



# REGIONAL FORUM ON CLIMATE RISKS AND FOOD SECURITY RESILIENCE

Proceedings of the Forum | October 25-27, 2018 | Lusaka, Zambia

## ABSTRACT

The Common Market for Eastern and Southern Africa (COMESA), in collaboration with the World Bank, hosted a Regional Forum on Climate Risks and Food Security Resilience at the Taj Pamodzi Hotel in Lusaka Zambia from October 25-26, 2018. This was followed by a Field Visit to the SADC Plant Genetic Resources Center (SPGRC), on October 27, 2018.



**Regional Forum on Climate Risks and Food Security Resilience**

**Lusaka Zambia**

**25-27 October 2018**

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## Acknowledgements

The Regional Forum Climate Risks and Food Security Resilience was generously supported through a grant from the Food Price Crisis Response Trust Fund, a World Bank-managed program designed to help countries prepare for climate risks and better manage food price volatility. The trust fund was financed by Australia, Canada, Korea and Spain.

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## Acronyms

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACBP	Africa Climate Business Plan
ACTESA	Alliance for Commodity Trade in Eastern and Southern Africa
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance
AIFS	ASEAN Integrated Food Security Framework
AMAF	ASEAN Ministers of Agriculture and Forestry
ASEAN	Association of South East Asian Nations
ASEAN CRN	ASEAN Climate Resilience Network
ARC	Africa Risk Capacity
ARM	Agriculture Risk Management (ARM)
AU	African Union
CA	Conservation Agriculture
CAT	Catastrophe
CEO	Chief Executive Officer
COMESA	Common Market for Eastern and Southern Africa
COMSHIP	COMESA Seed Harmonization Programme
CSA	Climate Smart Agriculture
CSIP	Climate-Smart Investment Plan
CSOs	Civil Society Organizations (CSOs)
DDOs	Drawdown Options
DINA	Drought Impact and Needs Assessment
DRR	Disaster Risk Reduction (DRR)
EA	Early Action
EAFF	East African Farmers Federation
ENSO	El Niño Southern Oscillation
EAP	East Asia Pacific
EW	Early Warning
EWS	Early Warning System

FAF	Food, Agriculture and Forestry
FANRPAN	Food Agriculture and Natural Resources Policy Analysis Network
GDP	Gross Domestic Product
Ha	Hectares
HSNP	Hunger Safety Net Program
IAPRI	Indaba Agriculture Policy Research Institute
IBRD	International Bank for Reconstruction and Development
ICT	Information Communication and Technology
IDA	International Development Association
IFAD	International Fund for Agriculture Development
IFC	International Finance Corporation
IFP	Investment Project Financing
IFPRI	International Food Policy Research Institute
IPCC	Intergovernmental Panel on Climate Change
IS-EWS	Information and Early Warning Systems
KLIP	Kenyan Livestock Insurance Program
MET	Meteorological
MRVs	Measurement Reporting and Verification Systems
MSP	Managed IT Service Providers
NDCs	Nationally Determined Contributions
NDP	National Development Plan
OpEx	Operating Expenditure Costs
PARM	Platform for Agriculture Risk Management
PPCR	Pilot Program for Climate Resilience
Q&A	Question and Answer
RAB	Rwanda Agriculture and Animal Resources Board
SACAU	Southern Africa Confederation of Agriculture Unions
SASOP	Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operation
SD	Sustainable Development

SEADRIF	Southeast Asia Disaster Risk Insurance Facility
SFM	Sustainable Forest Management
SPA-FS	Strategic Plan of Action on Food Security
USD	United States Dollars
WASH	Water Sanitation and Hygiene
WRS	Warehouse Receipt System

## Executive Summary

The Common Market for Eastern and Southern Africa (COMESA), in collaboration with the World Bank, hosted a Regional Forum on Climate Risks and Food Security Resilience at the Taj Pamodzi Hotel in Lusaka Zambia from 25-26 October 2018. This was followed by a Field Visit to the SADC Plant Genetic Resources Center (SPGRC) on the peripheries of Lusaka, on 27<sup>th</sup> October 2018.

The Regional Forum brought together participants from 13 out of the 21 COMESA Member States: Comoros, Djibouti, Ethiopia, Kenya, Madagascar, Malawi, Rwanda, Seychelles, Somalia, Sudan, Uganda, Zambia, and Zimbabwe. Other participants were drawn from COMESA Secretariat, World Bank, Association of South East Asian Nations (ASEAN), International Finance Corporation (IFC), International Fund for Agriculture Development (IFAD), International Center for Tropical Agriculture (CIAT), Food Agriculture and Natural Resources Policy Analysis Network (FANRPAN), Indaba Agriculture Policy Research Institute (IAPRI), and the media.

The objectives of the Regional Forum were to: i) provide a platform for high-level policy makers from across the COMESA region to share their experiences and lessons learned in preparing for and responding to the 2015-16 El Niño event; and ii) to highlight evidence-driven “no regrets” policies and investment strategies for strengthening the climate resilience of agricultural systems and regional food security.

The Vice President of the Republic of Zambia, Her Honor Mrs. Inonge Wina officiated during the Forum together with Dr. Dev Haman, Acting Secretary General of COMESA (representing Ms. Chileshe Mpundu Kapwepwe, Secretary General of COMESA), Dr. Simeon Ehui, Director for Agriculture Global Practice at the World Bank,

and Ms. Ina Rutenberg, World Bank Country Director for Zambia.

A number of presentations were delivered, during the Forum, to frame the 8 key thematic sessions highlighting: experiences and lessons learned from the 2015-16 El Niño; the World Bank’s Ag-Observatory; innovative approaches to mitigating production risks at farm level, including scaling up of Climate-Smart Agriculture (CSA); innovations in financing climate/disaster risk initiatives; and initiatives designed to strengthen climate resilience and food security in the ASEAN region.

Technical contributions and experiences from the ASEAN region were particularly useful to participants from COMESA member States, because the South East Asia region experiences a wide range of risks while the region’s level of risk management is comparatively robust. Two presentations were delivered by the ASEAN Secretariat during the Forum with the aim of sharing lessons and good practices with participants from the east and southern African region, including delegates from three of the Indian Ocean States of COMESA (Comoros, Madagascar and Seychelles).

Following a series of rich discussions on Day 1 and Day 2 of the Forum, several key pathways to stronger climate resilience and regional food security were recommended for the COMESA region. These include:

- The need for continued collaboration between COMESA and the World Bank towards building the capacities of member States to address climate vulnerability and strengthen food security resilience;
- A focus on strengthening data systems including the need to invest in research to generate real-time data to improve the quality of evidence-based policies and decision making;

- Scaling up of the World Bank’s Agriculture (Ag) Observatory to ensure better preparedness and action vis-à-vis climate risks and food systems resilience;
- The need to scale up CSA and increase exploration of innovations and collective approaches to addressing climate risks;
- The necessity for Member States to intensify regional cooperation for disaster/climate risk management and integrate systems for development of strategic food reserves within the context of COMESA;
- A need to improve stability of financial systems. This includes among others, shifting the management of financial risks into market systems while also designing mechanisms to support the spread of financial services particularly to vulnerable populations.
- A request for Member States to diversify income streams and food production systems to include nutrient dense foods that address malnutrition particularly for the most vulnerable in society;
- Emphasis on the need to strengthen the role and visibility of the private sector in managing and mitigating climate risks to ensure food security resilience;
- The need to strengthen and enable innovation in the area on insurance to manage agriculture risk;
- The importance of strengthening meteorological services through building of human and institutional capacities at required levels;

A Field Trip to the SPGRC was organized by COMESA on Day 3 of the Forum, during which six (6) countries participated as follows: Somalia, Uganda, Kenya, Malawi, Zimbabwe, and Ethiopia. The SPGRC was established in 1989 and it hosts a gene bank for storage of plant genetic resources for the purposes of strengthening food security resilience and agriculture development in the Southern African Development Community (SADC) region.

## Background

During the period 2015-16 record-high temperatures, droughts and floods, fueled by one of the strongest El Niño events in recent decades crippled agricultural production across east and southern Africa. By early 2016, millions of households faced food insecurity as crops failed, incomes dropped, and food stocks tightened. Several countries in the east and southern African region were hit particularly hard and levels of preparedness and responses varied across the region. Furthermore, evidence points to a fact there is currently a 70% chance of an El Niño Southern Oscillation (ENSO) looming in the horizon (*See Concept note in Annex 1 and El Niño brief in Annex 5*).

It is against this backdrop that COMESA in collaboration with the World Bank, hosted a Regional Forum on Climate Risks and Food Security Resilience at the Taj Pamodzi Hotel in Lusaka Zambia from 25-26 October 2018. The Regional Forum brought together participants from thirteen COMESA Member States, namely: Comoros, Djibouti, Ethiopia, Kenya, Madagascar, Malawi, Rwanda, Seychelles, Somalia, Sudan, Uganda, Zambia, and Zimbabwe. Representatives from COMESA Secretariat, World Bank, Association of South East Asian Nations (ASEAN), International Finance Corporation (IFC), International Fund for Agriculture Development (IFAD), International Center for Tropical Agriculture (CIAT), Food Agriculture and Natural Resources Policy Analysis Network (FANRPAN), Indaba Agriculture Policy Research Institute (IAPRI) and the media, also participated in the Forum.

Her Honor Mrs. Inonge Wina, Vice President of the Republic of Zambia, officiated during the Forum and declared it open on the first day. The Office of the Vice President in Zambia is responsible for managing and mitigating disasters in Zambia. Other high-level officials

during the Forum included Dr. Dev Haman, Acting Secretary General of COMESA (representing Ms. Chileshe Mpundu Kapwepwe, Secretary General of COMESA), Dr. Simeon Ehui, Director for Agriculture Global Practice at the World Bank, and Ms. Ina Rutenberg, World Bank Country Director for Zambia.

## Forum Objectives

The objectives of the Regional Forum were as follows:

1. To provide a platform for high-level policy makers, from across the COMESA region, to share their experiences and lessons learned in preparing for and responding to the 2015-16 El Niño event; and
2. To highlight evidence-driven “no regrets” policies and investment strategies for strengthening the climate resilience of agricultural systems and regional food security.

The Forum also provided an opportunity for COMESA member States and the Secretariat to highlight their development priorities, engage with partners, and learn from the experience of other regional groupings such as ASEAN (*See Concept Note in Annex 1*).

## Anticipated Outcomes

Anticipated outcomes of the Forum included stronger awareness among policy makers on the challenges, gaps, and good practices from within the region and elsewhere and robust appreciation for the supportive role that the World Bank, COMESA and other entities, can play in helping the region to confront and better manage climate risks and uncertainty.

A Field Visit to the SADC Plant Genetic Resources Center (SPGRC) was organized on 27<sup>th</sup> October 2018 with the objective of

showcasing activities at the Centre designed to ensure agriculture development and food security resilience in the region. It was anticipated that several member States and other participants would visit the Centre to gain an insight into the involvement of the SRGRC in supporting countries to deal with climate vulnerability in the southern African region.

## Summary of Outcomes

A number of presentations were delivered, during the Regional Forum, to frame the 8 key thematic sessions that highlighted issues ranging from: experiences and lessons learned from 2015-16 El Niño, to presentations on the World Bank Agriculture Observatory, innovative approaches to mitigating production risks at farm level, including scaling up of Climate Smart Agriculture (CSA), innovations in financing climate/disaster risk initiatives, and collective pathways to climate resilience and food security in the ASEAN region.

Following a series of rich discussions and knowledge sharing on Day 1 and Day 2 of the Forum, various key pathways to stronger climate resilience and regional food security were noted for the COMESA region. Day 1 of the Forum enabled member States and other experts to share lessons and deliberate on experiences, preparedness, and responses concerning the 2015-16 El Niño (*See Program in Annex 2*). COMESA member States presented: a background and highlights on the impact of the El Niño as well as climatic impacts, specifically on agriculture and food systems, and shared lessons, experiences and good practices. Recommendations were made on how best to prepare for future climatic events at national level and from a regional perspective. Presenters, panelists and discussants during the Forum were drawn from Djibouti, Kenya, Madagascar, Malawi, Rwanda, Somalia, Zambia,

Zimbabwe, ASEAN, CIAT, COMESA, FANRPAN, IAPRI, IFC, PARM/IFAD, and the World Bank. Other conversations during the forum were focused on innovative approaches to mitigating production risks at farm level. These included discussions focused on agriculture risk management as well as the role of private sector in managing and mitigating climate risks to ensure food security resilience.

The Forum further deliberated and reflected on the COMESA Seed Harmonization Programme (COMSHIP) and the COMESA Secretariat's interventions vis-à-vis Climate Smart Agriculture (CSA). The Pilot Program for Climate Resilience (PPCR) in Zambia was also presented to provide perspectives on interventions being undertaken particularly in the western region of Zambia. Experts from the World Bank presented the Agriculture (Ag) Observatory and its procedures were illustrated with a view to raising the awareness of, and appreciation by, COMESA member States and other participants concerning its existence, benefits and modalities for its establishment. The World Bank's Treasury Department also shared insights (via Webex) on available financial products that can support member states in financing disaster risk response, including Contingency and Emergency Response Components (CERCs).

On Day 2 of the Forum, participants shared perspectives on several topics including lessons from the Integrated Forest Landscape Project in Zambia and challenges and opportunities in catalyzing climate change adaptation. Some highlights on innovations in financing climate/disaster risk initiatives and a discussion on scaling up climate smart agriculture in Africa were also presented. In addition, the Forum featured examples on the design of Climate Smart Investment Plans (CSIPs) in Cote D'Ivoire, Mali and Zambia. These were noted as key instruments that would enable countries to

move from investment ideas to formulating bankable projects.

Two presentations from the ASEAN Secretariat were particularly useful to participants/experts from COMESA member States, because the South East Asian region experiences a wide range of climate risks while the region's level of risk management is comparatively robust. In framing the discussion on perspectives from the ASEAN region, a presentation on striking a balance in managing El Niño and La Niña in east Asian agriculture was delivered by the World Bank. The ASEAN Secretariat then proceeded to share lessons and good practices with participants from the east and southern African region, including the Indian Ocean States of COMESA (Comoros, Madagascar and Seychelles). Presentations from ASEAN were focused on ASEAN's cooperation about disaster management and climate change as well as ASEAN's Integrated Food Security Framework Strategic Plan of Action on Food Security (2016-2020) and ASEAN's Food Security and Climate Resilience-Related Initiatives. These deliberations indicated above are presented below (*see Summary of Sessions on page 4*).

Pathways to stronger climate resilience resulting from the Forum discussions include among others, a need for continued collaboration between COMESA and the World Bank towards building the capacities of member States to address climate vulnerability and strengthen food security resilience. The Forum noted, that due to COMESA's mandate whose focus is on attaining regional integration through trade and investment as well as policy harmonization and its multiple-nations convening power, a partnership with the World Bank to support member States in managing and mitigating climate risks and achieving food systems resilience would be useful, efficient and cost effective. The World Bank is equipped with

both technical and financial strengths to work with member States in realizing the above purposes.

Participants also stressed the importance of strengthening data systems including the need to invest in research to generate real-time data towards improving the quality of evidence-based decision making. In this regard, a recommendation was made for the need to scale up the Agriculture (Ag) Observatory at country-level to ensure better preparedness and action vis-a-vis climate risks and food systems resilience. The Ag. Observatory presentation on Day 1, which included an illustration on the modalities for its use was well received by participants who expressed keen interest to speedily establish it in their countries. According to the presenters, establishing the Ag. Observatory is relatively affordable for member States. Another key recommendation advanced during the Forum stresses the need to scale up CSA and further increase exploration of innovations and collective approaches to addressing climate risks. Member States were also encouraged to intensify regional cooperation for climate risk management and integrate systems for development of strategic food reserves.

Furthermore, a need to improve stability of financial systems was highlighted as a crucial issue in the cause to address climate vulnerability. This includes among others, a need to shift the management of financial risks into market systems while also designing mechanisms to support the spread of financial services particularly to vulnerable populations. Member States were also advised to diversify income streams and food production systems to include nutrient dense foods that address malnutrition, particularly for the most vulnerable in society.

Finally, a Field Trip to the SPGRC was successfully coordinated on Day 3. Six countries

participated, i.e. Somalia, Uganda, Kenya, Malawi, Zimbabwe, Ethiopia. SPGRC hosts a gene bank for storage of plant genetic resources that are meant to ensure food security resilience and agriculture development in the event of shocks in the region. The Centre works in collaboration with each of the 16 SADC member States to conserve and preserve the genetic diversity and viability of Southern Africa's plant stocks. The Centre also performs important roles in research, documentation, education and training, together with counterparts at national level.

## Summary of Sessions

### DAY ONE – October 25, 2018

Despite strong growth potential, African agriculture is facing serious challenges, including human and naturally induced disasters. Food systems are increasingly strained by low productivity, low public and private investment in agriculture, weak policies, lack of real time data, rapid population growth, and climate change. One in four people in Sub-Saharan Africa are chronically undernourished. The food security challenge will only grow as climate change intensifies threatening crop and livestock production. If no adaptation occurs, production of maize, the region's most important staple crop could decline by up to 40% by 2050. Business as usual approaches will inevitably fall short as climate threats intensify. Key questions to be explored include: 1) how are agriculture value chains and food systems effected (i.e., yields/output, jobs/incomes, food access, nutrition) by weather-induced shocks; 2) what does the future hold under likely scenarios (i.e., temp/rainfall changes, anticipated yield drops, etc.); and 3) what are the implications for household welfare, regional food security, and poverty reduction? (see *Concept Note in Annex 1*)

To identify the effective solutions, regional decision makers need: to have better access to policy evidence to assess existing approaches, and the full range of risk mitigation, transfer, and coping options and associated trade-offs.

### Proceedings

Day One of the Forum was therefore designed to enable participants to understand climate risks (including ENSO-driven risks) and their implications. Sessions were designed to outline the threat and highlight innovative ways in which countries are responding to both extreme climate risks (e.g., El Niño/La Niña) and the longer-term threat of climate change.

The day began with breakfast from 07h30 to 08h30. This enabled participants to meet, greet and network. This was followed by the Official Opening Session, during which Her Honor Mrs. Inonge Wina, Vice President of the Republic of Zambia, officiated.

### *Opening Session*

In her opening remarks Mrs. Wina said, even though Zambia has been recording steady economic growth in recent years, poverty levels particularly in the rural areas, remained at significantly high levels. This is even though the country experienced a reduction in urban poverty by 25.6 percent, from 42 percent in 1991 to 23.4 percent in 2015, while rural poverty declined from 88 to 76.6 during the same period. She said that the Government of Zambia has emphasized Sustainable Development (SD) as one of the pillars on which [Zambia's long-term Vision 2030](#) is based, with a view to reducing poverty and improving rural livelihoods. The Vice President said the [Seventh National Development Plan \(7NDP\), 2017-2021](#), gives priority to labor intensive sectors, such as agriculture to achieving the aspirations of Vision 2030 whose aim is to ensure that Zambia becomes a prosperous middle-income country

by 2030. She said Zambia is keen to strengthen the policy and regulatory environment for agriculture development - a sector that provides employment, food security and nutrition, for the rural populations.



Her Honor the Vice President of the Republic of Zambia, Mrs. Inonge Wina meets Dr. Simeon Ehui (right), Dr. Dev Haman (center), and Ms. Ina Rutenberg (left) on her arrival at the Taj Pamodzi Hotel, Lusaka Zambia – 25 October 2018

Mrs. Wina said agriculture performance in Zambia declined from 8.5% to 5.3% in 2015 due to the 2015-16 El Niño and that the lack of effective evidence-based planning, limits effective preparedness and responses to the effects of climate change/risks. She said there is a need to build scientific knowledge and evidence to manage climate change risks and to improve food security resilience. This includes sharing of lessons learnt, experiences and best practices on addressing climate risks. She emphasized the need to raise awareness of the issues relating to climate vulnerability and food systems resilience, and urged the media to enhance their knowledge sharing, communication and advocacy on the subject. She ended her official opening statement by the stressing the fact that climate change is here, and it is real (*see Annex 4a*).

The Acting Secretary General of COMESA, Dr. Dev Haman (reading a statement on behalf of Ms. Chileshe Mpundu Kapwepwe, Secretary General of COMESA) said COMESA member States are agrarian economies at risk of being

affected by climate change, which in turn affects agricultural production and increases the prevalence of communicable diseases. He said COMESA's mandate is to attain regional integration, and this is also essential for fighting climate change and its risks. Dr. Haman said agricultural production has a potential to enhance poverty reduction and is also a means to creating employment for the growing youth population. He called on member States and experts to work towards strengthening food security resilience and view the resilience agenda as part and parcel of our livelihood systems. Dr. Haman said COMESA is working with its member States to prepare and respond to the effects of climate change. He stressed the importance of a region that remains connected and interconnected with a conducive regional policy environment for technology development and an environment that enables sharing of experiences and knowledge. He also expressed the need for awareness raising and for technologies and mechanisms that make agriculture more attractive to youth, who are our future leaders (*see Annex 4b*).

In his opening remarks, Dr. Simeon Ehui, World Bank Director for Agriculture Global Practice said, the World Bank is increasing its investments in climate smart agriculture interventions as can be seen in Niger and Rwanda. Under the Climate Change Action Plan, the World Bank is committed to working with countries to deliver climate-smart agriculture that achieves the triple win of increased productivity, enhanced resilience, and reduced emissions. He said this commitment amounted to a record-setting \$20.5 billion in climate-related finance delivered during the last fiscal year - the result of an institution-wide effort to mainstream climate considerations into all development projects. Dr Ehui further pointed out the importance of increased investments and good policies towards fighting climate change and its impact on the livelihoods of

vulnerable populations. He further informed the Forum that the World Bank's engagement on climate action with client countries is rapidly growing. This includes among others, the Bank's commitment to develop climate-smart agriculture profiles and/or investment plans for 40+ countries. He said that the Regional Forum was essential in that it provided an opportunity for participants to share experiences and best practices on preparedness and action vis a vis climate risks and food security resilience. He said safeguarding livelihoods and strengthening resilience in the face of growing climate threats is among the greatest challenges of the 21st Century and that this is particularly true in the case of agriculture (*see Annex 4c*).

#### Key Note Address



Dr. Debisi Araba addressing the Regional Forum at the Taj Pamodzi Hotel in Lusaka Zambia

A key note address was delivered by Dr. Debisi Araba Regional Director for Africa at the International Center for Tropical Agriculture (CIAT) to set the scene for the Forum. He called upon African Leaders, through the Vice President, to pay critical attention to the risks that climate change poses to the livelihoods of the region's populace. Dr. Araba said the regional forum is a good effort towards achieving agriculture transformation and there is a need to strengthen regional cooperation to effectively manage disaster/climate risk. He said there is a need to integrate systems for development of strategic food reserves and to

invest in planning to improve quality of evidence-based decision-making. Dr Araba said that investment in research and real-time data for in depth analytics is crucial for addressing climate vulnerability and that there is a need to view investments in climate infrastructure as public goods. He stressed the importance of improving the stability of financial systems, while managing financial risks should be shifted to the market system. Dr. Araba is keen to see mechanisms that support the strengthening of financial services, particularly to vulnerable populations. He said that there is a need to promote knowledge sharing through Managed IT Service Providers (MSP) taking into consideration the interconnectivity of the food systems. He further noted that the need to step up research capacity to invest in systems to build resilience across the region and to look beyond climate risks, to include soils, pests and disease management. He encouraged COMESA member States to enhance open and accessible data that informs early warning and action and stressed the significance of diversifying income streams and food production systems to include nutrient dense foods to address malnutrition particularly for the most vulnerable populations. Dr. Araba said there is a need to diversify food production and decision making, while also diversifying means of income beyond on-farm production. In addition, he said, understanding the dynamics/systems under which agriculture operates is crucial and that every person should note that the best time to mitigate disaster was yesterday, and the next best time is today. *"Today's bush is tomorrow's forest"*. Dr. Araba further noted that due to weak foundations in the agriculture transformation agenda, susceptibility to climate change remains high. Climate weather variability accounts for over 30% of crop yield, while shocks lead to food insecurity, malnutrition, migration, IDP, conflicts, political effects (*see Annex 4d*).

### *Session 1 and Session 2*

Session 1 and Session 2 were amalgamated to make up for time lost in the opening session. Both sessions were moderated by Stephen D'Alessandro (Senior Agriculture Economist, World Bank) and titled: *Sharing Experiences and Lessons Learned from 2015-16 El Niño*. Mr. D'Alessandro outlined the rationale for the session before introducing the six panelists as follows:

**Kudzai Ndidzano**, Acting Deputy Director in the Ministry of Environment Water and Climate for Zimbabwe, presented perspectives on *Strengthening El Niño Response in Zimbabwe*. In his presentation he noted that the El Niño of 2015-16 was classified as 'Very Strong'. It affected multiple sectors including agriculture, livestock and water sanitation and hygiene (WASH), leading to reduced crop yields, household food insecurity and malnutrition. This triggered a policy response leading to the development of a drought risk management strategy and action plan. He said seasonal forecasts do not necessarily lead to preparedness and that timely dissemination of climate information is very critical for contingency planning. He stressed the importance of strategic grain reserves and noted that Early Warning (EW) and Early Action (EA) systems as being crucial. He recommended the adoption of the watershed management approach and diversification of livelihoods options.

**Mupenzi Mutimura**, Senior Research Fellow for Feed Resources and Animal Nutrition at the Rwanda Agriculture and Animal Resources Board (RAB), shared insights on *Rwanda El Niño and Climate Change Resilient Livestock*. He said El Niño effects are seen through periodic floods and droughts, early onset and prolonged dry seasons, leading to food insecurity and malnutrition. In his presentation he said Rwanda lost over 920 livestock animals and

witnessed a drop in milk yields while, over 6800 ha of crop land was destroyed. This led to several technical and policy interventions such as: scientific modelling through- sustainable intensive decision support system (SIDESS) to help farmers increase productivity and reduce effects of climate change, a national disaster and preparedness plan, national contingency plan for drought, and a task force on drought and food shortage, etc.

**Doshanie Kadokera**, Economist in the Ministry of Agriculture, Irrigation and Water Development for Malawi, shared perspectives on *Strengthening El Niño Response in Malawi*. Mr. Kadokera said Zimbabwe experienced a strong El Niño phenomenon for 2 years in a row. Impacts of the 2015-16 El Niño include: reduced rainfall, stagnant productivity, despite efforts to increase production, deficit in maize supply, leading to increased food insecurity, increased pests (locusts, army worm), dwindling water levels, affecting fisheries productivity by 90%, sectoral losses of up to \$240.7 million, particularly losses in cereals. Furthermore, Malawi has adopted agriculture insurance, and is a member of Africa Risk Capacity (ARC) since 2012. Mr. Kadokera stressed the importance of data quality and access as well as packaging and delivery channels, as being critical for the success of agriculture insurance products. He noted that despite positive policy processes evolving, they are fragmented in terms of practice and that emergency responses tend to be reactive rather than proactive. Impacts result in high humanitarian costs, high dependency on development partners and unpredictable public investment. He said that there is a need therefore, to employ multiple integrated risk management tools and to strengthen capacity to operate them, while also promoting crop diversification and use of drought tolerant varieties. In his recommendations Mr. Kadokera said that there is also a need for proactive responses, and a

favorable policy environment to incentivize private sector investment. Countries must establish and fund robust institutional machinery and build capacity gaps, while also strengthening their ability to operate existing EW tools. There is a need to promote joint programming and contingency planning and to employ multiple /integrated risk management tools.

**Antony Chapoto**, Research Director at Indaba Agriculture Policy Research Institute (IAPRI), presented the outcomes of an IAPRI/IFPRI/World Bank study on *El Niño Impacts and Trade Policy and Implications on Household Food Access and Welfare*. Mr. Chapoto said East and Southern Africa experienced the strongest El-Niño's on record in recent decades, affecting agricultural production in several countries in the region. The regional food shortage triggered policy responses aimed at ensuring food availability. Some of the effects of the El Niño include: record high temperatures, droughts, floods, food insecurity due to crop failure, decrease in incomes, tightened food and labor markets, national emergencies, and export bans. Mr. Chapoto said countries moved aggressively to secure food stocks, stabilize prices, and ensure the availability of maize. In sharing the findings of the IAPRI/IFPRI/World Bank study on El Niño Impacts, he stressed how in general, policies relatively helped some low-income consumers of maize. Mr. Chapoto also shared perspectives on the trade policy responses and expected impacts in three countries (Tanzania, Malawi and Zambia) in which IAPRI has conducted a study following the El Niño 2015-2016. These policies areas included: Maize export restrictions, Temporary ban on maize meal exports in Tanzania, while Zambia introduced price controls and buffer stocks procured through the Food Reserve Agency. Policies in both countries were only for a short-term timeframe. About Malawi, the policy aimed at facilitating maize imports and a

ban on unlicensed selling of maize as well as price controls and controlled maize exports in the medium to long term period. Mr. Chapoto said Government responses to El Niño in 3 countries triggered adverse impacts on incomes of poor farmers dependent on maize sales. In Zambia, adverse impacts were more as a result of trade policies, than from the El Niño phenomenon. He recommended a combination involving promotion of regional grain market integration, and social protection and mitigation at the farm level. This includes strengthening of grain market information systems, improving climate risk mitigation at the farm level, design of innovative risk financing strategies and adaptive social protection for the most vulnerable.

**Osman Hassan Abdi**, Technical Advisor in the Ministry of Planning of Somalia, shared perspectives on *Somalia's Drought Impact Needs Assessment and Recovery and Response Framework*. He presented the unique situation of Somalia as a relatively stable country that is progressing towards peace and stability following a decades long civil war that ravaged the country since 1991. Cycles of natural disaster have increased along with the number of people needing humanitarian assistance. He talked about the need for Drought Impact and Needs Assessment (DINA) interventions that could support recovery and build resilience into recovery efforts. DINA also highlights needs across multiple sectors such as transport, environment and natural resources, water etc., that will assist in building greater resilience. Mr. Abdi said, the structural drivers of drought related crises need to be addressed across multiple sectors to mitigate the impact of increasingly frequent droughts. He said the bulk of damage from drought was the environment and natural resources, indicating a lack of resilience in management of this sector. He further pointed out that most of losses are witnessed in agriculture and livestock, and this

reflects the dependency of Somalia's economy on these sectors and their vulnerability to droughts. It was noted that a large portion of recovery needs are in the agriculture and livestock sectors, which are the most impacted. Urban development and municipal services need to reflect the trend towards urbanization and the role of urban centers in the context of crises. In the long run the National Development Plan (NDP) seeks to develop a New Economic Model including diversification of production sectors, systems capacity and regulations to support an expanded portfolio of productive capacities as well as improving public and private capacities.

**Ademola Braimoh**, Senior Natural Resources Management Specialist for the World Bank, delivered a presentation on the *Zambia Agriculture Risk Assessment Report (2018)*. He began by highlighting the importance of the Agriculture sector for the Zambian economy. He said even though the sector provides a livelihood and incomes for over 70% of the population, it contributes minimally to the country's Gross Domestic Product (GDP). He said, bad agriculture performance impacted the rest of sectors during the period 2013-2015 lowering total economic growth by 2%. Dr. Braimoh further stated that the agriculture sector needs to be risk assessed because adverse effects of risks: affect the performance of farms and the larger agricultural value chain, and further pose serious consequences to stakeholders and consumers. Agriculture risks have potential to disrupt value chain development and cause extensive financial and economic losses. The World Bank Group undertook a study on agriculture sector risk management in Zambia. The assessment was aimed at analyzing principal risks and identifying pathways to manage those risks. Major risks in Zambia are witnessed under the lens of production, markets and the enabling environment. According to the findings of the

study, three areas of risk management are found to warrant priority in Zambia, and with significant potential for synergizing actions undertaken across them. These are: strengthening early warning systems to detect threats to food security, developing climate smart agriculture and increasing resilience to climate-related shocks through diversification, and developing the Zambian Commodity Exchange (ZAMACE) and building shock-responsive safety net.

The joint sessions 1 and 2 concluded with questions and comments from the floor as well as answers and clarifications from the panelists:

- 1. Question:** What are the major barriers to preparedness and response in Zimbabwe and what are the areas of highest needs for investment?

**Response:** Some of the major barriers to preparedness and response (and therefore areas requiring highest investment) in Zimbabwe include, among others, difficulty in accessing reliable data from the Meteorological Department and weak linkages of irrigation infrastructure to farm level.
- 2. Question:** Why are related policies not very responsive?

**Response:** Data quality affecting responsiveness, particularly for the ARC and technical information on crop varieties are not accurate. It is also essential to note that country contexts vary and therefore, response models may not necessarily be generic, but specific to each country context.

### *Session 3*

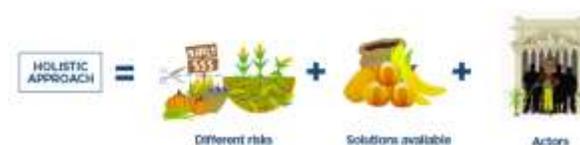
Session 3 was moderated by Nalishebo Meebelo (Senior Consultant, World Bank). The session was titled: *Innovative Approaches to Mitigating Production Risks at Farm Level*. Dr. Meebelo said the role of regionalism as well as

that of the private sector were crucial elements for addressing climate vulnerability in the COMESA region. She also noted the work being undertaken by institutions such as IFAD through PARM to assist African countries in their search for effective tools to manage agriculture risk. Session 3 panelists intervened as follows:

**John Mukuka**, Acting CEO and Seed Expert for ACTESA/COMESA presented the *COMESA Seed Harmonization Programme (COMSHIP)* and its linkages to the theme of the Forum. Dr. Mukuka said COMSHIP is a regional program designed under COMESA’s mandate that encourages policy harmonization, collectiveness and interconnectedness of member States towards achieving common developmental goals for the region. He said the main objective of COMSHIP is to facilitate seed trade through reduced costs of doing business. The key areas of harmonization are seed certification, variety release, and phytosanitary issues. Dr. Mukuka presented the four strategic focus areas of COMSHIP as: domestication – under which seven-member states have aligned their national seed laws with the COMESA initiative, awareness – under which COMSHIP has been officially launched in 18-member states, capacity building which includes several trainings, and seeds for small-scale farmers. He said a variety catalogue has been developed and is operational. Forty-nine crop varieties have been registered as regional varieties. In terms of how COMSHIP is linked to climate risks and food systems resilience, he said the program seeks to encourage production of seeds that are adaptable to: changes in diseases and pests, the need to reduce carbon and water foot prints, CSA (early maturing and drought tolerant varieties), and conservation agriculture.

**Dr. Dick Siame**, Country Program Officer, IFAD, presented the activities of the *Platform for Agriculture Risk Management (PARM)* in eight

sub-Saharan countries. He said PARM is an initiative of the G7 and G20 countries, with a mission to raise awareness about Agriculture Risk Management (ARM) at local and global levels. PARM is a result of discussions on food security and agricultural growth and is a four-year multi-donor partnership aimed at making risk management an integral part of policy planning and implementation in the agricultural sector. Dr. Siame spoke on the following areas under which PARM is supporting countries: how to deal with risks (mitigation, transfer, coping), instruments (tools) and strategies to manage risks, assessment of layers of responsibility, agriculture risk management information systems studies in seven countries (Senegal, Niger, Cabo Verde, Uganda, Cameroon, Ethiopia and Mozambique), integration between information and early warning systems (IS-EWS), other feasibility studies undertaken in PARM participating countries (e.g. EWS and Warehouse Receipt System (WRS) currently ongoing in Zambia – informed by the recent World Bank ARM Assessment). Dr. Siame said, a holistic approach to agricultural risks means considering a broad range of risks and a broad range of solutions, and that no risk is considered in isolation (OECD, 2009). This implies dealing at the same time with different and synchronized actions to manage risks.



He also said that, in managing risks, timely access to information and capacity building activities are essential to agricultural stakeholders, and to extension workers or policy makers to enable informed decision-making and progressive skills enhancement on ARM practices.

**Augustine Langyintuo**, Senior Private Sector Specialist for IFC, gave perspectives on the *Role*

*and Experience of the Private Sector in Managing and Mitigating Climate Risks to Ensure Food Security Resilience.* Mr. Langyintuo said key climate risk factors include droughts, floods and extreme temperatures and spoke about impacts on agriculture as being either direct or indirect. He also shared perspectives on how to achieve agriculture growth with resilience, stating that this requires strong political will to enable resilient markets, resilient agriculture and resilient people. In presenting perspectives on the role of the private sector in improving adaptation to climate risks, he noted the need to: develop and accelerate adaptation of innovative climate resilient technologies and services (including CSA), catalyze greater investment in vulnerability reduction, integrate adaptation into business strategies and investments, develop products that will enable lower costs and more effective responses to climate change as a basis for profitable businesses, mobilize financial resources and technical capacity for adaptation, leverage the efforts of governments in policy formulation and implementation, and engage civil society and communities in adaptation efforts. He said the private sector is essential for development of technologies around issues such as drought tolerant input varieties and indigenous crops. He outlined some barriers for the private sector, noting among them: risk avoidance and limited access to weather and climate data. He said for the private sector to respond and participate effectively in managing agriculture risks, there is a need to increase their awareness and include them in national adaptation efforts as well as engaging them in product development and Public Private Partnerships (PPPs).



**Left to right:** Ms. Ina Rutenberg (Zambia World Bank Country Director) and Dr. Augustine Langyintuo

**Mclay Kanyangarara**, Climate Change Advisor at COMESA Secretariat, highlighted the *Significance of Regionalism in Addressing Climate Smart Agriculture*. He began his presentation by saying that the reality of climate change is no longer debatable and went on to present perspectives from COMESA. He said COMESA has been involved in Conservation Agriculture (CA) and Climate Smart Agriculture (CSA) activities in the region and that the uptake of CA/CSA remains sluggish, despite demonstrated and proven successes. He explained why the results have been uninspiring to farmers including the fact that technology is largely supply driven and donor funded, while well intentioned input support programmes entrench dependency in many rural people. He also said some CSA approaches such as digging basins involves tough physical work, and hence a lack of interest by many, including the youth. Furthermore, small holder farming is not regarded as a business. Dr. Kanyangarara gave perspectives on what should be done differently. He said, commercialisation is crucial – that production must be seen for its profit at all levels, while integrating new technologies are key to raising productivity. He said, we need to undertake a judicious selection of success prone farmers that can be role models to others as participants in pilot initiatives. He stressed the importance of the value chain approach which ensures private sector engagement/

participation, while allowing governments to focus on their core mandates. He further said teaching, exposing and training school children on sustainable development to generate a cadre of youth better equipped to do things correctly when they graduate, should be considered. Partnering with others to create more value and synergy is also key. He later presented activities undertaken in COMESA member States and said most of them were baselines and pilots aimed at driving policy.

**Yvonne Mulenga**, Monitoring and Evaluation (M&E) Specialist on the Pilot Program for Climate Resilience (PPCR) in Zambia, shared perspective on the *Zambia Strengthening Climate Resilience (PPCR Phase II) Project*. Ms. Mulenga delivered a statement on behalf of the National Coordinator for PPCR, Ms. Chitembo K. Chunga. She said PPCR is designed to assist the government to mainstream climate change into the National Development Plan (NDP). PPCR is working in four regions of Zambia and implements two projects (1. Drought prone areas; 2. Flooded areas in the Western part of Zambia) and seeks to generate innovations and help communities to adapt to the effects of droughts and floods - to ensure communities are resilient to drought. Areas of focus include: promotion of CSA, crop varieties and livestock breeds that can adapt, financing of water harvesting structures for small scale irrigation, canal rehabilitation (drainage) in flooded areas (seven priority canals in Western Province), solar powered boreholes, facilitating access to markets, diversification (e.g. fish farming in flooded areas), encouraging non-farm livelihoods (honey, mushroom, crafts), roads and improved supply of inputs. PPCR is planning to develop open data sharing information system (climatic information) and bulking centers to reduce post-harvest losses.

Some salient points during the Q&A Session included:

**Question:** Recent research showed that certain types of seeds can yield 40% more than the conventional seed variety. Are there efforts by COMESA to access that variety?

**Response:** COMESA works with two organizations – Eastern African Farmers Federation (EAFF) and Southern Africa Confederation of Agriculture Unions (SACAU) - to identify good varieties and incorporate them on the COMESA Seed catalogue and to support the financing of seed testing to enable them to become available to farmers.

**Response:** COMESA does not release seed varieties as such. To be registered in the regional variety catalogue, a variety must be released in at least two countries. COMESA works with regional farmer organizations to bring to their attention, newly released high-productivity varieties.

**Comment:** CSA is perceived differently in different countries and communities. Using indigenous seeds or improved seeds therefore, is dependent on the context of each community.

**Comment:** Sustainability of CSA and resilience projects should be given serious considerations. Uganda for instance has a good example of an insurance/subsidy program involving 65,000 farmers. What is most important is to increase incomes for farmers.

#### *Session 4*

Session 4 was moderated by Caroline Franca, GIS Specialist and Erick Fernandes, Lead Agriculture Specialist at the World Bank. The session was titled: *The World Bank's Ag Observatory*. Erick Fernandes and Carolina Franca presented the World Bank's Agriculture (Ag) Observatory. The presenters shared their perspectives on data availability and the need to harness the power of data to inform policy and in making strategic decisions to transform

agriculture. Carolina Franca gave an illustration to participants on how the Ag Observatory works and used an example of Chisamba in Zambia to show real time data. The Ag Observatory aims to support partners to access and deploy high resolution and near real time ag-meteorological data. Other existing data systems include: FEWSNET, GEOGLAM, GIEWSNET, and ground weather stations. These systems can be used to track food and agriculture systems. According to the presenters, it is difficult to maintain weather stations in physical setups but, investing in cloud systems has less operating expenditure costs (OpEx).

This session included several discussants as follows: **Ademola Braimoh**, Senior Natural Resources Management Specialist for the World Bank, **Sithembile Mwamakamba**, Head, Climate Change Portfolio, FANRPAN, **Chitalu Zimba**, Principal Statistician, Early Warning Systems and Food Security, **Pham Quang Minh**, Assistant Director, Food, Agriculture and Forestry Division, ASEAN

The presenters and discussants shared their perspectives on the Ag. Observatory and the need for real time data to aid policy and decision making. In Ghana there is an effort for localized and timely insight for farmers. There is good satellite decadal data which can now assist in planning and policy implementation. The data is currently private but, there is need to make it public so that local farmers can benefit in their farming practices. With the new systems available it is now possible to generate data in real time to enable modelling of climate data. The Intergovernmental Panel on Climate Change (IPCC) report shows that climate stresses and shocks are now more frequent than ever. This means real time data is ever more valuable now and is critical for agriculture transformation. The World Bank has received a grant to make the data available in a few

countries and is in the process of acquiring rights to the data to make it public in many countries. The approximate subscription amount for the data is \$50,000 per year for real time data. The presenters recommended the possibility of regional bodies such as COMESA to host this initiative and to encourage countries to subscribe to it.

Some of the challenges noted for the Ag. Observatory include, among others, infrastructure challenges in the countries. About the ASEAN experience, the institution has invested huge amounts of finances into Information Communication and Technology (ICT) and several systems to facilitate resilience for agriculture and food security. Meanwhile, the Zambia Ministry of Agriculture (Early Warning Unit) has faced challenges in decision making due to lack of reliable data. They at times must rely on raw internet data to make decisions due to the lack of meteorological stations in all parts of Zambia. Therefore, the systems presented by World Bank Ag Observatory would help the country in terms of planning for food security resilience. Major challenges faced by countries are not only related to accessing large data, but also the ability to analyze data and make sense of it. This poses a challenge to government Met services to deliver data needs. The challenge also presents an opportunity for collaboration between private sector and government to provide climate data services. Some questions were asked following this session:

**Question:** Given the El Niño event which is looming in the horizon, how long would it take to deploy the World Bank Ag. Observatory systems in the countries?

- **Answer:** With \$1 million, the project could be rolled out to all African countries and it does not take long to deploy.
- **Answer:** CIMMYT conducted a trial for seeds that performed well in the last El

Niño. The report has been released in the public and is ready for use.

- **Answer:** Africa is not doing enough to invest in climate information systems to address climate risks and food security resilience. For this reason, there is need for the following: a policy shift to encourage climate and evidence-based planning, and budgetary allocation and targeted investments.

#### *Session on World Bank Group Products for IBRD and IDA Countries*

This session was facilitated via Webex video conferencing. The presenters, speaking to the Forum from Washington DC., USA were, Antonio S. Davila-Bonazzi, Lead Financial Officer and Abigail Baca, Disaster Risk Management Specialist, in the Treasury Department of the World Bank. The two presenters shared perspectives and available products within the context of financing disaster risks and catastrophe bonds. Their presentation highlighted the following: Disaster Risk Financing basics, Overview of available products, CAT Bonds, Case Studies on Pacific Alliance CAT Bond and Pandemic Insurance, and transactions completed by the World Bank. The presenters highlighted the fact that the cost of disasters continues to rise, citing global economic losses from natural disasters as exceeding \$300 billion per year, forcing 26 million people into poverty every year and that almost 75% of the losses are attributable to extreme weather events. The presenters went on to say that the Bank works with countries to help manage and mitigate the impact of disaster. They said contingent lines of credit can help governments access rapid financing after an event, and that both International Development Association and (IDA) and International Bank for Reconstruction and Development (IBRD) countries are eligible for Post-Disaster Investment Project Financing (IPF)

and Contingency Emergency Component. They further stated that Catastrophe (CAT) Bonds, i.e. financial products that are being used by governments to transfer risks to the market, and CAT Drawdown Options (DDOs), provide immediate liquidity and allow governments to access financial resources before a disaster, strikes. The World Bank can assist governments assess risk exposure, design and execute capital market transactions to transfer risks.

#### **DAY TWO – October 26, 2018**

In the context of increasing global competition, rapid population growth, and climate uncertainty that defies borders, no country can afford to go it alone. Progress on developing climate risk preparedness and response plans is variable across the region. Stronger regional collaboration in confronting common challenges like climate change is needed more than ever. While regionalism has shown promise in strengthening disaster preparedness and response capacity of member states and food systems, Regional Economic Communities (RECs) in Africa, as elsewhere, have distinct institutional competencies and policy coherence around longer-term development planning, resilience, and food security objectives. Each region would benefit from sharing knowledge and experiences and learning from others. While some countries can mobilize funding for programming at national level, there is strong scope for more technical and financial backstopping at regional level to spur the development and harmonization of programs in critical areas that would benefit from higher levels of cooperation and integration such as EW and Response Systems, seed markets, and cross-border trade. The second day was therefore designed to explore collective pathways to adaptation and stronger resilience. This day examined the role of regionalism and best-practice as well as

collective pathways to improved climate risk management and climate change adaptation.

The day began with a re-cap of the previous day, presented by Joel Okwir, Agriculture Economist for COMESA. In his presentation, he summarized the content of the opening session including the three speeches delivered by Dr. Simeon Ehui, Dr. Dev Haman and her Honor the Vice President of Zambia. Mrs. Inonge Wina, respectively. He then presented a summary of sessions 1 to 4 concerning Day 1 of the Forum and the presentation on World Bank Group Products for IBRD and IDA Countries. This included some highlights on the question and answer sessions that followed each session.



Participants from Madagascar and Comoros during the Forum

## Proceedings

### *Session 1*

Session 1 titled, *'Catalyzing Climate Change Adaptation: Challenges and Innovations* was moderated by Dr. Debisi Araba, Regional Director for Africa at CIAT. In reiterating his remarks during the Forum's Keynote Address, Dr. Araba said countries and their leaders need to think about investing in evidence-based planning to improve quality of decision-making for agriculture development and food systems resilience. Dr Araba said that investment in research and real-time data for in depth analytics is crucial for addressing climate vulnerability and that there is a need to view

investments in climate infrastructure as public goods. He introduced his panelists as follows:

**Ademola Braimoh**, Senior Natural Resources Management Specialist, World Bank presented his perspectives on the recent study on *Scaling-up Climate Smart Agriculture through the Africa Climate Business Plan*. Dr. Braimoh said that the World Bank Group has contributed to meeting the funding gap by investing heavily in the Africa Climate Business Plan (ACBP) launched during the COP21 in Paris, in 2015. The ACBP requests a funding equivalent to \$19 billion by 2020 to help Africa to adapt to climate change and build resilience to climate shocks. The Climate Smart Agriculture component in the ACBP requires an amount of \$3 billion to support the vision of accelerated agriculture transformation of the Malabo declaration. The World Bank Group has developed a pipeline of innovative and transformational projects to tackle climate change and establish a platform to mobilize funding in Africa. In total 83 CSA projects were approved by the Bank since 2016 to April 2018 totaling a value of \$3.8 billion for 30 countries covering 5 million farmers on 3 million hectares. \$1.5 billion is dedicated to agricultural adaptation and mitigation. Future opportunities will include: CSA country profiles, CSA investment plans, Strengthening of Measurement Reporting and Verification Systems (MRVs) for Nationally Determined Contributions (NDCs), building capacity to access climate finance, promoting knowledge sharing, and capacity enhancement of CSA policies and technologies and practices. Furthermore, the World bank will soon launch a program for CSA strengthening in higher education systems. We also need to address climate finance challenges for resilience building. This calls for the creation of an enabling environment that can catalyze investments. We need innovative financing and a deliberate policy environment. In addition, we must identify key entry points for CSA.

**Evan Girvetz**, Senior Scientist, CIAT presented on the *Climate-Smart Investment Plan (CSIP) in Cote D'Ivoire and Mali, and perspectives on CSA Profiling*. In his presentation he stated the fact that many interventions can be climate smart somewhere, but none are likely climate-smart everywhere depending on the context and priorities. He said the CSA Plan considers four steps that include a situational analysis, prioritization of interventions, program design, and implementation as well as monitoring and evaluation. The situational analysis or CSA profiling depicts the country situation in terms of aspects such as people, agriculture and livelihoods, economic relevance of agriculture, CSA financing opportunities, enabling policies and institutions and others. He said CSA and climate risk profiling was completed in more than 30 countries globally and more than 50 countries sub-nationally. Building on CSA profiles enables the identification of CSA investment opportunities. Potential impacts of climate change on trade (imports and exports) were assessed in countries such as Mali and Côte d'Ivoire. This has allowed a shift from investment ideas to designed bankable projects. Twelve project concepts were developed for the two countries. He also said, that the CSA and economic assessment for national soil fertility program is also crucial through cost-benefit analysis.

**Dominic Namanyungu**, Principal Extension Methodologist in the Ministry of Agriculture, Zambia, spoke about the *Climate-Smart Investment Plan (CSIP) for Zambia*. He said that the objective is to develop a Zambia Climate Smart Investment Plan to inform agriculture sector planning, foster dialogue and build capacity to operationalize country climate commitments for a productive, resilient and low-emissions agriculture development in the short, medium and long term. The CSIP approach for Zambia combines a set of elements such as: development of an

agriculture sector vision, scenarios, sector modeling and analyses, and prioritization and evaluation. The CSIP emphasizes three pillars of conservation agriculture which include minimum soil disturbance, agroforestry and crop diversification. CSA's impact on household income is mostly positive in the long run, providing incentives for adoption. Mr. Namanyungu said, that numerous investment opportunities for CSA exist in Zambia to roll out among 50% of farmers. This requires a total investment of \$617 million over a period of five years. Projects seeking to enhance market infrastructure, timely access to diverse inputs and adoption of the landscape management approach, are among the required interventions.

**Tasila Banda**, National Project Coordinator, Zambia showcased the *Integrated Forest Landscape Project in Zambia*. She said that this project is in the Eastern Province of Zambia and covers nine districts. The area is vulnerable with a significant forest loss map. The project development objective is to improve landscape management and increase environmental and economic benefits for targeted rural communities in the area as well as improving the recipient's capacity to respond promptly and efficiently to crises. The project development objective has its indicators and financing arrangements. Dr. Banda said the project has four components: enabling environment, livelihood and low carbon investments, project management, and contingent emergency response. In scaling up CSA the project has 239 extension workers in place and has reached 10,755 lead farmers, who were trained across the camps. It is expected that each extension worker will train 45 farmers, while each lead farmer will train 10 farmers to reach a total target of 118,305 farmers. Consequently, food security and climate benefits by CSA interventions will be achieved through conservation agriculture,

integrated soil fertility management and agroforestry.

### *Session 2*

Session 2 was moderated by Barry Maher, Senior Financial Sector Specialist at the World Bank. The session was titled, *Exploring Innovations in Financing Climate/Disaster Risk Initiatives*. Mr. Maher set the scene for the session and later moderated a panel discussion. In framing the session, he said the El Niño is looming in the horizon and there is a 75% probability for this event. In this case, governments need to be prepared, based on the scientific evidence available. Preparation for the event requires financial investments. Government, home owners, farmers and the poor people have to adapt to the phenomena. Disaster Risk Reduction (DRR) financing is an essential and integral part of the broader agriculture risk mitigation. In addition, core principles for financing included: timeliness, how money reaches beneficiaries, and disk risk layering. Furthermore, there is need to use several financial instruments to address the risks. For example, Kenya has a good risk financing strategy.

Panelists deliberated as follows:

**Lucy Nyirenda**, Head of Program at Africa Risk Capacity (ARC) spoke about the *Role of ARC in Agriculture Risk Financing in Africa*. In her submission Ms. Nyirenda said, the ARC is a specialized agency of the African Union (AU) designed to reduce impact of droughts and other natural hazards, and therefore preventing loss of livelihoods. It provides disaster finance linked to contingency plans and is the first sovereign insurance pool in Africa and the first in the world that links pay-outs to contingency plans. ARC works with countries to define the countries risk and quantify the risks, after which financial resources can be disbursed to governments. ARC allows stability in social

protection and focuses on investments in agriculture for increased productivity and diversification. Ms. Nyirenda said, ARC employs risk modelling using the Africa Risk View which is a data platform. Based on the modelling, contingency plans are then, designed. The plans focus on the most affected populations as the target to protect and improve



Panelists deliberate during Session 2 on Day 2 of the Regional Forum

livelihoods in the face of risks. \$36 million has been paid out, while 2.1 million people have been assisted and over one million livestock assisted. ARC also focuses on the long-term resilience needs as opposed to simply responding to immediate risks and shocks. This provides governments with the opportunity for long term risk planning and to allocate funds accordingly.

**Richard Kyuma**, Program Coordinator, Kenyan Livestock Insurance Program (KLIP) shared a presentation on the KLIP and said that the Government is not implementing the program individually, but with strategic partners including the World Bank and the International Livestock Research Institute (ILRI). It is now being implemented in eight county governments of Kenya, which are most affected by drought. The rationale behind the use of the insurance methodology was due to the economic impacts of droughts, which led to the loss of \$10 billion. KLIP is implemented using

satellite data and imagery and uses an innovative insurance scheme. Mr. Kyuma said, it is not easy to sell insurance to small-scale farmers and that is the challenge that most member states are faced with. Therefore, there is a need for awareness raising and capacity building and to anchor insurance to policy instruments to ensure its sustainability. In the meantime, Kenya is introducing a partial subsidy program. About challenges in facilitating insurance, it was noted that budget deficits are common issues that governments are faced with, and therefore there are difficulties with regards to integrating insurance as a financing tool for risk management. Governments will need to use innovative means of financing risk and ensure effective policy reform.

**Naseer Khan**, Operations Manager for Hunger Safety Net Program (HSNP) in Kenya, said the Government of Kenya is funding 60% of the program, while 40% is donor funded. He said HSNP is a flagship program of Kenya and targets the most vulnerable people. It is a social cash transfer program involving a target of 100,000 households. HSNP uses geolocation and mapping of households. \$27 per month per household is paid through an account opened with a local bank and a biometric VISA card enabled. Mr. Khan said there is a need for expansion of the program. Meanwhile, Kenya uses a mix of financing instruments to respond to drought risks, while the DRR financing strategy for Kenya is being developed in collaboration with World Bank, to be finalized soon. Humanitarian responses are very costly. Governments need to put in place measures to increase investment for future risk management purposes.

**Charlotte Hanta Baraka**, General Secretary in the Ministry of Population and Social Protection, Madagascar, said despite the vast wealth of Madagascar, the country remains one

of the poorest countries in the world. For this reason, the government designed a social protection program. The El Niño of 2015-16 had a negative impact on the vulnerable communities and hence the focus on social protection. Beneficiaries were involved in the design stage of the initiative and to hasten the response, a grant was provided by the World Bank to respond to the effects of the disaster. Direct transfers were done to the beneficiaries. A grant of \$35 million was given to the government. Ms. Baraka said, women are among the most vulnerable to the risks and that capacity building is a regular feature of the risk management. Family planning is also done as a measure to mitigate the risk to disaster. This initiative employs a multi-stakeholder approach with the involvement of ministries of agriculture, water and other line ministries. Some challenges were noted, and questions asked following this session as follows:

### Challenges

1. Budget deficits are common issues that governments are faced with and hence there are difficulties in bringing in insurance as a financing tool for risk management.
2. Governments need to use innovative means of financing risk and therefore, effective policies reform is required to achieve this.
3. Humanitarian responses are very costly and therefore, governments need to put forth measures to invest for future risk management

**Question:** Is there room for risk financing and innovation?

**Answer:** The market in Kenya is enthusiastic and the future may witness other innovative approaches to agriculture risk financing, introduced.

**Answer:** There is a need to create awareness among the farmers in Malawi regarding risk financing and innovation.



Participation during the Forum

### **Session 3**

Session 3, titled *Exploring collective pathways to climate resilience and food security – the ASEAN Experience*, was moderated by Ioannis Vasileiou, Agriculture Specialist, World Bank. Mr. Vasileiou shared perspectives of a program being implemented in the ASEAN region, through a presentation on striking a balance in managing El Niño and La Niña in east Asian agriculture. He spoke about the impacts of the El Niño Southern Oscillation (ENSO) as well as country preparedness and resilience efforts and recommendations on priority actions. The objectives of the program are, to: increase awareness among policymakers about ENSO and its impacts on agri-food systems in five countries in East Asia (Cambodia, Lao PDR, Myanmar, the Philippines, and Vietnam), and provide country-specific options to enhance their preparedness and resiliency for future events. Mr. Vasileiou shared statistics on the impact on ENSO in the East Asia Pacific (EAP) Region and some key messages. He said importantly that national economies and people are vulnerable to ENSO-related climate shocks and that there are negative effects on agricultural production. ENSO's impacts on agricultural sector have economy-wide ramifications and El Niño threatens countries' progress in poverty reduction and food security. In addition, poor rural households suffer

disproportionately, while women are vulnerable to ENSO events. He further said, impacts vary across sub-national regions, and that La Niña gains can offset some of El Niño's losses. Mr. Vasileiou also shared perspectives on the role of effective policies in addressing ENSO impacts.

This session featured two panelists from the ASEAN Secretariat. Their participation was designed to inform the participants on lessons learned, and experiences and good practices on matters of climate risks and resilience, from a region beyond Africa.

**Natalia Derodofa**, Senior Officer, Environment Division, gave an overview of ASEAN and presented the *ASEAN Cooperation Framework on Disaster Management* as well as the *Operational Mechanism of ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre)* and the *ASEAN Cooperation Framework on Environment, Climate Change and Transboundary Haze Pollution*. ASEAN was launched in August 1967 with the aim and purpose of accelerating the economic growth, social progress and cultural development of the region through joint endeavours and promoting regional peace and stability through abiding respect for justice and the rule of law. ASEAN has ten member States: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. Ms. Derodofa said the AADMER was signed in July 2005, ratified by all ten countries in ASEAN, entered into force on 24 December 2009 with the objective of providing effective mechanisms to achieve significant reduction in disaster losses in ASEAN, and to jointly respond to disaster emergencies. It is legal framework for all ASEAN member States and serves as a common platform in responding to disasters within ASEAN. The AHA Centre is the operational coordination body and engine of AADMER. The AADMER work program (2016-

2020) is focused on: risk assessment and awareness, prevention and mitigation, preparedness and response, recovery, and knowledge and innovation management. About the ASEAN Disaster Risk Financing and Insurance, she elaborated on the Southeast Asia Disaster Risk Insurance Facility (SEADRIF) which is proposed as a re-insurance-backed disaster liquidity facility, providing participating countries with immediate disaster response financing. SEADRIF is expected to be established in 2019. She presented a list of 28 AHA Centre responses for the region (data as at August 2018) and also shared insights to the Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operation (SASOP), highlighting seven key steps including: notification of disaster, request for assistance, offer of assistance, disaster situation update, joint assessment of required assistance, mobilization of assets and capacities, and demobilization of assistance and reporting. The region has seven principles under One ASEAN, One Response. Furthermore, Ms. Derodofa said, the ASEAN Strategic Plan on Environment is still under development and has linkages with regional blueprints and global priorities.

**Pham Quang Minh**, Assistant Director, Food, Agriculture and Forestry Division, shared perspectives on *ASEAN Cooperation in Food, Agriculture and Forestry (FAF)* as well as *Climate Resilience-related Initiatives and Partnership/Cooperation arrangements*. He said, ASEAN cooperation in the agriculture sector dated back as early as 1968, with cooperation in food production and supply. In 1977, the scope of cooperation was broadened to include the greater area of agriculture and forestry since the needs have since increased. Currently, the specific areas under ASEAN cooperation are focused on food agriculture and forestry. Dr. Minh further said the following, that: the key goals of ASEAN

cooperation on Food, Agriculture and Forestry (FAF) in 2016-2025 are in ensuring equitable, sustainable and inclusive growth, alleviating poverty and eradicating hunger, ensuring food security, food safety and better nutrition, deepening regional integration, enhancing access to global markets, increasing resilience to, and contributing to mitigation and adaptation of climate change, natural disasters and other shocks, and achieving Sustainable Forest Management (SFM). He said, to implement activities on FAF cooperation, forty-eight Working Groups and sub-working groups (WGs) under ASEAN Ministers of Agriculture and Forestry (AMAF) were established with different tasks/ functions. In addition, he said, the ASEAN Integrated Food Security (AIFS) Framework was adopted by ASEAN Ministers in Agriculture and Forestry in 2015. The priority commodities for food security in the ASEAN region include rice, maize, soybean, sugar and cassava. Other commodities such as livestock, fishery and crops for staple food, which are important for food security and nutrition, shall be identified during implementation of the AIFS Framework and Strategic Plan of Action on Food Security (SPA-FS). The AIFS Framework comprises five components, which are distinctive but interrelated in nature to facilitate cooperation in addressing food security in the ASEAN region. The AIFS Framework's Components are supported by corresponding nine Strategic Thrusts. On Climate Resilience related initiatives, Dr Minh presented the ASEAN Climate Resilience Network (ASEAN CRN) which aims at promoting a common understanding on climate change and the agriculture sector amongst ASEAN Member States.

#### Session 4

Session 4 was a wrap up session on *Pathways Forward to Stronger Climate Resilience and Regional Food Security* moderated by Willem Janssen, Lead Agriculture Economist, World Bank. The session was designed to allow an open discussion involving all participants. The main panelists selected to open and close the session were drawn from Uganda (Dr. Charles Mukama), Zimbabwe (Dorcas Tawonashe), Madagascar (Charlotte Hanta Baraka), COMESA (Dr. Mclay Kanyangarara) and Djibouti (Nouradin Elmi Robleh).

The session commenced with a presentation delivered by Nouradin Elmi Robleh from the Ministry of Agriculture Environment Fisheries and Livestock of Djibouti. His presentation was titled, *Resilience Program for Drought and Development of Livelihoods in the Horn of Africa (DRSLP I)*. Mr. Robleh said the objective of the initiative is to assist the country develop its mitigation and adaptation capacities to reduce its exposure to the adverse effects of climate change, particularly of nomadic populations and agro-pastoralists.



Construction of an underground water reservoir in Silalmia, Djibouti

#### Key Takeaways and Next Steps

The following issues/key messages were highlighted during the session as takeaways and/or as recommendations and next steps for addressing climate risks and food security resilience, including the need to enhance the

role of regionalism. This session was moderated by Willem Janssen from the World Bank. It was an interactive discussion that involved all participants present. Four (4) questions as follows, were presented to participants to reflect on during this session:

- What have you taken away from the discussions of this Forum?
- What are the some of the key challenges and gaps?
- What are the good practices that should be upscaled in your countries?
- What do you think is the role of regionalism and what role could COMESA play [going forward]?

The deliberations during this session are summarized as follows:

**With regard to the COMESA Secretariat's support to the small island States of Comoros, Madagascar, Mauritius and Seychelles to develop policies and strategies on climate risks and resilience:** It was noted that small Islands States are at greater risk of suffering the impact of climate risks and therefore, COMESA is requested to pay greater attention to their plight through building their capacity to manage and mitigate risk and supporting their efforts in ensuring that effective evidence-based policies are in place.

**Ensuring an integrated approach as well as calls for regional cooperation and joint planning between stakeholders and institutions in the context of climate Change and risks:** The Forum called on COMESA member States to work together to deal with common issues. Constellations of a few countries at a time, within the region, should be supported in the identification of similar climate risks and in sharing information of matters of management and mitigation of climate effects.

COMESA is called upon as the REC to spearhead this proposed initiative. Climate risks are, after all, regional in nature and therefore, they require regional preparedness and responses. COMESA should continue engaging with ASEAN in order to draw from the experiences and good practices from the south east Asian region.

**Interventions aimed at addressing climate vulnerability require significant amounts of resources and capacity:** Member States were encouraged to be innovative in their approaches to risk financing. Furthermore, countries could reach out to existing World Bank's financial instruments (such as the Post-Disaster Investment Project Financing (IFP) and Contingency Emergency Component as well as the Catastrophe (CAT) Bonds and CAT Drawdown Options (DDOs). It was also recommended that various insurance (risk transfer) products are significant in supporting and encouraging the area of financing risk – among them, weather index insurance and yield index insurance. The Forum noted that there is a need to develop blended financing tools and insurance products to fight climate change and achieve resilience. In addition, countries such as Malawi have been members of the ARC since 2012. ARC uses Africa Risk View to monitor drought situation during a particular rainfall season and trigger pay-outs in times of major drought events. As a case in point is noted when Malawi bought a parametric drought insurance policy from ARC Ltd for the 2015/16 agricultural season.

Some examples were provided, as case studies, on the need to improve Early Warning information systems by countries to strengthen preparedness and early action. The World Bank, for instance, has recently finalized an Agriculture Risk Assessment/Profiling Report for Zambia (2018) in which a recommendation has been made for some key areas to be strengthened/addressed. These include the

need to: strengthen Early Warning Systems (EWS), address Price Volatility and Trade Restrictions, and strengthen Warehouse Receipts. Based on the outcomes of the above World Bank Study, PARM/IFAD is currently undertaking two specific studies with a view to developing tools to support/strengthen management of agriculture risk. The two areas are: Early Warning Systems and Warehouse Receipts Systems in Zambia.

**Supporting small scale farmers to access climate information and to be actively involved in implementation of climate related interventions:** The Forum discussed the issue of strengthening meteorological services at country level. This includes among others, strengthening the capacity of National Agro-Meteorological (AgroMet) services through:

- Improved Access to climate data and enhancement of climate information systems. This eventually translates into increased investment in technologies that are essential to address climate risks and achieve food security and resilience etc.;
- Capacity building and training of key staff in the ministries responsible for agriculture, particularly their AgroMet Departments; and
- Developing capacities of farmers on usage of climate modelling, information technologies and decision making based on accurate data.

**On that fact that quality and real time data is important to support the resilience agenda in the member States:** The Forum noted that there is an urgent need to leverage the large data and geospatial capability tools, such as the World Bank's Ag Observatory (Ag Observatory), in decisions making, policy reform, including among others, targeting climate-smart interventions in existing and pipeline projects. The Forum noted that there is a need to enhance capacities in terms of resources and

policies, including knowledge management systems, that are required to deal with climate risks.

**Enhancing awareness raising among youths on climate change:** COMESA presented their work being undertaken in Zimbabwe, where school children are being taught, exposed and trained on sustainable development with a view to generating a cadre of youth that are better equipped to participate in the cause for management and mitigation of climate risks and strengthening of food security resilience. The Forum noted the significance of this initiative to supporting the agenda on addressing climate vulnerability and securing the future for the young by ensuring their involvement early in the cause.

The Forum also noted the need to deepen involvement of **Civil Society Organizations (CSOs)** in climate change planning and responses and to establish regional platforms for sharing lessons and good practices on climate risks management and resilience.

## Closing Session

The closing session was moderated by Willem Janssen and Nalishebo Meebelo.

**Stephen D'Alessandro** spoke on behalf of the Bank and thanked participants for their rich contributions to the sessions and discussions. He also thanked staff of the COMESA and World Bank teams for their unrelenting efforts during the organization and facilitation of the Forum.

**Mclay Kanyangarara** spoke on behalf on COMESA. He thanked the World Bank for partnering with COMESA to organize the Forum. He stressed the importance of moving beyond the rhetoric on approaches to dealing with climate change effects, preparedness and responses, to becoming more practical in

seeking solutions that protect the livelihoods of populations in the region. He emphasized the need for generation and use of real time data, stating a willingness for COMESA to work with the Bank in supporting countries to establish the Ag. Observatory. He said CSA is key to addressing food security resilience and to protecting livelihoods in the region and looked forward to continued collaboration with the Bank on this matter, going forward.

A Vote of Thanks was delivered by **Mr. Mohammed Ali Ismail**, Permanent Secretary in the Ministry of Agriculture for Somalia, who thanked COMESA and World Bank, on behalf of other member States present, for organizing the regional forum which allowed the sharing of very important information. He said Somalia is excited to be back in COMESA and looks forward to working very closely with the Secretariat.

Closing Remarks were delivered by **Mr. Dominic Namanyungu** on behalf of the host country, Zambia. In closing the Forum, Mr. Namanyungu said, the Government of the Republic of Zambia takes issues of climate risks and resilience very seriously. He noted that the Vice President, who oversees Disaster Risk Management and Mitigation in the country, requested COMESA and the WB to share with her office the proceedings of the forum and the key note address. He thanked all participants for their contributions to a successful Forum and the World Bank and COMESA for organizing the event.

## DAY THREE – October 27, 2018: Field Visit to the Southern Africa Development Community (SADC) Plant Genetic Resources Centre (SPGRC)

A Field Visit to the Southern Africa Development Community (SADC) Plant Genetic Resources Centre (SPGRC) was organized by

COMESA Secretariat in the margins of the Regional Forum. The event took place on Saturday 27<sup>th</sup> October 2018 from 09h05 to 11h15, i.e. two hours and 10 minutes, approximately. The following countries participated in the visit: Ethiopia, Kenya, Malawi, Somalia, Uganda and Zimbabwe<sup>1</sup>, accompanied by participants from COMESA Secretariat. Logistics were organized to enable participants to leave the Taj Pamodzi Hotel at 08h45. Staff at SPGRC was ready to welcome participants at 09h05 and to facilitate a tour, while providing information on the origins, objectives and operations of the Centre.

The Centre was established in 1989 in recognition of the importance of conserving plant genetic resources, and as a result of erosion of genetic resources in Southern Africa (See: <https://www.sadc.int/sadcsecretariat/servicescentres/spgrc/>). The SPGRC is a non-profit, self-governing regional organization, located on the outskirts of Lusaka (Chongwe, Lusaka Rural District), Zambia. The Centre works in collaboration with each of the 16-member States of SADC, to conserve and preserve the genetic diversity and viability of Southern Africa's plant stocks. The Centre also performs important roles in research, documentation, education and training, together with counterparts at national level. The SPGRC has 3 sections: The Ex Situ, In Situ and Documentation section. The Centre collects, documents and stores seed samples on a long-term basis. This process is called *accession* – a unique entry into a gene bank collection, representing a distinct genotype or plant variety as collected at a specific location and time. Information about the collection sample is important for searching and retrieval from the gene bank. The SPGRC seeks to improve accession information and to make this available through a documentation

and information system to all member States. National Centers hold more than 44,000 accessions, with genetic material collected from local farms and from the wild.

The Centre initially operated as a project and initiated the creation of national gene banks. A strategy was developed, and donor funds mobilized for operations. The Centre began as a 20-year project, initially funded and technically supported by the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) through the Swedish International Development Cooperation Agency (SIDA). The SPGRC acts as the central depository for seeds in the member States.



Seeds at the SPGRC, Lusaka Rural District, Zambia

The Centre is not without challenges. These include, among others, energy issues (particularly electricity) – a standby generator set is available to address power cuts at the Centre, which is able to accommodate 90 to 100 fridges. Furthermore, collection of seed germplasm can be complicated due to issues such as limited road access and civil unrest. Materials collected require careful handling to avoid loss, misplacement, or loss of viability.

The Centre collaborates with other international genetic resources centers. In this

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<sup>1</sup> Other member States and participants did not participate in the Field Visit due to the fact that their [flight] departure times were scheduled at the same time as the visit to the SPGRC.

regard, some good work has been undertaken to address the above challenges through the adoption of the International Treaty on Plant Genetic Resources for Food and Agriculture by SADC (See: <http://www.fao.org/plant-treaty/en/>). The Treaty is designed to facilitate global access to conserved plant genetic resources. The objectives of the Treaty are, generally, to ensure the “...conservation and sustainable use of all plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use...”<sup>2</sup>

Zambia was selected to host the SPGRC since it housed a model gene bank as a conservation effort. The gene bank stores plant genes for food and agriculture purposes. Participants also noted during the Field Visit that Ethiopia is a leading country in genetic resources conservation. Somalian participants also shared the fact that their country has had civil wars for 30 years and therefore, they lost everything in terms of scientific research in agriculture. Agriculture however remains a key sector in Somalia and the country would have an interest in accessing genetic resources. Staff at the SPGRC informed Somalian participants that their country can access plant genes through the Global Crop Diversity Trust.

Climate change affects the work of the SPGRC due to floods and droughts, which pose a high risk of total crop failure. This was especially evident during the El-Niño of 2015-2016, which recorded the worst droughts and floods in 35 years in the SADC region. The El Niño caused a humanitarian crisis affecting 39 million people, i.e. 13% of the SADC population. To mitigate the risks posed by the El-Niño, the national gene banks distributed local seeds to local farmers in

several countries to support efforts towards ensuring food security resilience for the small-scale farmers. This intervention by the SPGRC resulted in reduction in crop failure due to the use of floods and drought resistant seed varieties.

To address issues of agriculture risk financing, the SPGRC communicated to SADC Secretariat requesting support to be provided to countries with a view to linking national risk management agencies with the national gene banks. SADC secretariat has since approved that request and is ready to move to the next stage.

**Table 1: Number of households supported with agriculture interventions in some SADC countries as at end of October 2016**

Country	FAO	Other Partners	Total
Lesotho	99,000	10,500	109,500
Madagascar	80,700	19,314	100,014
Malawi	219,299	81,000	299,299
Mozambique	149,750	113,671	263,421
Swaziland	11,299	10,273	21,572
Zimbabwe	163,615	318,180	481,795
<b>Total</b>	<b>713,674</b>	<b>632,938</b>	<b>1,346,612</b>
<b>Key Interventions</b>			
Crop (seed production, distribution of crop and vegetable seed and planting materials, tools, fertilizer, etc.)			
Livestock (forage production, feed provision, animal health, etc.)			
Water-related interventions (irrigation, water point rehabilitation/construction, water harvesting, etc.)			



Participants during the Field Visit to the SPGRC on the margins of the Regional Forum

<sup>2</sup> <http://www.fao.org/plant-treaty/en/>

## Annexes

## Annex 1: Concept Note for a Regional Summit on Climate Adaptation and Food Systems Resilience in East and Southern Africa

### A. Summary

This note outlines a proposal for organizing a regional policy dialogue/summit during Fall FY19. The objective of the proposed 2-day event is to: 1) provide a platform for COMESA members states to share their experiences and lessons learned in preparing for and responding to the 2015-16 El Niño event; and 2) highlight evidenced-driven “no regrets” policies and investment strategies for strengthening the climate resilience of agricultural systems and regional food security. The gathering will also provide an opportunity for COMESA and its member states to highlight their development priorities. Anticipated outcomes include stronger awareness among regional policy makers of good practice, from within the region as elsewhere, and stronger appreciation for the supportive role that the World Bank and other partners can play in helping the region to confront and better manage growing climate risks and uncertainty.

### B. Context/Background

During 2015-16, record-high temperatures, droughts and floods fueled by one of the strongest El Niño events in recent decades crippled agricultural production across East and Southern Africa. By early 2016, millions of households faced food insecurity as crops failed, incomes dropped, and food stocks tightened. Several countries in the region were hit particularly hard. By late 2015, estimates placed more than 15 million people in central and eastern Ethiopia alone at food security risk following the worst drought there in 50 years. Widespread flooding in Kenya ravaged cropland and displaced thousands while a severe drought in South Africa—which normally accounts for roughly half of the region’s yellow maize output—forced authorities to import maize from abroad for the first time in nearly a decade. In neighboring Malawi and Mozambique retail maize prices spiked, nearly doubling in a few short months.

Increasing levels of concern in early 2016 over the mounting crisis prompted quick action by the World Bank and other development partners to assist client countries in responding to the crisis and to document and learn from the experience. This has generated a wealth of new understanding and insights with strong scope to inform governments’ forward policy planning and investments and the World Bank’s strategic engagement in the region.

### C. Activity Objectives

The overall objective of the proposed activity is to provide an event platform for high-level policy makers in the region, technical experts, and development partners to exchange knowledge and insights into how to reverse the region’s growing climate vulnerability. It will achieve this objective by facilitating the sharing of experiences and lessons learned among countries from across East and Southern Africa in preparing for and responding to the impacts of the 2015-16 El Niño event. Informed and guided in part by the World Bank’s portfolio work, event proceedings will highlight evidence-based, “no regrets” policies for mitigating impacts and strengthening the climate resilience of agri-food systems and regional food security. A central theme will be exploring the role of regionalism and collective, supra-national

pathways towards resilience. Among intermediate outcomes expected from this activity would be a stronger awareness among regional policy makers of good practice policy options and approaches and as a stronger appreciation for the supportive role that the World Bank can play in helping the region confront growing climate risks.

#### **D. Methodology**

In the context of increasing global competition, rapid population growth, and climate uncertainty that defies borders, no country can afford to go it alone. Stronger regional collaboration in confronting common challenges is needed more than ever. To get there, regional policy makers need better access to policy evidence to assess existing approaches and the full range of risk mitigation, transfer, and coping options and associated trade-offs. Progress on developing climate risk preparedness and response plans is variable across the region. While some countries can mobilize funding at national level, there is strong scope for more technical backstopping from the regional level in cases where countries have not progressed significantly in developing and harmonizing programs.

While regionalism shows promise in strengthening disaster preparedness and response capacity of member states and food systems, every region has distinct institutional competencies and policy coherence around longer-term development planning, resilience and food security objectives. Each region would benefit from sharing its knowledge and experiences. Regional can also help strengthen national plans while highlighting areas of shared challenges and interests.

This cross-GP initiative will build on World Bank's competitive strengths in generating and disseminating knowledge and building consensus among stakeholders. Spearheaded by the Agr GP, the activity will benefit from the strong support and collaboration of GP's GTC, GSU and GSP. As envisioned, the activity would be organized as a 2-day event in Lusaka, Zambia and hosted by the COMESA Secretariat. It will bring together decision makers from across the COMESA region and representatives from other regional groupings (EAC, IGAD, SADC) to facilitate knowledge sharing and exchange in developing shared policies, programming and systems. The activity will sponsor two representatives from each of the 19 COMESA member states and two representatives each from EAC, IGAD and SADC to participate. Building on a South-South Exchange Visit (P161300) organized by the World Bank to South East Asia in May 2017, representatives from the Association of Southeast Asian Nations (ASEAN) will also be invited to share their experiences.<sup>3</sup>

Organized around key themes, panel discussions, TED-style talks and presentations by government teams, the event proceedings will provide an opportunity for government teams, the World Bank, other leading development partners, and representatives from the private sector to share insights and the

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<sup>3</sup> Several countries in Southeast Asia have developed collaborative frameworks under the auspices of the Association of Southeast Asian Nations (ASEAN) to boost the capacity of member states to prepare for and respond to natural disasters and strengthen food systems resilience. These include the 1976 Declaration on Mutual Assistance on Natural Disasters, the ASEAN Committee on Disaster Management (ACDM), the ASEAN Agreement on Disaster Management and Emergency Response (AADMER)<sup>3</sup>, and the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre), a centralized regional hub for disaster preparedness and response.

latest evidence of best practice from within the region, as elsewhere. AfDB, the USAID SA Mission and Center for Resilience, IAPRI, IFPRI, CCARDESA, and GFDRR are among likely partners.

Possible/expected outcomes of the proposed activity include:

- Improved understanding of the challenges and opportunities related to strengthening regional collaboration, mainstreaming DRM into regional development strategies, and harmonizing climate adaptation policies and regulations among member states;
- Stronger appreciation for the role of regional trade and enabling policy in stimulating needed investments and the growth of more resilient agri-food systems;
- Better awareness of challenges and opportunities for investing in the development of sustainable and effective social safety net program, based on case studies from across the region;
- Improved awareness of pathways toward strengthening regional cooperation and capacity on DRM through a diverse range of actors including the private sector, the diaspora, civil society organizations and scientific communities;
- Enhanced knowledge of mechanisms and strategies for the shared mobilization of resources for disaster response and agricultural research and innovations development;
- Stronger awareness of effective approaches for mainstreaming disaster response and climate change into regional development strategies and harmonizing related policies and regulations at state level;
- Exploring mechanisms for improving ICT deployment and use of Earth Observation (EO) technology for enhanced environmental monitoring to support policy decision making in Africa and SE Asia;
- Identifying pathways for strengthening data sourcing, analysis and sharing capacities to enhance access to information by decision makers for better early warning/response, especially during crises.

Annex 2: Program - Regional Forum on Climate Risks and Food Security Resilience  
 October 25-26, 2018, Taj Pamodzi Hotel, Lusaka, Zambia

<b>DAY ONE – Thursday, October 25</b>	
<b>Time</b>	<b>Description/Notes</b>
07h30 – 08h30	Breakfast
08h30 – 09h00	<p><b>Opening Session</b></p> <p><b>Remarks World Bank</b> – Simeon Ehui, Director, Agriculture Global Practice, World Bank</p> <p><b>Remarks by COMESA Secretariat</b> – Chileshe Kapwepwe, Secretary General, COMESA</p> <p><b>Opening Statement Zambia</b> – Guest of Honor, Inonge Wina, Vice President, Zambia</p>
09h00 – 09h30	<p><b>Keynote Address:</b> Debisi Araba, Regional Director, Africa, The International Center for Tropical Agriculture (CIAT)</p>
09h30 – 10h45	<p><b>Session 1: Sharing Experiences and Lessons Learned from 2015-16 El Niño</b>  <b>Moderator:</b> Stephen D’Alessandro, Senior Agriculture Economist, World Bank</p> <p><b>Strengthening El Niño Response in Zimbabwe</b>  <b>Speaker:</b> Kudzai Ndidzano, Acting Deputy Director at Ministry of Environment Water and Climate</p> <p><b>Rwanda El Niño and CC Resilient Livestock</b>  <b>Speaker:</b> Mupenzi Mutimura, Senior Research Fellow in Feed resources and Animal nutrition at Rwanda Agriculture and Animal Resources Board (RAB)</p> <p><b>Strengthening El Niño Response in Malawi</b>  <b>Speaker:</b> Doshanie Kadokera, Economist (Food Security), Ministry of Agriculture, Irrigation and Water Development</p> <p><i>Followed by Q&amp;A</i></p>
10h45 – 11h15	Coffee break
11h15 – 12h30	<p><b>Session 2: Sharing Experiences and Lessons Learned from 2015-16 El Niño</b>  <b>Moderator:</b> Stephen D’Alessandro, Senior Agriculture Economist, World Bank</p> <p><b>El Niño Impacts and Trade Policy and Implications on Household Food Access and Welfare – IAPRI/IFPRI/World Bank study</b>  <b>Speaker:</b> Antony Chapoto, Research Director, IAPRI</p>

	<p><b>Somalia Drought Impact Needs Assessment and Recovery and Response Framework</b></p> <p><b>Speaker:</b> Osman Hassan Abdi, Technical Advisor, Ministry of Planning, Somalia</p> <p><b>Zambia Agriculture Risk Assessment</b></p> <p><b>Speaker:</b> Ademola Braimoh, Senior Natural Resources Management Specialist, World Bank</p> <p><i>Followed by Q&amp;A</i></p>
12h30 – 14h00	Lunch
14h00 – 15h30	<p><b>Session 3: Innovative Approaches to Mitigating Production Risks at Farm Level</b></p> <p><b>Moderator:</b> Nalishebo Meebelo, World Bank</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• <b>Platform for Agriculture Risk Management (PARM)</b> Dick N. Siame, Country Program Officer, IFAD</li> <li>• <b>Pluralistic Seeds Systems</b> Augustine Langyintuo, Senior Private Sector Specialist, IFC</li> <li>• <b>Addressing Climate Smart Agriculture: Regional Perspective – COMESA</b> Mclay Kanyangarara, Director, Climate Change Unit, COMESA</li> <li>• <b>COMESA Seed Harmonization Program</b> John Mukuka, Seed Expert, ACTESA/COMESA</li> <li>• <b>Zambia Strengthening Climate Resilience (PPCR Phase II) Project</b> Chitembo K. Chunga, National Coordinator, Pilot Program for Climate Resilience, Zambia</li> </ul> <p><i>Panel Discussion followed by Q&amp;A</i></p>
15h30 – 16h00	Coffee
16h00 – 17h30	<p><b>Session 4: Presentation on the World Bank’s Ag Observatory</b></p> <p><b>Speakers:</b> Caroline Franca, GIS Specialist; Erick Fernandes, Lead Agriculture Specialist, World Bank</p> <p><b>Moderator:</b> Erick Fernandes, World Bank</p> <p><b>Discussants:</b></p> <ul style="list-style-type: none"> <li>• Sithembile Mwamakamba, Head, Climate Change Portfolio, FANRPAN</li> <li>• Chitalu Zimba, Principal Statistician, Early Warning Systems and Food Security</li> <li>• Pham Quang Minh, Assistant Director, Food, Agriculture and Forestry Division, ASEAN</li> </ul>
17h30 – 18h30	<p><b>World Bank Group Products for IBRD and IDA Countries</b></p> <p><b>Speaker:</b> Antonio S. Davila-Bonazzi, Lead Financial Officer, World Bank</p>

<i>Followed by Q&amp;A</i>	
18h30 – 21h00	Reception and Dinner
<b>DAY TWO – Friday, October 26</b>	
<b>Time</b>	<b>Description/Notes</b>
07h30 – 08h30	Breakfast
08h30 – 09h00	Opening remarks by co-chairs – WB/COMESA <i>(Summary of previous day's deliberations)</i>
09h00– 10h45	<p><b>Session 1: Catalyzing Climate Change Adaptation: Challenges and Innovations</b>  <b>Moderator:</b> Debisi Araba, Regional Director, Africa, The International Center for Tropical Agriculture (CIAT)</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• <b>Integrated Forest Landscape Project, Zambia</b> Dr. Tasila Banda, National Project Coordinator, Zambia</li> <li>• <b>Scaling up Climate Smart Agriculture through the Africa Climate Business Plan</b> Ademola Braimoh, Senior Natural Resources Management Specialist, World Bank</li> <li>• <b>Climate-Smart Investment Plan (CSIP) and CSA Profiles</b> Evan Girvetz, Senior Scientist, International Centre for Tropical Agriculture (CIAT)</li> <li>• <b>Climate-Smart Investment Plan (CSIP), Zambia</b> Dominic Namanyungu, Principal Extension Methodologist, Ministry of Agriculture, Zambia</li> </ul> <p><i>Panel Discussion followed by Q&amp;A</i></p>
10h45 – 11h15	Break
11h15 – 12h45	<p><b>Session 2: Exploring Innovations in Financing Climate/Disaster Risk Initiatives</b>  <b>Moderator:</b> Barry Maher, Senior Financial Sector Specialist, World Bank</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Richard Kyuma, Program Coordinator, Kenyan Livestock Insurance Program (KLIP)</li> <li>• Lucy Nyirenda, Head of Program, ARC</li> <li>• Naseer Khan, Operations Manager, Hunger Safety Net Program (HSNP), Kenya</li> <li>• Charlotte Hanta Baraka, General Secretary, Ministry of Population and Social Protection, Madagascar</li> </ul> <p><i>Panel Discussion followed by Q&amp;A</i></p>

12h45 – 14h00	Lunch
14h00 – 15h30	<p><b>Session 3: Exploring collective pathways to climate resilience and food security – the ASEAN Experience</b></p> <p><b>Moderator:</b> Ioannis Vasileiou, Agriculture Specialist, World Bank</p> <p><b>ASEAN’s AADMER framework for disaster preparedness and response, and the Coordinating Centre for Humanitarian Assistance</b></p> <p><b>Speaker:</b> Natalia Derodofa, Senior Officer, Environment Division, ASEAN</p> <p><b>ASEAN Integrated Food Security Framework, Strategic Plan of Action on Food Security, 2016-2020 and ASEAN’s food security and climate resilience-related initiatives</b></p> <p><b>Speaker:</b> Pham Quang Minh, Assistant Director, Food, Agriculture and Forestry Division, ASEAN</p> <p><i>Presentations followed by Panel Q&amp;A</i></p>
15h30 – 16h00	Break
16h00 – 17h00	<p><b>Session 4: Wrap up Session: Pathways Forward to Stronger Climate Resilience and Regional Food Security</b></p> <p><b>Host:</b> Nalishebo Meebelo, World Bank</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• COMESA Countries</li> </ul>
17h00 – 17h15	Wrap up and Closing session
<b>DAY THREE – Saturday, October 27</b>	
7h00 – 7h30	Breakfast
7h30 – 12h00	½ day to visit the SADC Plant Genetic Resources Centre (SPGRC)

Annex 3: List of Participants - Regional Forum on Climate Risks and Food Security Resilience  
- October 25-26, 2018, Taj Pamodzi Hotel Lusaka, Zambia

	<b>Name</b>	<b>Country/Organization</b>	<b>Designation</b>
1.	Joel. H Okwir	COMESA Secretariat	Agriculture Economist
2.	Alex Mwanakasale	World Bank	Senior Agriculture Specialist
3.	Simeon Ehui	World Bank	Director, Agriculture Global Practice
4.	Willem Janssen	World Bank	Lead Agriculture Economist
5.	Stephen D' Alessandro	World Bank	Senior Agriculture Economist
6.	Ioannes Vasileiou	World Bank	Agriculture Specialist
7.	Barry Maher	World Bank	Senior Financial Sector Specialist
8.	Shunalini Sarkar	World Bank	Knowledge Management Expert
9.	Erick Fernandes	World Bank	Lead Agriculture Specialist
10.	Ademola Braimoh	World Bank	Senior Natural Resources Management Specialist
11.	Nalishebo Meebelo	World Bank	Senior Consultant
12.	Mustefa Abu Kuffa	Kenya Livestock Insurance Programme	Senior MRV
13.	Richard Kyuma	Kenya	Programme Coordinator
14.	Willem Janssen	World Bank	
15.	Jhorus M. Mushota		Interpreter
16.	Pham Quang Minh	Indonesia (ASEAN)	Assistant Director, Food, Agriculture and Forestry Division,
17.	Innocent Makwiramiti	COMESA	Senior Private Sector Development Officer
18.	Razafindratovo Falison	Madagascar	Director
19.	Tsiory Andrianantoandro	Madagascar	Environmentalist
20.	Timothy J. Ogwang	Kenya	Agriculture Officer
21.	Dorcas Tawonashe	Zimbabwe	Agriculture Economist
22.	Belay Getachew	COMESA	Biotechnology Specialist
23.	Kudzai Ndidzano	Zimbabwe	Climate Change Compliance Officer
24.	Doshanie Kadokera	Malawi	Economist (MoAIWD)

25.	Lucy Nyirenda	Africa Risk Capacity	Head of Programmes
26.	Mohammed Ali Ismail	Somalia	Permanent Secretary
27.	Suthembile Mwamakamba	FANRPAN	Programme Manager
28.	Tshilidzi Madzivhandila	FANRPAN	Director Policy and Research
29.	Osma Hassan Abdi	Somalia	Technical Advisor, Planning
30.	Naseer Uddin Khan	Kenya	Operations Manager HSNP
31.	Augustine Langyintuo	Kenya	Senior Private Sector Specialist. IFC
32.	Joseph Mpunga	COMESA Secretariat	Senior Investment Promotion Officer
33.	Charles Mukama	Uganda	Focal Point Agriculture Risk Management
34.	Yvonne Mulenga	Zambia	M&E Specialist PPCR
35.	Grace Obuya	Kenya	IFAD Consultant
36.	Ngao Mubanga	Zambia	IFAD Consultant
37.	Tasila Banda	Zambia	ZIFLP National Coordinator
38.	Lwembe Mwale	COMESA Secretariat	Project Officer CC
39.	Mclay Kanyangarara	COMESA Secretariat	CC Advisor
40.	Debisi Araba	Kenya	CIAT Director
41.	Abderemane Hachime	Comoros	Expert Sustainable Development
42.	Theophile Dusengimana	Rwanda	Environment and CC Policy Specialist
43.	Meylad Adam	Sudan	COMESA Desk/Ministry of Agriculture
44.	Zimba Chitalu	Zambia	Principal Statistician, Ministry of Agriculture
45.	George Uzice	Seychelles	Climate Change Negotiator (MEELL)
46.	Tryness Nkhoma	Malawi	Principal Environmental Officer
47.	Evan Girvetz	Kenya	CIAT Senior Scientist
48.	Anthony Chapoto	Zambia	Research Director, IAPRI
49.	Ali Salim Abdourohmane	Comoros	Focal Point Products
50.	Mupenzi Mutimura	Rwanda	Scientist
51.	Natalia Derodofa	Indonesia (ASEAN)	Senior Officer, Environment Division, ASEAN Secretariat

52.	Nouradin Elmi Robleh	Djibouti	Assistant to the Secretary General (Ministry of Agriculture Environment Fisheries and Livestock)
53.	Caroline S. S. Franca	Brazil	Consultant (Data and GIS Specialist)
54.	Dominic M. Hamanyungu	Zambia	Principal Extension Methodologist
55.	Hanta Baraka Charlotte	Madagascar	Secretary General, Ministry of Population and Social Protection
56.	Bennie Mundando	Daily Nation, Zambia	Senior Reporter
57.	Tiyanzile Phiri	Daily Nation, Zambia	Agriculture Economist
58.	Royd Sibajene	ZAWLS	Journalist
59.	Abram Banda	ZNBC	Cameraman
60.	Patricia Banda	ZNBC	Reporter
61.	Chileshe Mwango	QTV	Reporter
62.	Rebecca Vumisah	Radio	Journalist
63.	Monica Mayuni	Zambia Daily Mail	Senior Reporter
64.	Collins Phiri	Zambia Daily Mail	Photojournalist
65.	Sichula Ishmael Mike	Phoenix FM	Senior Reporter
66.	Chiluba Kaite	COMESA Secretariat	Photographer
67.	Phil Kambafwile	COMESA Secretariat	Photographer
68.	Daniel Banda	COMESA Secretariat	Corporate Communications
69.	James Kunda	Times of Zambia	Reporter
70.	Wesley Hanyongola	City TV	Reporter
71.	Golden Yalenegi	5 FM Radio	Reporter
72.	Michelo Hachizibe	Christian Voice	Journalist
73.	Cheswa Kapasa	Diamond TV	Cameraman
74.	Patrick Makenzi	Diamond TV	Journalist
75.	Namwinga Mwinga	MUVI TV	-
76.	Tetiwe Mweemba	Kwacha Newspaper	-
77.	Wezi Mazunda	Sky FM	-
78.	Logic Kukwanda	Hot FM	-

79.	Malangi Nzombola	CBC TV	-
80.	Dem Mwelwa	FM	-

## Annex 3a: Biography of Speakers



**Theophile Dusengimana** is an Environment and Climate Change Policy Specialist at the Ministry of Environment of Rwanda. In this capacity, he coordinates international partnerships and

agreements on climate change, as well as the preparation and implementation of strategy and regulatory frameworks and instruments towards mitigation and adaptation of the country on climate change.



**Doshanie Kadokera** is an Economist (food security) in the Ministry of Agriculture, Irrigation and Water Development (MoAIWD) of the Republic of Malawi. He has worked with the

Ministry for 8 years. He coordinates National Early Warning and Food Security activities and guides the Ministry and other cooperating partners on food security status (food surpluses/shortages) for timely planning by government. Mr. Kadokera coordinates all Safety Net Programs, monitoring of the national and household food security levels throughout the season, and plays a leading role in the production of the monthly/ quarterly Malawi Food Security Bulletin and the Food Security Balance Sheet. He is currently the African Risk Capacity (ARC) Government Coordinator for Malawi, as well as the focal person for all disaster related issues for the Ministry. He holds a Bachelor of Science in Agricultural Economics, as well as a Master of Science in Agricultural Economics specializing in Agricultural Policy Analysis.



**Mohamed Ali Ismail** has worked in the Ministry of Agriculture and Irrigation for the Federal Government of Somalia (FGS) since 1981. He is the Focal point for CAADP in

Somalia as well as Permanent Secretary of the Ministry. He has a bachelor's degree in agriculture.



**Richard Kyuma** is an expert in rangeland and pastoral livestock production systems, drought management, GIS and remote sensing. He is currently the Program Coordinator of

the Kenya Livestock Insurance Program jointly being implemented by the Government of Kenya, World Bank and ILRI, covering Turkana, Marsabit, Wajir, Mandera, Tana River, Isiolo, Garissa, Samburu, Baringo and West Pokot, Kajiado, Narok, Laikipia and Lamu Counties.



**Mukama Charles** is a Senior Veterinary Inspector as well as desk officer for COMESA/WTO/OIC regional economic communities and the Project Manager of the

COMESA Seed Trade harmonization Project at the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF). Dr Mukama is the Ministry ARM focal point and has coordinated the ARM assessment studies that profiled the most important agriculture risks and risk management tools in Uganda and coordinated the ARM capacity building seminars in the country. He was part of the technical team that developed the National Agricultural Insurance initiative being implemented in Uganda by the Ministry of Finance, Planning and Economic Development together with Uganda Insurance Association (UIA).



**Dick N. Siame** is the Country Program Officer for the International Fund for Agriculture Development (IFAD). He has been based in the Zambia Office, since May 2008. He is a Development Economist who has worked in the field of development, mostly focusing on smallholder agricultural and rural development since the early 1980s. He worked for the Ministry of Agriculture as an Economist and as Program Coordinator and Manager for various development programs funded by GIZ, SIDA, World Bank, IFAD. He has also worked as consultant for various development organizations.



**Herinandrasana Tsiory Andrianantoandro** is an Environmentalist in the Departments of Environment and Climate Change within the Ministry of Agriculture and Livestock, Madagascar. For the past eight years, he has ensured the integration of the environmental dimensions in sectoral policies and strategies of agriculture and livestock, in programs and projects of the Ministry and for the continuation of sectoral activities related to the environment with a view to contributing to the rational management of agro-biodiversity and sustainable development, while considering the context of climate change.



**Debisi Araba** is the Director for Africa at the International Center for Tropical Agriculture (CIAT). He leads CIATs work in Africa, in collaboration with hundreds of partners, to make agriculture and food systems more competitive, profitable, and resilient through smarter, more sustainable natural resource management, as well as improving human health and

nutrition across the continent. He is also a member of the Malabo Montpellier Panel, a group of international agriculture experts who guide policy choices that accelerate progress towards food and nutritional security in Africa. He was previously the Senior Technical Adviser on Environmental Policy to the Minister of Agriculture and Rural Development in Nigeria and the team leader of the Environment and Climate Change Unit in the Ministry (2012-2015). He holds a BSc in Geography from the University of Ibadan, an MSc in Clean Technology from the University of Newcastle Upon Tyne, a Doctorate degree in Environmental Policy from Imperial College London and a Master's in Public Administration from the Harvard University Kennedy School of Government.



**Elmi Robleh** is assistant to the Permanent Secretary in the Ministry of Agriculture Water Environment Fisheries and Livestock in Djibouti. Nouradin has worked in the Ministry for six years and is in charge of drought resilience and food security. He holds a bachelor's Degree in Mineral Resources and a master's Degree in hydrology and water quality.

**Abderemane Hachime** is responsible for communication in the Ministry in charge of Energy, Agriculture, Fisheries and Environment, Comoros. He also coordinates the 6th National Report to the Convention on Biological Diversity.



**Pham Quang Minh** accomplished his Doctor Thesis in the National University of Hanoi, Viet Nam in 2012. His research focused on WTO's agricultural policies, including the Agreement on Agriculture (AoA), and the Agreement on the Application of Sanitary and

Phytosanitary Measures (SPS Agreement). In 2000-2013, Dr Minh worked in the Ministry of Agriculture and Rural Development of Viet Nam as Senior Agricultural Official in the Department of Planning. From 2013 to date, as Assistant Director at Food, Agriculture and Forestry (FAF) Division in the ASEAN Economic Community Department of the ASEAN Secretariat, Dr. Minh has worked with ASEAN Member States and various international and dialogue partners to promote ASEAN cooperation on food, agriculture and forestry, and to conduct related measures under the ASEAN Economic Community (AEC) Blueprint, while also promoting the international relationship between ASEAN and international/ dialogue partners in the FAF sector. He supported ASEAN Member States to develop and implement various regional documents such as: (i) ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action on Food Security in the ASEAN Region (SPA-FS), 2015-2020, (ii) ASEAN Regional Guidelines on Food Security and Nutrition Policy, ASEAN Guidelines on Promoting Responsible Investment in Food, Agriculture and Forestry Sectors and (iv) ASEAN Ministers on Agriculture and Forestry (AMAF)'s Approach to gender mainstreaming in the Food, Agriculture and Forestry Sectors. Recently, Dr. Minh has worked with ASEAN Member States to develop the ASEAN Multi-sectoral Framework for Climate Change: Agriculture and Forestry towards Food and Nutrition Security and Achievement of SDGs. The Framework will be further implemented by ASEAN Member States in 2018-2025.



**Natalia Derodofa** is currently Senior Officer of the Environment Division at the ASEAN Secretariat (Association of Southeast Asian Nations), where she provides support and assistance in the

development, implementation and monitoring of programs, projects and initiatives related to ASEAN cooperation on environment. She holds a master's Degree in international Relations from Macquarie University, Sydney, Australia.



**Zimba Chitalu** is the Principal Statistician for Early Warning Systems and Food security in the Ministry of Agriculture, Zambia. He has a background in agronomy, statistics/Information

Systems and M&E. He has experience in designing agricultural experiments, surveys and censuses and has been involved in database programming (using MS Access, Dbase IV and Foxpro), low level Programs like C++ and fourth level Programming using Turbo Prolog. AA. Mr. Chitalu also has a wide knowledge in data analysis using SAS, SPSS, Genstat, Stata, R stat.



**George Francis Uzice** is a climate change negotiator, with the role of increasing understanding of key legal and technical issues and building

stronger representation of Seychelles views in the UNFCCC processes and other climate change related meetings. He ensures better coordination of the SIDS/AOSIS group in the different areas to implement the communications and outreach plan of all COP's decisions and is involved in the development of Seychelles climate change policies. He is also currently the technology coordinator for the AOSIS at the UNFCCC meetings.



**Barry Maher** is a qualified actuary with experience in the non-life insurance sector, the carbon and renewable energy markets, financial inclusion as well as disaster risk financing. From a

Lloyds of London reinsurance syndicate, to an

insurance agency, to the UN, he now works for the Disaster Risk Financing and Insurance Program of the World Bank. Key activities undertaken in his current role include leading policy dialogue and developing customized financial solutions with Ministries of Finance to improve their financial resilience to disaster shocks, leading the development of analytical tools which support Ministries of Finance in their selection of financial instruments, including insurance, to protect their fiscal position against disaster risk. Currently, he is based in Pretoria and is the focal point for disaster risk finance work in the Africa region, focusing on developing disaster risk finance solutions to support shock-responsive safety nets and agriculture insurance programs. He holds a bachelor's Degree in Actuarial and Financial Studies from the University College of Dublin and a Masters in Statistics from the University of Oxford.



**Simeon Ehui**, was appointed Director of the World Bank's Food and Agriculture Global Practice in September 2017. He oversees the strategic direction and high-quality delivery of the Agriculture Global Practice work program with a focus on Africa, the Middle East, Eastern Europe and Central Asia. Since joining the World Bank in 2003, Dr. Ehui has held several assignments. He was manager of the Food and Agriculture Global Practice for Africa (2015-2017) and South Asia (2009-2015) while based in Pakistan. He also served as Lead Economist and Sector Leader for the Sustainable Development Network in Nigeria covering a variety of issues such as agriculture, social, environment, transport and energy. Before joining the World Bank, Dr. Ehui worked for 15 years in the Consultative Group on International Agricultural Research (CGIAR). He managed multi-country agricultural research development programs in Africa and Asia for both the International

Institute of Tropical Agriculture (IITA) and the International Livestock Research Institute (ILRI). Dr. Ehui holds a Ph.D. in Agricultural Economics from Purdue University and has published extensively in his field. He is an honorary fellow of the African Agricultural Economist Association, and a Distinguished Agricultural Alumnus of Purdue University.



**Ioannis Vasileiou** serves as an Agricultural Specialist at the World Bank's Agriculture Global Practice. He is a member of the World Bank's Climate Smart Agriculture (CSA) Team, which is addressing the challenges of agriculture and food security in the face of climate change. Mr. Vasileiou previously worked as a Science Officer for the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), based at the International Food Policy Research Institute (IFPRI). In this role, he focused on issues related to global change, climate resilience and vulnerability, as well as enabling governance and institutions for climate change adaptation and mitigation. Mr. Vasileiou's past work also focused on sustainability and climate change, with the Cabinet of the Commissioner for Environment at the European Commission and at the United Nations. His work at the UN includes working with the Climate Change Support Team of the UN Secretary General, the Division for Sustainable Development at DESA, the UN Global Compact, and the UN Global Pulse. He has also worked on programs with the non-profit sector, such as with the Millennium Promise. Mr. Vasileiou holds a Master of International Affairs from Columbia University, where he specialized in Economic and Political Development.



**Nalishebo Meebelo** is the National Expert for Zambia on matters concerning policy advice for strengthening

implementation of the Comprehensive Africa Agriculture Development Programme (CAADP) and domestication of the 2014 Malabo Declaration. She holds: A Bachelor of Arts degree in Economics with Public Administration, an MBA with Finance, and a PhD in Business Studies, focused on *knowledge management within the sustainable development framework*. Meebelo has worked at both African regional and continental levels, coordinating and facilitating implementation of CAADP for more than a decade. She has supported African Union (AU) member States in their efforts to promote domestic and foreign investment (FDI) linked to smallholders along key agriculture commodity value chains, through targeted policy reform. Dr Meebelo was the Deputy Coordinator for CAADP in the COMESA region and first Coordinator of the COMESA Business Council - voice of the private sector in eastern and southern Africa. She has also contributed to the development of several COMESA and AU frameworks and guidelines as well as strategic plans and programmes in support of regional integration and agriculture development. Meebelo participated in the development of the recent AU Continental Agribusiness Strategy and AU Country Agribusiness Partnership Framework (CAP-F). She is an Associate Editor for a publication titled '*Women Writing Africa: The Eastern Volume*' (2003) and was also nominated as Role Model under the Modernizing African Food Systems (MAFS) initiative in 2015.



**Augustine Langyintuo** is a Senior Private Sector Specialist with the International Finance Corporation (IFC) under the World Bank Group. He is an

Agricultural Trade Economist with extensive agricultural policy reforms, regional trade facilitation and market modeling experiences. He currently provides technical leadership in agricultural policy reforms and agribusiness development in Africa, Eastern Europe and South East Asia while leading the Finance, Competitiveness and Innovation (FCI) Global Practice advisory work in Cameroon, Gabon, Equatorial Guinea, Sao Tome, CAR, Republic of Congo and Chad. Prior to joining IFC in 2013, he was the Head of Policy & Partnerships of the Alliance for a Green Revolution in Africa (AGRA), where he led Ministerial and Parliamentary levels policy advocacy for agricultural transformation in selected African countries. Before joining AGRA in 2009, Augustine Langyintuo was the Socio-Economics Team Leader at the International Maize and Wheat Improvement Center (CIMMYT), where he led agricultural development policy research in East, West and Southern Africa, offered training courses on agricultural market modeling for regional economists, and co-supervised MSc and PhD students in USA and Southern Africa Universities. Prior to that he headed the Socio-Economics Unit of the Savanna Agricultural Research Institute (SARI) in Ghana while lecturing Natural Resource Economics, Farm Management & Accounting and Computing & Programming courses at the University for Development Studies (UDS), Ghana. He reviews for several international Journals and serves as an Associate Editor of the African Journal of Agricultural and Resource Economics. He is the immediate Past President (2013 – 2016) of the African Association of Agricultural Economists and current Chair of the Africa Section of the

Applied and Agricultural Economics Association. He holds a PhD (Agricultural Economics) from Purdue University, USA, an MSc Degree (Agricultural Economics) from University of Reading, UK and a BSc (Upper Honors) Degree in Agriculture from Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.



**Ademola Braimoh** is Senior Natural Resources Management Specialist and the Climate-Smart Agriculture Coordinator for the World Bank's Africa Region. His work focuses on the interaction between agriculture, environment and climate – both in investment operations and analytical work and helping client countries identify strategies for scaling up climate-smart agriculture in the region.



**Mupenzi Mutimura** is a Senior Scientist in feed resources and animal nutrition at Rwanda Agriculture and Animal Resources Development Board (RAB) - formerly Rwanda Agricultural Research Institute (ISAR) - in Kigali, Rwanda, since 2005. He obtained his basic education in Democratic Republic of Congo (DRC) and Rwanda. He holds an MSc in Agriculture-Grassland/Forage Science and PhD in Animal Science -Ruminant Nutrition, from the University of KwaZulu-Natal in the Republic of South Africa. He has experience in climate change adaptation and mitigation, and mixed crop-livestock farming systems. Currently, he is conducting research in the area of climate smart agriculture where he is focusing on climate smart forage options to increase crop-livestock productivity. He has published over 25 refereed journal articles, 5 book chapters and 28 articles/abstracts in proceedings. He contributed to the capacity building of students at University of Rwanda by teaching Pasture Agronomy and Management, as well as feed

analysis and evaluation in BSc and MSc in Animal science, respectively. He is also a co-supervisor of 5 MSc students in Animal Science from University of Rwanda and 3 PhD students from Kenyatta University- Kenya, University of Nairobi and from Swedish University of Agricultural Sciences.



**Osman Abdi** is a social scientist focused on community development and social welfare, having completed his first degree from the University of Nairobi and by the virtue of working different fields in the last 6 years in diverse cultural backgrounds from South Sudan, Uganda, Kenya to Somalia. He is also very passionate about humanitarian field of work with a view to changing and impacting the livelihoods of needy and vulnerable families.



**Kudzai Ndidzano** is the Principal Climate Change Compliance Officer in the Climate Change Management Department of the Ministry Lands, Agriculture, Water, Climate and Rural Resettlement. Responsible for national compliance to the UNFCCC, it's Kyoto Protocol and the Paris Agreement and reporting through the National Communications and Biennial Update Reports. He is the Ministry's Coordinator for the Zimbabwe Climate Change Technical Assistance (ZIM-CLIM) funded by the multi-donor Zimbabwe Reconstruction Fund (ZIMREF) through the World Bank and a Technical Advisory Committee member for the development of Zimbabwe's National Water Masterplan. He is also a member and of the National Civil Protection Committee. He has wide experience in climate change mitigation and adaptation including climate smart agriculture (CSA), disaster risk

reduction/management, integrated water resources management (IWRM) and general catchment management, gained over years of adaptive research and development work targeting rural communities. he holds a Master of Science Degree in Integrated Water Resources Management (IWRM) from the University of Zimbabwe and Bachelor of Science Degree in Natural Resources Management and Agriculture majoring in Land and Water Resources Management from the Midlands State University also in Zimbabwe.



**Timothy Jomo Ogwang** is the Head of the Industrial Crops Sub-division in the Ministry of Agriculture, Livestock, Fisheries and Irrigation, State Department of Crops

Development. Throughout his career, Mr. Ogwang has been involved in the formulation, development and reviews of various policies, strategies, Bills, Acts, Regulations and Guidelines. He holds a Bachelor of Science Degree in Agriculture, from University of Nairobi.



**Falison Razafindratovo** is Director at FID (Intervention Fund for Development) Taolagnaro (Fort Dauphin), Madagascar. He oversees the FIAVOTA Program - a social

safety nets program in the South of Madagascar. Prior to this position, Mr. Razafindratovo was Director at FID Manakara, FID Antsiranana, and FID Mahajanga.



**Charlotte Hanta Baraka** is the Secretary General of the Ministry of Population, Social Protection and Promotion of Women. She is the Supervisor of the Social Safety Nets Program. She

was the Director General of Social Protection in

the Ministry of Population, Social Protection and Promotion of Women in the Ministry of Population, Social Protection and Promotion of Women from 2014 – 2016, Director of Medico-Social Assistances of the Ministry of Population and Social Affairs from 2009 – 2014, Member of the Board of Directors of the National Office for the fight against tobacco from 2017 to date. She is a Member of the Board of Directors of the National Office of Nutrition (since 2013 until today).



**Dorcas Tawonashe** is an Agricultural Economist with 14 years of experience in policy development, program planning, monitoring and evaluation for agriculture and rural development projects.

She is currently the Economist (Ministry desk officer) for the Departments of Climate Change and Irrigation where she is responsible for monitoring and evaluation of national projects. Under her curatorship as the Irrigation and Mechanization Economist she participated in the development, planning and implementation of major national projects such as the FAO Smallholder Irrigation Project (US\$12 million), the More Food for Africa Project (US\$98 million) and the Irrigation Zhove Project (US\$35 million). Her involvement with these national projects exposed her to programme planning, design and implementation of monitoring and evaluation plans, baseline surveys, feasibility studies, training needs assessment, training and developing project indicators and log frames. She has also coordinated impact assessments, mid-term project evaluations where project successes and failures were documented and used to develop lessons learnt and good practices.



**John Mukuka, PhD**, is a Zambian National, who joined the Alliance of Commodity Trade in Eastern and Southern Africa (ACTESA), in June 2010, and

is in charge of the COMESA Seed Development Program/ COMESA Seed Harmonization Implementation Plan (COMSHIP) as well as Acting CEO of ACTESA. He graduated with a bachelor's degree in Crop Science in 1996 from the University of Zambia, a Master of Science degree in Tropical Nematology from University of Gent, Belgium in 2003 and graduated from Christian Albrechts University, Kiel in Germany in February 2010 with a Doctor of Science in Phyto-Pathology. He also worked as a Research Assistant at the University of Zambia from 1996 to 1998 and later at the Zambia Agricultural Research Institute (ZARI) as an Agricultural Research Officer from 1998 to 2005. At COMESA, he is spearheading the COMSHIP initiative to ensure transparency, coherence, synergistic and accountability in its implementation. COMSHIP is crucial in enhancing quality, improved seed including availability of climate-smart varieties to small-scale farmers.



**Mclay Kanyangarara** is the Climate Change Advisor at the Common Market for Eastern and Southern

Africa (COMESA) headquartered in Lusaka Zambia. He provides overall leadership and strategic direction to the Climate Change Unit. COMESA is a regional economic community of 19 African Member States. Dr Kanyangarara holds a Doctorate Degree from Oxford University and has previously worked with the United Nations Industrial Development Organization (UNIDO), prior to joining COMESA 17 years ago. At COMESA Secretariat, he spearheaded the formation of the COMESA Climate Change Unit in 2009 which, notable among other projects, successfully implemented a Tripartite Climate Change initiative that brought together the three Regional Economic Communities (RECs) of the Eastern and Southern African region. Dr Kanyangarara has an excellent understanding of climate change issues, as well as demonstrated knowledge of and working experience in the COMESA-SADC–ESA region with extensive experience and exposure at government, corporate, regional and international levels. He is knowledgeable in climate smart agriculture, renewable energy, climate change negotiations, climate change policy, knowledge management and climate financing. Apart from climate change issues, he has been very involved in the extractive/metallurgical sector that consumes vast quantities of energy, while simultaneously producing much of the region's greenhouse gases.

## Annex 4: Opening Statement by Her Honor Mrs. Inonge Wina, Vice President of the Republic of Zambia



**Dr. Dev Haman**, Acting Secretary General of COMESA

Dr. Simeon Ehui, Director for Agriculture Global Practice, World Bank

Ms. Ina Rutenberg, Country Director, Zambia and Special Representative to COMESA for the World Bank

**Senior Government Officials** and **Experts** from COMESA member States, here present

**Experts** from ASEAN, IGAD, SADC, EAC and beyond

**Staff** from the COMESA Secretariat and the World Bank

**Members of the Print and Electronic Media**

May I simply say, distinguished ladies and gentlemen

It is a great honor and privilege for me to be here with you this morning, to officiate during this important event - the COMESA Regional Forum on Climate Risks and Food Security Resilience.

Allow me to begin my statement by congratulating Ms. Chileshe Kapwepwe on her recent appointment as Secretary General of COMESA and to assure you that the Government of the Republic Zambia, as host on the COMESA Secretariat, will continue to work with your institution to ensure its success in advancing the regional integration agenda through trade and investment.

Let me also take this opportunity to welcome all our visitors to Zambia, and to this important Regional Forum, which seeks to provide a platform for high-level policy makers and technical experts in the COMESA region as well as technical and financial partners, to exchange knowledge and insights concerning modalities and potential tools aimed at reversing the region's growing climate vulnerability. I hope you will take time during your short stay in Zambia to visit some of our interesting entertainment and touristic sites. I am also certain that you are already experiencing the warm hospitality that the Zambian people are well known for.

**Distinguished Ladies and Gentlemen**

For several decades, Zambia's investment has been heavily concentrated in the copper mining sector, with negligible resources going into sectors that create and sustain productive employment such as agriculture, manufacturing and tourism. We also note that even though the country has been recording

steady economic growth in recent years, poverty levels, particularly in the rural areas, remain at significantly high levels. This is despite that fact that we experienced a reduction in urban poverty by 25.6 percent, from 42 percent in 1991 to 23.4 percent in 2015, while rural poverty declined from 88 to 76.6 percent during the same period.

### **Ladies and Gentlemen**

Zambia's long-term vision is to become a prosperous middle-income country by 2030, and sustainable development is one of the key basic principles on which Vision 2030 is founded. Within this context, the Patriotic Front Government believes that economic growth must be synonymous with rapidly increased incomes of rural people, to lift them out of poverty. The Seventh National Development Plan (2017-2021) whose theme is focused on accelerating development efforts without leaving anyone behind, stresses the importance of inclusive economic growth that is associated with labor-intensive sectors, such as agriculture – a sector that provides employment, food security and nutrition, for the rural populations. My Government is keen therefore, to strengthen agriculture related policies and regulatory frameworks to enable effective economic transformation towards shared prosperity and improved livelihoods.

### **Distinguished Ladies and Gentlemen**

Agriculture development and food security in our region, is at greater risk today than ever before due to several factors including: natural and human induced disasters, low public and private investments in relevant sectors, lack of effective evidence-based planning, weak institutional capacities etc. Furthermore, our countries are experiencing the impact of climate change and its related risks. Many of us here recall the 2015-2016 El Niño events that resulted in high temperatures, droughts and floods, posing a great risk and fueling crop failures, reduced income and generally, food and nutrition insecurity. This is all fresh in my memory, because my office is designed to deal with Disaster Management and Mitigation in Zambia. **Risk Events** are a major contributing factor to decline in Zambia's agriculture GDP. Agriculture GDP averaged 8.2% for the period 2011 to 2015 and declined to 5.3% due to El Niño and Fall Army Worm.

For our countries in the region to achieve the aspirations of the 2014 African Union Malabo, there is a need for us to begin to share and use the scientific knowledge and evidence to inform how we manage climate and agriculture risks and to ensure food security resilience. You may wish to note that this is a matter that rests high on the agenda of my Government and is reflected in the Seventh National Development Plan. Zambia is keen to deal with production risks, market risks, financial risks, enabling environment risks as they relate to matters of agriculture development and food security. The Government welcomes partners such as the World Bank, COMESA and others to work with us in managing climate and agriculture related risks in our country.

### **Ladies and Gentlemen**

I am told that an ENSO is 70% eminent in the horizon in our region. This Forum could not have been organized at a better time to look at country preparedness for such events and to share lessons, experiences and good practices on matters of climate change. I am keen to receive the outcomes of the discussions of this Forum and to be briefed on the way forward for the region, after your deliberations.

In conclusion, let me to take this opportunity to thank COMESA and the World Bank for selecting Zambia to host this event and for inviting me to deliver this opening statement. My gratitude also extended to the organizers of the event and to all the technical experts from our member States, representatives from regional economic communities and other participants who are here to share and add value to this Forum. My message particularly to the Media is to ensure that we increase our knowledge sharing, communication and advocacy on this matter of climate risks and food security resilience to ensure that it is given due attention by all policy makers and stakeholders in the region.

I wish you all a fruitful Forum.

Thank you for your attention.

I now declare this Forum officially Open.

## Annex 5: Statement by the COMESA Secretary General

Your Honor Mrs. Inonge Wina, Vice President of the Republic of Zambia

Dr. Simeon Ehui, Director for Agriculture Global Practice, World Bank

Ms. Ina Rutenberg, Country Director, Zambia and Special Representative to COMESA for the World Bank

### **Representatives of the World Bank and COMESA**

#### **Members of the Media**

#### **Distinguished participants**

#### **Ladies and gentlemen**

We are greatly honored by the Government of the Republic of Zambia for hosting this event and gracing the opening ceremony for this regional Forum on climate risks and food security resilience. The forum is very timely as the adverse impacts of climate change are evident throughout the world and more so in our region where most of the people depend on rain-fed agriculture and other environmental resources for their sustenance.

COMESA is very proud to jointly organize this forum in close partnership with the World Bank. Our partnership goes back many years wherein we continue to collaborate in diverse areas of common interest.

I am especially pleased to welcome all participants particularly those from as far afield as the ASEAN region. COMESA cherishes this south-south collaboration to exchange of ideas and experiences. I trust that your time with us will be purposeful and worthwhile.

#### **Ladies and gentlemen,**

The essence of resilience is that tenacity essential for species and systems to survive and thrive. In other words, those that do not have this essential quality struggle to thrive and eventually perish. This fundamental principle is the main reason why the who is who of the world are seized with finding lasting solutions to the threats of climate change and enhancing the resilience of the systems that are essential for life on this planet.

Likewise, the regional integration that we are pursuing in COMESA is also vulnerable to the vagaries of climate change and I will illustrate this with a few examples:

- The economies of many of our member states are agriculture based and so the bulk of goods traded in the region are agriculture commodities or products derived therefrom. Maize, beans, sugar, tea, tobacco, livestock, poultry and dairy products, cotton textiles come to mind
- Trade is primarily by road and many of the roads were not designed to withstand the heavy flooding we are witnessing because of climate change.
- Many countries within our region such as DRC, Ethiopia and Zambia depend on clean renewable hydro-electric power. While this is progressive and green, in 2016 we saw the folly of depending primarily on this energy source when, due to El Niño induced drought, the level of Lake Kariba,

shared by Zambia and Zimbabwe for generating electricity fell to its lowest level since the lake was constructed

### **Ladies and gentlemen,**

Building resilience to the impacts of climate change of the agro-food systems, infrastructure and energy supplies is a top priority at COMESA. However, resilience is also needed to other natural and man-made disasters. A few years back, we saw how communicable diseases can quickly turn into a pandemic and paralyze a whole region when the deadly Ebola ravaged west Africa. As we speak, Ebola, cholera and typhoid lurk in our regions and are of grave concern.

Regional integration entails interconnecting physical and non-physical national systems into regional systems. Examples are road, rail, communications, electricity grids, financial, tourism and health systems. It is imperative that we build resilience into these systems as they are the mechanisms through which we deliver regional integration.

### **Distinguished participants**

#### **Ladies and gentlemen**

For these interventions to succeed, there needs to be:

- High level of awareness especially at the leadership levels
- Enabling national and regional policy environment
- Human and institutional capacity to effectively deal with the issues
- Technology development, transfer and diffusion
- Access to financing

This regional Forum is a major step in the right direction in this regard. Through your discussions and exchanges, we look forward to harvesting ideas and insights that will inform and underpin our future actions.

Whilst you are at it, may I implore you to devise innovative ways of bringing in the private sector to create new business out of doing the right things in this regard.

The youth bulge is upon us and in many countries, the front of this bulge has breached the 30-year mark. The future is bleak for many of these young people. The challenge is for the sustainable development agenda to create meaningful jobs and pacify this restless element of society that now exceeds 50% of the population and still growing. Agriculture technology has been stagnant in many countries leading to lack of interest in it by most youths resulting in many of them migrating into urban areas. Bringing in modern technology and mechanization should reverse this trend.

In the same vein, urban agriculture is an increasingly important food security and resilience measure for the urban poor. Countries must recognize, regulate and facilitate this subsector. In countries like Cuba, urban and peri urban agriculture accounts for more than half the agricultural output.

**Ladies and gentlemen,**

Finally, and on a positive note, many of our member states already have a head start on the green economy race as they are among the lowest emitters of green-house gases blamed for climate change. Green technology options for development now widely available and affordable for the countries to launch themselves onto a sustainable low carbon growth and development pathway.

With these few remarks, I thank you for your attention and wish you successful deliberations.

## Annex 6: Welcome Remarks by Simeon Ehui, Director, Agriculture Global Practice

1. Salutations
2. Thank you, Ms. Mebeelo, (Moderator), Hon. VP Inonge Wina, distinguished guests. On behalf of the World Bank, I am honored to be here with you today for the opening of this 2-day Forum on Climate Risks and Resilience.
3. I would also like to extend special thanks to COMESA Secretariat for jointly preparing today's event. I am delighted to see representatives and experts from ministries across the region, development partners as well as other stakeholders to participate in this Forum.
4. We gather at a time when food production is struggling to keep up as crop yields level off in many parts of the world and natural resources—including soils, water and biodiversity—are stretched dangerously thin. Over 800 million people worldwide go to bed hungry. The food security challenge will only become more difficult, as the world will need to produce about 70 percent more food by 2050 to feed an estimated 9 billion people.
5. This challenge is amplified by agriculture's extreme vulnerability to climate change. Climate change's negative impacts are already being felt, in the form of reduced yields and more frequent extreme weather events, affecting crops and livestock alike. Substantial investments in adaptation will be required to maintain current yields and to achieve the required production increases.
6. Agriculture is also a major part of the climate problem. It currently generates 19–29% of total GHG emissions. Without action, that percentage could rise substantially as other sectors reduce their emissions.
7. Safeguarding livelihoods and strengthening resilience in the face of growing climate threats is among the greatest challenges of the 21st Century. This is particularly true in the case of agriculture.
8. Many of you recall just a few short years ago when record-high temperatures, droughts and floods, fuelled by one of the strongest El Niño events in recent decades crippled agricultural production across East and Southern Africa. By early 2016, millions of households faced food insecurity as crops failed, incomes dropped, and food stocks tightened. Several countries in the region were hit particularly hard. Drought-ravaged South Africa—which normally accounts for roughly half of the region's yellow maize output—was forced to import maize from abroad for the first time in nearly a decade. In neighbouring Malawi and Mozambique retail maize prices spiked, nearly doubling in a few short months.
9. Mounting concerns by governments, the World Bank and other development partners catalysed rapid and concerted action to respond to the crisis and to document and learn from the experience. This has generated a wealth of new understanding and insights with strong scope to inform governments' forward policy planning and investments. We forward to hearing about some of those lessons during this Forum.
10. Today with the looming threat of another extreme El Niño developing in the Pacific Ocean in coming months, the National Oceanic and Atmospheric Administration (NOAA) puts the

probability as much as 75%. And while this El Niño is not expected to be as strong as the last, we shouldn't underestimate its potential to upend lives and livelihoods.

11. Enabling investments and policies to build resilience to ENSO can also help us build resilience to climate change. This is urgent. As you know, the IPCC's latest report warns that limiting warming to 1.5C is barely feasible and every year we delay, the window of feasibility halves. But, it also highlights that limiting warming to 1.5°C can result in significantly smaller net reductions in yields of maize, rice, wheat, and potentially other cereal crops, particularly in sub-Saharan Africa. Livestock is also projected to be adversely affected with rising temperatures. All said, for the optimists among us, there's still hope. Just last week, the UN Secretary General, at the World Bank's Annual Meetings in Bali, called for a switch to climate-friendly sustainable agriculture.
12. The World Bank Group (WBG) is currently scaling up climate-smart agriculture. Under the Climate Change Action Plan, the World Bank committed to working with countries to deliver climate-smart agriculture that achieves the triple win of increased productivity, enhanced resilience, and reduced emissions. This commitment amounted to a record-setting \$20.5 billion in climate-related finance delivered during the last fiscal year - the result of an institution-wide effort to mainstream climate considerations into all development projects.
13. We know that climate smart agriculture is within reach. We are glad to have here with us today experts from a wide range of CSA projects and activities to share their experience of making agriculture climate smart.
14. Climate-smart agricultural practices can reverse the trends of land degradation, sustain food production, reduce greenhouse gas emissions and improve ecosystem services that makes agriculture more resilient.
15. The World Bank's engagement on climate action with our client countries is rapidly growing:
  - In 2016, we committed to ensure 100% of agriculture operations are climate-smart by 2010. We achieved this goal in less than two years.
  - In 2016, we also committed to develop climate-smart agriculture profiles and/or investment plans for 40+ countries. By now, we have accomplished this goal for 20 countries, several of those are in Eastern and Southern Africa. *We'll be hearing on Friday about the Climate-Smart Investment Plan (CSIP) developed here in Zambia.*
  - We've generated 45% climate co-benefits generated by the AgGP's US\$4.6 billion in new lending delivered in FY18.
  - The World Bank's main lending arms, IBRD and IDA, have almost doubled the share of projects that deliver climate co-benefits, increasing from 37 percent in FY16 to 70 percent in FY18.
  - And World Bank financing for developing countries to adapt and build resilience to climate change also grew – with \$7.7 billion in adaptation investments in FY18 compared to \$3.9 billion the previous year.

- Now, close to half (49 percent) of all World Bank climate finance is devoted to adaptation, demonstrating a commitment to focus as much on supporting countries to adapt to climate change as on mitigating future emissions.
- From January 2016 to April 2018, the World Bank’s Board of Directors approved **83 projects** supporting **climate-smart agriculture in Africa** with cumulative investments of **US\$3.8 billion**.
- Spreading across 30 countries, the projects aim to improve the livelihoods of about 5 million farmers and increase the climate resilience and productivity of about 3 million hectares of land.
- Out of the \$3.8 billion invested, the total climate co-benefits, that is, the amount of finance flowing into agricultural adaptation and mitigation is \$1.5 billion. Some 66 percent of the climate finance flows into adaptation in Africa.
- Higher finance flows to adaptation compared to mitigation reflect the priorities of African countries to urgently address the continent’s agricultural sector’s climate vulnerability and increase resilience.
- We are targeting to further expand the share of Climate Smart Agriculture triple win projects (to 66% over FY20-FY25, this is still internal) and further deploy a full range of analytical and funding instruments for CSA interventions.
- We (as WB) are currently in the process of developing an Adaptation and Resilience Strategy, including setting up Post-2020 Climate Targets and Actions, where agriculture will be also featured.

16. Some examples of Bank-supported financing for climate action include:

- In **Niger**, a CSA project aims to benefit 500,000 farmers and agro pastoralists in 44 communes through the distribution of improved, drought-tolerant seeds, more efficient irrigation, and expanded use of agroforestry and conservation agriculture techniques.
- In **Rwanda** for example, the flagship program on Land Husbandry, Water Harvesting, and Hillside Irrigation Project, aimed to better manage rainfall in key watersheds so that it causes less hillside erosion.
- In **Senegal**, the West Africa Agricultural Productivity Program (WAAPP) has developed seven new high-yielding, early-maturing, drought resistant varieties of sorghum and millet. Released in 2012, these varieties are being widely diffused to farmers and show positive yield results.
- We are providing 38 million people in 18 countries with access to reliable climate information and early warning systems to deal with more frequent and intense natural disasters such as floods and hurricanes.

17. Beyond finance, good policy is critical. Farmers require the right mix of incentives to adopt needed adaptation and mitigation measures. Here, it’s worth highlighting that current US\$ 600 billion/year support programs for agriculture across the world, including price support measures

and input subsidies, often provide perverse incentives. This needs to change. We need better, more systematic thinking on how to redirect these support programs for better climate outcomes.

18. In sum, building resilience in the agricultural system is an opportunity to make progress across a wide range of sustainable development goals – poverty, climate, nutrition and health. It's a universal agenda we can all get behind.
19. We hope this Forum will provide a constructive and useful platform for COMESA member states to share their experiences and lessons learned in preparing for and responding to the last El Niño event. We also hope to hear about best practice investments and policies with strong scope to ensure we are better prepared for the next crisis. We also hope that we will all take away a better understanding of what works, what doesn't work as well, and what we can do collectively to push forward on this critical agenda. I think we would all agree that within the context of growing climate risks, with impacts that scale well beyond national borders, no country can afford any longer to go it alone and we need to find collective pathways to confront what is a shared, global challenge. Regionalism—embodied by regional organizations like COMESA—must play its part.
20. I'd like to thank our colleagues from COMESA for co-organizing this event. I'd also like to recognize those representing EAC, IGAD, SADC and ASEAN for joining us today for this Forum.
21. Finally, I would like to encourage all of you to participate actively in today's discussions, share the achievements you have made and challenges you face, and provide your advice in developing strategies, building capacities at all levels and plan of action to prepare and respond to ENSO and reducing climate vulnerability. The World Bank looks forward to working with you to enhance ENSO preparedness and resilience to climate change. Once again, a very warm welcome to all, and I look forward to your active participation and contributions.

Thank you.

## Annex 7: Keynote Address by Adebisi Araba, Regional Director, Africa, CIAT

### Protocols

Your Excellency, Mrs. Inonge Wina, Vice President of the Republic of Zambia, Honorable Mr. Dev Haman, Acting Secretary General, COMESA, Dr. Simeon Ehui, Director, Agriculture Global Practice, World Bank, Dr. Ina-Marlene Ruthenberg, Country Manager, Zambia, World Bank, Distinguished Ladies and Gentlemen. Good Morning!

I would like to extend special thanks to the World Bank Group, as well as the leadership team and members of COMESA for organizing this gathering of stakeholders, working to strengthen the foundations of agriculture transformation in Africa.

What does agriculture transformation entail? It entails evolving systems, practices and policies to make the sector resilient to shocks and stresses, highly productive, globally competitive and sustainable, able to deliver food and nutrition security, while also economic development and shared prosperity.

Agriculture transformation compels us to reassess the role of agriculture in economic development. Typically, we find that responses center around climate adapted and low emission technologies. We need to adopt a more nuanced appreciation for food systems and how they interact with the financial, environment, trade, legal, social, infrastructural, communications and education systems amongst many others. We need to embrace the complexity of these interactions and understand that agriculture – and its development – cannot succeed in a vacuum. This may help us sidestep the risk of speaking to the converted within an echo chamber and not engaging with all relevant stakeholders.

The total GDP of the COMESA region is just under a trillion dollars. The agriculture sector contributes about 20% of this, most of which comes from primary production.

**Data indicates that the agriculture sector is growing** along with other sectors of the economy. Crucially, the percentage contribution of agriculture production to GDP is showing a downward trend, indicating that other sectors of the economy are growing and new ones coming on stream. The pie is getting bigger and productivity is increasing. The emergence of these new sectors is encouraging, as these interactions can be expected to lead to the creation of new technologies and opportunities to further diversify the agriculture sector and stimulate the creation of higher quality jobs further up the value chain in the provision of new products and services (summary – growth and diversification is happening). This is the promise of agribusiness.

I also would like to congratulate COMESA on its recent expansion and admission of Tunisia and Somalia as member states, bringing its total membership to 21 countries. Also, special commendation goes to Hon Kapwepwe for her leadership in ushering in the African Continental Free Trade Area, which will create one of the world's largest trading blocs and accelerate the pace of increased internal trade in Africa.

This is not happening in a vacuum. These gains have been achieved through public sector enabled, private sector led investments in productivity, sustainability and competitiveness.

Ladies and Gentlemen, these foundations for agriculture transformation are not yet firm. These gains face threats and risk being wiped away completely.

The last El Niño-Southern Oscillation, or ENSO, which occurred just under three years ago, hit agriculture and food production systems hard, leading to large-scale crop failure, loss of income for millions, decimated food stocks and contributed to severe spikes in inflation.

As you know, climate and weather systems do not contain themselves within political borders. The last ENSO is estimated to have had severe impact on COMESA member countries – the most vulnerable region in Africa.

By late 2015, estimates placed more than 15 million people in central and eastern Ethiopia alone at food security risk following the worst drought there in 50 years. This year, Kenya, which just emerged from a prolonged drought, has experienced massive flooding, devastating cropped land, with one major incident involving the failure of an alleged illegally constructed dam, which led to the loss of over 40 lives. Meanwhile drought conditions in South Africa— a country which normally accounts for roughly half of the region’s yellow maize output—forced authorities to import maize from abroad for the first time in nearly a decade. In neighboring Malawi and Mozambique retail maize prices spiked, nearly doubling in a few short months.

These crises threaten prosperity. They stifle growth, destabilize development plans and cause unimaginable hardship to millions of Africans.

It is therefore not a question of why we should act to fortify ourselves against the shocks and stresses brought upon by ENSO – the value proposition is quite clear. It is a question of how we achieve this. Unmitigated weather-related risks in the agriculture sector is a nightmare for all stakeholders in agriculture and food systems. Climate and weather alone account for about one-third of staple crop yield variability on average globally, and over two-thirds of yield variability for maize in parts of eastern and southern Africa. No one is insulated from the fallout of livestock or crop failure. It is simply bad for business. These shocks contribute to food shortages, spikes in the price of commodities, increase in the cost of financial services, the enactment of knee-jerk trade barriers – sometimes accompanied by additional externalities, malnutrition is exacerbated, businesses – all the way from on farm, through agro-dealerships and retail, collapse. Migration, internal displacement of people, conflict, civil unrest and even governments may lose elections. The core value proposition of the ability of the agriculture sector – to lift millions out of poverty and entire economies on the pathway to prosperity – is threatened and so solutions should engage our full intellect and complete attention.

With a 70 percent chance of another extreme ENSO threat imminent, this gathering affords us the opportunity to take stock of the emerging lessons on good practice and strategies for strengthening the resilience of food systems and opportunities for regional collaboration within COMESA and beyond to face this challenge head on.

Winston Churchill once said that “those who fail to learn from history are doomed to repeat it.” I would like to share with you a few ideas on what we need to do to arm ourselves with the know-how to prepare for the next ENSO.

**We need to step up regional cooperation.** A short while ago, I had mentioned the creation of the African Continental Free Trade Area. This should form a crucial bridge, where we mainstream disaster risk management and internalize the risks from climate shocks and stresses into region-wide food and trade policies. It is important that as an economic region, we work to de-risk food systems, we create

platforms for partners to understand why no one can go it alone or must bear an undue share of the burden.

These platforms should foster participation and collaboration on strategies for policy synergy at the regional level and implementation at the national and sub-national levels. An example of this is the Forum for Agricultural Risk Management in Development, FARMD, a multi-stakeholder, knowledge sharing platform that enables stakeholders to share experiences, gain access to information and best practices, engage in constructive dialogues, and build partnerships.

Aligned to this could also be the opportunity to **create a virtual strategic food reserve network** among member states, where forward planning will afford member states the opportunity to operate a system where stocks could be built up and released in times of shocks, dampening price spikes and promoting resilience. We can learn from the work in the ASEAN region, where, after the price spikes of 2007/2008, the ASEAN Summit of 2009 developed regional political frameworks through the ASEAN Integrated Food Security Framework and Strategic Plan of Action on Food Security, to place food security as a permanent and high-level policy priority and putting the region on the pathway to long-term resilience. This is the establishment of an emergency rice reserve. In partnership with China, Japan and the Republic of Korea, the ASEAN Plus Three Emergency Rice Reserve (APTERR) Agreement was designed to strengthen rice production, prevent post-harvest losses, promote labor opportunities and provide rapid responses in overcoming rice supply shortages in emergencies occurring in any of the signatory countries.

**We need to improve the quality of evidence-based decisions for the public sector, as well as for private enterprise.** To achieve this, we need to invest in research and the acquisition and use of high-resolution climate data.

**Change begins with liberating access to information.** For years countries have struggled with documenting weather information, talk less of making it available for use. I have a personal experience with this. In a former job, working as a Senior Advisor in the government in Nigeria, I requested for rainfall data for in-house analysis. The meteorological agency asked the Ministry of Agriculture to pay for the data! In short, the Nigerian government wanted to charge the Nigerian government for data that the Nigerian government paid to create! If it was this disjointed for me, how bad is it for the private sector?

The cost of high-resolution satellite data has become more affordable through improved technologies and competition. Through partnership with aWhere, the World Bank and the Kenyan Agriculture and Livestock Research Organization, are working to synthesize and make available high-resolution weather data, combining satellite information with existing information from weather stations under the Kenya Agricultural Observatory program. The near real time, higher resolution data improves the quality of decision making for both the public sector and private sector who utilize it. This is Big Data being used on a scale unimaginable a few years ago. It is hoped that the output and application programming interphase from this partnership will be made open and free, to encourage the wide adoption and use by consumers and service providers. The Big Data platform of the CGIAR is also well placed to convene, coordinate and inspire partners on the acquisition, analysis and use of Big Data for improving decision making for all stakeholders.

Another example worth sharing is the **Nutrition Early Warning System**, or NEWS, being developed by colleagues at CIAT. NEWS leverages Big Data and artificial intelligence to synthesize conventional and non-conventional socio-economic data to inform and improve decision making on nutrition from the household level, up to the entire region.

**We will also need to look beyond weather related climate risks**, as degraded soils, pests, diseases, migration and conflicts increase pressure on food systems. One example is a strategic initiative from CIAT on Agriculture Risk Management, which aims to utilize cutting edge science to de-risk and increase the flow of financial services to the sector.

**We need to commit to open and accessible data.** COMESA member states should commit to making climate data open and free. We should collectively focus on scaling up investments, not just in acquiring and analyzing data, but also to create open-source platforms for contribution and sharing, within countries and across the region to improve our preparedness and responses to early warnings.

The CGIAR has an open access and open data policy across all 15-member Centers. The National Agriculture Research Systems in COMESA could collaborate with the CGIAR to accelerate the adoption of similar policies and promote knowledge sharing.

Cataloguing data in open, accessible and malleable formats increases the likelihood of data being tested and validated and used by those who need them.

**We need to diversify income streams and production systems.** Monocropping is a high reward, but high-risk venture, as we have experienced recently with the Fall Army Worm and the maize industry in the region. Without adequate insurance, lifetime investments could be wiped out in a single crisis episode. It is therefore important, for economic and nutrition security that we encourage the diversification of food and income streams of the most vulnerable populations, as well as national food stocks, to lessen the impact of any single event. Improving on-farm production diversity, especially through the introduction of nutrient dense foods such as legumes and vegetables, provides the added benefit of reducing the prevalence of malnutrition, if incentives are provided for these foods to be included in diets.

This is also connected to having tactile breeding platforms and seed systems – for example, the Drought Tolerant Maize for Africa – adapted to climate forecasts.

**We need to improve the prioritization and decision systems for investment planning.** Member states ought to adopt evidence-based decision support mechanisms, such as the Climate Smart Agriculture investment plans, as being championed by the World Bank under the Adaptation for African Agriculture (triple 'A') initiative. These plans lead on from with national priorities to advise on bankable projects for adapting and mitigating the impact of climate change. Aligned to this is also the need to develop dynamic climate risk profiles – at the national and sub-national levels – of member states. These profiles identify the severity of risk exposure at all points of the agriculture value chain and provide guidance for prioritizing investments in boosting resilience.

**We need to improve the stability of financial services for the agriculture sector.** The business of agriculture is risky – in real and perceived terms. There is need for the research community and governments to generate the evidence and provide the enabling environment for public and private financial service providers to internalize climate risks in the design and use of their products and services. The management of climate risks should partially shift into market systems, to improve responses which provide the incentives for the adoption of best practices due to market signals. National level risk sharing mechanisms, such as the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending, NIRSAL – a US\$500 Million public-private initiative to define, measure, price and

share agribusiness related credit risk – should be adopted and designed to support the spread of financial services, particularly to the more vulnerable populations who do not have access, or typically qualify for financial services.

**We need to scale up the flow of commercial lending to the sector.** Agriculture contributes over 20% to GDP in the COMESA region and about 30% across Africa, yet, total commercial lending to agriculture on the continent is under 3%.

**Sovereign level risks should be integrated into regional systems**, such as the African Risk Capacity, ARC, to enable governments focus on investment planning for development, while allowing ARC and similar systems to internalize these risks for which they are designed.

In addition to this, considering the inter-connectedness of food systems to wider economic development, **we need to ensure that no one is left behind** in participating in markets and the financial ecosystem. Financial inclusion of all populations, ensuring affordable, equitable and easy access to services, improves our understanding of the market size and needs and stimulates the development and provision of necessary services.

There's a Bemba proverb that goes *“Imiti Ikula Empanga”* meaning *“Today's Bush is Tomorrow's Forest.”* I really like this proverb, because it captures the essence of investing today for a prosperous future. Today, I call on all stakeholders in member states of COMESA to rise to the challenge and commit to sharing, learning and investing in building resilient food systems.  
Thank you.

## Annex 8: Briefing - Concerns and Preparedness for a New El Niño Onset in Sub-Saharan Africa in Late Fall 2018 - September 10, 2018

### Highlights

- El Niño and its Impacts in Africa in 2015/2016
- Likelihood of a Late Fall 2018 El Niño
- World Bank Preparedness
- Recommendations for the World Bank

### ENSO

**The El Niño Southern Oscillation (ENSO) is a naturally occurring weather pattern resulting when ocean temperatures in the Pacific Ocean, near the equator, vary from the norm.**<sup>4</sup> Changing weather patterns triggered by ENSO (El Niño, warming, la Niña, cooling) phases can have damaging impacts on agriculture, fisheries, and other climate and weather-sensitive sectors and exacerbate food insecurity conditions, particularly in areas of Africa that suffer chronic food insecurity conditions. The 2015-2016 El Niño event was the worst in 15 years, it was associated with massive crop failures in Southern Africa, floods in parts of East Africa, little or no harvests in many areas, and an extensive food security crisis. The El Niño phenomenon typically occurs every two to seven years. Some global climate models suggest that the ENSO cycle will become more intense under climate change.

**Although grave concerns with respect to El Niño impacts on food security in Southern and Eastern Africa were somewhat alleviated after subsidence of Pacific Ocean temperatures in 2016, there is a strong likelihood of a new event in late Fall 2018, as will be shown below.** World Bank preparedness for contingent financing of emergency response to El Niño impacts in Africa has improved considerably since 2016, but much remains to be done with clients to improve the resilience of their food systems. In addition, the World Bank needs to institute better ways to consult regularly across relevant Global Practices, brief the Africa RMT monthly, and provide outreach to client governments and relevant other international agencies on a regular basis.

**The 2015/2016 event and food security in Sub-Saharan Africa**

**The usual effects of El Niño events on weather in Sub-Saharan Africa** are to produce hot and dry spells from November to March in Southern Africa, with increased volatility of weather outcomes, in Eastern Africa, the usual effect is to produce heavier rain and flooding from October to January, in West Africa El Niño impacts tend to be less pronounced and over-ridden by other forces, although they could contribute to a poor rainy season from July to September in the Sahelian belt.<sup>5</sup>

**Record-high temperatures, droughts, and floods crippled agricultural production in East and Southern Africa in 2015/16.** In some cases, this was due to the amplification by El Niño of the effects of drought in

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<sup>4</sup> Water temperature greater than 0.5 degrees Celsius above normal is an anomaly and this repeated for three months leads to the designation of an El Niño event. See: <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml>

<sup>5</sup> Disaster Risk Management and Resilience Global Solutions Group, "El Niño Briefing Note: Potential impacts and options for WBG response" *DRM & Resilience Updates*. World Bank, December 20, 2015.

the preceding years. By early 2016, millions of households across the region faced food insecurity as crops failed, incomes dropped, and food and labor markets tightened. Several countries in the region were hit particularly hard. By late 2015, estimates placed more than 15 million people in central and eastern Ethiopia alone at food security risk following the worst drought there in 50 years.<sup>6</sup> In Southern Africa, 40 million people were classified as food insecure and in need of assistance by the World Food Program in January 2017.<sup>7</sup> Severe drought in South Africa--a normal source of imports for surrounding countries in poor harvest years--forced authorities to import maize from abroad for the first time in nearly a decade.<sup>8</sup>

**In East Africa, widespread flooding in Kenya ravaged cropland and displaced thousands.** Only Tanzania and Zambia had surplus grain production in the sub-region. Retail maize prices spiked in many countries, nearly doubling in domestic currency in Malawi and Mozambique.<sup>9</sup>

**Like policies adopted during the global food price spikes of 2008, some governments moved aggressively to secure food stocks, stabilize prices, and ensure the availability of maize.** Botswana, Lesotho, Malawi, Namibia, Swaziland, and Zimbabwe all declared national emergencies, and by July 2016, the Southern African Development Community (SADC) had declared a regional drought emergency. As in earlier episodes, policy makers appear to have focused on food availability and cost, particularly in urban areas, imposing export bans in exporting countries and importing food in deficit countries and countries subject to strong adverse shocks. Malawi, Tanzania, Zambia, and Zimbabwe all implemented quantitative restrictions on maize exports. Farm incomes suffered from a combination of much lower yields and prices lower than they would otherwise be. Poverty spiked in both urban and rural areas.<sup>10</sup>

**Several takeaways of relevance here emerge from the sad experiences of 2015-2016.<sup>11</sup>**

- El Niño events do affect weather broadly in East and Southern Africa, and in ways generally not favourable to agriculture.
- While the effects tend to be drought in the Southern countries and excess rainfall in the Eastern countries, these effects can be reversed in some areas, as witnessed by the extreme drought in Ethiopia and flooding in parts of Namibia.
- El Niño tends to contribute to already high volatility of weather outcomes, which is particularly bad for agricultural resilience when yields are low and dependent on rainfall.
- Policy stances matter greatly to the capacity of all people in the sub-region, and especially the poor with limited resources of their own, to adapt to the major changes in food availability wrought by El Niño events.

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<sup>6</sup> Al-Mamun et al., *Assessment of El Niño Impacts and Grain Trade Policy Responses in East and Southern Africa*. IFPRI, IAPRI and World Bank. Washington, D.C. December 2017.

<sup>7</sup> World Food Programme, "El Niño Food Security Impact 2015-2016". Infographic. Rome, WFP September 2016.

<sup>8</sup> Baudoin, M.-A. et al., "Living with drought in South Africa: lessons learnt from the recent El Niño drought period", *International Journal of Disaster Risk Reduction* (23) 2017, 128-137.

<sup>9</sup> Al-Mamun et al. Op. Cit.

<sup>10</sup> Al-Mamun et al. Op. Cit.

<sup>11</sup> Al-Mamun et al. Op. Cit.; Botha, B. et al., *Hard Hit by El Niño: Experiences, Responses, and Options for Malawi*. Washington, D.C., World Bank, 2017; Dorosh, P. et al. *El Niño and Cereal Production Shortfalls: Policies for Resilience and Food Security in 2016 and Beyond*. Washington, D.C., IFPRI Food Policy Brief, April 2016; Republic of Mozambique and World Bank, *Mozambique: Food Market Monitoring and Resilient Agriculture Planning*. Washington, D.C., World Bank Report ACS25019, June 2018.

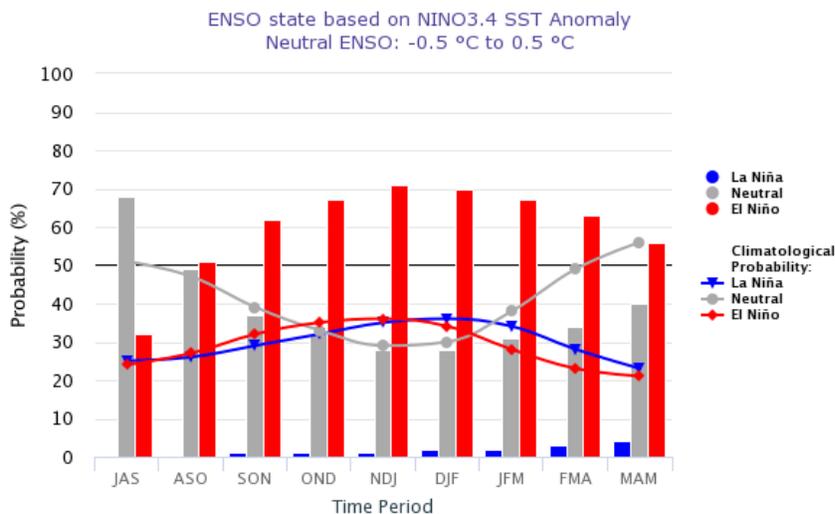
- Sometimes well-meaning policies targeted to one group, such as export bans to manage urban prices, do the most harm to other groups. Many of these lessons were learned by clients in the aftermath of the global food price crisis of 2008. As in the case of development partners, institutional memories of governments in the countries involved are sometimes weak, and expediency often triumphs in emergency situations.
- Where emergency assistance was most needed, for example in Ethiopia and Malawi, time was of the essence and access to rapidly disbursing financial assistance was key to successful response.

### The evidence for a new El Niño in Southern and Eastern Africa in late Fall 2018

Since late 2016 and through the early and mid-summer of 2018, East-Central Pacific waters reflected ENSO-neutral conditions, but there has been a shift in probabilities as of late summer 2018.<sup>12</sup> The most recent consensus forecasts (mid-August) endorsed by the United States Weather Service (NOAA) show a 70% probability of the onset of an El Niño (warming) in the November 2018 to January 2019 period, as illustrated in Figure 1.

Figure 1

### August 2018 Official NOAA-Columbia University ENSO Forecasts 2018-2019



Source: Consensus forecast NOAA Climate Prediction Center and Columbia University International Research Center for Climate and Society, August 9, 2018, see <https://iri.columbia.edu/news/august-climate-briefing-winds-breathe-life-into-probable-el-niño-development/>

Notes: The time periods on the horizontal axis are three-month periods; the highest probability of an El Niño (warm) event of 70% is forecast for November-December-January 2018 (NDJ).

<sup>12</sup> Columbia University International Research Institute for Climate and Society (IRI), see: <https://iri.columbia.edu/news/august-climate-briefing-winds-breathe-life-into-probable-el-niño-development/> and (U.S.) National Oceanic and Atmospheric Administration Climate Prediction Center (NOAA-CPC), see: [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/lanina/enso\\_evolution-status-fcsts-web.pdf](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf)

**CPC has now issued an official El Niño “watch” for the period in question, the precursor to an “advisory” issued once an El Niño event is confirmed.**<sup>13</sup>

**The consensus view from the modeling so far is that the El Niño event likely to occur from November onwards, although it will likely not be as strong as the one that caused such havoc in 2015-2016 in Southern Africa.** The consensus modeling view calls for an anomaly of approximately a 1 degree Celsius (i.e. higher than normal) in water temperatures in the NDJ period in 2018-19.<sup>14</sup>

**The late August 2018 consensus of climate experts in the sub-region, as reported by the SADC Climate Services Center (CSC)** reporting on an a large assessment meeting in Lusaka, is that the rainfall outlook for the SADC region from October 2018 to March 2019 is “Normal to Below Normal” for all of the region except for a curved belt stretching from Angola to Northern Mozambique, where it is “Normal to Above Normal”. While not alarmist in tone, these anomalies have serious implications for food production and rural incomes in the region, the CSC accordingly notes the need to prepare for impacts on agriculture.<sup>15</sup>

**World Bank preparedness to assist clients with contingent finance in handling a new El Niño event beginning in late Fall 2018**

**During the 2015/2016 El Niño event, the World Bank and other international institutions played a critical role in supporting nations in Eastern and Southern affected by the crisis, through the provision of targeted technical assistance and financing government responses for mitigating evolving food security crises.** The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) estimated in December 2016 that the need for humanitarian response arising primarily from the impacts of El Niño in Ethiopia and Somalia at the time was of the order of US\$2.5 billion, of which roughly US\$1.5 billion were raised. In Southern Africa, Angola, Lesotho, Madagascar, Malawi, Mozambique, Swaziland and Zimbabwe were estimated to have need of over US\$1.3 billion and to have secured US\$800 million.<sup>16</sup>

**The World Bank was heavily engaged in this respect through technical assistance, the putting in place of contingent finance arrangements, and capacity-building for future crises.** In-depth technical assistance projects targeted to dealing with the crisis in the food area were undertaken in 11 countries of the sub-region. Post-disaster needs assessments were undertaken in Malawi and Angola. Rapid funding estimated at US\$545 million was carried out through a variety of mechanisms, including project restructuring in Angola, Lesotho, Malawi and Swaziland, additional financing to existing projects in Ethiopia, Lesotho, Madagascar, and Mozambique, an Emergency Recovery Loan in Malawi, and

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<sup>13</sup> Ibid.

<sup>14</sup> Ibid. Probabilistic estimates are based on modeling; in this case there is a remarkable confluence of the average predictions from 18 dynamical models and 8 statistical models reviewed by Columbia’s IRI and the NOAA’s Climate Prediction Center expert consensus view for the November through January period. The El Niño water temperature anomaly in the same region of the Pacific in the Fall of 2015 was well above 2 degrees Celsius, see: <https://www.climate.gov/news-features/blogs/enso/december-el-ni%C3%B1o-update-phenomenal-cosmic-powers>

<sup>15</sup> Southern African Development Community Climate Services Center (CSC). “Early Warning Bulletin on the 2018/19 Southern Africa Rainfall Season”, Gabarone, SADC-CSC August 2019

<sup>16</sup> UN, OCHA, “Overview of El Niño Response in East and Southern Africa as of Dec. 1 2016”, New York, United Nations, OCHA.

contingent funding through the Bank’s Immediate Response Mechanism in Kenya, Lesotho, Madagascar, and Mozambique.<sup>17</sup>

**The Immediate Response Mechanism was approved by the World Bank Board in December 2011 as a means to use funds already in countries’ IDA envelopes rapidly.** It allows IDA countries to access up to 5 percent of their undisbursed IDA investment project balances following a crisis based on agreement between World Bank Africa Region (AFR) senior management and the Ministry of Finance of the country concerned. Small states and countries with small undisbursed balances can access up to \$5 million. It complements longer-term emergency response tools available to IDA countries, such as the Crisis Response Window, offering them financial support within weeks. The pro-active inclusion of Contingent Emergency Response Components (CERCs) in selected existing and/or future investment projects facilitates a very rapid disbursement of funds usable for emergency response, it was used to good effect in Southern Africa in 2015-2016.<sup>18</sup>

**Increasingly client governments of the World Bank in Africa have opted to include stand-alone Contingent Emergency Response Components (CERCs) in their IDA or IBRD projects.** These CERCs are included in project documents that go through regular World Bank and Host Government approval processes, typically with a zero-dollar initial funding allocation. Current procedures then allow a rapid restructuring of project expenditures in already approved projects with these components, to support emergency responses agreed to be necessary by both parties at the executive level without having to seek World Bank Board or national Parliamentary approval that would normally be necessary. The need for these specific responses were not foreseen at the time of approval of the original project that is being restructured, but the CERC elements allow maximum speed and flexibility in accessing emerging funding.<sup>19</sup>

**Although CERCs have been around since at least 2006 in some form, practical applications really began with the introduction of IRM CERCs in December 2011.** The Bank’s Africa Region (AFR) presently has 78 active projects with CERCs of some kind in place. At least one third of these by value have come about in the past two fiscal years, as shown in Table 1.

**Table 1: Numbers and Value of Projects in AFR Initiated FY 2006 to FY2018 with CERC Components**

FISCAL YEAR OF PROJECT APPROVAL (IDA/IBRD PROJECTS)	OVERALL VALUE OF PROJECTS APPROVED WITH CERCs (US\$ Millions) <sup>1</sup>	NUMBER OF PROJECTS WITH Stand-alone CERCs	NUMBER OF PROJECTS WITH IRM-CERCs	TOTAL NUMBER OF PROJECTS INITIATED WITH CERCs
2006-2016	3,978.81	26	19	45 <sup>2</sup>
2017-2018	1,931.50	32	4	36

<sup>17</sup> World Bank, “Africa-El Niño Update”. Washington D.C., World Bank Management Brief, October 2016.

<sup>18</sup> Development Committee of the Governors of the World Bank, “Progress Report on Mainstreaming Disaster Risk Management in World Bank Group Operations”, Washington, D.C., World Bank, World Bank Report DC 2016-004, March 25, 2016

<sup>19</sup> Ibid.

2006-2018	5,910.25	58	23	81
<p>Note: (1) Data as of August 27, 2018. These are primarily investment lending projects, and primarily IDA. The share of IBRD in total grew over the period, reaching just over 5% in 2017-2018.</p> <p>(2) Includes 3 projects ( 2 stand-alone CERCs and 1 IRM CERC) that were no longer active in August 2018.</p> <p>Source: World Bank DRM, CERC Analytics Dashboard V3 Updated August 27, 2018</p>				

**Over US\$ 4.3<sup>20</sup> billion in undisbursed balances presently (August 27, 2018) resides in IDA/IBRD projects in AFR that have CERC components that can be activated for emergency response.** More than US\$2.5 billion of this is from projects approved with CERC elements in FY 17 and FY 18, including just under US\$ 1.4 billion for countries in Eastern and Southern Africa as a whole or US\$1.1 billion in COMESA countries. These projects were under preparation during a period of El Niño impacts, but were mostly approved after the 2015-2016 El Niño had receded. Furthermore, the investment lending projects that account for almost all these new funds in FY2017 and FY2018 come from projects across the spectrum of thematic sectors served by the World Bank, from sources as diverse as agriculture, urban, social, health, education, transport, environment, water, and so forth. To date (August 27, 2018), only 6 projects in AFR have CERCs that have been activated, 4 in Southern Africa and 2 in Western Africa. All of these involved use of the Immediate Response Mechanism.

**There has been an expansion of overall IDA lending in Africa across all sectors in FY 2018. More remarkable for present purposes, there has been the inclusion of CERC components in most new projects approved in FY 2017 and FY 2018 that will facilitate rapid financial response as needed going forward.** With US\$ 4.3 billion in undisbursed balances in active projects in AFR with CERC components (few of which have been activated to date), there is considerable reserve capacity for financing new emergency response. If every project in AFR with CERCs contributed 5% of its undisbursed balances, this would yield an upper limit estimate of US\$215 million available at short notice for AFR as of August 27, 2018, or US\$70 million for countries in Eastern and Southern Africa, or US\$ 55 million in COMESA countries. The amount available to any one country in this way could not exceed the amount allowed by the undisbursed balances of its own projects, or US\$ 5 million, whichever is larger.

**Beyond contingent finance, the real business of preparation for El Niño in countries likely to be affected is to adopt policies and make mainstream investments in advance of foreseeable problems that mitigate harm from and increase the resiliency of real incomes and food entitlements to weather shocks.** The particulars will vary by country and time period. Conceptually, increasing the capacity for adaptation requires a thorough ex-ante assessment of pertinent risks and a cost-effective plan for addressing them. The details go beyond the limited scope of the present brief, but an excellent example has recently been published for Zambia, for example, to which the reader is referred.<sup>21</sup> However some generic recommendations that arise from recent experiences and should form the core of what countries should strive for.

#### **Four generic recommendations that have stood the test of time and a plea**

<sup>20</sup> World Bank DRM, CERC Analytics Dashboard V3 Updated August 27, 2018

<sup>21</sup> Braimoh, A. et al. *Increasing Agricultural Resilience through Better Risk Management in Zambia*. World Bank Washington DC. License: Creative Commons Attribution CC BY 3.0 IGO.

- **As in all disaster response, the first need is for as early warning of problems as possible** and as comprehensive coverage of places affected as possible, Early Warning Systems need not only detect, but get the relevant information in a useful form to those who need it in a timely manner.<sup>22</sup> Experience shows that governments do not always know where the worst affected are or how to reach them.
- **As in all disaster response, the worst effects tend to come from lack of information sharing and lack of communication amongst the multiple persons and agencies that need to act quickly.** Governments should consider setting up or reactivating multi-stakeholder coordinating groups on food security that include relevant government and private sector actors, civil society, and development partners.
- **Every country should implement a comprehensive risk assessment with respect to food security.** There are a broad variety of tools available to mitigate different kinds of risks at different costs. In some cases, a financial engineering solution (such as a line of credit) will be far more cost effective than a physical solution (such as grain stocks). In others, a physical solution such as stepped up animal disease monitoring and vaccination will be far more cost effective than an expensive contingent financial instrument.<sup>23</sup>
- **It will be vital for countries to review policies in place that prevent markets from transmitting price signals for food within countries and across countries in well-defined sub-regions such as COMESA.** Markets play a vital smoothing role for volatile prices, and well-functioning markets greatly increase the capacity for adaptation to shocks. Experience from 2008 to 2012 clearly showed that attempts to use quantitative trade restrictions to mitigate food price rises backfired on the imposing countries directly, and indirectly through lost goodwill on the part of neighbors whose access to food imports was curtailed.<sup>24</sup>
- **Development partners should stand ready to assist countries that wish to make progress in the four areas above.** It is only a matter of time before problems faced in 2015-2016 resume.

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<sup>22</sup> See Braimoh et al., *Assessment of Food Security Early Warning Systems for East and Southern Africa*, Washington, D.C., World Bank, Africa Climate Business Plan Series, January 2018. Also see Southern African Development Community Climate Services Center (CSC), Op. Cit., for a practical example.

<sup>23</sup> For an actual case of the latter, see World bank, *Agricultural Sector Risk Assessment in Niger: Moving from crisis response to long-term risk management* Washington, D.C., World Bank, January 2013.

<sup>24</sup> World Bank, *Global Monitoring Report 2012: Food Prices, Nutrition, and the Millennium Development Goals* Washington, D.C., World Bank, 2012.