

Fellowship Report

Climate Adaptation in Agriculture and Trade

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Fellowship report period: July 2016 to May 2017

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1. Introduction

Climate change represents an important challenge in Africa especially for sensitive sectors such as agriculture that contributes significantly to economic growth and livelihoods in the region. Even though Agriculture is a critical economic resource for many African countries, (contributing 20% to 30% of GDP and representing 55%¹ of the total value of African exports); the region is still food insecure and are net importer of food. This will only increase as the impacts of climate change takes its toll in the region and projected to reduce crop yield. Therefore, identifying alternative pathways of adapting food security beyond just production systems, is thus, critical.

In response to this, African Climate Policy Centre (ACPC) at the United Nations Economic Commission for Africa (UNECA) has prioritized the agriculture sector as the major entry point in debates about adaptation to climate change, food security and poverty reduction. To assist in building the capacity of African governments and institutions to benefit, as much as possible, from the opportunities climate change offers in the agricultural sector, ACPC has developed a fellowship programme that captures the linkages between agricultural, trade and climate change policies in depth. Such fellowship programme aims to enhance the capabilities of a wide range of African experts in climate research and policy in supporting Africa's transition towards a low-carbon and climate-resilient development pathway thus contributing to food security. The fellowship programme also aims to link African climate change scholars and professionals with relevant research and policy institutions across the continent, as well as expose the fellow to different training and capacity building opportunities.

2. Climate adaptation on agriculture and trade fellowship

While several adaptation measures have been put in place by a large number of African countries with positive effect on the resilience of agricultural systems for the short term, the measures are not sufficient to address the long term impact of climate change on food security. In this interactive system, trade is expected to provide a pull factor for prominent agricultural commodities emerging under climate triggered shifts in entire ecosystems, alterations in agroecological zones, and in a changing crop habitats.

Even though Africa has tremendous agriculture potential, an unacceptably large number of people still lack the food they need for an active and healthy life. The latest available estimates indicate that about 233 million² people in Africa are undernourished in 2014–16. The climate change, agricultural production and trade fellowship programme therefore investigates and evaluates the interactions between climate change, agricultural production and trade in achieving food security. By using a nexus approach and developing a framework that diagnose the opportunities that may

¹ <http://www.ipcc.ch/report/ar5/wg1/>

² <http://www.fao.org/3/a-i4646e.pdf>

emerge from a changing climate; the main objective of the fellowship programme is to build a business model around key priority agricultural crops that transforms food security from a subsistence base to a business framework that capitalizes on the emerging opportunities from the interaction of climate change, and agricultural trade for providing climate adaptation for food security in Africa.

Ultimate goal of the project

Contribute to the development of a knowledge-base in capitalizing on the emerging opportunities from the interaction between climate change and agricultural trade for boosting inter-regional trade in agricultural commodities and enhancing climate adaptation for food security in Africa.

Role of the research fellow

My roles in this project were diverse including helping the implementing institutes to develop implementation plan and methodologies for different components of the project, organizing inception workshop, prepare expert group and consultative meetings, develop knowledge products, direct involvement on the project activities since July 2016.

3. Results

The table below summarizes some of the major achievements that was achieved during the eleven-month fellowship programme.

Category	Activity	Status	Deliverables
Partnerships for implementation			
Africa Trade Policy Center of ECA	Planning meetings	Completed	Work plan
Knowledge products			
Impact of climate change on agricultural trade flows and food security in ECOWAS	Summary report	Completed	Summary report
Trade models for climate change and agriculture	Review paper	Completed	Review paper
Trade's contribution to SDG goals	Information note	Completed	Information note
Organization of high level meetings			
Capitalizing on Emerging Opportunities for Agricultural Production and Trade under Climate Change in Africa	Organized a side event at the 22nd session of the Conference of the Parties (CoP22) to the UN Framework Convention on Climate Change (UNFCCC)	Completed	Report

	Organized a side event at the Africa Trade week	Completed	Report
Conferences and workshops participation			
The 2nd Africa Climate Smart Agriculture Alliance under the patronage of the Government	Conference	Completed	Report
The 22nd session of the Conference of the Parties (CoP22) to the UN Framework Convention on Climate Change (UNFCCC)	Conference	Completed	Report
The Sixth Conference on Climate Change and Development in Africa (CCDA–VI)	Conference	Completed	Report
Africa Trade Forum at Africa Trade Week (ATW 2016)	Conference	Completed	Report
EIF Phase Two: Enhancing Inclusive and Sustainable Trade Development for LDCs	Regional workshop	Completed	Report

3.1. Knowledge products

A) Impact of climate change on agricultural trade flows and food security in ECOWAS

ACPC in collaboration with the United Nations University-Institute for Natural Resources in Africa (UNU-INRA) led a two-year research that assess the impacts of climate change on agricultural trade and food security in Economic Commission of West African States (ECOWAS). The project also assesses whether or not agricultural production systems and trade policies in the ECOWAS region can be adjusted to alleviate the impact of climate change on food security and promote sustainable development. This report summarizes the research's findings and highlights the gaps than needs to be addressed and provides some key recommendations for future work.

B) Trade models for climate change and agriculture

Trade plays a significant role in building resilience to and mitigating the severity of food security shocks. Although there are a growing number of studies analyzing how agricultural production and commodity markets need to be adjusted to promote interregional balance in agricultural production and food security, few of these studies have critically explored the potential adjustments in intra-regional trade flows in agricultural commodities as a response to changing

climate. Despite the considerable challenges and opportunities, only a very limited number of studies have investigated the interaction between trade, climate change and agriculture in Africa. Important studies in this area utilise Computable General Equilibrium (CGE) modelling to analyse the interaction between biophysical models of climate change and market-based responses, such as international trade. Yet many of these models are calibrated on assumptions which are more appropriate for high income, industrialized economies with greater adaptive capacity. This paper provides a review of the different methodologies currently employed by the body of literature assessing trade in climate change and agricultural production in Africa. Although its main purpose is identifying literature gaps and targeting areas in which further research would be especially valuable, it also draws upon the key outcomes from this literature to present a summary of findings useful for stimulating policy thinking and responses.

3.2. High level meetings

During my first six months of my fellowship programme, I took the responsibility of organizing a high level discussion side event at **COP22**, that took place in Marrakech, Morocco November 15, 2016 and at **Africa Trade Week**, that took place in Addis Ababa, Ethiopia, November 29, 2016.

The main objective of this high level discussions were to explore ways to capitalize on the opportunities emerging from the nexus of climate change, agricultural production and trade in incentivizing business investments of agriculture to transform the sector in Africa and enhances food security. The side events were organized in collaboration with the Africa Climate Policy Centre (ACPC) and Africa Trade Policy Center (ATPC) of UNECA.

The two high level discussions provided a forum for learning and sharing experience and knowledge amongst experts, ministers and policy makers in the field of Climate Change Adaptation, Agriculture, and International Trade. The discussion was rich in raising issues that contribute in the articulation of policies that would support Africa's growth and transformational trajectory following climate-induced shifts in agro ecosystems. It also helped in illustrating the emerging corridors for agricultural trade, and the opportunity to respond to market demand for agricultural commodities.

3.3. Conferences and workshops

- The 2nd Africa Climate Smart Agriculture Alliance under the patronage of the Government of Kenya was held from 11-13 October, 2016 in Nairobi, Kenya. The theme for the Conference was *“From Agreement to Action: Implementing INDCs for Growth and Resilience in African Agriculture”*

- The Sixth Conference on Climate Change and Development in Africa (CCDA–VI) was held from 17-20 October, 2016 in Addis Ababa, Ethiopia. The theme for the Conference was “*The Paris Agreement: What next for Africa?*”
- The 22nd session of the Conference of the Parties (CoP22) to the UN Framework Convention on Climate Change (UNFCCC) was held from November 7 – 18, 2016, in Marrakech, Morocco
- Africa Trade Forum at Africa Trade Week (ATW 2016) was held from November 28th – December 1st, 2016 in Addis Ababa, Ethiopia.
- EIF Phase two regional workshop was held from January 31st – 3rd February 2017 in Addis Ababa Ethiopia. The main theme of the workshop was “*Enhancing Inclusive and Sustainable Trade Development for LDCs*”.

3.4. Others

In addition to my main task as a research fellow on climate adaptation in agriculture and trade; my contribution to the African Climate Policy Center (ACPC) also included, but not limited to, technical inputs to the past and on-going projects, reviewing reports, assist in organizing workshops, serve as rapporteur, prepare “*talking points*”, participate in planning meetings for ClimDev-Africa Phase II business plan, ACPC strategy, WISER Phase I final project document compilation and WISER Phase II project proposal and CCDA VI planning, preparation for steering committee meeting and others as per ACPC’s senior experts demand.