In the area of providing farmers access to optimal packages for input intensification, the government has continued investments in NARO's work on technology improvement through research on improved seeds, breeds and stocking materials which are being made available through OWC in partnership with private sector. Over the implementation period of the Agricultural Sector Strategic Plan (ASSP 2015/16-2019/20), the government of Uganda intends to spend 178.5 Billion Shillings on development of new technologies. The government is also investing in the development of the phosphates industry in Tororo to reduce the cost of fertilizer.

Furthermore, the government of Uganda through the national agricultural research laboratories at NARO Kawanda has also finished mapping the nutrition and health status of our soils and so far a Fertilizer Optimization Tool (FOT) has been developed for use by extension staff which gives Economically Optimum Nutrient Application Rates for different agro-ecological zones (AEZ).

I therefore call upon farmers, practitioners and development partners to embrace the conservation approach to farming.

And now it is my pleasure and honour to welcome the 2nd Deputy Premier of the Republic of Uganda and Minister of East African Affairs to the podium to officially open this Summit. Welcome Rt. Hon. Kirunda Kivejinja.

FOR GOD AND MY COUNTRY

13.0 Remarks by the African Union



H.E. Amb. Josefa Leonel Correia Sacko,

Commissioner for Rural Economy and Agriculture, African Union Commission

I am greatly honoured to make these opening remarks at this very important event - the First ASARECA Council of Patron Ministers' Summit and the High-Level Forum on Sustainable Intensification of Africa's Farming Systems – holding in this beautiful Resort in Uganda, the pearl of Africa.

We have just concluded a Retreat in Tunis. I made all efforts to be here to join ASARECA in commemorating 25 years of coordinating collaborative agricultural research for development in the sub-region. I take this opportunity to wish the organization a successful Silver Jubilee and many more fruitful years ahead. As Commissioner of the Department of Rural Economy and Agriculture of the African Union, I am particularly happy with your theme- Sustainable Intensification of Africa's agriculture.

We strongly believe that agriculture and rural development hold the key for transformation. Available evidence indicates that GDP growth generated by agriculture is at least twice as effective in reducing poverty as growth in other sectors. Over the past half century, agricultural production gains across the world have helped millions of people to escape poverty, removed the threat of starvation and provided a platform for rural and urban economic growth in many countries. African farmers have traditionally pursued shifting cultivation in response to population growth and declining soil fertility. In much of Africa, this extensification path is rapidly becoming unsustainable or impractical as land grows scarcer. Growth in population and incomes combined with rapid urbanization and increasing domestic demand for agricultural products are exerting strong pressures on farmers to intensify agriculture by using more labour and/or capital per hectare of land but

the use of inputs, technology, and investment has been lower than expected in Africa. I look forward to reading your recommendations on the path for sustainable intensification of agriculture in Africa in the face of declining productivity and disinvestment in agricultural research, extension and production systems from both governments and international donors.

Excellencies and Distinguished Ladies and Gentlemen, as you may be aware, the Department of Rural Economy and Agriculture (DREA) is one of the eight Departments of the African Union and the number is set to reduce to six with the ongoing restructuring of the Commission. The current mandate of the department is to initiate and promote policies and strategies that can contribute to the development of the rural economy, particularly through the improvement of agricultural productivity and growth of the sector as a whole. DREA thus initiates, proposes and coordinates policies and programmes for the development of production capacities in agriculture, livestock, aquaculture and fisheries, with the aim of ensuring food security in Africa. DREA is also charged with the responsibility of promoting measures that will contribute towards enhancing environmental sustainability. The ongoing reform of the African Union has added blue economy to our portfolio.

DREA has five regional technical offices: the AU Inter-

African Phytosanitary Council (IAPSC); AU–Inter-African Bureau for Animal Resources (AU–IBAR); Pan African Veterinary Vaccine Centre (PANVAC); Pan African Tsetse and Trypanosomiasis Eradication Campaign (PATTEC); and Semi-Arid Food Grain Research and Development (SAFGRAD). Agenda 2063, Africa's economic transformation blueprint, is very clear on the central role of agriculture. African Union Heads of State and Government adopted the Comprehensive Africa Agriculture Development Programme (CAADP) at the AU General Assembly held in Maputo, Mozambique in July 2003. Through CAADP, African governments agreed to allocate at least 10% of national budgets to agriculture and rural development, and to achieve agricultural growth rates of at least 6% yearly.

In 2014, African leaders recommitted to the principles of CAADP by endorsing the AU Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods. The Declaration translates the vision for Africa's Agriculture within the First 10 Years of Implementation of the AU's Agenda 2063. The Malabo Declaration adopted 7 commitments comprising the 2025 vision and goals of Africa Accelerated Agricultural Growth and Transformation; including; commitments to Ending Hunger in Africa and halving Poverty by the year 2025

I am pleased to inform you that the department together with AUDREA/ NEPAD has been at the forefront of implementing the CAADP/ Malabo Declaration and mitigating the effects of climate change through its various interventions anchored on a 5-year Business Plan (2017-2021) which translates the political commitment in the Malabo Declaration into concrete actions.

DREA recognizes that well-coordinated collaboration in agriculture research for development (AR4D) among actors is critical for addressing challenges on the African

continent in order to increase agricultural productivity and create impetus for regional and international trade which has become overtly important with the signing of the Continental Free Trade Agreement (AfCFTA) in March 2018 in Kigali, Rwanda. To this end, DREA has been working with various partners such as Regional Economic Communities; Continental and Sub-regional Organizations on Agricultural Research for Development; Civil Society Organizations, Non-Governmental Organizations; Member States; Private Sector and Development Partners. AUC-DREA views ASARECA as a strong sub-regional partner that is critical and relevant for the advancement of the agricultural research for development in the Eastern and Central Africa sub-regions. It is for this reason that we signed an MOU with the Organisation which we are currently reviewing with a view to strengthening our relationship.

Excellencies, we note that agricultural research for development programs require significant amount of resources to deliver anticipated benefits. Institutions such as ASARECA have demonstrated unwavering dedication towards coordination of regional research agenda in the east African subregion and therefore need to be supported in order to be able to fulfil their mandate.

I would like to thank member states that have been funding ASARECA's operations and urge our Ministers present to reaffirm their willingness to continue funding ASARECA's operations towards the region's development. I take this opportunity to encourage other countries in the regions who have not yet joined the Association to do so, so that they can enjoy the same benefits as the original founder members.

I wish us all wonderful deliberations and I thank you for your attention.

Merci beaucoup, Obrigada, Asante sana, Webale!

14.0 Opening Address



Rt. Hon. Alhaji Kirunda Kivejinja,

Deputy Prime Minister of the Republic of Uganda

It is my pleasure to join my colleague Hon. Vincent Ssempijja Bamulangaki, Minister of Agriculture, Animal Industry and Fisheries and all the Ugandans here in welcoming you to the Republic of Uganda, the Pearl of Africa.

I also want to extend my appreciation to the Australian Centre for International Agricultural Research (ACIAR), the International Maize and wheat Improvement Center (CIMMYT) for working together with MAAIF and ASARECA to organize this Summit. The theme for this Summit – repositioning ASARECA for accelerated African agricultural transformation is a very pertinent one for our region.

From 2008 to 2013 (the post food crisis period), the annual growth rate of agricultural exports grew by 6.6% annually as a result of higher prices for some commodities on the global market, significant improvements in infrastructure – especially transport and telecommunication and greater efforts at regional integration. This is no reason to clap however. Over the same period; imports of agricultural commodities grew five-fold. This is in part because population has more than doubled over the last 30 years, has become increasingly urban and diets are shifting to higher protein foods and greater consumption of imported cereals (wheat, rice, and maize) rather than of the local cereals, roots, and tubers. Indeed the region is a net importer of cereals with the proportion of cereals in total domestic food cereal supply ranging from 100% in Congo; Ethiopia (11.8); Kenya (39.9); Madagascar (8.7); Malawi (1.9); Mozambique (29.1); Rwanda (35.2); Uganda (9.1); and Tanzania (14.9%).

This means the sector is not responding adequately to demographic and other trends, because average farm

yields have largely stagnated, our agriculture is still rain-fed even when climate change effects dictate otherwise – indeed the percentage of arable land equipped for irrigation in the fourteen countries represented here is only 4.7%, mechanization is low, and so is fertilizer use. The time to do business unusual is overdue. In 2014, African Leaders made commitments at the African Union Summit in Malabo, Equatorial Guinea to accelerate agriculture growth. Among other pledges include enhancing investment finance in the agriculture sector.

In fact, each dollar invested in agricultural research and development has been estimated to provide returns of up to \$10 or more to the overall economy. Investments in public agricultural research, development and extension programs are essential to enabling the science and innovation needed to accelerate growth in productivity. Overall public sector expenditure on agriculture in the region still lags behind the Maputo recommendation of at least 10% of the national budget. The average expenditure for EAC countries stands at only 4.4%; 3.3% for COMESA countries and 2.7% for SADC countries. As the Republic of Uganda, we have made commendable progress towards meeting this agriculture spending target so as to facilitate innovation and technology generation but we can do better.

National agricultural research systems are at the core of innovation for local and national food security. Innovations, technologies and practices developed through publicly-

funded agricultural research help producers around the world remain competitive by increasing the productivity and sustainability of production, reducing loss and waste in the value chain and enabling adaptation to, and even mitigation of climate change. Consumers of agricultural products benefit from the lower, more stable prices and increased access to safe, nutritious food resulting from these investments.

But as the African Proverb goes - – “if you want to go quickly, go alone; but if you really want to go far, then go together”. Regional agricultural research institutions such as ASARECA play a role in catalyzing collective actions and economies of scale by allowing our sovereign governments to access and share proven technologies and innovations as well as scarce resources such as scientists and hi-tech laboratory infrastructure.

Twenty-five years ago, ten countries in the Eastern and Central Africa region including Uganda, Burundi, Kenya, DRC, Eritrea, Ethiopia, Madagascar, Rwanda, Sudan and Tanzania entered a memorandum of understanding to collaborate in research for development. The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) was birthed in response to a critical need to strengthen capacities for agricultural research for development and to enhance the efficiency and effectiveness with which research was responding to critical challenges in the agricultural sector.

At the heart of this pledge was a commitment to leave no country behind; at the time some countries were just coming out of conflict and needed to rebuild their national agricultural research systems and some, I am told did not even have a faculty of agriculture.

I am glad to say that the Government of Uganda entered into a Headquarters Agreement with ASARECA at its inception and has hosted it since. ASARECA enjoys diplomatic status in Uganda.

ASARECA embodies the fact that the national agricultural

research systems of Eastern and Central Africa together are more potent than the sum of its parts. ASARECA provides the platform for countries to exploit their comparative advantages and relative strengths resulting in economies of scale and the critical mass needed to address common priority constraints. In particular, ASARECA coordinates the identification of the regional research priority agenda, fosters scientific and technical collaboration through collaborative regional research programs, building AR4D related capacities, exchange of germplasm and new knowledge. Some of our development challenges transcend borders, which are porous for that matter – and require collective responses as no country alone can carry the weight.

In the recent past, the member countries have called for reforms in ASARECA governance and management to ensure that the institution better fulfills its mandate. I have been made aware that this Summit will institute the new governance system for ASARECA in response to these demands.

I have been made to understand that the ASARECA Council of Patron Ministers responsible for agricultural research will now be more actively involved in providing overall guidance to regional collaborative programs, confer the legal authority by signing the revised Constitution of ASARECA, and provide a political umbrella to the ASARECA Board of Directors. The Council assures the political support needed if ASARECA is to be truly representative of all the elements of the NARS in respective countries and that regional research as long as it serves our national priorities features prominently in the policy agenda to ensure adequate, stable and timely funding. It is also essential that the Board of governance of ASARECA is inclusive, efficient, and effective and reflects the complexity of the agricultural sector and its R4D requirements. The Board of Directors ensures that the regional research agenda is seamlessly aligned or adds value to our national priorities.

The Republic of Uganda supports the governance and

management reforms undertaken at ASARECA and wants a revitalized, reformed and effective ASARECA that is more efficient and effective in supporting member states achieve agricultural transformation. As a region we need to leapfrog into middle income status by learning more and exchanging more with one another. In support of the mandate of ASARECA as our principal organization for coordinating R4D efforts in the region, I take this opportunity to encourage the Republic of Uganda and other member countries to fulfill their funding commitments to ASARECA to enable it fulfill its mandate. Africa needs to support her home grown institutions by keeping our funding commitments so that they can be strong enough to fulfill their mandate.

I also thank the development partners represented here who are actively supporting regional research initiatives for the solidarity and support that they have extended to Uganda and the region at large through these initiatives. I do call for more South-South and triangular cooperation which is a valuable avenue for developing capacity although we can and should expand the scope to all areas of mutual interest in the context of R4D partnerships for development.

I now want to take this opportunity to condole with Malawi and Mozambique over the loss of lives occasioned by the recent flood events. Let us take a moment of silence in honour of those who passed on.

Climate change is indeed with us and must be addressed. Although the agricultural sector contributes the least to climate change effects, it is unfortunately the worst hit. The agriculture sector hence has to be an active player in devising mechanisms for mitigating against climate change and ensuring the resilience of our farmers and ultimately our economies.

Later this morning this forum will discuss at some length the promise of Conservation Agriculture-Based Sustainable Intensification for enhancing climate resilience and

sustainability of our farming systems. These discussions will be based on an 8-year collaborative research effort (commonly called the SIMLESA Project - that is the Sustainable Intensification of Maize- Legume Cropping Systems in Eastern and Southern Africa). It is gratifying to note that the SIMLESA project spearheaded transnational collaboration that involved NARO scientists and those from ASARECA, CIMMYT, the Australian Center for International Agricultural Research [ACIAR]- as the main funder –and their collaborators in seven countries across eastern and southern Africa and the University of Queensland.

This discussion will be opportune moment for us because Uganda's Climate-Smart Agriculture strategy recognizes the important role that conservation agriculture plays in addressing climate change. I encourage you therefore to critically review the issues and evidence presented and to embrace those policy actions that we need to roll out as a region to ensure that our food security is cushioned against climate change for us and for those that will come after us. Climate change remains a threat to our efforts to achieve sustainable development.

We must muster the political will to fully implement our national climate change strategies – mitigation and adaptation measures. And as we listen in on the evidence provided in this forum, let us commit to; (i) being the generation that saves the planet; (ii) ensuring that no country and no one is left behind in AR4D; (iii) ensuring that ASARECA is revitalized to deliver its mandate and empowered financially to do so; (iv) regional collaboration in AR4D based on national priorities and needs; and (v) It is now my pleasure to declare this Summit Open and to wish you all fruitful deliberations

FOR GOD AND MY COUNTRY

ALHAJ ALI KIRUNDA KIVEJINJA

RT. HON. SECOND DEPUTY PRIME MINISTER AND
MINISTER OF EAST AFRICAN AFFAIRS

3RD MAY 2019, KAMPALA, UGANDA

15.0 Key Note Speech: Harnessing the Power of Global Collaboration to Improve Africa's Food Security in the face of climate change



Dr. Martin Kropff,

Director General, CIMMYT

15.1 The 9 Billion person question for the future

Global population is predicted to grow to 9 billion people by 2050 with main growth coming from Africa, India and Pakistan. This implies that an additional 2.5 billion people, none of whom are born yet.

Even though the population growth rate is declining in percentage terms every year, the same number or more people are borne annually than in preceding years. Annual population increase in real numbers will hence remain unchanged until 2050 and reduction by then may or may not happen. If there is a slowdown in actual numbers, then all predictions show this will only start around 2040, implying that the next 20 years are extremely critical to produce enough food to feed the world.

The global challenge we are facing based on population growth projections is that we need to produce two times more food with two times less resources at the global level and that food must be two times more nutritious. One of the commitments of the UN Sustainable Development Goals (SDGs) is to eradicate hunger by 2030. However, at present, the number of hungry people is increasing globally. World hunger rose in 2016 for first time this century; with 815 million people reported as chronically undernourished – up by 38 million (Hans, 2017). About 489 million of these are located in countries affected by conflicts. This number of hungry people exceeds the entire population of South Asia at the beginning of

Green Revolution (1970). It is worth noting that while nearly a billion go hungry around the world, some amount of food that could feed 4 billion people is being rechanneled as animal feed. Global partnerships such as the International Wheat Improvement Network (IWIN) are needed today as much as ever before to maintain global wheat security.

Our ability to deliver sustainable food security depends on three key converging challenges: (i) climate change, (ii) population growth, and (iii) limited natural resources. Understanding the severity of these challenges and the action needed to tackle them is high on the international research agenda. The future is uncertain but it is possible to construct a range of likely futures driven by a range of factors, including international agricultural research investments.

15.2 CIMMYT around the World

The International Maize and Wheat Improvement Centre (CIMMYT)'s mission is maize and wheat science for improved livelihoods. CIMMYT's work is mainly in Africa (40%), Asia (40%) and 20% Latin America. It is implementing over 50 projects covering 23 of

the 54 countries in Africa, CIMMYT has more than 168 staff around the world, and many of the staff are from Africa. Impact is mainly generated through the partnerships CIMMYT has nurtured over the years in the countries where it works with national research systems, government and private sector. CIMMYT's Integrated Research Agenda 2017 – 22 seeks to achieve scientific excellence in four thematic areas – genetic diversity with the genebank in Mexico preserving over 150,000 accessions of wheat and 30,000 of maize; breeding programs to develop and improve access to improved varieties; farming systems research; and increasing impacts with capacity development and partnerships as cross-cutting areas.

In line with this thematic focus, CIMMYT has developed extensive experience and expertise in breeding, variety release, improved seed markets, gender, scaling, sustainable intensification and country-level approaches. Globally, CIMMYT provides 40% of ALL germplasm exchanged by the public sector. In Africa, CIMMYT plans to use agrifood systems as a platform to bring together global expertise for an integrated and transformative approach. This will focus on:

- a. Research building on established expertise e.g. high yielding, stress tolerant seeds; stronger seed markets
- b. Refine and scale-up approaches e.g. sustainable intensification, gender-friendly mechanization to unlock yield potential and to create sustainable, productive and profitable farming systems
- c. Use technology and tools in novel ways e.g. high resolution imagery and data analytics, integrated food systems planning. CIMMYT intends to use country-level integrated approaches to assess the prospect of food and nutrition security in maize- and wheat-based countries (Ethiopia, Kenya, to start) by 2030 using new data and tools. It will also focus on enhancing the adoption of new maize and wheat varieties using high resolution technology extrapolation domains using big data

analytics and targeting tools. Precision agriculture will be the future of smallholder agriculture.

15.3 Africa's agri-food challenges and potential solutions

A food and nutrition secure Africa will require a holistic approach including investment in agri-food R&D for innovation; transforming smallholder agriculture including banishing the hand hoe and mechanization along entire value chains; empowering women in agriculture; strengthening partnerships for co-innovation; market development to enhance direct access to markets for smallholder farmers and policies for the right incentives. The section below looks at the challenges that Africa needs to address.

Challenge 1: Feeding a growing population

Currently 2 billion people have micronutrient deficiencies and we can no longer focus on just food security alone, nutrition security is just as critical. To address the challenge of sustainably feeding Africa, there is need to improve productivity, quality and resilience of the most important crops such as maize which is consumed by 50% of the population an equivalent of over 300 million people and which accounts for 22-56% of total calorie intake in Africa. Wheat is also important to Africa. Demand for wheat is on the rise throughout the continent. People in the region consume nearly 47m tons of wheat every year and more than 80% of this wheat is imported and there is need to produce more of it locally.

There is also need to improve health and nutrition by mainstreaming biofortification in breeding and agro-processing of key staples.

Challenge 2: Climate change impacts yield

Climate change is predicted to impact yields of major staple crops including maize. Maize mega environments are based on a combination of temperature and rainfall.

To enhance resilience to climate change, CIMMYT is focusing on expediting the development and deployment of better and resilient varieties, i.e. varieties that are high yielding, tolerant to drought, heat and other stressors, disease and pest resistant and nitrogen-use efficiency. In Africa, CIMMYT is employing excellence in breeding tools to develop and deploy client-oriented stress tolerant maize and wheat for various African markets. Currently 3.5 million hectares of land is planted to DT maize out of 35 million hectares.

Challenge 3: Pests and diseases

Worldwide, yield loss averages 10-16% with climate change induced yield losses is expected to increase by 10 to 25% per °C (Deutsch et al., 2018). Climate change induced pest and disease proliferation is expected to increase yield losses unless addressed. The key diseases include:

- i. Maize Lethal Necrosis (MLN) is a devastating disease in Eastern Africa.
- ii. Tar spot complex is caused by a combination of *Phyllachora maydis* and *Monographella maydis* fungal infection in association.
- iii. The wheat blast pathogen *Magnaporthe oryzae* is a common problem on wheat. Although it is the same fungal species that causes rice blast, the wheat blast pathogen is a distinct population of *M. oryzae* (referred as *M. oryzae* Triticum population) and does not cause disease in rice.
- iv. Stem rust is the most feared disease of wheat. Stem rust spores arriving as late as one month before harvest can turn a previously healthy crop into a tangled mass of stems, which produces little to no grain.
- v. Fusarium head blight of wheat (FHB) disease periodically causes significant yield loss and reduced grain quality. *Gibberella zeae* also produces mycotoxins, which are chemicals that are toxic to humans and livestock.
- vi. Septoria – these are two major diseases caused by

Septoria. Both diseases cause serious yield losses reported to range from 31% to 53% (Deutsch et al., 2018).

These pests and diseases require a rapid response to deal with the threats. To address the pest and disease challenges, CIMMYT is investing in early warning and monitoring, building international partnerships, combined with disease control measures such as breeding, crop management, national capacity building and use of new technologies (e.g. gene editing). Currently, CIMMYT has a quarantine facility in Naivasha, Kenya, where all sorts of tests can be undertaken on new varieties be developed for addressing not only Maize Lethal Necrosis (MLN) but also Fall Armyworm (FAW). These solutions require joint efforts. For example, since FAW was first detected in Nigeria and São Tomé, it has spread across more than 40 African countries and has been seen in India since July 2018. It could also invade Europe and other continents.

CIMMYT is leading a multi-institutional response against Fall Armyworm (FAW). The FAW R4D International Consortium with approximately 45 members held an event in Addis in 2018. Hosted by the Fall Armyworm R4D International Consortium, the conference was aimed at drawing a science-based roadmap to combat the hungry caterpillar. The partners organizing the conference were the African Union Commission (AUC), the Alliance for a Green Revolution in Africa (AGRA), the Centre for Agriculture and Biosciences International (CABI), CIMMYT, the Food and Agriculture Organization of the United Nations (FAO), the International Centre of Insect Physiology and Ecology (ICIPE), the International Institute of Tropical Agriculture (IITA), and the United States Agency for International Development (USAID).

A key recommendation made by the Fall Armyworm R4D International Consortium is to develop common methodologies and research protocols to ensure data from various studies across the continent are better

used and compared. Because no one solution can fit all farmers and their socioeconomic contexts, advice must include; use of environmentally safer pesticides; low-cost agronomic practices; and landscape management; and fall armyworm-resistant varieties, among other integrated pest management tools. Enhanced cooperation between countries to access new technologies and manage the transboundary pest is seen as a priority. Consortium experts also urge an integrated pest management approach, initiated based on farmers' needs.

Challenge 4: Produce more, sustainably

CASI as promoted through SIMLESA is one of the technologies and practices for bridging the maize yield gap. SIMLESA agronomic trials were used to validate the role of conservation agriculture and sustainable land management in smallholder systems in seven countries in Eastern and Southern Africa (ESA). The socioeconomic and gender component informed the strengthening of policies and markets for equitable technology delivery. Investments in seed systems contributed to delivery of stress tolerant maize and legume varieties while scaling modalities were used to share lessons on bringing agricultural innovations to scale. In addition, capacity building provided opportunities for graduate training of early-career African scientists.

The impact of SIMLESA was substantial. The project, implemented in Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania and Uganda directly benefitted 484,000 households. Uptake of CASI technologies increased farm yields by up to 38% (23% on average). Labour costs savings amounted to 56% with increased net returns of up to \$600/ha. The project created a transnational network of researchers for scaling (12 institutions). In addition to contributing to the knowledge base on CASI. At least 60 briefs and synthesis documents have been prepared to inform policy actions

besides journal articles, how-to-do manuals, videos and other documentation. Furthermore, stories of farmers positively impacted by SIMLESA are now documented in a Lead Farmer Booklet available online.

Smallholder appropriate mechanization is an important driver of adoption of CASI technologies and practices. To produce more sustainably and with less there is need to scale smallholder CASI appropriate machinery. Minimal soil tillage is a recommended CASI practice and implements suited to reduced tillage are vital. Steps in the mechanization agenda should include improved manual tools, innovative draft power machinery and small two and four-wheel tractors. We can speed up uptake by learning from the experiences of India and Mexico on smallholder mechanization

15.4 Building on SIMLESA

Building on achievements of SIMLESA will require institutionalizing the gains made by developing integrated climate-smart agri-food approaches such as:

- Delivering better seeds (e.g. drought and heat tolerance) and seed systems
- Using conservation-agriculture based sustainable intensification practices
- Strengthening value chains and market linkages for nutrition
- Forward-looking and learning for early warning and response
- Using innovative research approaches
- Using big Data technology
- Empowering local startups
- ICT for agricultural development and innovation

Together we can invest in all these options towards transforming smallholder agricultural systems.

16.0 Sustainable Agricultural Intensification through Conservation Agriculture: Institutional, Market and Policy Enablers



Dr. Paswel Marenja,

SIMLESA Project Leader, CIMMYT

Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) is fully aligned with the 4 CAADP Pillars; Pillar 1 identifies the role of conservation agriculture in sustainable land management, Pillar 2 dwells on the need to strengthen agribusiness systems, Pillar 3 looks at strengthening household assets and productivity through markets, while Pillar 4 focuses on the need to improve agricultural research systems.

SIMLESA Results

Impacts on yields, incomes and labour costs

Evidence from SIMLESA indicates that investments in CASI lead to higher yields in maize and legume farming systems. In Malawi, the percentage increase in maize yield due to use of CASI technologies and practices was 17% in the mid-altitude agro-ecology and up to 38% increase in the lowland agro-ecologies. In Ethiopia, grain maize yields increased by 5-18% on average compared with farmers' practices while sites in Mozambique recorded up to 20% increase in maize yields using planting basins compared with conventional tilled seed beds and up to 19% increase in maize yields in Gorongosa under direct seeding. In the drier areas of Tanzania, maize yields increased by 2.5 – 3 tons/ha while in the wetter areas yields increased by 2.5 – 6.5 tons/ha.

Economic Result 5 showed that there was an increase in net maize income from adoption of CASI technologies and practices which ranged from 9-35% for CASI practices alone and from 26-137% for CASI practices + complementary inputs compared to conventional practices.

The impact on labour was also substantial. In Tanzania, use of reduced tillage aided by a two wheel tractor reduced the amount of time spent on planting one hectare of a maize field from 160 person hours of intensive tillage using a hand hoe to only 3 machine hours. In Kenya, up to 80% or more of the labour associated with conventional tillage is attributable to land preparation and weed control. Shifting from these conventional methods of tillage to conservation agriculture reduces costs of labour by 56%.

Impacts of CASI uptake on soil health

Shifting from conventional tillage-based cropping systems to conservation agriculture improves soil stability and fertility; helping to reduce the high runoff and soil loss responsible for soil degradation. In Malawi, results on impact of CASI on soil health showed 30% more soil organic carbon under CA based rotations compared to soils under conventional tillage; 30% more water retention for soils under CA systems and 60-90% increase in water infiltration rates in CA systems relative to the conventional furrow and ridge system. The Tanzania sites recorded an average increase in soil organic

carbon by 65%. Furthermore, the use of crop residue as a permanent soil cover and intercropping reduced soil loss by 34-65% in the Central Rift Valley of Ethiopia. The evidence from CRV Ethiopia also showed improvements in rainfall productivity with use of CASI.

Scaling of CASI technologies and practices

SIMLESA employed a range of methods to scale CASI over the 9-year period of implementation. By 2017, SIMLESA Ethiopia had reached 375, 557 farmers and 23 percent had adopted at least one CASI technology. In 2010, SIMLESA was working directly with 36 farmers who were also the hosts of the long-term on-farm trials in addition to the on-station trials.

By 2014, the project had expanded approaches to include the use of multi-stakeholder agricultural innovation platforms through which field days and exchange visits, use of multimedia, extension materials, awareness meetings and trainings were organized to scale CASI. By the end of 2014, 38,170 farmers had been reached. Further scaling and outreach was accomplished when the competitive grant scheme was used to engage scaling partners from the private sector and civil society reaching a total of 191,757 farmers by 2016.

Social Innovations

Functional agricultural innovation platforms (AIPs) facilitate information exchange, collective action and market participation. In Uganda, for instance 8 out of 10 farmers had no access to extension services prior to their participation in AIPs. Participation in AIPs increased access to 90%. Collective engagement with markets through AIPs also improved from 1 out of 10 farmers to 90 % of the farmers engaging in bulk produce marketing and 50% in bulk input procurement.

In Malawi, AIP facilitation increased the number of farmers who adopted CASI from 2% in 2011 to 35% in 2011. Farmers engaged with AIPs also benefitted from a 44% increase in produce prices due to bulk marketing

and a 20% discount on fertilizer prices due to volume purchases through AIPs.

Adoption of CASI practices

M&E results indicate 484,000 households had adopted at least two recommended CASI practices within 20-30 km of demonstration sites by 2018 with 14% consistently adopting for 3-5 seasons. The extent of adoption of CASI technologies and practices averages 0.4 ha per farmer which is equivalent to 43% of the average area allocated by farmers to maize-legume production.

Mainstreaming CASI

The evidence synthesized from SIMLESA's work and the lessons learnt over the last nine years in the region inform policy action especially in the areas of scaling CASI: and regional networks.

- i. Scaling CASI through:
 - Advisory and extension institutions
 - Broad-based farmer education through long term demonstration and learning sites
- ii. Regional CASI networks to support:
 - On-going adaptive and multidisciplinary research
 - Training in CASI at multiple levels
 - Knowledge systems to enhance access to information on CASI
- iii. Enable rural market development by encouraging innovations that improve rural value chains and enable adoption of CASI
- iv. Support the development of smallholder machinery value chains through
 - Establishing and coordinating the efforts of networks of machinery development, testing and adaptation
 - Local-level training for entrepreneurs in decentralized custom hire businesses and service centers
 - Support market innovations that enable low-cost farmer learning and experimentation on a low cost low risk basis.



03

MINISTERIAL AND DEVELOPMENT PARTNERS' PANEL DISCUSSION ON CONSERVATION AGRICULTURE-BASED SUSTAINABLE INTENSIFICATION





Moderator: Kasumba Samson

News Anchor, NBS

17.0 Summary of the Ministerial Panel Discussion

Moderator

Hon. Kaba Urgessa of Ethiopia, we would like you to outline the key climate-smart agricultural CASI specific or CASI related programs in Ethiopia.

Hon. Kaba Urgessa, Ethiopia

Ethiopia has several programs which are related to CASI. Farmers in Ethiopia have been traditionally practising or exercising intensive tillage, though the practice of CASI is not new to Ethiopia. But with climate change, we decided to focus on conservation agriculture and there are now several opportunities for mainstreaming CASI through the Sustainable Land Management (SLM) program, which mainly focuses on conservation agriculture. We also have the Participatory Small Irrigation Development Programmes (PSIDP). For one hectare of irrigation to be developed it has to be backed by 4 ha of land managed under soil and water conservation practices. We are also one of the first countries to implement a climate-resilient green economy where we are now investing in climate-smart agriculture. All these programmes have climate-smart agriculture components in them. These are the current programmes in Ethiopia involving CASI.

Moderator

What are some of the key opportunities for using the sustainable land management programme and other related programs to promote CASI?

Hon. Kaba Urgessa, Ethiopia

The SLM programme even from its name involves a range

of activities in the area of soil and water conservation and that is a major benefit we are getting actually from conservation agriculture as well. The SLMP is substantially funded and some of this can be channeled to CASI specific activities.

Moderator

Prof. Hamadi Iddi Boga, in Kenya, what are the programmes highlights in your climate-smart agricultural agenda that support approaches like CASI which we are talking about this afternoon?

Prof. Hamadi Iddi Boga, Kenya

Kenya is a water-stressed country, our productivity is very low despite the fact that we use a lot of fertilizers. In our agriculture sector policy, we have emphasized climate-smart solutions and specifically mention conservation agriculture. Out of the policy we have developed a new strategy that has three pillars that deal with resilience and we are implementing this through a World Bank funded Kenya CSA project and the drought resilience project funded by African Development Bank (AfDB) which have introduced some of these climate-smart technologies to smallholder farmers especially in the maize and wheat value chains. Through SIMLESA and other FAO programs, in addition to efforts within the ministry of agriculture together with our national research institution, KALRO, we have established CASI demonstrations for small scale farmers all over the country. The opportunity now exists for scaling up, so that CASI can be adopted given that

in Kenya we have a major drought every 2-3 years and productivity has been going down. Based on the lessons of SIMLESA, we can sustain that and thereby improve yields with the amount of rain we receive.

Moderator

What are the key climate-smart agricultural programmes that can be used to scale CASI in Uganda?

Hon. Vincent Bamulangaki Ssempijja, Uganda

Uganda is empathizing three issues today, irrigation - small scale, medium and large scale irrigation schemes, sustainable land management and mechanized agriculture. Small irrigation technologies are targeted at individual homesteads. Sustainable land management interventions have started with the highlands including the Kigezi highlands, Kasese and the Mt. Elgon areas. We are also looking at small scale tillage equipment including ox ploughs and small tractors. As we move to promote mechanized agriculture we are also saying that we still have to employ smart agricultural practices and to emphasize soil management issues. Next week we will be passing a policy on organic fertilizer use to enhance the production of crops which is related to sustainable agricultural production. We are also working in close collaboration with ASARECA on these issues including CASI.

Moderator

In many modern agricultural systems, we see that mono-cropping tends to dominate. Is crop diversification in smallholder systems consistent with specialized market-oriented agriculture?

Hon. Vincent Bamulangaki Ssempijja, Uganda

The Uganda situation is that 96% of our farmers are smallholders with land size holdings ranging from 0.5 or less – 10 acres. Mixed cropping using optimum mixed cropping patterns (especially cereal-legume

rotational or inter-cropping patterns are feasible so long as they contribute to labour and land-use efficiency. The nutritional dividends are important and the strategic role of plant protein in the decades to come will become larger and larger. Reliance on animal proteins will come to stiff resource limits and be climate damaging. As we know, intercropping is an old-age practice among farmers, at least in Uganda but your research has helped us identify the most beneficial patterns. Our role as policy makers is to ensure that research is financed to enable that knowledge refined even further and that our extension systems are adequately linked to research and empowered to deliver that new knowledge.

Moderator

Ethiopia has done quite well with regard to sustainable land management and CSA and there is a lot to learn from her. How can the national extension system be leveraged to make CASI the new norm in Ethiopia?

Hon. Kaba Urgessa, Ethiopia

Ethiopia has one of the densest agricultural extension systems in Africa if not the world having nearly 21 development agents for every 10,000 farmers and we also have over 11,000 farmer training centres and this is to be expanded to each Kebele in the near future. We also have a minimum of three extension agents for crop, livestock and also natural resource management for each Kebele and this number will increase under the small scale irrigation initiative. We are using two approaches – deploying more extension agents to areas which are under-served. More importantly, we are re-skilling our current extension workforce so as to equip them with more knowledge on CASI. If we don't change the mindset of our extension workforce it will be nearly impossible to change the mindset of farmers. We have benefitted from the support of many development partners in our CSA related programs including ACIAR, CIMMYT, FAO, IDRC and ASARECA. We are grateful for this support. From this year onwards, we have incorporated CSA in our national agricultural extension system and re-skilling

of the extension workforce has started this cropping season.

Moderator

Prof. Boga, how can we ensure that CASI messages to farmers are standardized and that long-term demonstration trials such as those employed in SIMLESA become part and parcel of national extension approaches?

Prof. Hamadi Iddi Boga, Kenya

The most important thing is that the lessons from SIMLESA should be packaged into extension materials that be used for capacity building by extension workers so that they can build capacity of the farmers appropriately. Also, we can set up demonstration plots in different regions where farmers can go and see the technologies in practice. The lessons from SIMLESA are vital to the scaling of this process. In the Ministry, we intend to use the programs on CSA to domesticate those lessons and transmit them through our national extension system. Because the national government is responsible for policy, standardization at this level will enable private sector and the NGO actors to standardize their approaches too so that the farmer is not confused.

Moderator

Dr. Makumba, farmer groups under NASFAM in Malawi appear to be very strong, what is the role of the public extension workforce in encouraging development of agricultural innovation platforms?

Dr. Wilson Makumba, Director, DARS, Malawi

Actually agricultural innovation platforms are very important because it brings together various stakeholders to discuss issues pertinent to their specific crop value chains of interest, to provide farmers with knowledge and access to markets. There are a few key issues in relation to AIPs that I need to share with the house. AIP is a departure from the ordinary way of doing things in agriculture; it requires mobilizing stakeholders to

participate in the platform, understanding the roles of the various stakeholders in the platform, capacity building and facilitating action. Our public agriculture extension workforce has been at the forefront working with the platforms to disseminate information and knowledge as related to agricultural innovation to aid proper understanding and decision making by farmers and other stakeholders in agricultural development. We can improve this by using various communication platforms with particular focus on ICTs because of their important role in communication including; sharing knowledge on climate-resilient farming systems. In Malawi, we are looking at piloting provision of ICT tools to farmers within existing value chains which is also very important for development of these platforms.

Moderator

Sustainability is such an important matter, what do you see as the sort of things needed to make agricultural innovation platforms sustainable?

Dr. Wilson Makumba, Malawi

Actually we are putting our efforts in AIPs with a focus on unlocking markets for farmers who are already engaged with the AIPs, so that they get outlets and good market prices for their products. There is also need to build capacity of the farmers and other stakeholders in the system. We are also encouraging scientists to work with the platform actors so that we can strengthen the innovation system and generate technologies that address current challenges and meet the needs of actors along the value chain including farmers, processors, industry and the changing preferences of consumers, etc.

Moderator

Mr. Paulo, in SIMLESA experience, Mozambique has had strong private sector linkages, what do you see as the opportunities in rural agricultural markets that the private sector is not exactly taking advantage of?

Hon. Felix Paulo, Mozambique

The results of SIMLESA working in partnership with CIMMYT and other actors included; providing climate-resilient technologies and practices. However, not all farmers have adopted this seed or got access to it for planting. Private sector needs to take up these proven technologies and develop the retail distribution systems needed to reach all farmers at affordable rates.

The private sector has a lot to contribute to the growth of the agricultural sector since Government can only promote partnerships together with stakeholders and provide the hard infrastructure.

Moderator

Hon. Nyikwec of South Sudan, is there anything that you are doing differently in the management of natural resources in view of climate change and the dangers thereof?

Hon. Adigo Nyikwec, South Sudan

South Sudan is the youngest nation in the world. About 95% of the land is fit for agriculture but only 4.5% is utilized, because what we do currently is subsistence farming. We have not yet gone deep into commercialized farming and because of this 80%, of the population lives in the rural areas. We do not know the use of fertilizers, what we cultivate in Southern Sudan is organic food. Despite our fertile land, we are now facing the problem of climate change. We have developed an agricultural master plan for 25 Years and part of our strategy is to use irrigation to overcome the problem of climate change and reduce dependence on rain. We use irrigation because we have a lot of water in Southern Sudan which is from the Nile and its tributaries. Southern Sudan is still struggling so we encourage investors to come and invest in agriculture in Southern Sudan so that we can also develop. We are also working closely with JICA, to organize small scale farmers into cooperatives and to train them in irrigation so that they can easily do it for themselves. We are also cognizant of the important role of universities and other tertiary institutions in the implementation and realization

of the aims of the agricultural master plan.

Moderator

What is your advice to nations with regard to bettering regional cooperation in AR4D?

Hon. Adigo Nyikwec, South Sudan

The signing of the peace agreement in September 2018 has brought relative peace to South Sudan. There is need for Africans to move and work together. Recently we were searching for Universities to bolster our academic and the response from other nations including in the US, Europe and South Africa ready to work with South Sudan was overwhelming. Africa is endowed with natural resources, so if we work together, train our citizens and deploy improved technologies, we will nurture our potential to become the bread basket of the world and be able to stamp out the hunger and poverty which is rampant in Africa.

Moderator

Burundi's rolling hills and topography also imply high vulnerability to soil erosion, soil degradation. As we discuss the causes and consequences of limited resilience to climate change effects, what programs are currently in place to stem soil degradation in Burundi?

Hon. Dr. Deo Guide Rurema, Burundi

Land is an important factor for production and to ensure soil conservation, Burundi has banned the use of polythene bags and has also set up a factory for the production of organic fertilizers. The ban on polythene bags was based on their effect on the environment and there are also ongoing discussions with the World Bank for funding to restore the environment.

Burundi has also engaged in benchmarking activities with several countries to bolster our knowledge on sustainable intensification and land management technologies and practices.

Moderator

Hon. Ssempijja, what is the country's strategy to mechanize smallholder agriculture along the value chain from production through Post-harvest processing?

Hon. Vincent Bamulangaki Ssempijja, Uganda

The government has embarked on mechanization of smallholder agriculture to reduce or perhaps eliminate reliance on the hand hoe and other back breaking practices along agricultural value chains. We have employed a mixed approach to suit various contexts: the use of the traditional 4W tractors and related implements but also 2WT, animal draught power and implements suited to smallholder contexts and CASI as promoted by SIMLESA. We have also created a department of mechanization, water and irrigation within the ministry which is spearheading implementation of the strategy.

We have also established regional mechanization centres to provide ancillary services close to smallholder farms. We are also recruiting senior agricultural engineers in every district to organize and institutionalize our mechanization agenda. This approach is conscious of the need to promote mechanization in view of soil conservation and sustainable intensification to enhance that we do not enhance productivity at the cost of land degradation.

Moderator

Hon. Kaba, if there was one programme on which you were to put money in promoting CASI, which one would it be?

Hon. Kaba Urgessa, Ethiopia

Over 60-70% of the eastern highlands are in Ethiopia and are highly degraded. In addition, estimates indicate that 60-70% of Ethiopia is productive arable land but much of this land is now significantly eroded and about 2 million are at a point of no return. We have no option but to resort to conservation agriculture. According to

SIMLESA evidence and other literature, CASI approaches can reduce soil erosion by up to 98% and can conserve soil moisture by up to 79%. If this is indeed the case, then the option we have is to assign funds to CASI. We have already put significant funding into the three programs I mentioned earlier – SLM, PCDP and the CRGE. CASI is not an option; it is a must for Ethiopia.

Moderator

Prof. Boga, research and knowledge systems for CASI and CSA are considered in some circles to be too fragmented? Do you agree and how can this be rectified?

Prof. Hamadi Iddi Boga, Kenya

The biggest challenge we have is how we manage our knowledge. We have a lot of knowledge in our research institutes, universities and a lot of traditional knowledge in our farming communities in addition to opportunities to tap into outside knowledge. Inside the country, we need to create knowledge ecosystems that harness all this by taking advantage of ICT and the digital space that we have so that we can consolidate this knowledge and use the tools that are there for artificial intelligence to process it to support decision making.

At the regional level, a platform like ASARECA, provides an opportunity for regional cooperation among scientists but also for policy makers to interact with research evidence. Our knowledge ecosystem has to be aligned from production of knowledge up to its application at all levels including research, private sector, public sector and industry. ASARECA provides the platform at regional level and within the country, we need to create similar ecosystems so that the collaboration can be complete.

Moderator

Tanzania is one of the countries with a long standing relationship with mechanization institutes such as CARMATECH. Why has agricultural mechanization not taken off in Tanzania despite looking like a promising opportunity?

Dr. Geoffrey Mkamilo, Tanzania

Agricultural mechanization in Tanzania seeks to target smallholder farmers to change from the hand hoe technology to use of tractors and related equipment. But what is missing no is; 1) The need to sensitize farmers in tractor operations for efficient use; 2) Smallholder farmers also do not have financial resources to purchase, operate and service the equipment; 3) Lack of a service and maintenance system that allows smallholder farmers to utilize mechanization services without having to invest heavily in owning them; and 4) Some farmers are accessing tractor hire services but linkages to markets to sell the products is also a challenge. These gaps mean that farmers have continued using the hand hoe which is also labour intensive and a drain on productivity.

Moderator

Mr. Osman what are some of the models for private public partnerships in machinery markets currently in use on the Sudan?

Mr. Babiker Osman, Sudan

In Sudan, we have two sectors, the irrigated and rain-fed sectors. Currently, mechanization equipment is made available by government to farmers through the cooperative model and farmers in turn obtain mechanization services through their cooperatives.

The private sector plays the role of adding value to farmers produce and hence providing the market pull needed to incentivize production and demand for mechanization services by farmers.

Comments and Reactions from the Plenary

In the morning, the AU Commissioner reminded us of the commitment by our Heads of State to commit 10% of their budget to agriculture as per the Malabo Declaration. To date only 10 countries have fulfilled this commitment. Can the panelists clarify on the reasons for this dismal performance with regard to allocation of funding to the sector that employs the majority of the labour force in the region?

Not much has been mentioned about what we are doing to shift small scale farmers from subsistence to export-oriented production especially given current opportunities for inter and intra-regional trade. ASARECA should also be working with the various countries to drive the export agenda.

Hon. Vincent Bamulangaki Ssempijja, Minister of Agriculture, Animal Industry and Fisheries, Uganda responded and informed the meeting that agriculture as a sector cannot stand alone, investing in other sectors that support agriculture for example electricity generation,

infrastructure including roads and irrigation in tandem is just as important.

The Hon. Minister also added that emphasis had been placed on food security and income for farmers and this year's theme focused on "Processing and Adding Value to Agriculture Products". Uganda intends to minimize its food import bill by minimizing importation of food stuffs that can be produced and processed internally while also enhancing exports.

Dr. Makumbi indicated that because of upheaval in the tobacco market Malawi was now emphasizing legume for export production which had benefitted from the SIMLESA support on enhancing legume productivity. Hon. Onyoti Adigo Nyikwec, Minister of Agriculture, South Sudan, added that each Government had its own priorities, and South Sudan had security as its priority and now that there was peace, there was need to develop infrastructure and support other sectors that would in turn boost agriculture.

18.0 Development Partner Panel on Commitments to Regionally Coordinated AR4D





Moderator, Kasumba Samson

News Anchor, NBS

Summary of the Development Partner Panel Discussion

Panelists

- Dr. Peter Horne Global Manager Country Programmes, ACIAR;
- Dr. Tracy McCracken, Technical Advisor, USAID East Africa
- Dr. George Bigirwa, Vice President, AGRA
- Dr. Yemi Akinbami, Executive Director, FARA
- Dr. Tekola Dejene, World Bank, Washington Office
- Dr. Stephen Mugo, CIMMYT Regional Representative for Africa

During this panel discussion the development partners in attendance congratulated the repositioned ASARECA on attaining 25 years. The expectation is that given the reforms at management and governance level, there will be more effective and efficient delivery of services to member countries.

The partners noted that we now have a lot of technologies and approaches that have been proven to work including CASI, there will be need for research to understand better what drives practice change on farms; more collaboration across institutions and disciplines to scale these technologies and put them in the hands of farmers; the need for harmonized policy frameworks and their implementation to enable technologies cross borders for research and trade; the need for appropriate smallholder mechanization; and the need to build capacity of scientists at all levels.

In the future outlook on climate-smart agricultural research, the discussion noted the need to generate and scale climate-smart technologies and approaches; the need to enhance resilience by reducing the risk

that is posed by climate vulnerable cropping systems, understanding the drivers of diversification and supporting diversification into non-farm livelihood opportunities while unlocking markets for livelihoods that are climate resistant or robust but lack market integration.

There is also need to work with policy makers in helping to understand what needs to be done to deliver on these GHG emission reduction targets and how to monitor progress; and the need to explore through research sweet spots where it is possible to simultaneously deliver livelihood incentives to farmers whilst providing benefits with regard to the climate.

Full Panel Discussion

Moderator

After listening in on the evidence and hearing our Hon. Ministers response to the evidence on the SIMLESA flagship, in this panel, we would like to go a notch higher and candidly reflect on the role of regional research coordination in general. In a dynamic and changing research landscape, what is the niche for SROs, what are the impacts of regionally coordinated research, what lessons have we learnt and how should SROs and other international research actors' better position to serve member country governments and the development partner community even better. What are the key gaps and opportunities in achieving climate change resilience and sustainable agricultural systems in Africa?

I will give each of you a chance to make your comments in response to the above and then we will open up to the plenary.

Dr. Tracy McCracken

Thank you very much ASARECA for providing USAID the opportunity to participate in this discussion. I am delighted to see all the people we have here, the Ministers, the Ambassadors from the RECs and all the delegates here. As we have discussed today, farmers in the region are facing many challenges – loss of soil fertility, climate variability, challenges of invasive pests and diseases and farmers need solutions to address these issues and strengthen food security across Africa. These challenges know no borders, they cross from Tanzania to Kenya; from Rwanda to Uganda, they don't need passports so we have to have a regional approach. USAID has worked with COMESA, EAC and IGAD to build harmonized policy frameworks to respond to some of these issues mainly to improve farmer access to new and improved technologies and innovations such as improved seed, pesticides and new technologies such as aflasafe. Aside from these policy frameworks which are

essential to cross border technology transfer and trade, USAID has also recently partnered with CIMMYT, FAO and the African Union to build a research platform on Fall Army Worm (FAW) to put together best practices and technologies to control this pest in Africa. USAID looks forward to continue working with its regional partners, national governments, private sector and all relevant stakeholders present here in this room to assist African farmers reach their full productivity potential and support Africa's journey to self-reliance and food security.

Dr. Yemi Akinbami

I would like to start by acknowledging the resilience and the great work that the Secretariat of ASARECA has facilitated over the years. 25 years ago, by some good thinking, the institution was set up. But we all know, that in the last 2-3 years there has been a big dip and for me as the Executive Director of FARA, ASARECA is very crucial to the mandate of FARA which is also related to delivering the mandate of the African Union to ensure Africa's food security and prosperity. So we have seen an institutional framework challenge which implies that if care wasn't taken, one of the four SROs on this continent could have gone under. But today we are very thankful to all the partners and the efforts and resilience of the Secretariat and the staff. Today we can celebrate a reborn, a reinvigorated, a refocused and repositioned ASARECA. But what does this mean? It means that there is hope for tomorrow. It means that we have a new opportunity to rebuild and recoup what was lost. In Nigeria, we have a proverb that says "when the palace is burnt down, it means a much more beautiful edifice will replace it." FARA is looking forward to support the great work that is going on in ASARECA in repositioning itself. We have been with ASARECA all through, and we will continue to support ASARECA in the context of the science agenda for agriculture in Africa. This is the flagship instrument by which we have harmonized the continental frame for

integrating science in our production systems.

I have been asked by AFAAS, CORAF who are unfortunately unable to be here, CCARDESA in the room here to deliver our message of solidarity not just the Secretariat but to all the member states, the NARI Director Generals, the Ministers, all the stakeholders – private and public, that we stand ready as FARA, AFAAS, RUFORUM and the SROs to support the great work that has been re-launched and to see that indeed ASARECA will be finally on track to deliver on its mandate.

Dr. George Bigirwa

Thank you very much Mr. Moderator. I would like to begin by congratulating ASARECA for having attained 25 years of existence and for the good job done. Indeed agricultural research still has a key role to play to help Africa achieve agricultural transformation and for farmers to attain food security. In this era of climate change and its associated challenges there are many institutions including some of you here who have come up with noble technologies. What we need to do now is put our hands together to make those technologies available to the farmers. That can be best done through clear partnerships, both public and private. At AGRA, we have positioned public and private institutions as very important and we are always devising various flagship projects to ensure that those technologies also reach the farmers. One of our key flagships involves work with national agricultural research systems and we have supported them to develop new varieties. Close to 530 new varieties have been released over the years and made available to the farmers and given that for you to be a good scientist you must have manpower, we have also gone ahead and invested in training both at PhD and Masters level. Within the 18 countries we have trained about 121 PhDs and 320 Masters who are now helping improve agriculture in their various countries. So I think we still need to work together to address some of these challenges.

Peter Horne, ACIAR

I have never been to a meeting with a singing moderator and it's an experience I will not quickly forget. I just want to reflect on two things related to the future direction for climate-smart agricultural research and then I would like to touch on collaborative AR4D. When thinking about future directions, the future is no longer what it used to be. For many of us while growing up, the future was quite predictable and safe, research was steady and we made incremental gains. We are now in a different world, I think Martin used the term - we need two times more food, two times more fuel resources, and we need better quality food. To put this into context, at an average level in the world, if we need 50-70% more food by 2050, only about 10% of that additional food can come from cultivating new land.

So we have to be smarter about producing food from the land that we already have. Business as usual in research cannot provide the transformational changes we need to meet demand for food to 2050 and beyond. But we also have very many good reasons to be optimistic and I just want to touch on those. Climate-smart agriculture is agriculture that we have been doing a lot of research on for many years; it's just the same agriculture with a climate lens on top and we can hope that CSA will become a comfortable norm. But what is the climate lens on top of sustainable agriculture? It has to do with being able to facilitate more resilient livelihoods and being able to reduce GHG emissions from agriculture. Around the world, we have done great research on sustainable agriculture and it doesn't mean it has to stop, but Martin referred to a bunch of technologies and approaches that are showing a lot of promise. Indeed a recent editorial nature magazine says the challenge of feeding the world by 2050 is achievable; the question is how to do it equitably and sustainably.

There is reason to be positive about sustainable approaches to agriculture. With regard to the future and the challenges in the resilience space, there is a

lot of research that needs to be done in the resilience area about reducing the risk that is posed by climate vulnerable cropping systems. The second area about resilience that is going to be important in the future is many smallholder systems have components of their livelihoods that are climate resistant or robust such as livestock but the farmers are not getting the returns from the market for their livestock. The third area we need to put work into in research in the future are the drivers of diversification.

We know that diversity of livelihoods provides resilience, and that farmers best survive when they have farm income as well as off-farm income. This diversification happens in big commercial systems as well as in smallholder systems.

The first area is sustainable technologies and approaches, the second is resilience, and the third area that we can obviously work on and are working on is mitigating the negative effects coming from agriculture in terms of climate. We are all aware of the promises made in Paris by all countries on actions to reduce reducing GHG emissions and in most cases, those promised have been heavily rooted in improvements in agriculture. We need to work with policy makers in helping to understand what needs to be done to deliver on these reductions and how to monitor progress. We are doing well in some of these three areas of climate-smart agriculture but there are also challenges.

One of the reasons for being optimistic is that there are some good examples in what we call sweet spots in smallholder agriculture where you can deliver on improvements in reductions in GHG emissions while concurrently delivering livelihood improvements. One example, China has been working with smallholder goat producers and has demonstrated on a fairly significant scale that you can have stocking rates and you can increase incomes 20-60 percent with half the number of animals. This results in a massive reduction in emissions

intensively from those livestock systems. So we can explore through research these sweet spots where we are delivering livelihood incentives to farmers and also providing benefits with regard to the climate.

The big gap we need to focus on in science is probably two areas: practice change and private sector. We can and have delivered interesting technologies that have been proven on the smallholder farmer scale to deliver more resilience and reduce GHG emissions. But unless we understand better how to drive practice change on farms that doesn't really help us very much. And to be frank, traditional extension systems have played an important role in the past but now we need to be much more innovative and operate outside the box. We need to engage more proactively with the innovative capability of the private sector. The reality over the last ten years is that there is been a massive change around the world in the interests of the private sector to invest in smallholder agriculture and this is creating a really good opportunity for us.

Finishing with regional collaboration in AR4D using a story from Australia. About 30 years ago, Australia had an external review of how well we collaborated in science. I think it would be fair to say we got close to an F because we weren't good at collaborating. This resulted in a significant change in the way we fund research in Australia, which stimulated collaboration across institutions that would not normally collaborate.

I will just point to two things that I think are really important for an organization like ASARECA. Regional collaboration exposes everybody to innovations that are happening elsewhere and secondly when we are talking about climate-smart agriculture we are no longer talking simple disciplines, we are clashing people together from across multi-disciplines to produce the innovations needed to deliver on the transformation of agriculture that we really need to address the challenges that we are facing. Thank you.

Dr. Stephen Mugo, CIMMYT

Let me take this opportunity to thank and congratulate ASARECA for the steps that you are taking to ensure that this technology especially reaches the farmers wherever they are in this region in Eastern and Central Africa and then to say that we are here because of this technology package; it is one of the most comprehensive that you can think of. You have improved crop varieties there, you have systems where you have the cereals – the grasses, the maize, the sorghum, etc; you have the legumes and so you are talking about systems. The way to get them to be used by the farmers involves addressing institutions, addressing partnerships, addressing people coming together to work together. If I reflect globally on the CGIAR, and specifically in CIMMYT, we are looking at a world that is free of poverty, that is free of hunger and that is free of environmental degradation and these are huge issues.

To be able to do that we will address the main global challenges which we can summarize as food security, health, environment, climate change and prosperity. What is next after hearing about these technologies and what has been developed so far? It is to see how that can be multiplied. Research has shown that it works and then once it is used by the farmers and the farming communities. It will open up tremendous opportunities. To be able to conduct it properly, we need to address appropriate machinery which will be small scale especially if we go by the size of farmers as described by the Honourable Minister in Uganda here. These small scale farmers will need to get inputs and all that. So it opens tremendous opportunities in and making the farming community itself which will address the issue of prosperity.

In terms of the gaps, have we gotten the technology that we wanted, yes. Do we have all the answers, no. There is much more that needs to be done. But by working together we can be able to address those issues. Thank you.

Dr. Tekola Dejene, World Bank

I thank ASARECA for inviting the Bank to this August house and at the same time congratulate ASARECA for the excellent arrangements for all of us here and bring also to your attention that the World Bank has been a partner with ASARECA from the day of its inception. It is a partnership, a relationship with ASARECA that has lasted for all these 25 years and we are still married, we are not divorced and we intend to continue together as we move forward. It is quite interesting that over the last 10 years of implementing the MDTF, ASARECA has gone through various tests and as Yemi mentioned, there are years where ASARECA has implemented programs very successfully and there are times when there were challenges – funding challenges, and programs were not implemented as they were planned to be implemented.

During all this time, the Bank has been with ASARECA providing the necessary support, consulting with them on how to overcome the challenges and also designing programs and projects that ensure that ASARECA's mandate and objectives are met. In this process, we have been able to deliberate much more on this issue. We have been very close with the workings of the institution and this has actually encouraged us to work with the management of ASARECA to exchange views and ideas as to how particularly prepare and implement projects, how to transform the institution in ways that will make it much more responsive and efficient as it moves forward.

I think we have reached a stage whereby a new chapter is going to begin starting from this occasion onwards. This new chapter will build up on the experiences that ASARECA has gained over the last 25 years. It is our hope that whatever activities it carries it out as it moves forward, it will be able to carry it out much effectively and in a much more efficient manner and we hope for the best for the new ASARECA.

Questions from the plenary

PS RoC/Chief of Cabinet - DRC

Question: When does the World Bank expect the ECAATP programme to commence?

Dr. Tekola Dejene

Answer: Unfortunately, I might not be able to give you an answer that will satisfy you. As most of you know, preparation of this project has been by and large finalized up to the point where the Bank was just about ready to appraise the project together with the member countries implementing this project. When the review process was about to be completed there were some changes internally within the Bank particularly at the higher level.

The new management that has come on board desires to review not just ECAATP but all regional projects in view of the fact that there might be some strategic changes that the Bank would like to follow in the design and implementation of regional projects. The process has taken longer than had earlier been anticipated but the process is ongoing and we all hope that it will be over soon and this project will soon reach the stage of approval by respective governments and implementation. That is all I can say at this point.

Question: As a long-term partner of ASARECA, what is USAID's current investment outlook with regard to SROs like ASARECA in particular and what is the envisaged funding mechanism?

Dr. Tracy McCracken

USAID has indeed been a long time partner of ASARECA just like the World Bank, we have worked together and achieved some really good results. Now that we have relaunched ASARECA, USAID will continue ongoing conversations this is still a work in progress until we decide on the new mode of partnership. Thank you.

H.E. Amb. Josefa Leonel Correa Sacko

I would like to thank for your input. My question goes to anyone but most especially the USAID representative. This is in regard to these new innovations and especially those which are crop-related. Increasing productivity requires that we get the soil nutrients correct and of course this morning the Minister from Burundi indicated that they are pushing for the use of inorganic fertilizer and we see many new innovations on fertilizer coming into our countries and not just on fertilizer but also seed, pesticides, etc.

The continent receives quite a lot of these but strengthening the systems of regulating them is a challenge and these agro-chemicals are finding their way into the food chain or are being misused due to lack of knowledge. We don't have standards for these new fertilizer innovations currently on the market. How can we get these standardized so that it is easy to regulate them and also educate users on application methods?

McCracken

USAID works very closely with RECs such as COMESA, IGAD, EAC in this region and also ECOWAS in West Africa and SADC in Southern Africa. One of the things we support is to harmonize policy development and standards. We currently have an ongoing programme working to harmonize seed policy and related standards to ensure high quality seed and ease trade in COMESA.

On pesticides, USAID and USDA have been working with EAC to harmonize pesticide registration and testing regulations so that for instant the test methods and procedures used in Kenya are similar to those in Uganda so that there are minimal regulations required for cross border trade.

We are not yet into fertilizer policy harmonization but our goal is to ensure harmonized regulatory framework so that inputs across the continent are of the same high quality assurance to buyers irrespective of country. We are working with RECs to deliver these harmonized frameworks across commodities. USAID is also heavily engaged in various bilateral relations with various countries with regard to agricultural input and commodity trade regulations.

Dr. Yemi

Drawing from my own personal experience on the use or the abuse of agro-chemicals posing very severe public health threats. One step is to make these policies but the bigger step is the implementation of the policies. This huge step is not far fetched. In my days as a Laboratory Scientist somewhere in West Africa we were looking at agro-chemical residues in underground water and in vegetables and we were shocked to find up to 400x the maximum residual limit.

In this geography, I can count on my fingers the countries with adequate lab capacity to determine the risk level in underground water, the risk level in materials on the market. Policies are good but we must also build capacity to implement these policies.

Dr. Bigirwa

Let me just add two things. The other important thing to address is to strengthen input regulatory agencies – if it seed we need strong seed regulatory agencies, fertilizer agencies. In some countries these agencies are either not there or they are understaffed. This is the time to strengthen them so they can play an effective role. The other thing is that when it comes to fertilizer, there is need to do soil mapping to avoid blanket application of fertilizer. Ethiopia is leading in that field: they have analyzed the soils, Tanzania is doing the same and Uganda is currently moving towards the same approach.

Unless we do that we will keep shooting in the dark, we need to analyze our soils, amp them and then correctly apply the required nutrients. Then finally we can also apply ICT to some of these things; there are many applications, it is just the question of identifying the right app and running with it.

19.0 Concluding Statement on the Panel Discussions



H.E. Amb. Josefa Leonel Correa Sacko,

Commissioner, Rural Economy and Agriculture, African Union

The panel discussions at this ASARECA Council of Patron Ministers' Summit have dwelt on issues that are pertinent to our continent.

Aware that the Comprehensive Africa Agriculture Development Programme (CAADP) seeks to accelerate agricultural growth, improve food security, and strengthen the resilience of the environment in Africa. Aware also that African Heads of State and Government reaffirmed their commitment to CAADP when they signed the Malabo declaration in 2014. Cognizant that one of the reasons productivity growth has slowed in Africa and even stagnated in some countries is severe land degradation in part fuelled by unsustainable farming practices coupled with low mechanization. The other is the limited investment in agricultural research for development and the lack of viable linkages to pluralistic extension approaches and institutional innovations to take technologies to scale.

Aware also that most countries in our region and in Africa so to speak are not meeting the 1% of GDP budget allocation to agricultural research for development putting the region at the risk of food insecurity and limited resilience to the heightened effects of climate change. Given the evidence that conservation agriculture sustainable intensification (CASI) works for the African farmer; considering that regionally coordinated programmes yield greater economies of scale, facilitate spillovers and allow faster spread of agricultural innovations for true impact.

I would like to join our Ministers responsible for agricultural research in Eastern, Central and Southern

Africa and the development partners represented here in affirming that first our country governments commit to meeting the 10 percent investment target in the agricultural sector as affirmed by the Malabo declaration and the 1% allocation to research in particular. This is necessary to generate the 6% growth in the agricultural sector that we need to transform our economies.

Increase the commitment to regional agricultural research for development within the broader goal of African integration at all levels recognizing that Africa-led, Africa-owned institutions need our support to meet their mandate and serve Africa's interests. I also affirm based on the evidence presented here that we should invest in regional centres of excellence on sustainable intensification for collaborative research, capacity building, technology generation & scaling and knowledge management. That national governments and regional economic communities like COMESA, EAC, IGAD and SADC should mainstream Conservation Agriculture-Based Sustainable Intensification in the agricultural investment plans and budgets. That there is need to foster public-private partnerships to scale CASI including appropriate mechanization and custom hire services. And finally that we need to invest in developing and strengthening institutions for collective action linked to a broader innovation platforms approach.

I thank you



04

RATIFICATION OF ASARECA'S NEW GOVERNANCE FRAMEWORK AND JOINT COMMUNIQUE



20.0 Ratification of ASARECA Governance Framework

This session was the official ceremony of the ratification of ASARECA's new governance framework by its Council of Patron Ministers. It was also the official occasion for welcoming the Republic of Congo as the 12th member of the Association. The session was meant to foster a renewed commitment to working together as a region towards African agricultural transformation and our shared prosperity.

The session was both ceremonial and committal and begun with a press briefing by the Patron Ministers followed by the signing of the new ASARECA Constitution and the Joint Communiqué on CASI and renewed commitment to regional AR4D. The plenary then resumed with an official statement from the Host Minister welcoming the Republic of Congo as the newest member of ASARECA.

Following this, the various Patron Ministers gave statements to provide overall direction to ASARECA and to its regional coordination efforts on behalf of member countries. The President of the ASARECA General Assembly working with Signum Advocates then officiated over the inauguration of the new ASARECA Board of Directors including the handover of the instruments of power with the Patron Ministers as witnesses.

The ceremony ended with a Cocktail reception in honour of the outgoing Board of ASARECA, a toast to celebrate 25 years of ASARECA and a closing statement made by the Chair of the Council of Patron Ministers on behalf of fellow Ministers.



ASARECA Patron Ministers participate in the General Assembly before the ratification of the Governance organs



The Outgoing Chairperson, Dr. Ambrose Agona (r) handing over instruments of power to the incoming Chairperson, Dr. Abubakr Hussein (c), the Director General of ARC Sudan.

21.0 Joint Communiqué on CASI and Regional AR4D

The Joint communiqué by Ministers of Agriculture of The Republic of Burundi, The Republic of the Congo, The Democratic Republic of Congo, The State of Eritrea, The Federal Democratic Republic of Ethiopia, The Republic of Kenya, The Republic of Madagascar, The Republic of Rwanda, The Republic of South Sudan, The Republic of the Sudan, The United Republic of Tanzania, The Republic of Uganda, The Republic of Malawi and The Republic of Mozambique of the high level Ministerial Panel on Sustainable Intensification of Maize-Legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) implemented by CIMMYT and national partners in Uganda, Ethiopia, Kenya, Malawi, Mozambique, Rwanda and Tanzania at the ASARECA Council of Patron Ministers' Summit.

We, the Ministers responsible for Agricultural Research from the aforementioned countries gathered in Kampala, Uganda, on this 3rd day of May 2019;

Aware:

that in Eastern, Central and Southern Africa, the challenge of feeding a growing population projected to double by 2050 has to be met,

that despite a degrading resource base coupled with global climatic and economic changes, where smallholder agriculture remains the centerpiece of our countries' economies,

that confronting this challenge while protecting the natural resource base involves finding innovative and sustainable ways to produce more food with less resources.

Cognizant of the need to use our land resources in ways that will ensure its health and sustainable access to future generations, Here note that:

Conservation agriculture-based sustainable intensification (CASI) practices, including practising minimum tillage, maintaining permanent soil cover and mulches and implementation of crop diversification practices (such as cereal legume intercropping and rotations), as tested through the sustainable intensification of maize-legume cropping systems in eastern and southern Africa (SIMLESA) programme and similar multidisciplinary research efforts show promise in boosting and stabilizing productivity and safeguarding the resource base in the face of climate change.

Mainstreaming CASI calls for institutionalization efforts that support scaling and networking, integration into agricultural research and extension systems and fostering value chains development. CASI also benefits from appropriate mechanization which would reduce drudgery especially for women farmers and laborers; as well as attracting youth talent into agriculture.

Do therefore recommend the following policy actions to our Governments and call for concerted action from

a range of multiple stakeholders in Africa including: multi-disciplinary researchers, Think Tanks, extension agencies, National and Regional Parliaments and Local Governments, private businesses, non-governmental organisations, regulatory agencies, farmers and their community organisations, trade organisations and others:

Mainstream and Institutionalize Conservation Agriculture-based Sustainable Intensification (CASI) farming practices through:

Enhanced investments in scaling priority technologies through

- Advisory and extension institutions. Ministries of Agriculture should facilitate re-skilling extension personnel in CASI and the operations of farmer innovation platforms and collective institutions
- Broad-based Farmer Education through CASI demonstration and learning sites. By mobilising public and private partnerships to fund national networks of long term CASI learning sites.

Regional CASI networks of

- Ongoing adaptive and multi-disciplinary research, training at multiple levels and knowledge systems. This should be done in collaboration with other relevant ministries and agencies (such as Education, Science and Technology, Environment and Natural resources) as well as sub-regional research organisations such as ASARECA, CCARDESA and CORAF.

Enable rural market development by:

- Encouraging innovations that improve rural value chains and enable adoption of CASI.
- Supporting agribusinesses willing to invest in rural innovation and market development as part of their business model, e.g. through funds that enable such innovators to access start-up capital where needed.
- Promoting collective institutions to enable farmer integration into markets

Support the development of smallholder machinery value chains through:

- Collaborative efforts for networks of machinery development, testing and adaptation
- Local-level training for entrepreneurs in decentralized custom hire businesses and service centers

Support market innovations that enable low-cost farmer learning and experimentation

To conclude, we re-affirm that with multi-sector support, smallholder farmers can trial, select and adopt CASI practices suited to their varying conditions to build resilient farms needed to feed the growing populations in Africa. Using CASI as a framework, it is possible to instigate critical paradigm shifts in smallholder farming systems and underlying agronomy, encourage institutional and market innovations to support farmers adopt CASI.

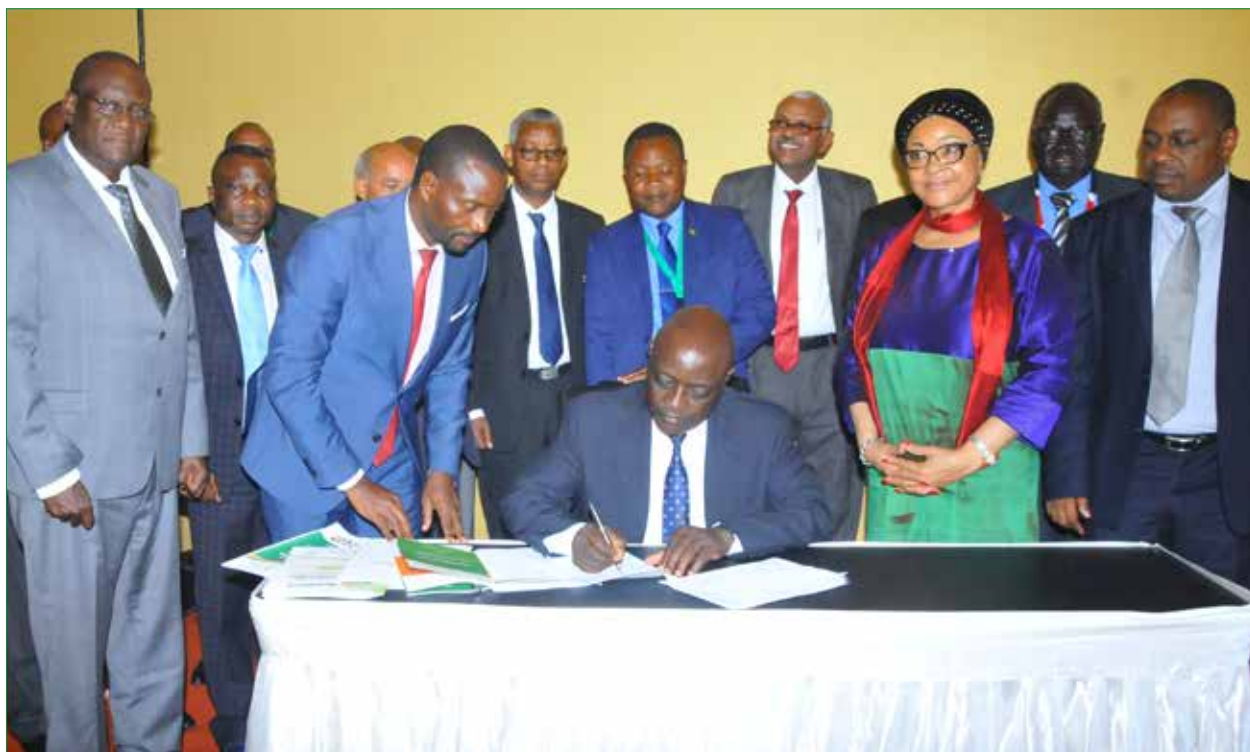
The potential of CASI to conserve soils, improve yields and have positive environmental impacts can enhance farm resilience to the effects of climate change. Therefore, CASI should be promoted as a regional initiative and as a major contributor to achieving the Malabo Commitment on resilience of farming systems in Africa.

We also affirm that political and material support at both national and regional levels are required to build strong partnerships in regional AR4D flagship programs for scaling of agricultural technologies and innovations. These regional collective actions are critical opportunities to create the free flow of new ideas, research results, technologies and innovations to generate the much needed spillovers across institutions and countries. Such positive spillovers are central to achieving impact of agricultural innovations faster and at national and regional scale.

IN AGREEMENT HEREOF, the undersigned representatives being duly authorized by their respective Governments have signed the present Joint Communiqué

DONE AT KAMPALA, this ___3rd ___ day of ___May___Year ___2019___

The Communiqué was signed by the Ministers responsible for agricultural research of the Republic of Burundi, Republic of the Congo, Democratic Republic of Congo, the State of Eritrea, The Federal Democratic Republic of Ethiopia, the Republic of Kenya, The Republic of Madagascar, the Republic of Malawi, The Republic of Mozambique, the Republic of South Sudan, the Republic of the Sudan, the United Republic of Tanzania and the Republic of Uganda and the African Union. The signing was observed by the Director General of CIMMYT..



Signing of the new ASARECA Constitution and the Joint Communiqué on CASI

22.0 Celebrating 25 years of ASARECA



Dignitaries cut a cake to celebrate ASARECA Silver Jubilee during the Summit week



23.0 Outgoing Board Receive Recognition



Prof. Iddi Boga (r), Principal Secretary for Agricultural Research Kenya and Dr. Ambrose Agona, the DG NARO, Uganda



Hon. Kaba Urgessa (r), the State Minister for Natural Resources, Ethiopia and Dr. Abubakr Hussein, the DG ARC Sudan



Hon. Kaba Urgessa (r), the State Minister for Natural Resources, Ethiopia and Prof. Amand Mbuya Kankolongo, the DG INERA, DRC



Hon. Onyoti Adigo Nyikwec (r), the Minister of Agriculture and Forestry, South Sudan and Dr. Geoffrey Mkamilo, the DG TARI, Tanzania



Mr. Amanuel Negassi (r), Advisor to the Minister of Agriculture, Eritrea and Dr. Joseph Mureithi, the DDG KALRO, Kenya



Hon. Onyoti Adigo Nyikwec (r), the Minister of Agriculture and Forestry, South Sudan and Stephen Muchiri, the CEO, East African Farmers Federation



Hon. Vincent B. Ssempijja (l) with DG Research South Sudan, Dr. Victor Silvano Bennett



Prof. Iddi Boga (r), Principal Secretary Ag. Research Kenya with DDG FOFIFA, Simeon Rakatomamonjy



Hon. Babiker Osman (r) of Sudan with DG ISABU, Ir. Dieudonne Nahimana



Hon. Dr. Deo Guide Rurema (r) with Dr. Zubeir, the private sector representative on ASARECA's Board



Hon. Amb. Josefa Sacko (r) of the African Union with Dr. Belay Getachew of COMESA



Mr. Mwalanga Odon (r) the PS Agriculture in RoC with Mr. Richard Sahinguvu of INADES



Mr. Jean Claude Boukono (r), Permanent Secretary Scientific Research with Prof. Lilia of Madagascar

24.0 Statements of Commitment to ASARECA by Ministers responsible for agricultural research for development in Eastern and Central Africa

During this session, the ministers responsible for Agricultural Research and Development in the twelve ASARECA countries made commitment to support ASARECA political and financially to fulfill its mandate. Below are the snapshots of the statements from the ministers.

BURUNDI



Hon. Dr. Deo Guide Rurema,

Minister of Agriculture and Animal Resources, Republic of Burundi

Burundi considers our membership to ASARECA as very important, and because of this, we partnered with Uganda, Rwanda, Democratic Republic of Congo and Republic of Congo to birth the Eastern And Central Africa Agricultural Transformation Project (ECAATP). Burundi remains committed to paying the one-off contribution of US\$100,000 to support its activities and the US\$60,000 outstanding balance on annual contributions.

ERITREA



Mr. Amanuel Negassi, Advisor,

Ministry of Agriculture, State of Eritrea

We value our partnership with ASARECA and therefore our membership to ASARECA is important to us. We remain committed to paying the one-off contribution of US\$100,000 to support its activities and the US\$145,000 outstanding balance on annual contributions.

ETHIOPIA



Hon. Kaba Urgessa,

State Minister for Natural Resources Management, Ministry of Agriculture, Ethiopia

Our membership to ASARECA is important to us which is why in partnership with Kenya, Uganda and Tanzania we gave it the mandate to coordinate EAAPP that closed in 2016. We remain committed to paying the one-off contribution of US\$100,000 to support its activities and the US\$30,000 outstanding balance on annual contributions.

DEMOCRATIC REPUBLIC OF CONGO

**Mr. Ndambu Mwalanga Odon,**

Permanent Secretary, Ministry of Science and Technological Innovation, DRC

The Democratic republic of Congo considers our partnership with all of you member countries of ASARECA as a powerful weapon to positively impact the status of agriculture through innovation and impactful research as outlined in the Strategy and results framework of our Association. DRC is committed to its membership to ASARECA and will work towards paying the one-off contribution of US\$100,000 to support ASARECA activities as well as paying the outstanding balance of US\$58,000 as annual contributions.

REPUBLIC OF THE CONGO

**Hon. Jean Claude Boukono,**

Chief of Staff, Cabinet of the Republic of the Congo

As the youngest member of ASARECA and one of the countries implementing the ECAATP project, we will demonstrate our commitment by meeting our contributions towards delivery of the medium-term operational plan of the strategy. We remain committed to paying the one-off contribution of US\$100,000 to support regional R4D activities and the annual subscription.

KENYA

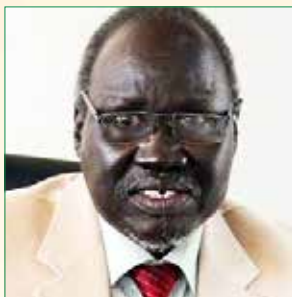
**Prof. Hamad Iddi Boga,**

Permanent Secretary Agricultural Research, Ministry of Agriculture Livestock Fisheries and Irrigation, Republic of Kenya

Kenya wishes to reaffirm its position as a member, and a founding member for that matter, of ASARECA and commits to paying the one-off contribution and any balance thereof to facilitate the future of agriculture, not just in Kenya, but in the region.

Using the ASARECA Framework, together we will put in place policies that work. Not just for governments, not just for agricultural research organizations but ultimately for smallholder farmers.

SOUTH SUDAN



Hon. Onyoti Nyikwec Adigo,

Minister for Agriculture, Forestry, Cooperatives, and Rural Development, Republic of South Sudan

These new innovations facilitated by ASARECA saw South Sudan counter the effects of the MLN disease that attacked our maize and threatened the food security of our young nation. With this mind, it is clear that our membership at ASARECA, as my colleagues from the region will agree, is greater than the USD 100,000 that we pledge to pay. It is an opportunity for us to grow our agricultural sectors, an opportunity for us to equip our scientists with credible research and to develop innovations that will finally see Africa feeding the world.

UGANDA



Hon. Vincent Bamulangaki Ssempijja,

Minister of Agriculture, Animal Industry and Fisheries, Uganda.

ASARECA has worked with the National Agricultural Organization and numerous organizations within the national agricultural research system of Uganda. Between 2008 and 2018, ASARECA invested US\$ 14.2 Million in Agricultural Research for Development Projects in Uganda through its development partners. Uganda pledges to work closely with ASARECA in our quest to position Uganda as a centre of excellence for cassava and as we establish national centres of specialization for oil crops and indigenous poultry.

SUDAN



Hon. Dr. Babiker Osman Mohammed Ali,

Under Secretary, Ministry of Agriculture, Republic of the Sudan

We deeply value our partnership with ASARECA and therefore our membership to ASARECA is important to us. We remain committed to paying the one-off contribution of US\$100,000 to support its activities and the US\$145,000 outstanding balance on annual contributions.

Patron Ministers' Summit Closing Statement



Hon. Vincent Bamulangaki Ssempijja (MP),

Minister of Agriculture, Animal Industry and Fisheries and Chair of the Council of the Patron Ministers

Once again, I greet you all. I appreciate the great work you have done during today's deliberations. During the deliberations, we have all appreciated the important role of agriculture to our region.

The key policy question that has emerged during this Summit is how to shift as many smallholder farmers as possible out of subsistence agriculture into commercially-oriented farmers who in turn target markets for their input procurement and output supply. The issues on how to raise material input use and access to agricultural services including extension, credit, finance, mechanization, and water for irrigation were further extensively discussed, and a way forward charted out.

I am happy to note that this Summit that brought together the ASARECA Council of Patron Ministers, the Development Partners, and other stakeholders in the agricultural sector extensively discussed regional agricultural research for development, besides exploring approaches for raising smallholder agricultural productivity and reducing the various risks faced by smallholders. I am also glad to note that the ASARECA's Constitution has been signed by the Patron Ministers. This officially launches the ASARECA Constitution, whose implementation commences immediately.

It is worth noting that a Joint communiqué on the promotion of CASI to conserve soils, improve yields and have positive environmental impacts has been signed by the participating Ministers of Agriculture from Burundi, The Republic of the Congo, DRC, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, South Sudan, Sudan, Tanzania, Uganda, Malawi and Mozambique. I am



I pledge to continue mobilizing my Colleagues – the Ministers to continue supporting ASARECA in implementing its Strategy.



confident that the partnership established during this Council of Patron Ministers' Summit will go a long way in contributing to sustainable food and nutrition security, increased smallholder farmers' incomes, agricultural productivity, and ecosystem services and resilience, as well as empowering ASARECA along the way.

As I mentioned during my Speech this morning, I once again call upon the farmers, scientists, practitioners and development partners to embrace the conservation approach to farming. I also pledge to continue mobilizing my Colleagues – the Ministers to continue supporting ASARECA in implementing its Strategy. Since these Ministers put me in that position to coordinate them as the Chair of the Council of the Patron Ministers, I believe they will not let me down.

And now it is my pleasure and honour to officially close this ASARECA Council of Patron Ministers' Summit, 2019.

FOR GOD AND MY COUNTRY



05

**PROGRAMS OF ACTION FOR
INSTITUTIONALIZING CONSERVATION
AGRICULTURE-BASED SUSTAINABLE
INTENSIFICATION IN EASTERN AND
SOUTHERN AFRICA**



On day three (3), there was a parallel discussion on the theme: Programs of Action for Institutionalizing Conservation Agriculture-based Sustainable Intensification (CASI) in Eastern and Southern Africa. The objective of this session was to use the Ministerial Communiqué to motivate actionable public and private sector CASI programs. The following presentations were delivered by researches and SIMLESA Coordinators from member countries.

Title	Title
Sub-Theme: Lessons from Ongoing Global Efforts Towards Climate-Smart Agriculture	Moderator: Dr. Drake Mubiru, a Principal Research Fellow, NARO Uganda
Climate-Smart Agricultural Initiatives in Southern Africa	Dr. Simon Mwale , Ag. Executive Director, CCARDESA
Value Chains as Critical Pillars for Sustainable Intensification	Dr. Birungi Korutaro , Kilimo Trust
Thoughts and Comments About SIMLESA and the Climate from a Crop Geneticist	Dr. Eric Huttner , Research Programme Manager, ACIAR
Climate-Smart Agriculture	Dr. Eric Craswell , Fenner School on Environment and Society, Australian National University, Canberra and Chair SIMLESA Project Steering Committee

Sub-Theme: Action Areas for Institutionalizing Conversation Agriculture-based Sustainable Intensification in Ethiopia	Moderator: Dr. Mulugetta Mekuria, SIMLESA Resource Person on Policy Outreach
Action Areas for Institutionalizing Conversation Agriculture-based Sustainable Intensification in Ethiopia	Mr. Bedru Beshir, Country Coordinator, SIMLESA Ethiopia
SIMLESA in Kenya: Highlights of Research and Achievements	C. Nkonge, A. Micheni, G. Ayaga, M. Odendo, C. Ndinya, C. Murithi and B. Rono
Action Areas for Institutionalizing CASI in Malawi	Grace Timanyechi Munthali, SIMLESA Malawi Coordinator
SIMLESA in Mozambique	Mr. Domingos José Brás Dias,, Senior Researcher, IIAM and Country Coordinator SIMLESA Mozambique
The Past, Present and Future of CASI in Tanzania	Dr. John E. Sariah, Principal Agricultural Research Officer TARI and Country Coordinator for SIMLESA and FACASI Projects in Tanzania
SIMLESA in Uganda	Dr. Drake N. Mubiru, Principal Research Officer (PRO), NARO-Uganda

Sub-theme: Fostering transnational collective action on CASI	Moderator: Dr. Leah Ndungu, Regional Manager for Africa, ACIAR
What is Needed in Regional Experimental Infrastructure: Reflections from 8 Years of SIMLESA	Dr. Isaiah Nyagumbo, Senior Agronomist, CIMMYT
Social Innovation and SIMLESA	Michael Misiko, Scientist, CIMMYT
Transnational Spillovers of Conservation Agriculture-Based Sustainable Intensification Technologies and Practices: The Role of Research Networks and Knowledge Management Systems	Prof. John Dixon FATSE, Australian National University, University of Queensland Dr. Mulugetta Mekuria, CIMMYT Policy Outreach Resource person/Consultant

Future AR4D Priorities: Panel Discussion by the Director Generals of Research from SIMLESA Country NARs and Executive Secretary, ASARECA

Moderator: Dr. Paswel Marennya

SIMLESA Coordinator, CIMMYT

Dr. Imelda Kashaija, Uganda

Crop-soil land mapping and soil fertility analysis is an area that is lacking; doing this will enable farmers to put in appropriate amounts of nutrients. Regarding herbicide use and reducing the drudgery associated with weeding, although some work has already been done on herbicides we are in an era of using selective herbicides but currently not all crops have suitable selective herbicides. Further research is needed to identify selective herbicides suited to a range of crops under CASI systems.

Moderator

CASI systems suffer a lot of weed infestation: do you envisage scenarios where research investments are channeled towards identifying non-herbicide weed control options; is there such a pipe dream?

Dr. Imelda Kashaija

Currently, there are several methods for minimizing weed infestation such as mulching, deep weeding, shallow weeding, mechanized weeding, etc. We deal with farmers under different typologies and not every farmer can afford herbicide. Research therefore needs to make available a range of options for effectively managing weeds or minimizing effects including the use of selective herbicides but also other methods.

Moderator

During the national policy forums it was clear that countries like Kenya for instance are reluctant to promote wide scale use of herbicides as a major input

due to the potential negative environmental health risks that widespread herbicide use posits. Turning to you Dr. Assefa, we have talked about weeds, soil health, what in your view is missing, what would you like to see being done better?

Dr. Solomon Assefa, Ethiopia

The CASI principles especially the minimum tillage works for us and CASI should be adopted by all farmers but Ethiopia is very vast as you all know. In addition, as population increases, farmers are increasingly cultivating the more marginal areas making adoption of CASI an imperative if we are to assure food and nutrition security in the country. A new Phase of SIMLESA is hence needed to help scale out CASI to more farmers, more agro-ecologies and more crop-livestock farming systems and ensure that CASI becomes a culture. If there is a possibility, we need funding to continue.

We have already mainstreamed CASI in our national agricultural extension system and equipped the extension workforce with knowledge on the same. We have also embraced a clustering approach. This involves zoning farmlands for specific cropping systems and commodity value chains and then organizing the farmers in those areas into clusters. These farmers grow the same crops using the same varieties and agricultural practices. This clustering makes it easy for the extension workforce and other actors to train the farmers but also to link them to service providers and markets.

Moderator**What does clustering entail?****Dr. Solomon Assefa**

Clustering refers to selecting the area for a specific commodity and organizing farmers in the proximity into collectives. These farmers are then provided with improved seed of the same variety, training, mechanization and other services. They are also encouraged to synchronize planting dates and to bulk market. Our plan is to place at least 50% of the cultivable land under the cluster approach as a way of boosting productivity.

Moderator

Turning to you Prof. Jean Jacques Mbonigaba Muhinda, in the area of social sciences, economics what in your perspective is needed to scale CASI?

Executive Secretary, ASARECA

I will touch mostly on issues related to institutions and I want to approach it from the perspective of where I am coming from now. I was reflecting last night on the Communiqué that we made our Ministers to sign. We brought the Ministers from the SIMLESA participating countries and all the other ASARECA member countries. We told them that based on the evidence from SIMLESA, Conservation Agriculture-Based Sustainable Intensification (CASI) works. We told them to go home and institutionalize CASI, we also them to promote CASI appropriate smallholder mechanization.

So if the Minister from Burundi calls me two months from now inquiring about the progress being made towards institutionalizing CASI. The final product should not be the signing of the Communiqué, so the challenge I am putting forward is how do we unpack this Communiqué into an action plan with clear

metrics and indicators so that two years down the road we can call back the Patron Ministers and give them feedback on how far countries have actually mainstreamed CASI technologies and practices in current production systems. There is work to be done in terms of formulating research questions.

Ministry machineries are very complex, and to mainstream CASI, for a Minister it entails capturing CASI in the national agricultural policy, in the national agricultural strategic plan. If it is not captured in these documents, then it will not feature in the national agricultural investment plans and consequently will not be considered as priority in the resource allocation. CASI needs to make it into these policy documents so that we can track related investments by country and the 2019 Communiqué doesn't end up just a document similar to the 2015 Joint communiqué on SI. Let us think about the follow up actions, should we for instance champion the development of a policy on CASI?

The other element we need to reflect on are the agribusiness opportunities around CASI and related policies e.g. input production and supply policies. For instance when it comes to mechanization which machinery are we using and where are we sourcing, which policies do we need to build capacity for operations, maintenance and so on.

I was once the national director for agricultural mechanization in Rwanda and every year I was sent to South Korea, China, India, etc to buy tractors and I purchased 100's of tractors over the period. The issue was always spare parts – how can we create opportunities for the manufacture and supply of spare parts. These areas can create job opportunities but also require more research, financing, markets, value addition. We now need to review all the CASI related value chains in light of the evidence of the last eight years from production to marketing.

Moderator

I invite any of the panelists to add to the previous discussion or share any other points of discussion as we close this panel.

Dr. Olga Fafetine, Mozambique

I think it is important to have CASI mainstreamed in the national agricultural policy documents. But currently in most countries, our national policies and strategic plans already make mention of CASI, the problem is implementation.

Therefore, we need to show that CASI makes good business can make money for farmers. We need to leverage on the initiatives currently being implemented in our countries. We need to invest in more demonstrations to show farmers that CASI works. We have a project funded by AGRA which is helping improve farmer access to improved technologies, another project dealing with improving seed systems and another on extension service delivery. We need to collaborate with all these projects given their complementarities with CASI principles in order to scale CASI.

Dr. Imelda Kashaija, DDG NARO Uganda

Most of our variety development programs have been reactive rather than pro-active. In the last 10-15 years we have tried to be more predictive but we need to increase the predictiveness with regard to variety development informed by models on the long term effects of climate change on the different varietal traits. We need to strategically improve our modeling skills. How will climate change affect the virulence of pests and diseases in the future for instance and how then should our breeding programs prepare and respond to these future climate scenarios? Can we have varieties of potato for instance that can grow at 250C as opposed to our varietal lines that only grow well when temperatures remain below 160C?

This is an area for future research. Lastly, having availed these good CASI technologies to farmers and having skilled them in how to apply them, when farmers get their bumper yields and have nowhere to sell their produce, they will start “cursing us.”

We need to look more into market research but also to think further on how to expand the AIP approach and bring on board everybody around the value chain including exporters so that all actors are linked to markets for their final products.

Dr. Wilkson Makumba, Malawi

Looking at the areas where CASI has been very successful, traditional leaders have been part of the implementers and have proposed byelaws to protect CASI systems against wildfires and uncontrolled grazing on crop residue meant for conservation agriculture. We need social studies to look into how we can integrate byelaws into national policies so that the new areas where CASI is scaled also benefit from this approach.

Secondly, although SIMLESA work has been widely published, most of the evidence is locked up in high impact journals with restricted access to the wider public. Our young scientist may not be able to access this information for future use. Going forward, this information needs to be synthesized into a book and made available through widely accessible channels such as our libraries so they can be used long into the future. We need to take the approach used with the national policy briefs which were widely shared with our policy leaders, researchers and the public.

Moderator

Thank you very much. Join me in thanking my Panel for sharing their insights and rich experiences with us.

Closing Session



Action for Institutionalizing CASI

Dr. Olaf Erenstein,

Director Socio-Economics Program, CIMMYT

This is not the end of the journey, we can envisage diverging paths going forward. Ideally, these need to be coordinated. This will be aided by the just signed Communiqué, which emphasized the need for (1) CASI institutionalization (scaling, networking), (2) market development and (3) small scale mechanization. The challenge is on us now to operationalize the communiqué.



Defending SIMLESA before governments

Dr. Peter Horne,

Global Manager, Country Programmes, ACIAR

It has been quite a journey, so many countries, so many technologies, and so many partners so I really want to commend you all. It is going to be incumbent on all of us to make sure that we have answers when Ministers ask, CASI works; so what do I need to do? This is a good challenge for SIMLESA. All of us will need to deliver our commitment and continue to be true to the principles and promise of CASI.



Vote of Thanks

Dr. Leah Ndungu,

Regional Manager for Africa, ACIAR

I would like to thank all the researchers behind this work. Over the 8+1 years, you have been resilient, you have put your heads together to put SIMLESA together and to give us the kind of results you have synthesized and disseminated. I Thank the ASARECA team for convincing this Summit for presenting the SIMLESA results



Vote of Thanks

George Mburathi,

ACIAR Advisor on Africa

The challenge of what next is very important. On many occasions, I have repeated many times over the last 8-9 years that scientists are very poor communicators and marketers of their products and I am glad that SIMLESA evidence has been finally presented at this kind of forum.

Field visit to Kalongo Sub County, Nakasongola District

On May 5th, participants at the Summit descended on the Ugandan district of Nakasongola, an agro-pastoralist zone about 115 km north of Kampala to see case studies of CASI adoption. They visited lead farmer, Mr. Richard Semyalo who has adopted SIMLESA technologies such as Permanent Planting Basins, rip lines and a combination of other climate-smart agriculture principles and best agronomic practices to optimize output.

Participants also visited an Innovation Platform (IP). Specifically, they stopped at a maize mill owned by Kalongo Maize-bean Agro-business IP. The community uses the mill to process maize flour for home use and for sale. The project promoted the IP approach to organize the farmers to realize the benefits of CASI faster.

During the tour, the host District Agricultural Officer and individual farmers testified that the SIMLESA project had led to increased yields by 30% and decreased the risk of crop failure by 30% in maize and legume cropping. Some of the quick benefits reported include:

- Awareness was created on management of soil and water, soil fertility, pests and diseases, agroforestry, and sustainable utilization of natural resources.
- CASI technologies such as reduced tillage, intercropping, residue/mulch, improved

agronomy, use of improved varieties, crop livestock integration reduced production risks.

- Farmers adopted Climate Smart actions such as the Permanent Planting Basins, Rip lines, intercropping, use of manure, mulching, and in situ water harvesting.
- Maize yields increased from 700kg/acre to 2000kg/acre (186 percent increase and bean yields increased from 150kg /acre to 500kg / acre (233%) leading to improved food security nutrition and household income.
- The Kalongo Maize-Bean Agribusiness IP led to better storage, partnerships and networks, better representation, better value chain analysis and development and better marketing and improved social relations.
- Reduced workload due to the use of oxen, motorized shellers and rippers.



Digging of Permanent Planting Basins (PPB) during the dry season in preparation for planting at the onset of rains



A farmer and his household in Lira Sub-county, Lira District, Uganda make rip-lines using a ripper and oxen



ASARECA Council of Patron Ministers' Summit

PROCEEDINGS

ABRIDGED VERSION



Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)

Plot 5, Mpigi Road | P. O. Box 765, Entebbe, Uganda

Tel: +256 414 320 556, +256 414 321 885

Email: asareca@asareca.org | Website: www.asareca.org

[@asareca](https://www.facebook.com/asareca) [@asareca](https://www.instagram.com/asareca)

