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Forum for Agricultural Risk Management in Development

4-5 NOVEMBER 2014 - JOHANNESBURG, SOUTH AFRICA

4th ANNUAL CONFERENCE

Managing Agricultural Risks in a Changing Climate in Sub-Saharan Africa

CONFERENCE PROCEEDINGS

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Economic Affairs SECO

Ministry of Foreign Affairs of the Netherlands

WORLD BANK GROUP
Agriculture

INTRODUCTION

From November 4-5, 2014, the Forum for Agricultural Risk Management in Development (FARMD) held its 4th Annual Conference in Johannesburg, South Africa. The objective of this year's conference, Managing Agricultural Risks in a Changing Climate in Sub-Saharan Africa, was to understand climate change and its implications for agricultural risk management in Sub-Saharan Africa.

The two-day conference brought together more than 130 participants from across Africa and around the world, including stakeholders from the public and private sectors, academia, farmers groups, and development organizations. Through speaker presentations and panel discussions, more than 45 experts shared experiences, best practices, and ideas for managing agricultural risks in Sub-Saharan Africa in the face of changing climate conditions.

DAY 1 – NOVEMBER 4, 2014

Welcome & Introduction

Marc Sadler, Adviser, Agricultural Risk and Markets, Agriculture Global Practice, The World Bank, delivered the welcome speech for the conference. Mr. Sadler highlighted two key themes for conference participants to reflect upon 1) The reality that climate change is here and that it is no longer a conversation about the future and 2) The need to avoid the danger of fatalism and improve our understanding about knowing what is going to happen and what to do to about future challenges.

FARMD's donors representatives **Tjeerd de Vries**, Senior Expert Food-Security and Agribusiness, Dutch Ministry of Foreign Affairs and **Nicolas Guigas**, Senior Economist /Senior Program Manager, Swiss State Secretariat for Economic Affairs (SECO), reaffirmed the support of their respective countries to the World Bank in developing and implementing a holistic and integrated agricultural risk management approach.

Ayalneh Bogale, Adviser in Climate Change and Agriculture, African Union Commission, stressed the importance of harmonizing the policies between the different countries on the continent and reaffirmed the efforts towards advancing this goal. He finally highlighted the opportunity for experts from the private and the public sectors to share their knowledge and open a dialogue on risk management practices and strategies.

From left to right: Raphael Karuaihe, Chris Lategan, Hardi Wilkins, Gerald Mahinda, and moderator Eleni Giokos

Keynotes

Bruce Campbell, Director of the CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS) delivered the first keynote speech addressing the need for a massive transformation in the way agriculture is practiced to enhance resilience and enable 500 farmers to practice Climate Smart Agriculture (CSA) by 2030.

The world is becoming more unequal under climate change and Africa is the continent most vulnerable to climate change, according to the Intergovernmental Panel on Climate Change (IPCC). Urgent action and a different kind of research that interfaces with the community are needed to get the message out to farmers. While there are no silver bullets, policymakers and practitioners must think through the entire value chain for a whole food systems approach that puts together different tools and strategies.

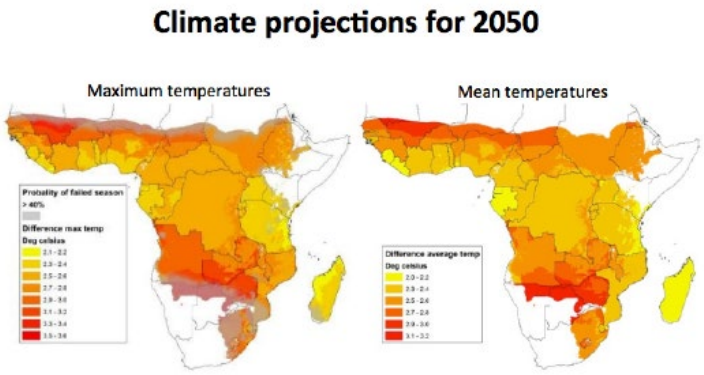
David Ameyaw, Director of Strategy, Monitoring, and Evaluation, Alliance for a Green Revolution in Africa (AGRA), delivered the second keynote speech highlighting the role of smallholder farmers in building resilience to climate change and managing agricultural risks.

Smallholder farmers have limited access to finance, inputs, and markets, and spend as much as 60% of their income on food. In this resource-constrained environment, enabling adaptation for the 33 million smallholder farmers in Africa requires better knowledge management, an effective seed system to combat climate change, and embracing the triple win of increased productivity, enhanced resilience, and improved GHG mitigation. Dr. Ameyaw emphasized that the FARMD conference was an opportunity for presenting solution-oriented actions for implementation, and not a theoretical exercise.

Session 1 – Climate Change Trends and Implications for Agricultural Risk Management

Jill Cairns, Senior Scientist, International Maize and Wheat Improvement Center (CIMMYT), presented findings on expected crop yield reductions due to climate change in Sub-Saharan Africa, highlighting the fact that yield declines are projected to be much sharper when temperatures increase if there is a lack of adequate water. (Download the presentation.)

Jill Cairns identified challenges and opportunities for addressing climate risks to crop production, including: 1) the difficulty of taking improved seed from the dissemination stage to successful farmer uptake; 2) the need to build national capacity; 3) the need for sustainable intensification approaches; and 4) opportunities for using multiple strategies together, such as combining genetic interventions with landscape interventions.



Excerpt from Jill Cairns' Presentation

James Kinyangi, Principal Scientist and Regional Program Leader, International Livestock Research Institute (ILRI), discussed how farmers consider investment decisions, arguing that farmers fail to take advantage of opportunities to invest in new technologies, for example new seed varieties, because they overestimate the risk that new methods will produce yields lower than traditional methods. To overcome this perception of new technology risk, new forms of partnerships between farmers, researchers, the private sector, and the public sector are needed. (Download the Presentation.)

Participants engaged with the speakers, and asked questions regarding Good Agricultural Practices (GAPs), Climate Smart Agriculture (CSA), how to make agriculture attractive to youth, and connecting farmers to markets.

David Ameyaw argued that the difference between GAPs and CSA is that CSA contributes to the triple win of improving productivity, increasing resilience, and reducing emissions, while GAPs do not necessarily contribute to all three goals. Jill Cairns stated that one way to get farmers to adopt CSA is to use different management techniques depending on the context and to engage with farmers to consider what practices are appropriate. Participants agreed that the way to make agriculture more attractive to youth is to make it a livelihood with greater earnings potential. Some stakeholders noted that there is a disproportionate concentration on production and a lack of attention to food markets, which need to be developed in order for farmers to increase their incomes and invest in new technologies and practices.

Conference Attendee Participating in the discussions.

Session 2 – Climate Change and Weather: A Shifting Target for Agriculture?

Panel discussion: **Brian Conklin**, Ghana Foreign Service Officer, United States Agency for International Development (USAID); **Ellah Chembe**, Deputy Executive Director, Zambia National Farmers' Union; **Ernest Aubee**, Principal Programme Officer and Head of Agriculture Division, ECOWAS Commission; **Kola Masha**, Managing Director, Doreo Partners; **Vincent Ngari**, Deputy Director of Livestock Production, Ministry of Livestock Development, Republic of Kenya discussed the impacts of extreme weather events among agriculture stakeholders, including consumers, producers, supply chains and governments.

Key themes emerged in the panel discussion, including:

1) Government has a responsibility to mainstream agricultural risk management into policy planning and strategies. This includes mainstreaming agricultural risk management in donor-funded programs.

2) Climate change and extreme weather events disrupt the entire supply chain. There is an urgent need to create partnerships with the private sector to finance and market risk

mitigation technologies in order to overcome smallholder constraints to accessing capital. Ideas for funding technologies included: persuading aggregators and processors to forward fund seed varieties down the value chain to smallholders, and creating relationships between the research industry and the private sector to develop technologies that the private sector can market effectively.

3) Subsidies for dealing with extreme weather need to be targeted towards the greatest return on investment. Government resources are limited, which necessitates having the right policy framework in place to encourage partnerships and lending in rural areas.

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4) Access to reliable, year-to-year data is a challenge, however, things are getting better.

5) There is no silver bullet. Thus, it is important to use multiple models to deal with extreme weather. Models for disseminating risk mitigation technologies and practices include using a franchise model to leverage peer pressure and guarantee the funds lent; and working with a large-scale nucleus farmer to engage out-grower farmers.

Session 3 – Managing Uncertainty: What Can Be Done?

Panel Discussion 1: **Gabriel Levanon**, SADC Area Manager, Netafim Inc.; **Mamadou Diakité**, Team Leader of the Sustainable Land and Water Management, New Partnership for Africa's Development (NEPAD); **Olivier Durand**, Senior Agricultural Specialist, Malawi Country Office, The World Bank; and **Yemi Akinbamijo**, Executive Director, Forum for Agricultural Research in Africa (FARA) discussed the strengths and limitations of different tools and strategies to manage adverse weather events, with an emphasis on mitigation solutions.

The key issues related to mitigation strategies discussed were investment frameworks to manage land and water for sustainability and challenges to implementing irrigation solutions. Panelists noted that that there is a need to coordinate, align, and harmonize donor funding around clear investment priorities to avoid duplication of efforts and competing projects. Ownership of irrigation on individual plots can stymie infrastructure maintenance and sustainability, and currently, there is a lack of small irrigation kits that are appropriate for smallholders.

Panelists noted that there is no miracle mitigation solution, and that farmers need access to a whole range of technical solutions. A reccurring theme throughout the discussion was that well-functioning institutions and good policies are as important as good technical solutions. For example, in many countries, food shortages are handled on an emergency basis, even though this can be forecasted and planned for in advance. Similarly, there is a need for transparency in terms of where money is going, where the gaps are, and how politics play into investment decisions.

Panel Discussion 2: **Andries Mahlase**, Client Relationship Manager, Munich Re; **Bode Opadokun**, Managing Director/CEO, Nigerian Agricultural Insurance Corporation (NAIC); **Christina Ulardic**, Head of Market Development for Africa, Swiss Re; **Daniel Clarke**, Senior Insurance Specialist, Agricultural Insurance Development Program (AIDP), The World Bank; **Fatima Kassam**, Chief of Staff, African Risk Capacity (ARC); **Shadreck Mapfumo**, Senior Financial Specialist, Global Index Insurance Facility (GIIF), International Finance Corporation (IFC) discussed the strengths and limitations of different tools and strategies to manage adverse weather events, with an emphasis on risk transfer and coping mechanisms.

Daniel Clarke framed agricultural risk transfer financing as a solution to a public policy problem, noting that when there is a shock to production, government policy responses are often unpredictable and ad hoc. Insurance subsidized by the

government at the national or provincial level formalizes this policy response, providing a rules-based environment for distributing emergency relief in an efficient and timely manner.

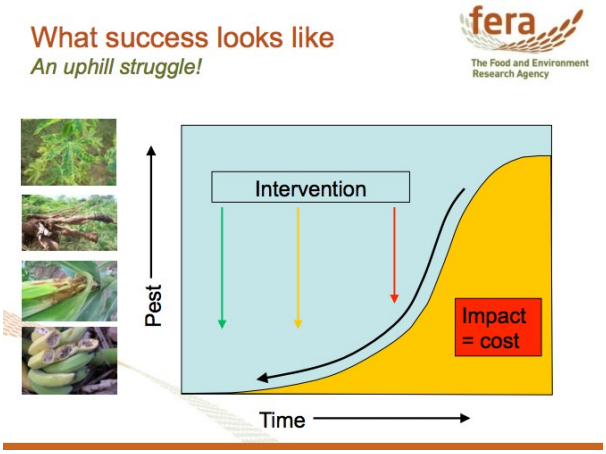
Christina Ulardic noted that there are no successful examples of retail insurance in the African subsistence market, remarking that if the insurance product on the market is voluntary, it is not going to be sold. To be successful, insurance for smallholders must be packaged with something else, for example fertilizers or credit, but this can create a distortion in the market and must be carefully targeted. One of the main advantages of Weather Index Insurance (WII) is that there are clearly defined payouts, measured at the weather station. A disadvantage of WII is that schemes are designed on the assumption that all farmers use the same practices, and when this is not the case, extreme weather will impact farms and farm losses differently.

The panel Q&A focused on the factors influencing supply and demand for agricultural insurance in Africa. Participants noted that the push for insurance is coming from donor organizations and financing institutions, while there is a lack of demand for insurance from farmers. There is a need for capacity building to create awareness and to make sure distribution networks are in place to deliver insurance products. Empowered farmers organizations are also needed to make sure that appropriate delivery takes place.

Session 4 – Climate Change: More Bugs, More Diseases?

From left to right: Julian Smith, Peter Ithondeka, Arne Witt, Langelihle Simela, and moderator Eleni Giokos

Julian Smith, Lead for International Development, The Food and Environment Research Agency (FERA), highlighted how climate change will create a different environment for pest and diseases. Given the global distribution of people, goods, and transportation networks, pests and diseases will have a wider reach, and we need to understand changing, dynamic landscapes to mitigate and cope with the changes in the geographic scope, frequency and intensity of outbreaks. Currently, Africa lacks the capacity to deal proactively with pest and disease outbreaks. Instead of waiting for full-blown outbreaks to occur, the mindset needs to change. Sign of a resilient agricultural system: Invest more in risk prevention than cure. (Download the presentation.)



Excerpt from Julian Smith's Presentation

Peter Ithondeka, Veterinary Services, Republic of Kenya, discussed how climate and the environment are major factors in determining not only the geographic and temporal distribution of bugs, but also the evolution of pathogen virulence and the efficiency of disease transmission. He noted that more frequent and more intense drought are already affecting pastoral production systems and forcing livestock to move to non-traditional rangelands where they are poorly adopted to circulating parasites and infections. Due to the globalized movement of livestock products, import sanitary controls at ports of entry, major investments in research and development of new drugs, and improved husbandry practices are needed to combat projected disease trends, particularly the heightened incidence and geographic spread of arboviruses such as African Swine Fever. (Download the presentation.)

Panel Discussion: **Arne Witt**, Regional Coordinator for Invasive Alien Species (IAS), Centre of Agricultural Biosciences International (CABI); **Jerry Hjelle**, Vice President, Science Policy at Monsanto Company; and **Langelihle Simela**, Programme Manager, Farmer Support and Youth Development, National Red Meat Producers Organization (NERPO) discussed mechanisms to minimize adverse consequences of pest and disease threats to crops and livestock.

Panelists highlighted the urgent need to put climate change in perspective: invasive species cost 1.4 trillion dollars per year (excludes native species). That figure was calculated in 2001, and with climate change, the threat of pests and diseases will grow. More resources should be devoted to

getting farmers to adopt new technologies. This is the key to making new technologies, like pest-resistant seed varieties, commercially viable.

Jerry Hjelle emphasized that we have the ability to improve traditional hybrid seed varieties now. In order to stimulate a surge in investment and bring disease-resistant hybrids to the market, policymakers and the private sector need to think regionally, which could improve the climate for investment dramatically. Pest bio-control and Integrated Pest Management (IPM) are critical components of pest and disease control for crops, but this strategy has not been embraced by developing countries. While pesticides have a role to play, they also have negative impacts in terms of poisonings and pesticide-resistance.

DAY 2 – NOVEMBER 5, 2014

Session 5 – Climate Change and Supply Chains: Managing the Chaos

Panel Discussion: **Chris Lategan**, Head, Middle Office Africa Division, AFGRI Limited; **Gerald Mahinda**, Managing Director, Kellogg's Sub-Saharan Africa; **Hardi Wilkins**, Global Head of Risk, Export Trading Group (ETG); **Raphael Karuaihe**, Manager Commodity Derivatives, Johannesburg Stock Exchange (JSE) explored how climate change will likely disrupt supply and amplify price volatility, implications for stakeholders, and risk management solutions.

Hardi Wilkins, Global Head of Risk, Export Trading Group (ETG)

The key issues discussed were price risk, price risk management, and the need to scale-up financial instruments, like revolving credit funds and forward contracts, to increase the participation of smallholders in productive value chains. Supply chain stakeholders agreed that climate change is a reality and that the current capacity to manage climate risk across Africa is underdeveloped. Panelists also emphasized the importance of persuading smallholders to manage farming operations as a business, which starts from proper financial management and is currently constrained by lack of collateralized assets.

Price volatility is a major risk in the sector, and panelists discussed mechanisms to decrease volatility, including the potential for creating an open commodity exchange in Africa. Raphel Karuaihe noted that for an open commodity exchange to work, the continent needs capital development and decent storage facilities to leverage off the security of the underlying product. Others noted that price transparency, which is often challenged by ill-considered government price controls, could drive trading and help quantify production costs versus revenue on the producer side.

Session 6 – Climate Change and Ag-Risk: Policy-Makers' Nightmare?

Panel Discussion: **Debisi Araba**, Technical Adviser on Environmental Policy to the Minister of Agriculture and Rural Development, Federal Republic of Nigeria; **George Wamukoya**, Climate Advisor to the Common Market for Eastern and Southern Africa (COMESA); **Jesús Anton**, Senior Programme Manager, Platform for Agricultural Risk Management (PARM); **Kenneth Ayuko**, Deputy Director for Policy Development Coordination, Ministry of Agriculture, Republic of Kenya; and **Wadzanai Katsande**, Investment Officer, Food and Agriculture Organization of the United Nations in South Africa, explored how climate change is likely to present challenges for sector policy-making and planning.

Debisi Araba, Technical Adviser on Environmental Policy to the Honorable Minister of Agriculture and Rural Development, Federal Republic of Nigeria

The key challenges discussed were how to facilitate the climate agenda in regional forums, how uncertainty affects policymaking, and how to manage data at the national and regional levels. Panelists agreed that regional forums have an important role to play in knowledge exchange, financing, and scaling up of successful solutions. Regional economic communities have catalyzed countries to create national cli-

mate change policies, but more could be done to nurture political will, build strategic alliances, and hold leaders accountable.

Jesus Anton emphasized that when uncertainty exists, it is difficult to come to a common understanding of what is the risk, the magnitude of the risk, and how to manage risk. This makes it important to correct asymmetric information and establish what is the trend, instead of treating shocks as one-off events.

In terms of data management, panelists noted that much of the data needed to inform policymaking exists, but that countries lack the tools to interpret data in a timely fashion and lack efficient information feedback loops between data analysts and decision-makers. There is also a lack of data coordination between ministries within countries, and across the region. To address data management gaps, there is an urgent need to think about how access to public data can be made available and how proprietary data could be made available through partnerships.

Session 7 – Short-Term Risks vs. Long-Term Resilience: Options and Challenges

Panel Discussion: **Bright Kumwembe**, Principal Secretary, Ministry of Agriculture, Irrigation and Water Development, Republic of Malawi; **Jerry Hjelle**, President, International Life Sciences Institute (ILSI); **Marc Sadler**, Adviser, Agricultural Risk and Markets, Agriculture Global Practice, The World Bank; **Mariam Sow**, NEPAD's Principal Food Security Analyst, New Partnership for Africa's Development (NEPAD); **Raimundo Matule**, Director, Directorate of Economics, Ministry of Agriculture, Republic of Mozambique; and **Tinashe Chavhunduka**, AFASA Secretariat, African Farmers' Association of South Africa (AFASA) discussed approaches to strengthen the agricultural risk management agenda and to mainstream the agenda into the climate change debate.

From left to right: Mariam Sow, Bright Kumwembe, Raimundo Matule, Tinashe Chavhunduka, Jerry Hjelle, and Marc Sadler.

The challenge of formulating a long-term investment strategy to manage agricultural risk in the face of competing budget priorities is exacerbated by ongoing agricultural shocks that drive spikes in food insecurity and absorb scarce government resources. Panelists noted that resources devoted to mitigation are generally more cost-effective than those devoted to coping, but that it is politically difficult to shift spending towards mitigation. Panelists also agreed on the need to pursue an integrative approach to risk management due to the interrelationships between different types of risk. Sector stakeholders often address risk individually, rather than collaborating, and as a result, building long-term resilience will require an institutional environment that is more conducive to addressing challenges holistically.

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MOVING FORWARD

Through active contribution and participation from its members, FARMD seeks to continue to build and share knowledge on agricultural risk management globally, and to bring together practitioners to discuss and share experiences with the goal of identifying and acting upon improved areas for investment and improved risk management strategies.

To access all conference presentations and materials, and to learn about upcoming FARMD programs, webinars and events, visit: https://www.agriskmanagementforum.org/

Questions: Please do not hesitate to contact info_farmd@agriskmanagementforum.org