



AGRF 2016 – SHOWCASE REPORT

Day 4 - Thursday, September

11:00am- 12:30pm

Showcasing Models

Transformative Models for Scaling Up in the Face of Climate Change

SESSION BRIEF

Context: Climate Smart Agriculture (CSA) is fast becoming the new norm in Africa as the continent's agricultural stakeholders are realizing that the rapidly changing weather patterns, climate variabilities and changes on the continent are increasingly disrupting production and livelihoods across the aggregate agriculture value chain especially more so for vulnerable smallholder farmers.

Historically devastating droughts and floods are forcing African agriculturalists to increasingly look to create ground water pumping and other irrigation systems, sustainable water harvesting technologies and to focus on the development of rural infrastructure including electrification (for storage, cold chain establishment, drying facilities, mechanization and processing).

Encouraging increased judicious use of appropriate fertilizer and improved seeds and soil revitalizing inputs are additional ways that farmers are being instructed and helped to address climate change. Innovations in novel farming techniques such as conservation agriculture including minimum tillage, micro dosing and use of satellite data for forecasting, provide hope for the various actors in development sphere in addressing the vagaries of climate change.

The discussion though, in general, of how to mitigate the impact of climate change is one that will increasingly be of relevance in any discussion of agricultural transformation in Africa.

Key Issues/ Questions:

- What is climate smart agriculture - and key methodologies/practices being encouraged to deal with climate change?
- What are key CSA practices/models that are working and can be scaled up or replicated?
- How can small holder farmers, who often do not have the resources to invest in infrastructure, be assisted by government in an effort to mitigate the impact of climate change on their operations?
- What policy shifts if any are needed to address climate change in Africa, and specifically its impact on agriculture including making crop insurance a reality for smallholder farmers?
- What is the role of the private sector in supporting sustainable agricultural development practices that align and promote CSA including financing mechanisms?



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Desired Outcome:

- Introduce delegates to climate smart agriculture.
- Identify good practices that can be scaled up across Africa.
- Agree on key roles that the private sector can play in supporting the development of CSA initiatives in Africa.
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Organizer: AGRF

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Name	Picture	Discussion
<p>Mr. Edwin Macharia, Managing Partner, Dalberg – Kenya</p> <p>Role: Moderator</p>		<p>Mr. Macharia began his facilitation of this session by encouraging the audience to recognize the fact that there is a need to focus on sustainability, particularly in the emerging markets across the world, in the face of climate change.</p> <p>To address the challenges increasingly caused by drought and flooding, he continued, we need to be able to scale up transformative models that facilitate adaption or mitigation and that can bring about economic and environmental sustainability in the face of climate change.</p>
<p>Hon. Mr. Nduati Mwangi, Permanent Secretary, Ministry of Water & Irrigation, Kenya</p> <p>Role: Setting the Stage</p>		<p>In beginning his presentation, the Honorable Permanent Secretary pointed out that the lack of irrigation, flood control, land degradation, coupled with the conversion of arable land to high end real estate, are but some of the major challenges in terms of sustainability that are facing Kenya and that are further complicated by climate change.</p> <p>We are witnessing changing rain patterns, he continued, as increased weather variability and climate change are affecting the traditional seasonal patterns within the agriculture sector. Across Africa, the most affected by these changes, have been the smallholder farmers.</p>



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	<p>To avert the effects occasioned by the changing climate, agriculture sector stakeholders need to work with data, and develop tools and models to adapt to climate change. Several changes need to be implemented in different regions where climate change affects the vulnerable most.</p> <p>Kenya imports food worth US\$ 1 billion, out of the more than US \$35 billion worth of overall food imports purchased by the continent in aggregate. This can change if we adopt transformative models by increasing productivity – and, importantly, develop improved infrastructure and methods of storage (drying and cooling facilities) and for transportation and post-harvest product handling to reduce losses.</p> <p>In Kenya, he noted, the challenge of our not being able to meet our food demand is exacerbated by the fact that we have weak and relatively little technical capacity to properly address climate change related issues that impact the agriculture sector.</p> <p>What can be done to ensure that Africa is food secure?</p> <p>Post-harvest crop management, and the storage of water must be areas of focus if we are to meet our food demands. As the effects of climate change increase (drought and floods), they will most profoundly be felt in the water sector - which has a direct and close relationship to the agriculture sector.</p> <p>Small quantities of water harvested and stored are not the solution, rather large-scale rainwater harvesting is. If this is not done, it will make the task of providing water much more difficult, which has the potential to lead to regional and community level conflicts due to the shrinking water sources.</p> <p>We also have to help change the low levels of preparedness for erratic weather patterns that we find in rural communities and work to educate farmers about what they can do to combat climate change on their farms.</p>
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		<p>There must be an effort to continue working on improving productivity and intensifying production using new and emerging technologies.</p> <p>We also need to update our national policies on water harvesting and storage. This requires a broad water storage and irrigation master plan. With water storage, and irrigation, this will make it possible to intensify and expand land under cultivation - especially in areas with low rainfall. A case study of this is the massive investment that we have made here in Kenya to irrigate roughly 10,000 acres through the Galana- Tana-Kulalu irrigation scheme.</p> <p>Also, while new irrigation systems are being developed, there is a need to rehabilitate existing irrigation systems. We also should not ignore the impact of our land use on agriculture across the nation, as there is shrinking arable land due to an influx of real estate developments. Kenya has increasingly been losing highland areas to real estate developments, which will exacerbate food insecurity.</p> <p>Interventions in agriculture and water sector should be based on broader visions of development in the country and incorporated into national strategies such as our Vision 2030 in Kenya, and aligned with the continental vision captured in the AU’s Agenda 2063.</p> <p>To reduce the risk that farmer’s face, more public – private partnerships that provide tools for risk mitigation will also be necessary. Here in Kenya, our government is willing to intervene and embark upon such collaborations where there is scale.</p> <p>In the end, we have to take the storage of water seriously; otherwise, our changing climate and weather patterns will have the capacity to wipe put Africa.</p>
<p>Panelists</p>		



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Dr. Juliette Biao
Koudenoukpo,
Director, Regional
Office for Africa,
UNEP



Dr. Koudenoukpo introduced the work of her office in Nairobi and then continued on to share with the delegates her view that Africa's agriculture transformation hinges on sustainability, as she explained that a green revolution will never happen if we do not protect and integrate the environment into that "revolution".

Food security, poverty and climate change are key challenges that we have to tackle in Africa today, she continued. This should be pursued within a framework of our having a robust environment and policy agenda developed and adopted. The Paris Agreement and Sustainable Development Goals must be pursued for us to achieve inclusive growth, and we cannot leave out Agenda 2063 in our planning.

The 10th WTO Nairobi package is also important as it received commitment by countries to abolish agriculture export subsidies.

To achieve this, we should aim to eliminate production inefficiencies by:

- i. Reversing ecosystem degradation,
- ii. Promoting Agro-industrialisation by using renewable energy in agriculture,
- iii. Combating climate change, and
- iv. Promoting enablers by investing in women and youth.

She further commented that in Africa, women produce and work more on farms than men. We should expand our financing for women farmers as part of the AU's Agenda 2063 implementation plan. Africa, she continued, needs to invest in affirmative action for women to access land and to support this our national policies should be changed. It is also important to incentivize women to remain in school and to continue their education, as educated women are more empowered and they can provide the much-needed revolution in agriculture. Furthermore, educated and



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	<p>empowered women should be involved in Africa’s policymaking processes.</p> <p>And, of course, for the women who remain in agriculture they should be helped to access markets – and to add value to their produce to become agribusiness players.</p> <p>It is estimated that if women had equal access to opportunities in agriculture, they could feed an additional 100-150 million hungry people.</p> <p>Also, toward increased inclusion, investing in the education of Africa’s young people should also be a priority as should be reforming the educational system to equip youth with agricultural and vocational skills. We also need to develop more agribusiness focused incubation centers. This is so because the agricultural value chain offers many opportunities, on and off of the farm.</p> <p>What should governments do better to have sustainable solutions? Governments have not fully promoted sustainable practices and the government needs to address environmental degradation.</p> <p>She concluded her remarks by noting that there is a need to scale up most of the Africa’s climate change related interventions. UNEP is promoting a framework of bringing together stakeholders to discuss how to scale up and to develop new interventions.</p> <p>Africa she noted, knows where it is going, but must be guided by African priorities.</p>
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<p>Dr. Moses Ikiara, Managing Director, Kenya Investment Authority</p>		<p>Dr. Ikiara began his presentation by pointing out to the delegates the fact that if there is a strong business case for climate smart agriculture, then the private sector will be willing to invest, since they are always profit driven.</p> <p>The use of technology is important to address climate change. There is a need to scale up the use of technology be able to benefit from the mass technological changes happening in agriculture.</p> <p>Africa needs to adopt integrated processes when investing in agriculture, taking a systematic approach that include practices that maximize crop production and intensification.</p>
<p>Dr. Denis Kyetere, Executive Director, African Agricultural Technology Foundation (AATF)</p>		<p>Dr. Kyetere began his contribution to the panel by posing the questions - are we developing the right technologies? . . . and how can we accelerate the adoption and dissemination of climate smart agricultural technologies and processes?</p> <p>In an African context, climate smart agriculture has been happening since time immemorial. For example, in the past banana plantations used mulching, which was a form of climate smart agriculture, to conserve moisture and increase resilience in times of drought. The question therefore is, have these practices been targeted?</p> <p>Climate smart agriculture requires a combination of practices, but we have to target them considering the different conditions. Technologies and agricultural products, which are drought tolerant, or which combat drought, should be scaled up and targeted to areas where water is scarce and they will make the most impact.</p> <p>For instance, AATF is currently in the process of developing water efficient and drought resistant maize for Africa.</p> <p>Our innovations must also be developed in the context of changing situations and tailored to increase resilience and to reduce emissions in the agriculture sector.</p>



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<p>Mr. Will Warshauer, President and CEO Technoserve</p>		<p>Mr. Warhauer shared with the delegates that from his experience he has learned that business solutions to poverty do work, therefore what can be good for business can also be good for farmers.</p> <p>He continued that given the unpredictable nature of climate variability and climate change, it is hard to predict the full impact and scope of climate change. Thus, we have to ask ourselves how do we make business sense of the phenomenon that is climate change? There has to be a business case on why to invest in climate smart agriculture.</p> <p>In his view, he further stated, multi-stakeholder platforms like AGRF are important in addressing some of the issues facing agriculture.</p> <p>We need to develop financial innovations, since smallholder farmers are most vulnerable and they need to have financial incentives to invest in climate smart agriculture, to help them reduce the potential impact of climate change.</p> <p>What is stopping our efforts to scale up the use of climate insurance and the adoption of drought resistant technologies? Incentives, exposure to products and education.</p> <p>The uptake rates for insurance provided to farmers is always 6-10 percent. Evidence show that incentives help in encouraging farmers to undertake insurance schemes. Government policies that encourage use and up take of such schemes have also been shown to be very useful.</p>
<p>Summary</p> <p>It is clear that farmers are aware of climate change. There is a myth that we have to solve all climate change problems at once. However, climate change adaptation should be looked at as a gradual and context specific intervention and then scaled-up. The agriculture system should be looked at as whole, rather than our addressing problems compartmentally by only working in different segments of the value chain. It is clear that climate smart agriculture has been around, as farmers have been applying natural capital and climate sensitive approaches for a long time. What they need now are new technologies that are already available from soil testing to ICT in marketing. These should be scaled up.</p>		