Training Manual

Climate & Agriculture Negotiations

Towards more coherence between climate, agro-processing, trade and agriculture

RWANDA TRAINING

CUTS International

trapca

AUTHOR

Trade Policy Training Centre in Africa (trapca)
ESAMI Hill, ESAMI Road, PO Box 3030
Arusha, Tanzania
Ph: +255 732 972 202 | Fax: +255 272 508 285
Email: info@trapca.org | Web: www.trapca.org

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CUTS International, Geneva
37-39, Rue de Vermont
1202 Geneva, Switzerland
Ph: +41.22.734.6080 | Fax:+41.22.734.3914
Email: geneva@cuts.org | Web: www.cuts-geneva.org

FUNDING SUPPORT

Swedish International Development Cooperation Agency (Sida)
Address: SE-105 25 Stockholm, Sweden
Visiting address: Valhallavägen 199.
Ph: +46 (0)8-698 50 00 | Fax: +46 (0)8-20 88 64.
Email: sida@sida.se | Web: www.sida.se

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Acronyms and Abbreviations

AAUs	Assigned Amount Units
AGOA	African Growth and Opportunity Act
AMS	Aggregate Measurement of Support
ARDP	Agriculture and Rural Development Policy
BTAs	Border Tax Adjustments
BT	BioTechnology
CAADP	Comprehensive Africa Agricultural Development Programme
CC-FS-T	Climate Change-Food Security-Trade
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CIF	Cost Insurance and Freight
CET	Common External Tariffs
CO_2	Carbon dioxide
COMESA	Common Market for Eastern and Southern Africa
COW	Committee of the Whole
CSA	Climate Smart Agriculture
CSOs	Civil Society Organizations
CTE	Committee on Trade and the Environment
EAC	East African Community
EACCCP	East African Community Climate Change Policy
EBA	Everything But Arms
ECCAS	Economic Community of Central African States
ECGLC	Economic Community of the Great Lakes Countries
EPAs	Economic Partnership Agreements
EPZ	Export Processing Zone
ERUs	Emission Reduction Units
FAFS	Framework for African Food Security
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FNDPC	National Forum for Development and Trade Policy
FNSP	Food and Nutrition Security Policy
FTA	Free Trade Area
GATS	General Agreement on Trade in Services
GATT	Agreement on Tariffs and Trade
GCF	The Green Climate Fund
GEF	Global Environment Facility
GEMIT	Environmental Measures and International Trade
GHGs	Green House Gases
GMOs	Genetically Modified Organisms
GoK	Government of Kenya
GSP	Generalized System of Preferences
IPCC	Intergovernmental Panel on Climate Change
IPRs	Intellectual Property Rights
ITMOs	Internationally Transferred Mitigation Outcomes
JI	Joint Implementation
L&D	Loss and Damage
LDC	Least Developed Countries
LULUCF	Land Use, Land-Use Change and Forestry
MDGs	Millennium Development Goals
MFN	Most Favoured Nation
MUB	Manufacturing Under Bond

NAPA	National Adaptation Programme of Action
NEPAD	New Africa's Partnership for Development
NTBs	Non-Tariff Barriers
NTMs	Non-Tariff Measures
PACT	Promoting Agriculture-Climate-Trade
PBR	Plant Breeders Rights
PCF	Product Carbon Footprint
PRSP	Poverty Reduction Strategy Paper
PVR	Plant varieties rights
REDD	Reducing Emission from Deforestation and Forest Degradation
S&DT	Special and Differential Treatment
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SNA	National Agricultural Strategy
TBT	Technical barriers to Trade
TFA	Trade Facilitation Agreement
trapca	Trade Policy Centre in Africa
TRIPS	Trade-Related aspects of Intellectual Property Rights
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WIM	Warsaw International Mechanism for Loss and Damage
WIPO	World Intellectual Property Organisation
WMO	World Meteorological Organisation
WTO	World Trade Organisation

INTRODUCTION

Background of the regional PACT-EAC2 on demand training programme: Agriculture in climate negotiations

Phase 2 of Promoting Agriculture-Climate-Trade linkages in the East African Community (PACT EAC2) Training Programme is a project initiated by CUTS International Geneva to be undertaken at national and/or the regional levels in the EAC through on-demand workshops. Within this programme emerged this training workshop dealing with agriculture and climate negotiations within the United Nations Framework Convention on Climate Change and the World Trade Organisation (WTO).

The purpose of the on demand training programme is to facilitate the development of adequate and holistic understanding on agriculture as it relates to climate and trade negotiations through detailed analysis of concepts, stakeholder engagement, current status, contestations and the preferred future positions for the EAC. Hence, the course will facilitate an active involvement of representatives of all relevant key stakeholders in the EAC, particularly those involved in agriculture and climate negotiations, including representatives from Environment, Agriculture and Trade Ministries, as well as some farmers and agro-processors. The overarching objective is to build technical and related knowledge and capacity of relevant stakeholders on how to engage with discourses surrounding agriculture and climate negotiations resulting in agro-industrial development that is more climate-aware, trade-driven and food security-enhancing. A critical mass of these relevant stakeholders needs to be built if the EAC and Africa as a whole will have its voice heard during global climate and other related negotiations.

Objectives

The objectives are:

- To increase the capacities of a critical mass of representatives of stakeholders (e.g., staff of relevant government ministries, private sector, farmers, CSOs, staff of regional organisations) in engaging the general discourse on agriculture and climate negotiations through the mastering of critical terms and procedures involved.

- To develop analytical, as well as interpersonal skills required to build negotiation consensus on agriculture and climate change from the national, through the regional (EAC), Africa Union to the global level.
- To increase the capacity of stakeholders to take advantage of ongoing agriculture, climate and trade negotiation processes, drawing from the WTO, UNFCCC, existing Intended Nationally Determined contributions [(I)NDCs] and other global texts from both the historical and futuristic perspectives, including the upcoming COP23 in Bon, Germany and ongoing WTO negotiations.
- To highlight and emphasise the fact that in negotiations, contesting policy domains/groupings get what they negotiate for, and that both the national and EAC interest remain the building blocks for the preferred agricultural position in climate negotiations that are informed by the twin pillars of adaptation and mitigation.
- To continue building an understanding on the concept of policy entrepreneurship that embraces the art and science of negotiation – knowing when to push for a position, when to stop and when to push again and when to withdraw if need be etc.

The program and the modules therein have been developed based on relevant material in the manuals and modules prepared under PACT EAC1, training needs assessment done in the PACT EAC2 inception meeting in Dar-es-Salaam, Tanzania in February 2016, as well as the modules under PACT-EAC2.
Additional information and text has been sourced on agriculture and climate negotiation.

Expected Outcomes

At the end of this on demand training, it is expected that the participants will:

- Be able to comprehend the concept of agriculture as it relates to climate negotiations under both the UNFCCC and WTO as well as other continental and global platforms.
- Be able to analyse the provisions of the (I)NDCs from all the six EAC countries and come up with a consensus of where the EAC wishes to be in the lead to COP23 and beyond.
- Be able to develop interpersonal and group engagement skills that will assist to successfully lobby different stakeholders, especially other negotiators and Parties to the UNFCCC and WTO in as far as agriculture and climate change positions are concerned as informed by the need to prioritise climate change adaptation and trade as indicated in Africa's Agenda 2063 – policy entrepreneurship.
- Be able to come to a consensus in terms of what exactly constitute the agriculture sector from the EAC perspective. For example, should agriculture include the subsectors of forestry, fisheries, livestock, crops, land use and land use change?

Structure and methodology

This on demand training manual consists of four modules namely:

- Module 1: Issues analysis: Understanding agriculture (including agro-industrial development), climate change, food security and trade concepts
- Module 2: Features of Selected International Institutions
- Module 3: Agriculture and climate change: Focus on the UNFCCC and WTO negotiations
- Module 4: Simulation exercise: Drawing up future negotiation positions

The above modules are designed for delivery in a highly interactive manner, making use of case studies of existing EAC positions and policy documents, especially the (I)NDCs emerging from Paris Agreement and ongoing positions on climate change and the WTO rules and agreements. Modules one to three will be delivered as presentations with adequate room for discussion and brief exercises, while the fourth module promotes simulations and practical engagements with the subject matter. This on demand training takes two (2) days of delivery.

MODULE 1: ISSUE ANALYSIS

Module Objective ● ● ● ●

This module introduces participants to concepts and definitions of agriculture (including agro-industrial development) climate change, food security and trade. The goal is to enhance understanding of participants on how agriculture (including agro-industrial development) can be more climate-aware, trade-driven and food security-enhancing in the EAC region.

Specifically, the module's objectives are to:

- Create and increase substantive understanding of issues related to agriculture and climate negotiations (including agro-industrial development), highlighting its linkages to the CC-FS-T nexus;
- Discuss the positive and negative impacts between CC-FS and CC-T; and
- Determine the most important causes of inappropriate agro-industrial development in the EAC and their linkages to the CC-FS-T nexus.

Learning Outcomes ● ● ● ●

By the end of the training on module 1, participants will be expected to:

- Practically demonstrate their firm grasp of the concepts of agriculture (including agro-industrial development), climate change, food security and trade and their interrelationships and links, particularly the positive and negative impacts; and.
- Determine the challenges and opportunities of the agro-industrial sector in EAC region.

Module Content ● ● ● ●

The module is organised under the highlighted key sections below:

- Concepts and definitions in agriculture (including agro-industrial development), climate change, food security and trade;
- Linkages between CC-FS and CC-T;
- Positive and negative impacts between CC and agro-industry; and
- Cases of inappropriate agro-industrial development in the EAC related to CC.

Basic concepts and main definitions

According to the FAO (2015) report on the state of agricultural commodity markets, at the global level, the share of processed products in agricultural exports remained constant between 2001 to 2004 and 2009 to 2012 at approximately 41%, while it shrank in Least Developed Countries (LDCs) from 31% to 26%. Over the same period, the share of raw commodities in the total value of agricultural exports increased substantially in developing countries from 33.5% to 48.5%.

The world's population is set to increase to 9.1 billion by the year 2050, and nearly all of this population increase will occur in developing countries alongside the acceleration of urbanisation. About 70% of the world's population is expected to be in urban areas. These trends will likely be experienced in the EAC. In order to feed this population, global food production will have to increase by 60% and this will be against a background of climate change.

An estimated USD$83 billion investment in agricultural production and agro-industrialisation will be required to meet this demand (FAO, 2015). The prospects for continued growth in demand for value-added food and agricultural products constitute an incentive for increased attention to agro-industrial development in the context of economic growth, food security, and poverty-fighting strategies.

The developmental role of agro-industrialisation is rooted in theoretical and empirical studies, which demonstrate that structural changes that accompany development often reveal a decline in the relative weight for agricultural sector versus non-agricultural sectors as per capita income increases. This is often accompanied by a drop in the share of primary production and a parallel increase in agro-processing (FAO, 1998). The potential for agro-industrial development in developing countries is largely linked to the relative abundance of agricultural raw materials and low-cost labour in most of them. The most suitable industries in such conditions are indeed those that make relatively intensive use of these abundant raw materials and unskilled labour, and relatively less intensive uses of presumably scarce capital and expensive skilled labour (Ibid). Furthermore, in developing countries where the domestic market is limited by purchasing power, value addition by Small and Medium Enterprises (SMEs) (for instance through small agro-industrial plants and cottage industries) may have higher impacts economically, especially for women and youth who face high rates of unemployment.

Forward-backward linkages in agro-processing and value chain dynamics may also present more opportunities for many economic sub-groups to participate in agro-industrialisation through farm-level production, transportation, post-harvest handling, and value addition. This further stimulates the service industry and provides an opportunity for service providers in areas of marketing, advertising, branding, labelling, and exports to participate in the process, thereby creating employment and propelling economic growth.

Finally, agro-industrial development impacts agriculture in different ways. For instance, agro-industrial development can directly stimulate increased agricultural production as a source of raw materials for industries and indirectly stimulate consumer demand for processed products. The construction of agro-industries and subsequent provision of power, transport infrastructure, water, and communication has spill-over effects on

agricultural production which contributes to the development of other sectors at the local level, creating a favourable atmosphere for technological progress. However, such growth and benefits have associated negative impacts on the environment from the harmful greenhouse gasses (GHGs) that could be emitted leading to global warming that results in climate change. Climate change may in turn lead to extreme weather events that may negatively impact agricultural production like droughts, floods, extreme snow etc.

Conceptualising agro-industrial development

Agro-industrialisation: It is the "transformation of products originating from agriculture, forestry and fisheries to intermediate and finished products" through value addition (FAO, 2007).

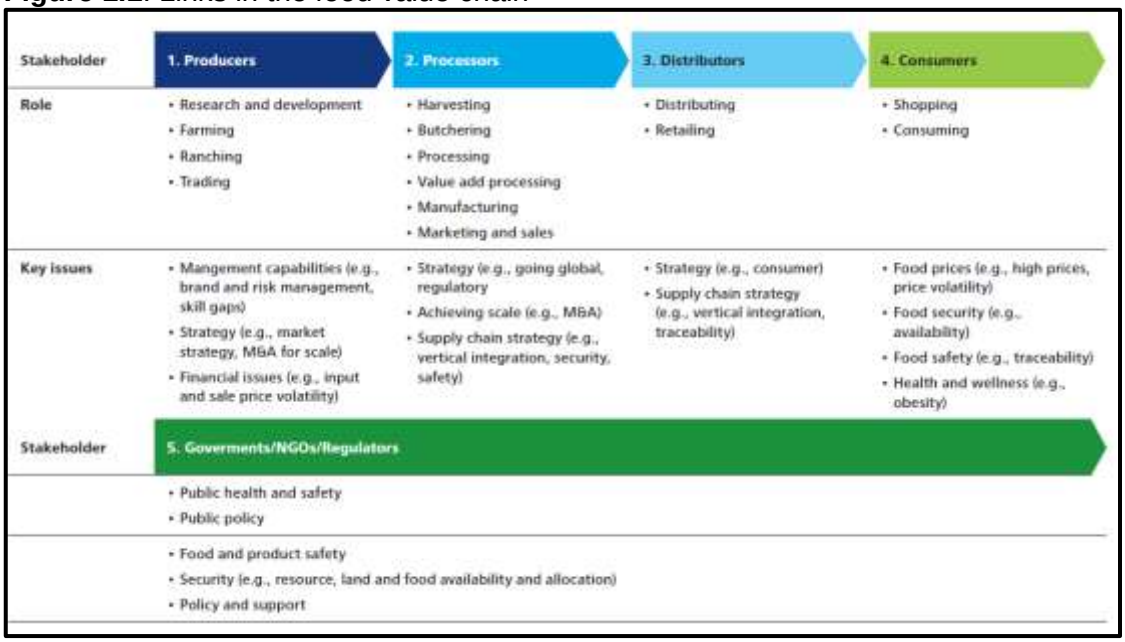
Agro-industrialisation can also be defined (FAO, 2013a) as the establishment of enterprises and supply chains for developing, transforming and distributing specific inputs and products in the agricultural sector.

Agro-processing means transforming products that originate from agriculture, forestry and fisheries (Ibid).

Agro-value chain describes the entire range of activities undertaken to bring a product from the initial input-supply stage, through various phases of processing, to its final market destination, and its disposal after use (UNIDO, 2009).

Agro-food value chains encompass activities that take place at the farm or rural level, including input supply, and continue through handling, processing, storage, packaging, and distribution. As products move successively through the various stages, transactions take place between multiple chain stakeholders, money changes hands, information is exchanged and value is progressively added. Macroeconomic conditions, policies, laws, standards, regulations and institutional support services (communications, research, innovation, finance, etc.) – which form the chain environment – are also important elements affecting the performance of value chains (Ibid). Figure 1.1 illustrates the concept of value chains with regards to food value chains.

Figure 1.1: Links in the food value chain



Source: Deloitte (2010: 3)

Concepts in climate change

Weather is the state of the atmosphere, to the degree that it is hot or cold, wet or dry, calm or stormy, clear or cloudy. Most weather phenomena occur in the troposphere just below the stratosphere. Weather refers, generally, to day-to-day temperature and precipitation activity.

Climate in a narrow sense is usually defined as the "**average weather**," or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands of years. The classical period is 3 decades, as defined by the World Meteorological Organization (WMO). These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system.

Climate Variability refers to variations in the mean state and other statistics (such as standard deviations, statistics of extremes, etc.) of the *climate* on **all temporal and spatial scales** beyond that of individual weather events. Variability may be due to natural internal processes within the *climate system* (internal variability*)*, or to variations in natural or *anthropogenic* external forcing (external variability).

Climate change refers to change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use**.**

Adaptation to climate change refers to actions taken to *reduce vulnerability* to actual or expected changes in climate. This includes all in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm

or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.

Vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity.

Mitigation refers to actions undertaken to reduce the sources or increase the sinks of greenhouse gases. It includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks.

Climate mainstreaming refers to the incorporation of initiatives, measures, strategies to reduce vulnerability to climate change into other existing policies, programs, resource management structures, and other livelihood enhancement activities, so that adaptation to climate change becomes part of, or consistent with, other sectoral programs.

Climate Smart Agriculture (CSA): CSA Refers to any policies and/or practices that lead to the following three goals: (1) a sustainable increase in agricultural production, (2) an increase in agricultural resilience to climate change (adaptation), and (3) a reduction in GHG emissions from agriculture (mitigation) relative to conventional practices (FAO, 2012). To the three goals highlighted, one can add the improvement of livelihoods through food security and the attainment of development goals (Sullivan et al., 2012).

REDD (Reducing Emissions from Deforestation and Forest Degradation)
This refers to actions designed to use market and financial incentives to reduce greenhouse gas emissions from deforestation and forest degradation. Because the goal of REDD is to reduce carbon in the atmosphere, it is considered a mitigation strategy.

Intended Nationally Determined Contributions (INDCs): INDCs are national climate pledges submitted by UNFCCC Parties in the run-up to and since COP21. The INDCs spell out the actions countries intend to take to address climate change – both in terms of adaptation and mitigation. Originally submitted as INDCs, these become binding Nationally Determined Contributions (NDCs) when a country ratifies the Paris Agreement.

Clean Development Mechanism (CDM): is one of the flexibilities of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (commonly referred to as Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO2, which can be counted towards meeting Kyoto targets.

Joint Implementation (JI): This Kyoto mechanism allows a country with an emission reduction or limitation commitment under the Kyoto Protocol (Annex B Party) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party, each equivalent to one tonne of CO2, which can be counted towards meeting its Kyoto target. Joint implementation offers Parties a flexible and cost-efficient means of fulfilling a part of their Kyoto commitments, while the host Party benefits from foreign investment and technology transfer.

Concepts and definitions related to food security

FAO (2006) defines **food security** as the situation that exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food, enabling them to meet their dietary needs and food preferences for an active and healthy life. This definition entails four dimensions of food security.

Availability: This refers to sufficient quantities of food of appropriate quality being at disposal to people. Availability of food can be achieved through domestic production, imports or through food aid.

Accessibility: This is ensured when households and all the individuals within the household, have physical, economic and/or social means to access food. The distance and access to markets, economic capacity and food aid are crucial factors in contributing to access to adequate food.

Utilization: This refers to the proper and healthy use of food. The diet should provide sufficient energy and essential micronutrients to combat "hidden hunger". The availability of clean water, adequate sanitation (including food safety, sanitary and phytosanitary, SPS) and good health of the citizens are key factors in the effective utilization of food.

Stability: The concept of stability refers to the factors that aim at ensuring stable availability, access and the utilization of food

Concepts and definitions related to trade

International trade is the exchange of goods, services and capital across national borders.

Export Diversification: Export diversification is variously defined as the change in the composition of a country's existing export product mix or export destination or as the spread of production over many sectors.

Tariff is a tax imposed on a good imported into a country. A tariff may be specific, when it is levied as a fixed sum per unit of the imported good, or *ad valorem*, when it is applied at a percentage rate with reference to the value of the import.

Non-tariff measures (NTMs) include all policy-related trade costs incurred from production to final consumer, with the exclusion of tariffs. They are categorized depending on their scope and/or design and are broadly distinguished in technical

measures (such as sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT) and pre-shipment inspections) and non-technical measures.

Non-Tariff Barriers (NTBs) refer to restrictions that result from prohibitions, conditions, or specific market requirements that make importation or exportation of products difficult and/or costly. NTBs also include unjustified and/or improper application of Non-Tariff Measures (NTMs) such as (SPS) measures and other TBT.

Regional trading arrangements is an agreement among governments to liberalize trade and possibly to co-ordinate other trade related activities. There are four principal types of regional trading arrangements a: free trade area; customs union; common market; and an economic union.

Trade liberalization or Free Trade refers to interchange of commodities across political boundaries without restrictions such as tariffs, quotas, or foreign exchange controls. This economic policy contrasts with protectionist policies that use trade restrictions to protect or stimulate domestic industries.

Customs Unions are arrangements among countries in which the parties do two things: (1) agree to allow free trade of products within the customs union, and (2) agree to a common external tariff (CET) with respect to imports from the rest of the world. Customs unions and preferential trade arrangements, more generally, have become increasingly important in recent years.

Common external Tariff (CET) is a uniform duty rate (customs duty) adopted by members of a Customs Union and charged on imports from countries which are not a part of the Customs Union.

Common Market is a customs union with provisions to liberalize movement of regional production facts (people and capital).

Free Trade Area (FTA) is a grouping of countries within which tariffs and non-tariff trade barriers between the members are generally abolished but with no common trade policy toward non-members.

Trade preference is a policy of admitting imports from one or more countries at lower (perhaps zero) tariffs than apply to otherwise comparable imports from other countries. Preferences are extended by granting country or countries to beneficiary countries. An example of a trade preference is the Generalized System of Preferences (GSP) which is extended by many developed countries to developing countries. Other examples are programmes such as “Everything But Arms (EBA)” extended by the European Union to Least developed Countries (LDCs) and the “African Growth and Opportunity Act” through which the United States of America extends preferential treatment to a group of African Countries for purposes of supporting their development efforts.

Rules of origin (ROO) are defined as the criteria used to define where a product was made. They are an essential part of trade rules because a number of policies discriminate between exporting countries: quotas, preferential tariffs, anti-dumping actions, countervailing duty (charged to counter export subsidies), among others.

National treatment principle is a basic WTO/ GATT principle of giving others the same treatment as one’s own nationals. GATT Article 3 requires that imports be treated no less favourably than the same or similar domestically-produced goods once they have passed customs. General agreement in Trade in Services (GATS) Article 17 and

Agreement on protection of Trade Related intellectual Rights (TRIPs) Article 3 also deal with national treatment for services and intellectual property protection.

Trade facilitation is the simplification, modernization and harmonization of export and import processes.

An advance ruling is a written decision provided by a Member to the applicant prior to the importation of a good covered by the application that sets forth the treatment the Member gives to the good at the time of importation with regard to: (i) the good's tariff classification; and (ii) the origin of the good.

Climate, Food, Trade, & Agro-processing: the Nexus

Climate change affects food security directly. Trade also affects both climate change and food security directly. Agro-industry development is about growth of enterprises, activities and institutions involved in transformation, distribution and value addition (including agro-processing) of agricultural and food products, which creates the link to climate change, food security and trade.

Positive and negative impacts between climate change and agro-industry

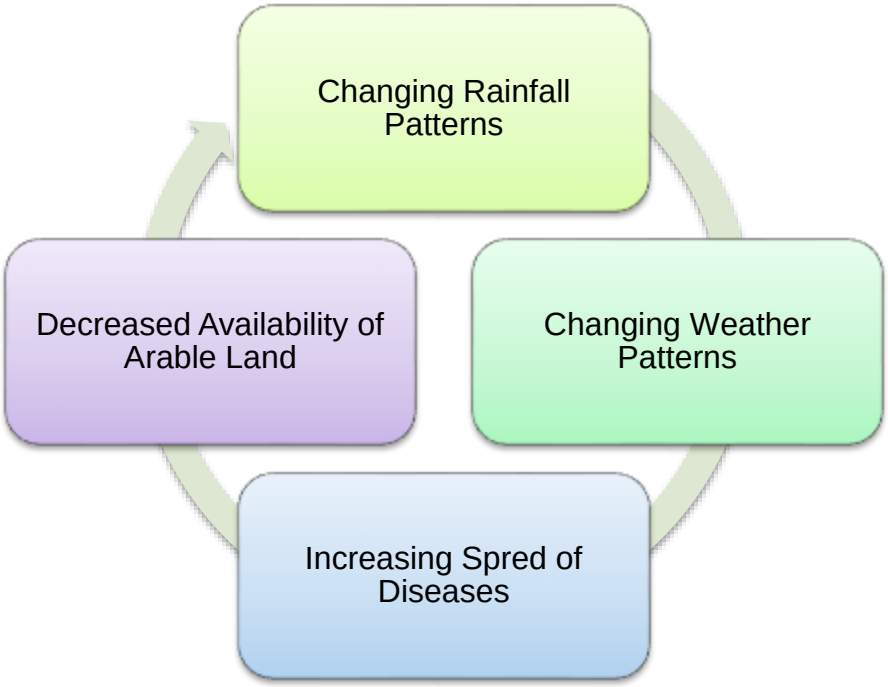
Climate change has become a global issue of concern because it poses a threat to people, ecosystems, livelihoods, and agricultural food production. The 2007 IPCC report on global climate change impacts (AR4) scenarios shows that there will be shifts in patterns of rainy seasons (IPCC, 2007). This is confirmed in the 2004 5th Assessment Report by the IPCC (AR5) (FANRPAN, 2017). These patterns interfere with cropping systems, negatively affecting yields and food security (Otieno et al, 2013). The most vulnerable groups are the poor, especially rural farmers. Future farming and food systems will face substantial, albeit distinct, changes in their environments. Some regions (the few winners) may benefit from more favourable climate conditions for production, while others (the larger group of losers) will face increased climate-change-related biotic and abiotic stresses. From this perspective, climate change affects agricultural production, agro-processing, trade in food, food security and agro-industry development negatively.

The International Centre for Trade and Sustainable Development (ICTSD) (2009), notes that agriculture will be significantly and negatively impacted by climate change. As such, substantial adaptation efforts will be required. In addition, the sector emits

significant amounts of GHGs, an aspect that demands action from the sector from a mitigation perspective. In terms of numbers provided by the IPCC, “agriculture accounts for some 13.5% of total anthropogenic GHG emissions globally. Combined, emissions from agriculture and deforestation, (of which agriculture is a key driver), account for more emissions than the transport sector. Agricultural emissions make up 47% of global anthropogenic emissions of methane (CH4) and 58% of global nitrous oxide (N2O). N2O emissions from soils and CH4 emissions from enteric fermentation constitute the largest sources of non-CO2 emissions, with biomass burning, rice production and manure management accounting for the rest”. (Ibid: 4). Developing countries also host the larger share of these emissions. The ICTSD further observes that if mitigation measures were to be scaled up in the sector, then they should be from soil carbon sinks (sequestration) (89%) and methane gas reductions (9%) as well as nitrogen oxide reductions at % (Ibid).

In a recent study scoping CSA in 15 east and southern African countries that included Kenya, Tanzania and Uganda, the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) (2017), summarised key findings from the AR5, which confirmed that global climate change was already damaging crops and undermining food production capacity, especially in Africa. To this end, climate change will negatively impact food security, nutrition and wellbeing in a number of ways (Figure 1.2).

Figure 1.2: Impact of CC on food security, nutrition and wellbeing



Source: Author, Based on FANRPAN (2017: 8)

Although climate change impacts will be felt all over the world, developing countries will likely be the most affected, particularly Africa because of its low adaptive capacity. There will be a general 3.2 degree increase in average temperatures, and humid areas will be wetter with a 7 percent increase in average precipitation (World Bank, 2009). Projections indicate an increase of arid and semi-arid lands, a reduction in crop growing times, and, in some countries, yield reductions in rain-fed agriculture of up to

50 percent by 2050, but some parts will also get wetter and will be more prone to flooding (Ibid).

In Kenya, for example, climate change has led to increased temperatures of between 0.3 to 2.9 degrees Celsius depending on the region, in addition to unpredictable rainfall patterns with increased risks of floods over the past 10 years (GoK, 2012). Climate change potentially poses one of the greatest challenges for Kenya to realise its vision to become a prosperous country. The World Bank affirms that "poverty and vulnerability to climate change remain the most critical development challenges facing Kenya (World Bank, 2009).

Industrialisation and agro-industrialisation have negative and positive effects on the climate, food security and trade. Despite their important contribution to overall economic development and agricultural development, agro-processing industries can give rise to undesirable environmental, food security and trade side effects.

The basic causal relationship between agro-industrialisation and climate change occurs through economic growth. Economic growth entails increased productive activities achieved through increased use of fossil energy sources and increased pollution leading to increases in GHG emissions into the atmosphere, which subsequently lead to adverse climatic change. Increases in agro-industrial activities are also accompanied by increased energy demands to transport products, ultimately intensifying the emissions tied to one product. In addition, as with any other industry, agro-industry can also create environmental pollution or hazards in various ways: for example, increased agricultural production most often leads to the use of fertilisers, pesticides, herbicides and fungicides the production of which requires considerable petroleum-based inputs and the discharge of organic or hazardous excess waste into water systems.

However, agro-industrialisation can also support the mitigation of climate change impacts through targeted mutually-supportive policies and strategies, for example, the conscious production of goods with low carbon footprints such as organic production. Increased economic growth can also enable a country to access climate-friendly technology. Moreover, policies and strategies can be implemented to reuse agro-industrial wastage. Therefore, the extent to which the positive inter-linkages between agro-industries and climate change are promoted will greatly depend on the way related policies and strategies are crafted.

The agro-industrialisation, contributes to climate change in three ways. First, agro-industrialisation, which is dependent upon the raw materials produced from agricultural production, spurs increased GHG emissions by expanding agricultural production activities which make use of petroleum-based fertiliser and pesticides, whose production contributes to climate change. Secondly, industrial activities associated with agro-processing would also contribute to increased GHG emissions and further exacerbate climate change. Thirdly, through trade, agri-business and global value chains, the movement of goods across continents also leads to increased carbon footprints, which are also directly linked to global warming and climate change. Most notably, industrial-based agriculture also destroys biodiversity and the ability to capture carbon, leading to climate change.

As Maio (2013) astutely notes, industrialisation and food security are rarely mentioned together in the same document or discussion space. Maio further argues that the achievement of one of these development objectives is very likely to have positive effects on the likelihood of achieving the other as well (Ibid.). There is also a positive relation between food security and industrialisation which is based on the link between

agricultural development and the increase in agro-processing activities. Agro-processing ensures a stable outlet for agricultural products, stimulating greater production. Therefore, agro-processing increases agricultural production, generating two positive effects. Firstly, the increase in production simply reduces the dependence on external food provision. Secondly, it creates the possibility to process additional products, allowing the generation and expansion of value-added agro-processing activities. Agro-processing will also ensure that small-scale farmers have a market for their produce, which will stimulate greater food production. Given the perishable nature of agricultural products, agro-industries are often situated close to production. A policy that supports the location of industries in rural areas promotes rural transformation and limits rural-urban migration, thus ensuring a higher and more stable labour force in rural areas. Therefore, industrialisation and food security should be viewed as complementary strategies as the achievement of one would also facilitate the achievement of the other.

However, in general, food security and industrialisation are not always complementary. Rapid industrialisation in cities may attract labour from the countryside as young people migrate to towns looking for industrial jobs, thus diminishing the productive capacity of the rural areas, ultimately contributing to food insecurity. In addition, high demand for food within cities and industrialising areas may force the redistribution of food from rural to urban and industrial areas. There have also been incidences where traders purchase agricultural land and its yield before the crop matures. Evidence has shown that when there is increased availability of lucrative markets, traders prefer to sell all the food to the market, leaving the households with very little food for their own subsistence or income. Examples of this phenomenon have occurred with maize in the northern region of Uganda, and also with pineapples in Kayunga District of Uganda. It is therefore important to understand how various geographic and socio- economic variables interact with each other and how to craft policies that create the conditions to achieve both food security and agro-industrialisation.

Industrialisation and trade are closely linked, representing two sides of the same coin (UNECA, 2015). There is a direct relationship between agro-industrialisation and trade as they facilitate each other. Trade can foster industrial development and upgrades, facilitating the exportation of the agro-processed products to foreign markets.

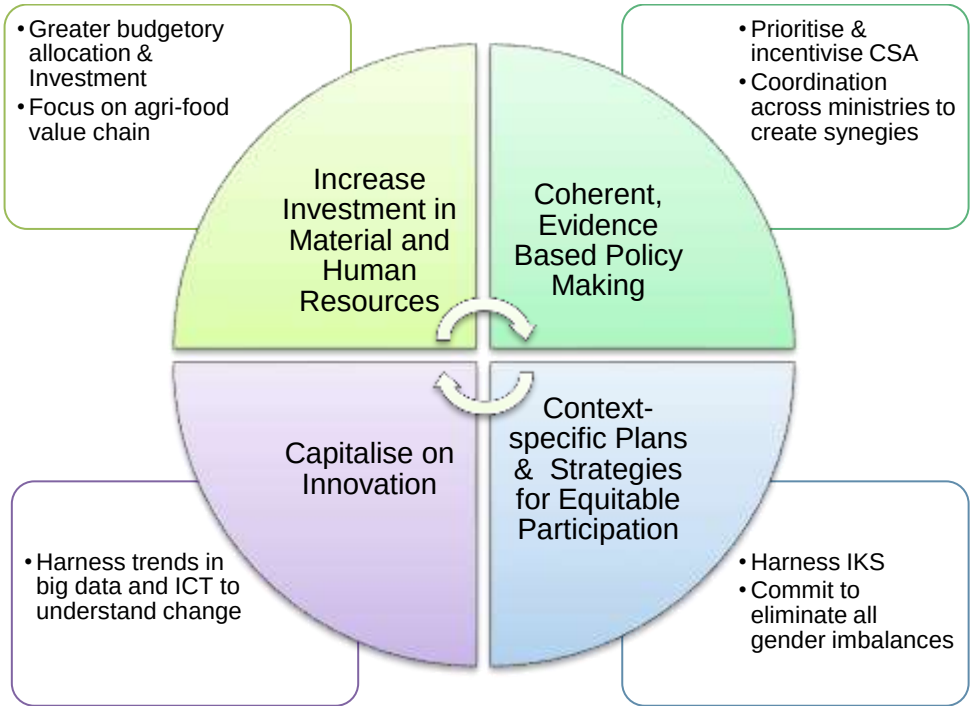
According to the UNECA Economic Report on Africa 2015, trade can serve as an instrument of accelerated industrialisation and structural transformation in Africa. The imperative to promote generalised industrialisation as well as agro-industrialisation in Uganda arises from the present challenge whereby Ugandan exports tend to be raw and low value-added products, leading to an ever increasing trade deficit that grew from 8.3 percent of GDP in 2014/15 to 8.7 percent in 2015/1616, as the country continues to import manufactured products.

Trade can promote trade-induced agro-industrialisation as long as it is deliberately oriented to promote agro-industrialisation. Empirical evidence shows that newly industrialised countries were able to catch-up with developed countries through highly selective trade policies. This is evident from East Asia's growing share in global exports, increasing from 2.25 percent in 1970 to 17.8 percent in 2010, coupled with the fact that manufactures constituted between two-thirds and four-fifths of the region's total merchandise exports (UNECA, 2015). Therefore, trade is a basic pre-requisite to promote agro-industrialisation, and conversely, agro-industrialisation is key to competitive trading in the regional and global arena.

In searching for some immediate intervention measures that could be put in place to address the challenges of climate change and food security, FANRPAN (2017)

indicates the necessity of Climate Smart Agriculture (CSA). To promote CSA, four key priority areas and their sub-components emerged as shown in Figure 1.3.

Figure 1.3: Key priorities actions for CSA



Source: Author, Based on FANRPAN (2017: 12)

Causes of inappropriate agro-industrial development in the EAC region

There are a number of key gaps identified resulting in inappropriate agro-industrial development in the EAC. Chief among such are misaligned policy frameworks. While most policies acknowledge the importance of agro-industries, many do not clearly outline the targeted outcomes of linkages between agro-industries, trade, food security, and climate change. The results of these linkages are not pronounced by the policies and they are therefore not widely known by key stakeholders, and yet a number of opportunities and drawbacks from these linkages are evident. There is also lack of finances and low levels of investment in agro-processing, coupled with a lack of or poor technology.

Potential spill over benefits or opportunities are not pronounced either, and efforts by the governments and other partners to tap into and build on opportunities are lacking. Efforts to mitigate potential spill over costs resulting from these linkages are also lacking, despite the growing magnitude of such costs. For example, risks and

uncertainties on agricultural productivity owing to climate variability, drought, and flooding pose a serious threat in the EAC region. Unfortunately, responses in terms of strategic interventions to address these risks and uncertainties, such as scaling up irrigation schemes and agricultural financing, are lacking. Post-harvest losses are very high, especially in the horticulture sub-sector. However, the requisite strategic responses such as agro-processing and the establishment of market outlets are limited.

Climate change has made it possible in some EAC countries like Tanzania to diversify and grow tropical commodities not possible in the past. However, efforts to support and capitalize on such opportunities are absent. Overall, existing policies and regulations are silent on these relationships. They do not acknowledge the emerging benefits and costs, and fail to strategize how to better utilise opportunities and mitigate the spill over costs emerging from these linkages for the benefit of the people. It is also important to underscore that while national policies and strategies are aligned with EAC regional policies, little has been translated in practice. Hence, policy implementation failure is the greatest challenge to overcome.

There also exist structural inefficiencies with respect to the functioning of value chains, specifically the way the sectors and ancillary support sectors such as packaging, labelling, branding, and marketing support agro-processing.

A number of suggestions may be put forward by the key stakeholders to address gaps resulting in inappropriate agro-industrial development in the EAC and these include the following:

- There is need for (domestic) resource mobilization to up-scale production and upgrade existing firms so as to ensure that the potential for the industry is fully utilized, especially in the banana and cassava sub-sectors;
- Provide credit for small and medium enterprises (SMEs) as well as guaranteed market access to agro-processors;
- Taking cognizance of the backward-forward linkages and ancillary sectors, such as irrigation, post-harvest handling, packaging, and waste management, it is important to create multi-stakeholder platforms which link SMEs who would provide ancillary services with agro-processing firms and other entrepreneurs;
- Monitor quality of inputs for agriculture production and outputs, including combating industrial pollution;
- Promote direct linkages between food manufacturing factories and farmers;
- Cross-cutting issues concerning the involvement of women and youth in agro-processing should be considered as a key issue of policy concern;
- Improve and expand services to farmers and processors;
- Sensitization campaign is vital for consumers to buy locally processed products; and
- Increasing irrigation, particularly in countries like Rwanda.

Exercise

Question: In what ways can climate change affect agriculture and agro-industrial development in the EAC?

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MODULE 2: FEATURES OF SELECTED INTERNATIONAL INSTITUTIONS

Module Objective ● ● ● ●

The module allows stakeholders attending the workshop to familiarize themselves with international institutions and their key areas of work related mainly to agriculture (including agro-industry) and climate negotiations. Specifically, the module has the objective to increase the knowledge and understanding of some key relevant international institutions and/or bodies responsible of policymaking and/or policy implementation mechanisms in the area of agriculture (including agro-industrial development) and climate negotiations.

Learning Outcomes ● ● ● ●

After going through module 2, it is anticipated that the participants will be able to:

- Sharpen skills to interact with different global institutions involved in negotiating agriculture and climate change matters;
- Be able to identify different organs of such global institutions in order to present the right material to the right platform when it comes to agriculture and climate negotiations, especially the UNFCCC and WTO; and
- Be able to identify individual heads and other influential persons behind the running of these international institutions, with the view to rally positive energy towards favourable responses to the EAC position on agriculture and climate negotiations for a critical mass and consensus building.

Module Content ● ● ● ●

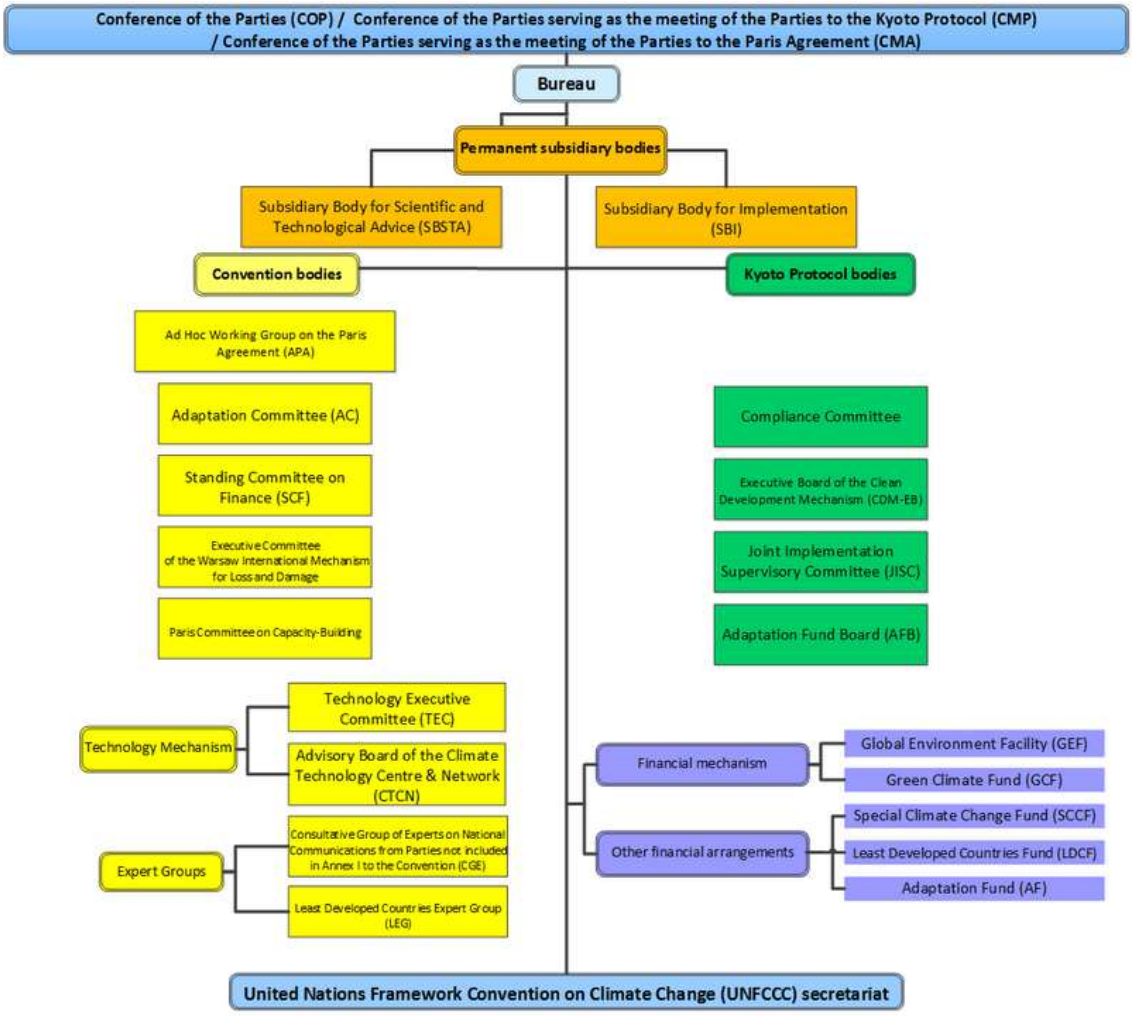
The module is organized under the following headings:

- Key relevant features of the United Nations Framework Convention on Climate Change (UNFCCC);
- Main features of the United Nations Food and Agriculture Organization (FAO)
- Main features of the World Trade Organization (WTO); and
- Main features of the United Nations Industrial Development Organization (UNIDO).

The United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) of 1992 remains the key intuition regarding deliberations on climate change (UNFCCC, 1992) (Figure 2.1). The UNFCCC came into force in 1994 after receiving over 170 ratification instruments from Parties.

Figure 2.1: Institutions established under the UNFCCC



Source: UNFCCC website - http://unfccc.int/bodies/items/6241.php

Details of the functions of all the institutions can be found at the UNFCCC website: http://unfccc.int/bodies/items/6241.php.

The Conference of Parties (COP) is the UNFCCC's supreme policymaking institution and has a number of subsidiary bodies and working groups that support the Convention. The COP meets annually to deliberate on climate change issues, among them: mitigation, adaptation,

financing, technology, education and awareness, and more recently, agriculture as well as loss and damage.

The COP is responsible for keeping international efforts to address climate change on track. It reviews the implementation of the Convention and examines the commitments of Parties in light of the Convention's objective, new scientific findings and experience gained in implementing climate change policies. A key task for the COP is to review the national communications and emission inventories submitted by Parties. Based on this information, the COP assesses the effects of the measures taken by Parties and the progress made in achieving the ultimate objective of the Convention. The COP meets in Bonn, the seat of the secretariat, unless a Party offers to host the session. As of April 2017, 22 COP Sessions have been held with significant objectives and outcomes for food security and trade. The next COP session (COP23) will be organized by Fiji and hosted at the headquarters of the UNFCCC Secretariat in Bonn, Germany from 6th to 17th November 2017.

The UNFCCC aims to minimise human induced GHG emissions that lead to global warming and ultimately climate change (UNFCCC, 1992). Carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) are among the chief GHGs listed in the UNFCCC. To address the escalating levels of GHGs into the atmosphere, the COPs to the UNFCCC concluded a legally binding implementation policy instrument called the Kyoto Protocol. Space is devoted in this module to deliberate on the Kyoto Protocol in detail later.

As outlined in Article 2 of the UNFCCC, the single fundamental challenge of international cooperation for climate governance is how to reconcile the objective to reduce and stabilise GHG concentration in the atmosphere with economic growth and international justice (Okereke & Schroeder, 2009). It is therefore necessary to realise that there is an extreme imbalance in both the distribution and the ability of Parties to the UNFCCC to cope with the negative impacts of the changing climate. Climate change then becomes an aspect of (in) justice as it is by the developed countries yet it imposes severe risks to the poor who are least responsible and simultaneously most vulnerable to climate change impacts.

Two fundamental principles inbuilt within the UNFCCC that address climate justice are: (1) equity, and (2) common but differentiated responsibilities of Parties (Robinson et al., 2009). The responsibilities between the developed North and the developing South are evident as these regions have: unequal material wealth, social and economic situations, different historical contributions to GHG emissions as well as different financial and technological capacities. In many occasions during international climate policy formulation, the developing countries, especially those from Africa have viewed proposals from the developed countries with suspicion (Buck et al., 2002).

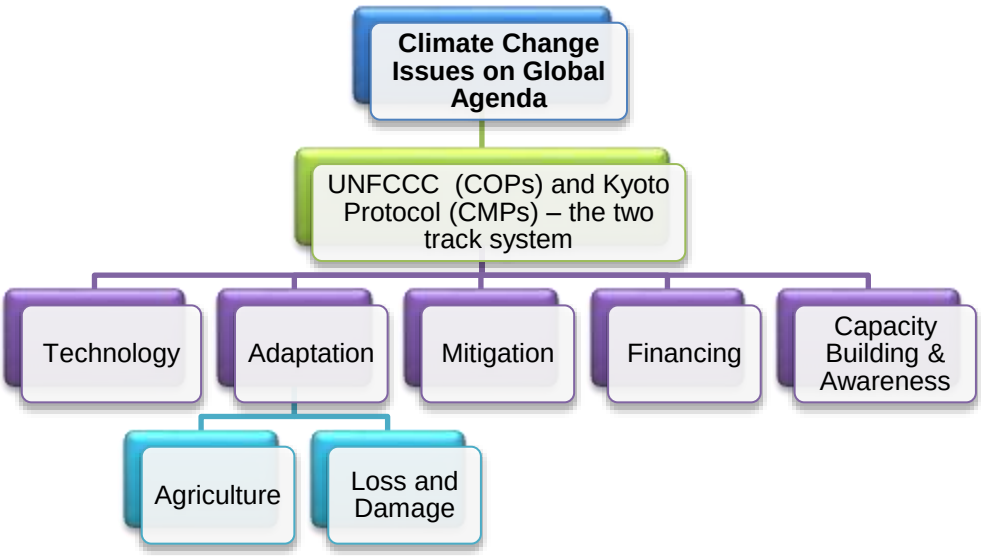
In the UN process, in theory, each country holds an equal vote (Shanahan, 2007). However, in reality, there is a big difference in the negotiating power of individual nations. Some have teams of well-trained negotiators, whereas others have individuals who may be meteorologists or technicians without training in negotiating. African negotiators are usually poorly trained and equipped unlike their counterparts from developed countries, with the exception of South Africa.

The international climate negotiations follow a two-track system that incorporates the 'Convention track' and 'Kyoto track' (Ministry of the Environment, 2009). The negotiations within the Kyoto track are coordinated by the Ad hoc Work Group (AWG) on further commitments for Annex 1 countries[1]. The AWG was established under Article 3 of the Kyoto Protocol (European Parliament, 2008). Under the UNFCCC, an Informal Dialogue on Long-

[1]These are 37 industrialised countries given greenhouse gas emissions reduction targets.

Term Cooperative Action was set-up in July 2005 and ended two years later in August 2007. A new arrangement – the AWG Long-term Cooperative Action was formed under the UNFCCC and keeps the two tracks separated. The two groups' work was expected to converge leading to a post-Kyoto Protocol framework in Copenhagen. However, this did not take place until COP17 that took place in Durban, South Africa in 2011. A summary of the two track systems and key issues discussed is presented in Figure 2.2. Although agriculture as well as loss and damage have emerged strongly under the UNFCCC, these are being addressed under the adaptation theme.

Figure 2.2: Two track systems and key issues discussed

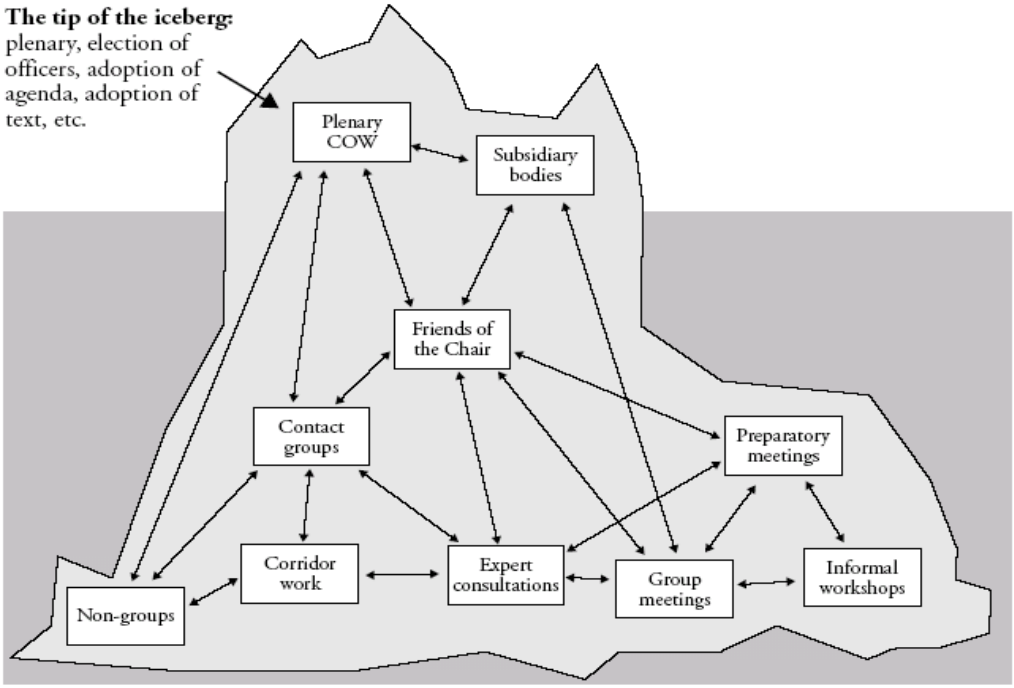


***Source**: Author*

Within the UNFCCC, there are formally recognised main negotiating groups that include the Africa Group, Environmental Integrity Group, European Union (EU) + Umbrella Group, G77+China, Least Developed Countries (LDCs) and the Small Island Developing States (SIDS). Although most of their members are also part of the G77+China, the LDCs and SIDS want large developing nations such as China and India to reduce their emissions. This break from solidarity within the larger block is a new development (Shanahan, 2007). This trend has since changed as many developing countries now support climate justice as being reflected by growing calls on loss and damage.

The negotiating process is not a simple and once off event. There exist both formal and informal negotiating platforms, with the Committee of the Whole (COW) being the central platform where final negotiations are undertaken. For effective participation in these negotiations, Africa and EAC in particular have to be aware of this negotiation process. A summary of the negotiating process is given by Boyer (2000) and this is shown in Figure 2.3.

Figure 2.3: The formal and informal processes



***Source**: Gupta (2000: 17)*

Africa's climate negotiation environment cannot be fully understood without taking stock of both the formal and informal negotiating arrangements. The continent is split in the formal and informal set-up to the level where speaking with one and strong climate voice becomes very difficult as shown by the different negotiation alliance groupings leading to COP 21. Under the UNFCCC, formal negotiation groupings to which African countries were affiliated during COP 21 include: the Africa Group, Alliance of Small Island States (AOSIS), Least Developed Countries (LDCs), G77+China, Arab group (formally League of Arab States), Like Minded Developing Countries (LMDC), Land locked developing countries (LLDC), China, India, Brazil, and South Africa (BASIC) and Coalition for rain forest Nations (CfRN). The informal groups to which African countries were affiliated to include: Cartagena Dialogue, Petroleum Exporting countries (OPEC), Agence inter-gouvernementale de la francophonie (OIF) and Small Island Developing States (SIDS).

However, it is the informal negotiating groups that make life difficult for the African continent as speaking with one united climate voice can be remote. This is because informal groups are smaller and coherent. Their strong associations and the need to be dominant forces in either wrestling climate change leadership or maintaining a strong hold on climate leadership facilitates their sticking together. Such informal groups have hidden agendas that are usually felt and seen from their negotiating positions or lack of it in formal groups. Among some of the noticeable informal climate negotiation groupings leading to COP 21 affecting Africa are: the Organisation for Petroleum Exporting Countries (OPEC), the Major Economies Forum, the G20 and a host of smaller blocks linked to the continent's largest GHG emitter, South Africa. These small blocks include Basic/Brics (Brazil, South Africa, India and China), G8+5 (G13) as well as Basic + the USA. The Basic protects its interests in taking advantage of belonging to Non-Annex 1 countries yet leveraging its role as an emerging global economic and military powerhouse. Basic sees further cooperation both within its boundaries and with global superpowers as an opportunity to propel its economic and industrial growth.

EAC countries belong to at least three of such negotiating groups as shown in Table 2.1 below.

Table 2.1: EAC participation in negotiating groups leading to COP21

Group	*EAC countries participating*	*Key group position issue during COP 21*
African group	All EAC Partner States	• Targeted finance for adaptation measures; • Strong intended nationally determined contributions (INDCs) towards achieving the objective of the UNFCCC.
LDC	Burundi, Rwanda, Tanzania, Uganda	• A binding agreement, • More financing from developed countries, • Adaptation is the primary focus, • Strong INDCs towards achieving the objective of the UNFCCC
G77 + China	All EAC	• Need for a binding deal to leverage financial support for adaptation and mitigation of climate change.
Landlocked developing countries	Burundi, Rwanda, Uganda	• Increased flow of finances from developed to developing countries, with Adaptation being the priority, • Strong INDCs towards achieving the objective of the UNFCCC.
Coalition of rainforest	Kenya Uganda	• Binding agreement, • Financing should focus on forest stewardship and for adaptation, Support ambitious INDCs.
OIF	Burundi, Rwanda	-
Cartagena Dialogue	Kenya, Rwanda	• A binding deal, • Increasing the flow of finance from developed to developing countries with a focus on mitigation measures mitigation measures.

Source: Yeo (2015).

Two other issues of relevance to this module are trade and food security. These last sections will now be dedicated to discussing these elements. Trade is mentioned only once in the UNFCCC under Article 3(5).

The UNFCCC thus indicate: The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change. Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

It emerges from Article 3(5) that Annex 1 (developed) countries are not supposed to disadvantage developing countries in their dealing with climate change, especially unilateral measures that result in discrimination on international trade. This way, the UNFCCC directly links to the World Trade Organisation (WTO), which is discussed in depth in the next section.
Coming to food security, this is addressed under Article 2 dealing with the objective of the UNFCCC. The UNFCCC thus indicate: The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic

interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

The World Trade Organisation[2]

The WTO was formed in 1995 after the end of the cold war to regulate commerce between states. It succeeded the General Agreement on Tariffs and Trade (GATT) of 1947. Under the GATT there was an established practice wherein members would meet periodically to review tariff issues. The meetings came to be known as the '*Rounds of Negotiations*' and would entail the formulation of binding principles and policies. These rounds include the Geneva Round 1947; the Annecy Round 1949; the Torquay Round 1950-51; the Geneva Round 1955-56; the Dillon Round 1961-62; the Kennedy Round 1963-67; the Tokyo Round 1973-79; the Uruguay Round[3] 1984-94 which established the WTO and the Doha Round which is yet to be concluded. The stalemate in the Doha Round has been precipitated by the contentious issues mainly concerning agricultural subsidies. A breakthrough albeit partly was struck which includes an agreement on Trade Facilitation, some agricultural issues and a few development proposals in Bali in December 2013 and later in Nairobi in 2015.

Since the establishment of the WTO, its membership has been growing. As of April 2017, there were 164 WTO members. All the EAC member states are WTO members, by virtual of having been GATT members and were therefore part of the founding members of the WTO in 1995.

Objectives, Functions and Structure of the WTO

The WTO is established under the Marrakech Agreement. The preamble of the agreement lists the objectives of the WTO *inter alia*:

- To raise the standards of living of its members;
- To generate employment amongst its members;
- To increase trade amongst the WTO member states;
- To increase productivity amongst the WTO member states; and
- To reduce trade barriers amongst the WTO member states

The functions of the WTO include:

- To oversee the implementation and administration of the WTO agreements;

[2] The authors thank Mr Edgar Odari for providing useful notes on this section

[3]The Uruguay Round was a decisive moment as it resulted in the famous Uruguay Round Agreements which include the Marrakech Agreement Establishing the World Trade Organization. The Uruguay Round started in 1986 and ended in 1994 and involved 123 countries.

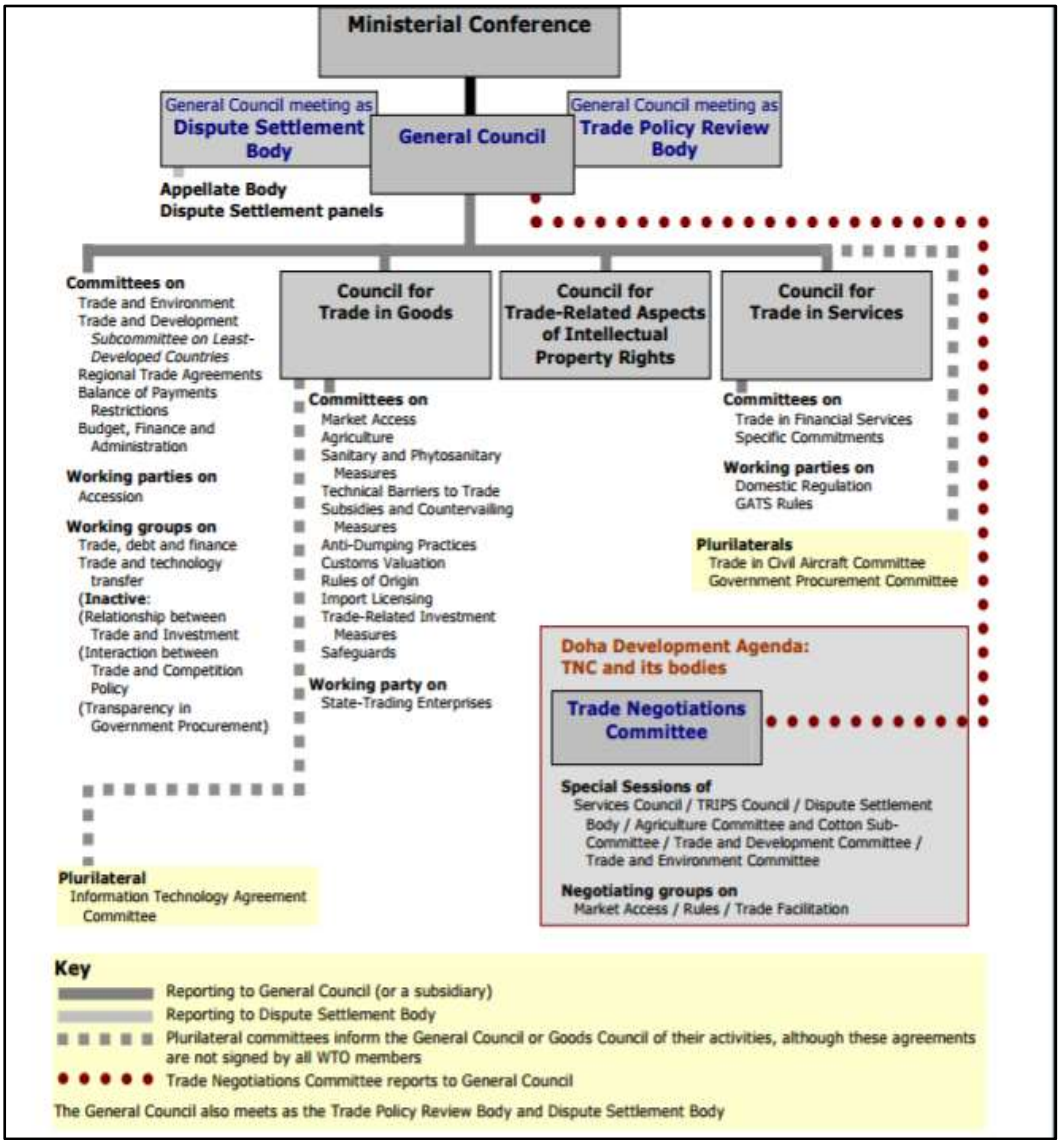
- To provide a forum for negotiations; and
- To provide a Dispute Settlement Mechanism

The WTO exists both as an institution with defined structures as well as a trading system. As a trading system, it entails a complex web of agreements and codes of the GATT as well as the principles, rules and decisions of the Rounds of Negotiations. It further includes all the GATT panel decisions as well as those of the Dispute Settlement Body established under the DSU. The WTO further embodies all decisions of the Contracting Parties. It is this system and the rules that make up the body of law known as international trade law.

The WTO was established through the Marrakech Agreement signed on 30th April 1994 in Marrakech, Morocco and came into being on 1st January 1995. The WTO replaced the GATT Secretariat as the organization charged with the overall administration of the multilateral trading regime. Its basic structure includes the following bodies: The Ministerial Conference; The General Council; The Trade Policy Review Mechanism; The Dispute Settlement Body (DSB); Councils; The Secretariat and Directorate; and Committees.

The Ministerial Conference is the topmost decision-making body of the WTO (Figure 2.4). It usually meets every two years bringing together all members of the WTO including EAC Partner States. It takes decisions on all matters under any of the multilateral trade agreements.

Figure 2.4: Structure of WTO



Source: WTO website- https://www.wto.org/, Accessed June 2017

WTO negotiations take place in the trade negotiations committee and its subsidiaries. Other work under the work programme takes place in other WTO councils and committees. All WTO members may participate in all councils, committees, etc., except Appellate Body, Dispute Settlement panels, and plurilateral committees. Organization and management of the negotiations under the current Doha Development Agenda round (DDA) can be accessed at: https://www.wto.org/english/tratop_e/dda_e/work_organi_e.htm

Given the central role played by the Committee on Trade and the Environment within the context of this module, space is now devoted to discuss this further. The Committee on Trade and the Environment (CTE) was established as a successor to the Group on Environmental Measures and International Trade established in 1971. Perhaps telling of the uneasy

relationship between trade and the environment, GEMIT had never met since its inception until 1992 in light of the Rio Earth Summit. The Marrakech Agreement set out the role of the CTE as entailing the responsibility:

- To identify the relationship between trade measures and environmental measures, in order to promote sustainable development; and
- To make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system.

In light of the foregoing mandate, the CTE developed a 10-item agenda for work. However, the CTE's mandate was adjusted in light of the 2001 Doha Ministerial Conference. One key development from this conference was the Doha declaration, which in paragraph 31 charged the CTE to focus primarily on three issues:

- The relationship between the WTO and MEAs;
- Procedures for information exchange between MEA Secretariats and the WTO, and the criteria for granting MEA secretariats observer status in WTO meetings; and
- The reduction or elimination of barriers to trade in environmental goods and services.

The significance of this mandate was to change the CTE from a mere discussion forum to one with the mandate to carry out trade negotiations. These negotiations would then feed to the final outcome of the Doha Development Round. In pursuance of its previous mandate, the CTE was further instructed to give particular attention to three issues. This, however, was not in the sense of carrying out negotiations but merely to promote the development of debate around these issues. They include:

- The effect of environmental measures on market access, and the environmental benefits of removing trade distortions;
- The relevant provisions of the TRIPS Agreement; and
- Labelling requirements for environmental purposes.

Progress in negotiations on environmental goods and services under Doha has been slow, with the difference between developing and developed countries greatly contributing to this slow process.

Frustrated with the limited progress in advancement in environmental good negotiations, a group of eighteen WTO members launched plurilateral negotiations for the establishment of the Environmental Goods Agreement (EGA) in 2014. The agreement being negotiated seeks to promote trade in a number of key environmental products, such as wind turbines and solar panels. Then number of participants in these negotiations has grown, representing 46 WTO members as of 2016. Although gaps still exist between participants on various issues, discussion have set stage for further talks.

Only a few developing countries have expressed a desire to participate in these negotiations mainly because of competing interests to preserve high tariff rates so as to protect domestic industries and/or to express their dissatisfaction with the current mode of negotiations (Wu, 2017).

Core Principles of the WTO Trading System

Linked to discussions above are the Core Principles of the WTO Trading System that include; The Most Favoured Nation (MFN) Treatment and The National Treatment. The MFN Treatment Principle entails an undertaking to the effect that a country will extend any privilege, concession or benefit given to one trading partner to all other trading partners[4] (non-discrimination). Countries are required to extend any special treatment (such as tariff reductions) given to the goods or services of one country to all WTO members for "like products" irrespective of their origin[5]. These goods and services include those from the agriculture sector. The principle of National Treatment fosters non-discrimination at the national level and links well with provisions in the UNFCCC on trade and food security discussed earlier. Whereas the MFN rule prohibits discrimination at the point of entry, the principle of National Treatment prohibits discrimination once the imported products have entered into the territory of the importing country. This means that imported goods or services should be treated in the same manner (in terms of domestic laws and regulations) e.g. imported goods should pay the same value added tax (VAT) as the domestically produced goods. This has implications on food security since it enhances food availability and affordability by obligating member countries to not discriminate between imported and domestically produced goods in terms of domestic taxes and regulatory requirements.

There are, however, exceptions to the National Treatment and Most-Favoured-Nation principles, such as in case of Economic Integration Agreements, Security Exceptions, The Safeguard Clause under Article XIX of the GATT and Balance of Payment Issues under Articles IX and XVIII of the GATT, among others provided for under various WTO agreements such as Article XX of the GATT which can be accessed at https://www.wto.org/english/res_e/booksp_e/gatt_ai_e/art20_e.pdf.

Negotiation groups in WTO and EAC participation

Like in the COP negotiations, WTO member countries form groups and coalitions around an issue of interest during negotiation. These groups have a common negotiation position. There

[4] The MFN rule is incorporated in the GATT, GATS and TRIPS Agreements. Their interpretation in each agreement, however, varies according to the nature of the disciplines

[5] For further reading on WTO cases decided on this issue, read: Appellate Body Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas*, WT/DS27/AB/R, adopted 25 September 1997, DSR 1997:II, 591; Panel Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas, Complaint by Ecuador*, WT/DS27/R/ECU, adopted 25 September 1997, modified by Appellate Body Report, WT/DS27/AB/R, DSR 1997:III, 1085; and Panel Report, *Canada – Certain Measures Affecting the Automotive Industry*, WT/DS139/R, WT/DS142/R, adopted 19 June 2000, modified by Appellate Body Report, WT/DS139/AB/R, WT/DS142/AB/R, DSR 2000:VII, 3043

are about 24 such negotiating groups in the WTO. The groups in which EAC countries participate in and the key issue of interest are shown in Table 2.2.

Table 2.2: WTO negotiation groups in which EAC countries are party to

Group (member ship)	Main area	EAC countries who are members	Key issue
G-20 (20)	Agriculture	Tanzania	pressing for ambitious reforms of agriculture in developed countries with some flexibility for developing countries
G- 33	Agriculture	Kenya, Tanzania, Uganda	Also called 'friends of special products'. Pressing for flexibility for developing countries to undertake limited market opening in agriculture
Paragraph 6 countries	Non-agricultural market access	Kenya	Have agreed to increase their binding coverage substantially, but want to exempt some products
'W52' SPONSORS	Intellectual property (TRIPS)	All EAC countries	Sponsors of a proposal for "modalities" in negotiations on geographical indications and extending the higher level of protection beyond wines and spirits) and "disclosure" (patent applicants to disclose the origin of genetic resources and traditional knowledge used in the inventions)
ACP (62)	Geographical	All EAC countries	Agricultural preferences
African group (43)	Regional	All EAC countries	General
G-90 (72)	African group, ACP & LDCs	All EAC countries	General
LDC (36)	General	Burundi, Rwanda, Tanzania, Uganda	Flexibilities for LDCs

Source:https://www.wto.org/english/tratop_e/dda_e/negotiating_groups_e.htm. Accessed May 2017.

Current WTO negotiating issues

The current WTO issues for negotiations are a part of the Doha Round of WTO negotiations—formally, the Doha Development Agenda, which was launched in 2001. The work program covered about 20 areas of trade, including agriculture and agro processed products, services trade, market access for non-agricultural products, and intellectual

property issues. The most contentious issue in these negotiations has been agricultural (including agro processed products) trade, with the protection by developed countries being a major bone of contention. Main issues have been on export subsidies (including export credits), domestic support, stockpiling for food security, safeguard mechanisms, state trading entities, and cotton subsidies.

A main outcome of the Nairobi Ministerial in December 2015 was elimination of export subsidies. Other negotiation areas which are also likely to form areas of future negotiation include: agriculture domestic support, food aid, regulatory issues affecting goods and services behind the border, and better discipline for subsidies and local content obligations. In addition some WTO members have called for consideration of other issues, given the statement on existing negotiation issues in the DDA, these are likely to include trade and investment, e-commerce among others.

Specifically for Ministerial Conference (MC11) to be held in in Buenos Aires – Argentina in 2017, key negotiation issues for developing countries according to third world Network (2017) include: public stockholding for food security purposes; the Special Safeguard Mechanism (SSM); importance of the development dimension, special and differential treatment (S&D), the need to address trade-distorting domestic support in agriculture in particular on cotton, and fisheries subsidies.

Food and Agriculture Organisation

The FAO has seven core mandates:

1. Facilitate and support countries in the development and implementation of normative and standard-setting instruments such as international agreements, codes of conduct, technical standards and others. This work will be developed at global, regional and national levels through global governance mechanisms, policy dialogue and support and advice, coupled with the development at country level of the necessary policies and institutional capacities for their implementation.
2. Assemble, analyze, monitor and improve access to data and information, in areas related to FAO's mandate. This includes the development of global and regional trends, perspectives and projections and the associated responses by governments and other stakeholders (e.g. policies, legislation and actions); also direct support to countries in the development of institutional capacities to respond to the identified challenges and possible options.
3. Facilitate, promote and support policy dialogue at global, regional and country levels. FAO as an intergovernmental organization is especially well positioned to help countries at national and international levels to organize policy dialogue activities directed to improve the understanding on important issues and to the establishment of agreements between stakeholders and/or countries.
4. Advise and support capacity development at country and regional level to prepare, implement, monitor and evaluate evidence-based policies, investments and programmes. This includes advice and support for activities directed to institutional strengthening, human resource development and direct advice to programme implementation.
5. Advise and support activities that assemble, disseminate and improve the uptake of knowledge, technologies and good practices in the areas of FAO's mandate. FAO as a knowledge organization needs to be at the forefront of knowledge and technology in all the areas of its mandate and be a source and organizational instrument to support countries in the utilization of available knowledge and technologies for development purposes.
6. Facilitate partnerships for food and nutrition security, agriculture and rural development between governments, development partners, civil society and the private sector. FAO has

a broad mandate that includes major development problems that need to be targeted from a broad and comprehensive perspective. However, FAO will focus its work on the areas in which it has special competence and will establish strong partnerships with other organization to cover other complementary actions required.

7. Advocate and communicate at national, regional and global levels in areas of FAO's mandate. FAO has a main responsibility in providing communication and information services in all areas of its mandate to countries and the development community and to strongly advocate on corporate positions in relation to relevant and urgent development issues.

On dissemination of information, FAO has FAOSTAT, which is a statistical database on agriculture, nutrition, fisheries, forestry and food aid agriculture, nutrition, fisheries, forestry and food aid covering over 210 countries; statistics on agriculture including on crops, livestock, irrigation, land use, fertilizer, pesticide consumption, and agricultural machinery; forestry (statistics on imports and exports of woods and paper); fisheries and aquaculture information to help promote responsible aquaculture and fisheries; forestry country profiles (distribution of world forests); Global Livestock Production and Health Atlas (GLiPHA). More specifically, statistics is provided by four different bodies:

- Agro-maps providing spatial database of sub national agricultural land-use statistics
- AQUASTAT (information system of water and agriculture)
- CountrySTAT (a national statistical information system for food and agriculture)
- TERRASTAT houses databases containing information on major soil constraints, soil in deserts and dry land areas, population distribution, steep lands analysis, land degradation severity and human-induced land degradation due to agricultural activities

Other information support include: PAAT platform to promote integrated trypanosomiasis control; and a global strategy to improve agriculture and rural statistics which provides a vision for national and international statistical systems to produce the basic data and information to guide decision-making.

The United Nations Industrial Development Organization

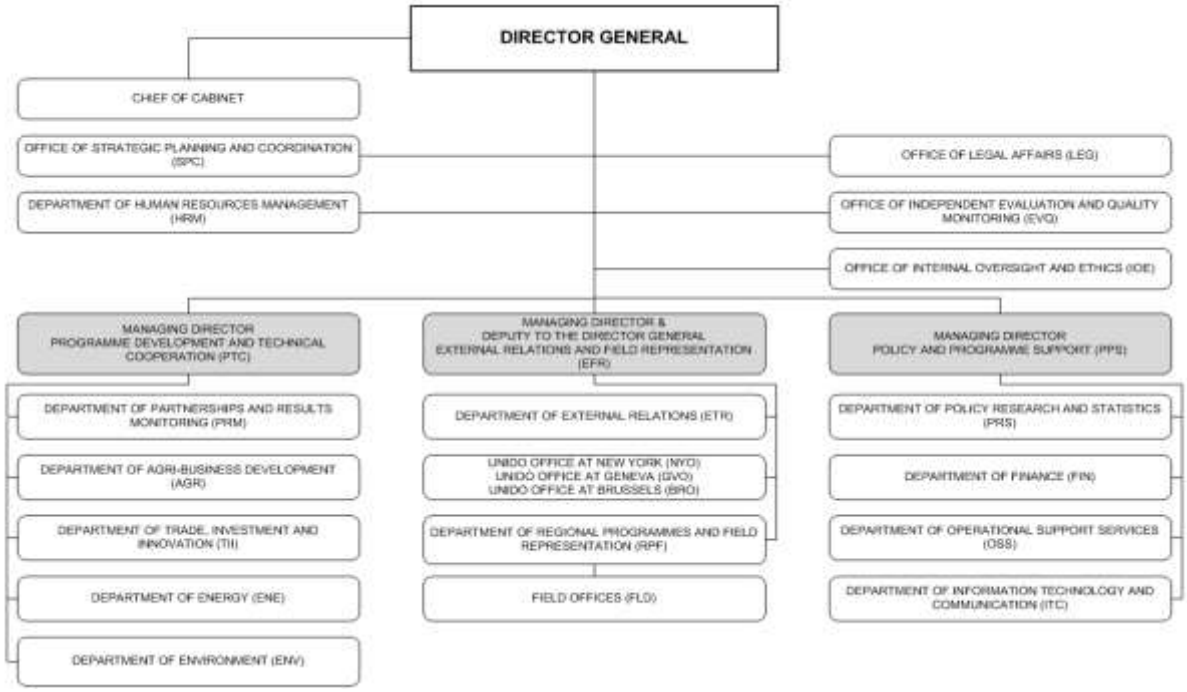
The United Nations Industrial Development Organization (UNIDO) focuses on promoting industrial development for poverty reduction, inclusive globalization and environmental sustainability (UNIDO, 2017). Its mission is "to promote and accelerate inclusive and sustainable industrial development (ISID) in developing countries and economies in transition" (Ibid, online).

The policy making organs of UNIDO include the General Conference and the Industrial Development Board (IDB). The Programme and Budget Committee (PBC) comes as a subsidiary organ of the IDB. The General Conference determines the guiding principles and policies and approves the budget and work programme. Every four years, the Conference appoints the Director General. It also elects the members of the IDB and those of the Programme and Budget Committee. The General Conference meets every two years. The IDB is made up of 53 members, all elected on a four-year term and on a rotational basis. The IDB's mandate is to review the implementation of the work programme, the regular and

operational budgets and makes recommendations to the General Conference on policy matters, including the appointment of the Director General. The IDB meets once a year. Lastly, the PBC is made up of 27 members, elected for a two-year term and meets once a year. By the time of completing the write-up of this training manual, UNIDO had a membership of 170 Member States (UNIDO, 2017).

UNIDO operates on along programmatic focus areas structured in three thematic priorities namely: Creating shared prosperity; Advancing economic competitiveness; and Safeguarding the environment (UNIDO, 2017). In addition, these programmatic fields are made up of a range of individual programmes implemented holistically to achieve effective outcomes and impacts through UNIDO's four enabling functions: (i) technical cooperation; (ii) analytical and research functions and policy advisory services; (iii) normative functions and standards and quality-related activities; and (iv) convening and partnerships for knowledge transfer, networking and industrial cooperation (Ibid). UNIDO's organisation chart is presented in Figure 2.5.

Figure 2.5: UNIDO as an organization



Source: UNIDO http://www.unido.org/who-we-are/unido-in-brief.html (Accessed 12 April 2017)

As an entity, UNIDO has fully embraced the 2030 Agenda for Sustainable Development (AfSD) discussed earlier in Module 1. Specifically, UNIDO's mandate is embodied in SDG9 that stipulates an ideal to "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" (United Nations, 2015). The SDG under consideration links well with the entire subject of agro-industrial development under CC-FS-T nexus.

It emerges that UNIDO has dedicated departments of (1) Agri-business development, (2) Trade, Investment and Innovation, (3) Energy, (4) Environment, and (5) Policy Research and Statistics. All the departments mentioned here have mainly direct links to what the training for the EAC stakeholders is focusing on. To this end, the EAC and its national governments tend to benefit if they can determine how best to relate and cooperate with UNIDO.

UNIDO has strong presence in the EAC through its Inclusive and Sustainable Industrial Development (ISDI) regional programme adopted by UNIDO Member States at the General Conference in December 2013. The ISDI regions in Africa include the East Africa[6], Central Africa, Southern Africa and Western Africa. In East Africa, UNIDO has a Regional Office in Ethiopia, Filed Offices in Kenya and Tanzania and Desk Offices in Rwanda and Uganda. UNIDO also has regional Partner Associations that include the African Union and EAC (UNIDO, 2017).

UNIDO has spelt out a number of African regional development priorities that include among those of interest to this training the following:

- African Union's Agenda 2063;
- African Union Action Plan for the Accelerated Industrial Development of Africa (AIDA);
- The AU/NEPAD Action Plan on Advancing Regional and Continental Integration in Africa (2010-2015);
- The African Union Pharmaceutical Manufacturing Plan for Africa (PMPA);
- The African Agribusiness and Agro-industries Development Initiative (3ADI);
- The Istanbul Plan of Action 2011-2020; and
- The Vienna Programme of Action 2014-2024.

[6] The eight contries include Burundi, Eritrea, Ethipia, Kenya, Rwanda, South Sudan, Tanzania and Uganda.

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MODULE 3: AGRICULTURE AND CLIMATE CHANGE

FOCUS ON THE UNFCCC AND WTO NEGOTIATIONS

Module Objective ● ● ● ●

This module grows the participants' confidence into addressing agriculture (including agro-industrial development) in climate negotiations, and vice versa. The purpose is to continue developing negotiation capacity in EAC teams that will result in favourable decisions on agriculture from the UNFCCC and other global negotiation platforms like the WTO.

Specifically, the module sets to:

- Create and increase substantive understanding of the historical and current issues related to agriculture (including agro-industrial development) in climate negotiations under the UNFCCC;
- Create and increase substantive understanding of the historical and current issues related to climate change and the WTO agreements;
- Determine the contestations and nature of such thereof in agriculture and climate negotiations and climate change in the WTO;
- Determine EAC country positions on agriculture as presented in (I)NDCs;
- Develop a critical mass to rally behind the preferred EAC position on agriculture in climate negotiations.

Learning Outcomes ● ● ● ●

By the end of the training on module 3, participants will be expected to:

- Be able to comprehend the concept of agriculture (including agro-industrial development) as it relates to climate negotiations under the UNFCCC and other platforms;
- Be able to analyse the provisions of the (I)NDCs from their country and all the six EAC countries;
- Be able to work as an EAC team to tease out key matters from the (I)NDCs in preparation for Module 4 focusing on simulations; and
- Deal with contestations regarding agriculture in climate negotiations as well as climate change in the WTO as policy entrepreneurs.

Module Content ● ● ● ●

The module is organized under the following headings:

- Historical perspectives on agriculture in climate negotiations;
- Climate change in the WTO agreements;
- Auditing agriculture in EAC (I)NDCs; and
- Summary findings from the EAC (I)NDCs audit.

Agriculture at the UNFCCC

Given the central role played by agriculture in African and EAC economies as well as how this subject has been slow in getting into the UNFCCC negotiations, it is inevitable that more effort should be made in highlighting concerns in this front. With the changing climate, agriculture remains at the coalface, especially that the sector is so vulnerable to extreme weather events that include floods, droughts, extreme frost, increasing temperatures and heat waves, hailstorms, wild fires etc. Hence, by default when one talks of agriculture, the aspects of climate resilience and adaptation are aroused. Needless to indicate that elements of mitigation in agriculture have found themselves in the negotiations early through land use, land use change and forestry (LULUF).

Although no formal decision on agriculture is in place under the UNFCCC as yet, it continues to be indirectly addressed in other UNFCCC discussions like the Nationally Appropriate Mitigation Actions (NAMAs), the National Adaptation Programmes of Actions (NAPAs), Reducing Emissions from Deforestation and Forest Degradation plus (REDD+) and in LULUCF (Muldowney et al., 2013). As the negotiations continue, there are a number of areas in which consensus could easily be reached namely: “the special nature of agriculture, and its relationship with food security; the importance of adaptation for all countries’ agricultural sector, particularly developing countries; mitigation and adaptation are linked to the agricultural sector; and the need to promote research, technology development and knowledge transfer within the sector” (Ibid: 209). The following sections focus on unpacking agriculture in climate negotiations, with an attempt to profile it from an historical to the contemporary texts and arguments.

Wrong Turn from Rio 1992

Article 2 of the UNFCCC (United Nations, 1992: 4) spells out the object of the convention that harnesses the desire “to achieve, in accordance with the relevant provisions of the Convention, stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, *to ensure that food production is not threatened*[7] and to enable economic development to proceed in a sustainable manner”.

[7] Emphasis added to highlight agriculture links.

Furthermore, Article 4(1) dealing with commitments of Parties to the UNFCCC highlights agriculture in its deliberations. In 4(1)(c), the UNFCCC indicates the need to "Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including … *agriculture … forestry*[8] sectors" (United Nations, 1992: 5). The UNFCCC goes further to embody agriculture and closely related sectors in 4(1)(e) that calls for a need to "Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture[9], and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods" (Ibid). The desire to mitigate as embedded in the UNFCCC gave birth to the concept of LULUCF (ICTSD, 2009).

It is clear therefore from the foregone, that agriculture has been realised as an important sector from the foundations of the UNFCCC in 1992 in Rio. Other significant sectors highlighted with a strong bearing on agriculture include: forestry and water, with a special focus on Africa, including the EAC. Hence, one may not be off the mark to proclaim that the world took a wrong agricultural turn from Rio in its climate negotiations. Matters pertaining to adaptation are also coming out clearly with the mentioning of droughts and floods.

Historically, therefore, the mitigation agenda was left out to Annex 1 (developed and industrialised) countries that were to collectively reduce GHG emissions by an average 5.2% based on 1990 levels between the years 2008 and 2012 under the Kyoto Protocol (United Nations, 1987). Thirty-seven (37) such industrialised countries were identified. To this end, it meant that by design, mitigation measure, whether in the agriculture or any other sector was not a matter for non-Annex 1 (developing) countries. Article 2 of the Kyoto Protocol commands Annex 1 Parties to promote sustainable development through the "promotion of sustainable forms of agriculture in light of climate change considerations" (Ibid: 2). Article 10 then caps it all by indicating that programmes will be set up in agriculture and forestry as well as having adaptation technologies and methods for improving spatial planning leading to enhanced adaptation to climate change. Hence land use activities like tree planting and managing forests could increase the removal (sink) of GHGs and other activities like efforts to curb deforestation could decrease the emissions of GHGs (ICTSD, 2009). As such, LULUCF activities were then accepted as part of the Kyoto Protocol mitigation agenda resulting mainly from REDD+. Among such REDD+ activities are forest management, cropland management, grazing land management and re-vegetation, which formed part of the CDM. In 2001 afforestation and reforestation were now eligible for CDM projects under the Kyoto Protocol and all this came with that mitigation bias. It comes as no surprise that the mitigation agenda dominated in a number of countries, even non-Annex 1 like South Africa. For example, South Africa had it Long Term Mitigation Scenario done in 2007 yet its Long Term Adaptation Scenarios came up many years later in 2013.

[8] Emphasis added.

[9] Emphasis added once more.

The Emergence of the Agriculture Focus

Although there has not been a negotiation track on agriculture in the UNFCCC, provision has been made to report progress through the National Communications done regularly after every 5 years under the UNFCCC (ICTSD, 2009). Needless to indicate that while many developed countries are in their 5th and 6th generation National Communications, many developing nations are still resident in their 2nd and 3rd generation National Communications (Muchuru and Nhamo, 2017a&b). From the IPCC's 1996 Revised Guidelines for National Greenhouse Gas Inventories, the Kyoto Protocol Parties were given separate guidance on reporting under agriculture and the LULUCF categories. This was followed by the 2006 Guidelines for National Greenhouse Gas Inventories that integrate these two aspects into one sector called the Agriculture, Forestry and Other Land Use Sector (AFOLU) (ICTSD, 2009). With all this happening, developing nations remained surrogate mothers to mitigation in the agriculture sector.

Since Bali 2007, the REDD+ agenda has grown big. However, arguments have been put across to include agriculture under REDD+ with others preferring it to be on its own (ICTSD, 2009). However, agriculture could not find its own track in the lead to COP15 that took place in Copenhagen in 2009 due to technical or political reasons or because of the negotiating calendar. To this end, a clear agricultural work programme was proposed that had to be agreed on (Ibid). A summary in terms of progress in agriculture and climate negations under the UNFCCC is presented in table 3.1.

Table 3.1: History of Agriculture in Climate Negations

Date	*Key Deliberations and Decisions on Agriculture*
2006 (COP12)	• An in-session mitigation workshop on agriculture, forestry and rural development held by the 24th SBSTA session.
2007 (COP13)	• Bali Road Map that placed the adaptation agenda to which agriculture is key on the table.
2008 (COP14)	• UNFCCC Secretariat, at the request of a number of Parties prepared a technical paper on the 'Challenges and Opportunities for Mitigation in the Agricultural Sector'.
2009 (COP15)	• An in-session workshop was held in April 2009 to invite views from Parties on agriculture. • Later that year, during COP 15, a draft agriculture decision text, which would have initiated a work programme on agriculture under SBSTA was prepared by negotiators.
2010 (COP16)	• Negotiations on agriculture continued COP 16 in Cancun. However, Parties did not agree on the general framework and therefore no decision on agriculture was reached. As such, agriculture appeared as a footnote under adaptation.
2011 (COP 17)	• Negotiations on agriculture continued in Durban and the conference reached a decision to request "the SBSTA to consider issues related to agriculture at its 36th session, with the aim of exchanging views and the Conference of the Parties adopting a decision on this matter at COP18". • Agriculture started featuring in the Nairobi Work Programme

	as well.
2012 (COP18)	• A lot of interest was shown in agriculture as reflected by a large attendance at formal and informal meetings.
2013 (COP19)	• Agriculture discussed under SBSTA 39 agenda item 10 dealing with “Issues relating to agriculture”.
2014 (COP20)	• There was no agenda either under the SBSTA or under the Durban Platform for Action (ADP).
2015 (COP21)	• Most Parties to the UNFCCC include agriculture in their mitigation targets (80%) and adaptation strategies (64%). • Non-annex 1 Parties noted the need for international financial support to implement their INDCs and raise the ambition of their contributions. • For countries to meet their targets, climate finance will need to address agriculture. • However, agriculture was not expressed explicitly in the Paris Agreement.
2016 (COP22)	• Continued deliberations on Parties submissions to the SBSTA with a lot of reservations on the slow pace of things toward a formal UNFCCC decision on agriculture.
2017 (COP23)	• Parties are expecting a stronger commitment and decision on agriculture, especially that the (I)NDCs have paved the way already.

Source: Author, based on Muldowney et al. (2013: 209); FAO (2013) and Richards, et al. (2015: 1).

From table 1, it emerges that the inaugural decision on agriculture and the established agenda item under the SBSTA of the UNFCCC was in 2011 during COP17 that took place in Durban, South Africa. This is the time when international NGOs had a huge campaign code-named ‘No Agriculture, No Deal” (Zvomuya, 2011). This campaign could have made enough noise for global leaders and negotiation Parties to do something about agriculture. This campaign aimed at raising awareness regarding the need to address agriculture issue in the UNFCCC, as this sector has not been adequately addressed in the past. Some of the issues the negotiators expected regarding a deal on agriculture are presented in table box 3.1.

Box 3.1: African negotiators at the upcoming COP 17 in Durban should push for a binding and responsible climate deal on agriculture

Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) CEO, Dr Lindiwe Sibanda, said African negotiators should make it their priority to secure a deal that will promote food security for climate change not to wreak havoc any further in the African continent. Addressing reporters in Pretoria about her organisation's call, 'no agriculture, no deal' for COP 17, Sibanda said: "We are grateful that COP 17 is taking place in the African continent. Now we want African negotiators to come out of this gathering with a responsible, binding climate change deal on agriculture.

"Should they fail to clinch a deal at COP 17, civil society will rise and say, 'any deal that does not have agriculture as a stand-alone priority sector is a betrayal to the farming sector and anybody who needs food to survive

Sibanda is also urging African political leadership to hold accountable those

who will be negotiating on behalf of the continent. She further said previous commitments made in Cancun must be sealed. "Let's not keep on changing ... Our view is that COP 17 in Durban [should] produce concrete outputs that would be binding to everyone.

Regarding the "no agriculture no deal campaign", Sibanda said: "We don't embark on protest campaigns, but we advocate for evidence based dialogue. Agriculture is the backbone of Africa's economy, so we will use all our power to ensure that agriculture is put on the centre stage at the COP 17, [and not] through an exit door." Sibanda said it was disturbing that developed countries were still refusing to make a binding deal to reduce atmospheric concentrations of greenhouse gases, adding that Africa would use COP 17 to push for a better global environment, improved agricultural productivity and land use.

FANRPAN will play a leading role in partnering with Climate Change, Agriculture and Food Security (CCAFS) to host Agriculture Day as a side event of COP 17 on December 3. It will also advocate for climate-smart agriculture at COP 17. Climate-smart agriculture includes proven techniques such as agro-forestry, improved grazing, zero tillage and intercropping to mention but a few.

Source: http://www.fanrpan.org/news/7727/themes/hiv_aids%20 (Accessed 11 August 2017)

In its submission contributing to the COP18 held in Doha, Qatar, Conservation International (201) presented three policy recommendations. In its view, a Program of Work or other further work under the UNFCCC on Agriculture and Climate Change had to explore the following priority areas:

- Achieving synergies between mitigation and adaptation efforts in agricultural systems;
- Prioritizing the needs of the most vulnerable social groups and ecosystems; and
- Promoting integrated, landscape level approaches to climate change and food security.

From another submission to UNFCCC Secretariat on Issues Related to Agriculture (under Article 76 of the COP17 LCA decision), the NGO Global Forest Coalition[10] indicated it was deeply concerned about proposals for an Agriculture Work Programme under SBSTA. It further indicated that it believed the UNFCCC was not the appropriate forum for developing a work programme on agriculture. The Coalition's major worry was about UNFCCC's support for CSA, which it conspires a threat to forests and forest-dependent peoples, including subsistence farmers and pastoralists. In the Global Forest Coalition's view:

[10] The Global Forest Coalition (GFC) is an international coalition of NGOs and Indigenous Peoples' Organizations defending social justice and the rights of forest peoples in forest policies. The GFC was founded in 2000 by 19 NGOs and Indigenous Peoples' Organizations (IPOs) from all over the world. It is a successor to the NGO Forest Working Group, which was originally established in 1995 (http://globalforestcoalition.org/about-us/, accessed 25 August 2017).

- CSA is based on the false assumption that further intensification of agriculture will reduce pressures on forests and other land and thus mitigate climate change;
- CSA is most likely to benefit agribusiness, not small farmers, thus reinforcing and extending the model of industrial agriculture, which is a major contributor to climate change;
- The promotion of CSA is closely linked to the promotion of a greater role of soils and agriculture in existing and new carbon trading/market mechanisms; and
- CSA would likely involve further expansion of industrial tree plantations.

In March 2012, the UNFCCC received papers on agriculture representing over 100 parties through the SBSTA (Muldowney et al., 2013). This followed the mandate from the COP17 decision on agriculture. The submissions highlighted four thematic areas that included the following (Ibid: 209)

- Discussions should be guided by the principles of the UNFCCC and in accordance with the SBSTA mandate. Many submissions supported a comprehensive approach to adaptation and mitigation, although priorities vary between Parties. Parties also emphasized and stressed the need to focus on synergies and trade-offs between adaptation and mitigation.
- Only one Party opposes mitigation completely and wants to see only adaptation in the further work under existing adaptation institutions.
- For developing countries, adaptation, food security and development are priorities, and they clearly state that they do not wish to take mitigation commitments in this sector. However, they recognize the need to increase productivity and efficiency of agriculture which contributes to mitigation as a co-benefit (some mentioning reducing emissions intensity so at least emissions would not grow with growing production).
- Parties were still divided between establishing a separate work programme on agriculture or using existing bodies inside the UNFCCC like the Nairobi Work Programme.

As all this was happening, FAO (2013) prepared a Guide to Agriculture for the UNFCCC COP19. From FAO's summary, the SBSTA 38 that took place in Bonn in June 2013 exchanged views on issues pertaining to agriculture. The SBSTA then "invited Parties and admitted observer organizations to submit their views on the current state of scientific knowledge on how to enhance the adaptation of agriculture to climate change impacts, while promoting rural development, sustainable development and productivity of agricultural systems and food security in all countries, particularly in developing countries. This should take into account the diversity of the agricultural systems and the difference in scale as well as possible adaptation co-benefits" (Ibid: 1). Agriculture was further discussed under SBSTA 39 agenda item 10 that focused on "Issues relating to agriculture" with an in-session workshop held on Tuesday 12 November 2013 that looked at the current state of knowledge on how to enhance the adaptation of agriculture to climate change impacts, while promoting rural development, sustainable development, and productivity of agricultural systems and food security in all countries, particularly developing countries (Ibid). Other matters discussed with a bearing on agriculture included the means of implementation that included: technology, capacity building and finance.

In 2013, there was a SBSTA Workshop in Warsaw to address agriculture issues under the UNFCCC. The workshop participants that included negotiating groups and other entities had guided inputs and these guided inputs were addressed through three questions that the statements had to address during deliberations. The guiding questions were:

1. What are climate change impacts on agriculture observed in your country/region?
2. What experience does your country/region have with practices and approaches for dealing with adaptation of agriculture to climate change impacts?
3. What experience does your country/region have with the application of scientific knowledge for enhancing the adaptation in agriculture while promoting productivity and taking into account co-benefits?

During this SBSTA workshop, Malawi presented some views on behalf of the African Group of negotiators. The African Group indicated that the majority of hungry and malnourished people live in Africa. As such, there was a need for concerted efforts to address climate change adaptation in Agriculture as famers were mainly small-scale subsistence who depended on rain fed agriculture. To this end, climate change would increase variability in rainfall and temperature among other impacts (Kossam, 2013). A number of issues that could be taken up when dealing with agriculture in the UNFCCC included the following: application of seasonal rainfall forecasting; the use of improved seed varieties including hybrid varieties; conservation agriculture; water management and irrigation; agro-forestry; fertilizer management; use of scientific and indigenous knowledge in climate risk management; and index based crop weather insurance (Ibid). The Africa Group concluded by identifying four priority areas that the international community through SBSTA could financially and technically support (Box 3. 2).

Box 3.2: Key messages from Africa

- Capacity building on the development and application of tools and methods for climate monitoring, modelling, uncertainty analysis, downscaling and early warning.
- Assessment, development and identification of research and technological options and practices for agricultural adaptation, including understanding positive impacts, limits to adaptation, and monitoring systems for adaptation.
- Assessment of technological needs relating to adaptation and promotion of technology transfer.
- Enhancing integration of indigenous knowledge and scientific based knowledge

Source: Kossam, 2013 (PowerPoint)

In another workshop presentation by Gambia representing the Least Developed Countries (LDCs), it emerged that the LDCs have limited experience with the application of scientific knowledge for enhancing climate change adaptation in agriculture due to low capacity of scientists and technicians (LDCs Group, 2013). However, there were positive developments (though small in scale) to address both climate change adaptation and mitigation from: (a) agro-forestry

that diversifies food production and serves as sink for GHGs, (b) conservation tillage that increases soil health and fertility and stores more carbon in the soil, and (c) rainwater harvesting technologies. To meet the challenges limiting scaling up, the LDCs requested support for more research and technological development and transfer, as well as enhanced systems to promote technology adoption in LDCs. Investments were also needed in public agricultural research capacities in LDCs that target improvements in agricultural productivity, resilience in the face of increasingly variable growing conditions, improvements in water use efficiency and reduced input intensity.

In addressing how COP20 and COP21 could have ensured a food-secure future, Campbell et al. (2014), advocated for: a 2015 climate agreement that would make reference to food production and provide the financial, technical and capacity building support for countries to devise ambitious actions for the agricultural sector; and a new climate agreement that should be consistent with the sustainable development goals (SDG) processes coming out of the 2030 global Agenda for Sustainable Development. Drawing from an audit on INDCs, Richards, et al. (2015), found that 103 of the 160 Parties communicate GHG targets that include the agriculture sector.

Agriculture is also featured in adaptation priorities and strategies in the (I)NDCs. Out of 113 Parties that include adaptation in their INDCs, 102 of the Parties include agriculture among their adaptation priorities. This scenario paints a vote of confidence regarding the manner in which adaptation should be a strong vehicle for addressing climate change and building resilience in the agriculture sector.

An audit concerning agriculture in the 2015 Paris Agreement was done by CGIAR (2015). The main challenge from the Zero draft of the Paris Agreement was that agriculture was not directly mentioned. This remain so in the final document. Under mitigation, there was mention of ‘all sectors’ and ‘all GHGs’, which by implication include agriculture (CGIAR, 2015). There was also mentioning of the ‘land sector’. What is even more worrying was the lack on mentioning of ‘agriculture’ under the adaptation text. While food security was included in the preamble, the focus in the entire text was on ecosystems and resilience.

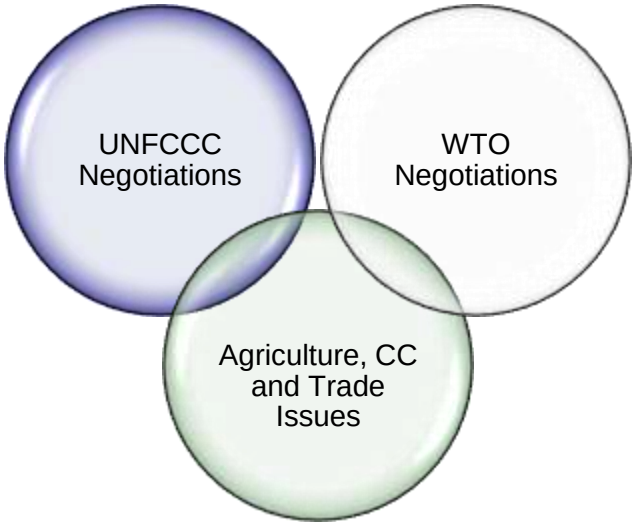
The recent negotiations in Bonn (May 2017) leading to COP23 show concerns on agriculture. Representing the Least Developed Counties (LDCs), Ethiopia highlighted that the block expected progress on agriculture and the transparency framework (IISD, 2017) as the update has been slow. Mali, representing the African Group, called for an agreement on addressing the impacts of climate change on agriculture. The Women and Gender organisation expressed its concern over proposals to include agriculture and land use in market mechanisms. Lastly, YOUNGOs urged a greater focus on agriculture, calling crop based biofuels a “fake solution” to addressing the challenges of climate change (Ibid). Further sentiments on slow progress on agriculture emerged from the Climate Action Network (CAN) international. CAN (2017), made it clear that it expected Parties to make real progress at COP 23, including on a joint SBSTA/SBI work programme on agriculture and food security. CAN claims to be the world’s largest network of civil society organizations working together to promote government action to address the climate crisis, with more than 1100 members in over 120 countries.

What emerges from the foregone is that there still remain contestations on agriculture in the UNFCCC and other negotiations platforms and systems. Overall, such contestations resemble policy domains to which the winners will likely remain those with power and other resources to influences decision. Usually the developed block of countries from the north will call the shots and the mitigation agenda in agriculture could be elevated at the cost to the relegation of the adaptation agenda that the EAC and other developing countries should push stronger.

Climate change matters in the WTO

Addressing trade and the environment in the WTO, Sandrey (2017), makes some interesting observations. The author maintains that while climate change is not part of the WTO's ongoing work programme per se, and there are no WTO rules specific to climate change, the WTO remains relevant. This is so because climate change measures and policies intersect with international trade in a number of different ways. In fact, Article 3 of the UNFCCC, makes reference to trade and emphasises the need for measures taken to combat climate change (including unilateral ones) not to constitute means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade (UN, 1992). Saner (2013: 4 & 6), argues, “[a] radically new approach is needed within the WTO agreements to generate solutions that have sufficient weight and treaty power to bring about a new and credible approach towards halting and reversing of climate warming”. Saner goes further and hints, “a WTO-UNFCCC cross-regime agreement does not exist and is not likely to emerge in the near future to stop global warming that results in climate change”. If one is to depict the relationship between the two negotiation platforms, it will emerge as reflected in Figure 3.1. However, the author accepts that the WTO, through its goals, rules, institutions and agenda, provides pathways for advancing international environmental goals. To this end, the WTO’s founding agreement recognizes sustainable development as a central principle.

Figure 3.1: WTO and UNFCCC relationship in the context of agriculture



Source: Author

Counter-arguments have also emerged. For example, although the WTO agreements make references to the environment as an essential component of sustainable development, such references are limited (Saner, 2013). In addition, the language is rather general and exhortatory in nature. As such, one could safely conclude that the current WTO agreements do not offer a language specifically guiding WTO Members towards negotiating and agreeing on greener and climate compatible production and trade patterns. The WTO rules are viewed only as allowing the environment and trade to coexist without specifically promoting sustainable development (Ibid).

In his early article entitled 'Climate Change and Unresolved Issues in WTO Law', Condon (2009: 895) raises a host of critical questions that will continue to guide deliberations into the future. These questions include the following:

1. How should the WTO deal with environmental subsidies under the General Agreement on Tariffs and Trade (GATT), the Agreement on Agriculture and the Subsidies and Countervailing Measures (SCM) Agreement?
2. Can the general exceptions in GATT Article XX be applied to other agreements in Annex 1A?
3. Are processing and production methods relevant to determining the issue of 'like products' in GATT Articles I and III, the SCM Agreement and the Antidumping Agreement and the TBT Agreement?
4. What is the scope of paragraphs b and g in GATT Article XX and the relationship between these two paragraphs?
5. What is the relationship between GATT Article XX and multilateral environmental agreements in the context of climate change?
6. How should Article 2 of the TBT Agreement be interpreted and applied in the context of climate change?

Although there is a need to exhaust the list of questions raised herein, space will only be provided to attempt to respond to some of the questions.

Measures aimed at addressing climate change raise legal issues regarding the relationship between the WTO law and international environmental law, as well as the relationship between various WTO agreements such as the agreements on: Technical Barriers to Trade; Application of Sanitary and Phytosanitary Measures; Agriculture; General Agreement on Trade in Services; and trade-related aspects of intellectual property rights. The detailed provisions of the agreements fall outside the scope of this work. As such, participants are encouraged to familiarise with such in their own time and at their own pace.

The rules and jurisprudence relevant to addressing climate change measures in the WTO mainly related to GATT Article XX, the PPMs (processes and production methods) issue, and the definition of a like product (Saner, 2013). Box 3.3 provides a number of specific rules that could be relevant for measures aimed at mitigating climate change.

Box 3.3: Specific rules relevant for measures aimed at mitigating climate change under WTO

- Disciplines on tariffs (border measures), essentially prohibiting members for collecting tariffs at levels greater than that provided for in their WTO scheduled consolidation
- A general prohibition against border quotas
- A general non-discrimination principle, consisting of the most-favoured nation and national treatment principles
- Rules on subsidies
- Rules on technical regulations and standards, which may not be more restrictive than necessary to fulfil a legitimate objective. Technical regulations and standards must also respect the principle of non-discrimination and be based on international standards, where they exist. There are also specific rules for sanitary and phytosanitary measures which are relevant for agricultural products.
- Disciplines relevant for trade in services, imposing general obligations such as most-favoured-nation treatment, as well as further obligations in sectors where individual members have undertaken specific commitments
- Rules on trade-related intellectual property rights. These rules are relevant for the development and transfer of climate-friendly technologies and know-how.

Source: Saner (2013: 22)

Overall, three key legal challenges could arise concerning climate change and the WTO in the form of: (1) coverage (to what extent Articles III, II and XX of the GATT are relevant); (2) compatibility; and (3) justifiability (how to justify an environmental measure to be in line with GATT Art. XX) (Condon, 2009). A summary on how climate change mitigation measures could impact and be in conflict with some WTO law is provided in Box 3.3.

Box 3.4: Climate change mitigation measures and their effect on WTO law

The principal policy alternatives to address climate change fall under three categories: (i) the cap-and-trade approach; (ii) standards-based policies, which require the adoption of specific measures or set source-specific emissions limits and (iii) carbon taxes. Depending on the manner in which these policies are implemented, they may raise issues of WTO compatibility. If pollution permits are distributed or sold in a discriminatory manner, a cap-and-trade system could be inconsistent with the non-discrimination obligations of GATT Articles I:1 and III:4. Similarly, if carbon taxes are applied in a discriminatory manner, there could be a violation of GATT Article III:2. If the revenue from carbon taxes is used to grant subsidies, those subsidies might be inconsistent with the SCM Agreement. Standards-based policies could also be implemented in a discriminatory manner, contrary to the GATT and the TBT Agreement.

Source: Condon (2009: 896)

Countries may also choose to apply tariffs or (carbon) border taxes that discriminate between different products based on differences in national climate change policies or differences in the carbon footprints of products (Condon, 2009). The GATT consistency of such border tax adjustments is unclear. The Food Miles saga that took place in the EAC between 2006 and 2008 is a typical case. Horticultural products were dumped at airports given that they were deemed to have a high carbon footprint. Likewise, South Africa is currently exporting much of its wine to the EU in bulk containers for the same reasons that bottled wine results in a high carbon footprint. The Meridian Institute (2011: 17) highlights that "depending on how they are designed, carbon standards and labelling, subsidies, border tax/carbon adjustments, or free allowances in the agricultural sector could be considered discriminatory or challenged under WTO rules". In addition, climate measures involving renewable energy and associated technologies are increasingly being contested under the WTO (Hä Berli, 2016). A summary of disputes is provided in table 3.2.

Table 3.2: Litigation about renewable energy measures

Case Number	*Respondent and (Short) Title*	*Complainant*	*Current Status*
DS 419	China - Measures concerning wind power equipment	USA	In consultations since 22 December 2010
DS 412	Canada - Renewable Energy	Japan	Implementation notified by respondent on 5 June 2014
DS 426	Canada - Feed-In Tariff Program	European Union	Implementation notified by respondent on 5 June 2014
DS 421	Moldova - Environmental Charge	Ukraine	Panel established, but not yet composed on 17 June 2011
DS 437	USS - Countervailing Measures (China)15	China	Report(s) adopted on 16 January 2015, with a recommendation to bring measure(s) into conformity
DS 443	European Union and a Member	Argentina	In consultations since 17

	State16 — Certain Measures Concerning the Importation of Biodiesels		August 2012
DS 459	European Union and Certain Member States — Certain Measures on the Importation and Marketing of Biodiesel and Measures Supporting the Biodiesel Industry	Argentina	In consultations since 15 May 2013
DS 473	European Union - Anti Dumping Measures on Biodiesel from Argentina	Argentina	Panel report under appeal on 20 May 2016
DS 452	European Union and certain Member States - Certain Measures Affecting the Renewable Energy Generation Sector	China	In consultations since 5 November 2012
DS 480	EU - Biodiesel	Indonesia	Panel composed on 4 November 2015
DS 456	India - Solar Cells	United States	Panel report dated 20 April 2016 under appeal

Source: Hä Berli (2016: 8-9)

To address climate change and other environmental issues in the SCM Agreement, the WTO Members have to consider whether to address environmental subsidies under the like products analysis, the extension of GATT Article XX to the SCM Agreement or both (Condon, 2009). The Technical Barriers to Trade (TBT) Agreement is likely to come into play with respect to some measures related to climate change, particularly standards. A multilateral environmental agreement on climate change might qualify as a relevant international standard if membership is open to all WTO Members.

In April 2012, the Director-General of the WTO, Pascal Lamy, announced the establishment of the 'Panel on Defining the Future of Trade' (Saner, 2013). As part of the ToR, the Panel had to "….examine and analyse challenges to global trade opening in the 21st century" against the background of profound transformations occurring in the world economy, looking "at the drivers of today's and tomorrow's trade, … bearing in mind the role of trade in contributing to sustainable development, growth, jobs and poverty alleviation" (Ibid: 29). Among some of the Panel's report critical ideas and recommendations are that:

> Many areas of *climate change policy*[11] potentially intersect with trade policy. In the past, international agreements on the environment, such as the Montreal Protocol, have managed both the environmental and trade aspects of cooperation without a clash. This should provide inspiration to governments as we risk encountering problems of incompatibility that could lead to a clash of regimes that would hurt climate change mitigation efforts and trade. … In our view it is the primary responsibility of the environment negotiators to define what is necessary in order to ensure adequate mitigation actions, and then it is a shared responsibility of the trade and environment communities to ensure that measures do not undermine trade and pander to special interests (Ibid: 30).

[11] Emphasis added.

From Saner's (2013) view, the statement "it is the primary responsibility of environment negotiators to define necessary mitigation actions, and a shared responsibility of the trade and environment communities to ensure compatibility between the two regimes" *is an abdication of WTO's responsibility in promoting sustainable development and fighting climate change*[12]. What was worrying more, was the fact that the Panel's report makes no single reference to the UNFCCC.

To sum up, the following key pointers are necessary as take home messages (Condon, 2009: 926):

- GATT Article XX will play an important part in determining the WTO consistency of climate change measures. The scope of paragraphs b and g in GATT Article XX still need to be defined in many aspects, as does the relationship between these two paragraphs.
- Multilateral environmental agreements on climate change will probably be relevant to determining the consistency of climate change measures with GATT Article XX and the provisions of the TBT Agreement that use similar language to that used in GATT Article XX.
- However, it is unlikely that GATT Article XX will be applied to the SCM Agreement, the Agreement on Agriculture or the TBT Agreement. Its application to other agreements in Annex 1A will have to be analyzed on a case-by-case basis.
- If processing and production methods are relevant to determining the issue of 'like products' in GATT Articles I and III, the SCM Agreement and the Antidumping Agreement and the TBT Agreement, then this may provide an alternative analytical approach to determine the WTO consistency of climate change measures. Again, this will have to be analyzed on a case-by-case basis in light of specific climate change measures. However, if environmental subsidies are designed so that they are not specific to certain enterprises, they will be not be subject to multilateral action under Part III or unilateral action under Part V.
- If the subsidies apply to agricultural products, they will have to comply with the commitments of Members under the Agreement on Agriculture. In the case of export subsidies, compliance with the Agreement on Agriculture may shield subsidies on agricultural products from action under SCM Agreement Article 3.1(a). However, opinion differs on this issue and this issue will become moot once export subsidies are eliminated. In the case of subsidies contingent on the use of domestic products, it will be necessary to comply with both the SCM Agreement and the Agreement on Agriculture.

The submission by Argentina on "The Doha Round and Climate Change" to the Committee on Trade and Environment in Special Session made a number of references directly linked to climate change and the greening of TRIMS and TRIPS (Saner, 2013). Argentina raised the following matters of concern:

- The WTO negotiations to eliminate barriers to trade in environmental goods and services should be aimed at facilitating access to goods and

[12] Ephasis added.

services that are used in climate change mitigation and adaptation projects by reducing costs of projects relating to action against climate change.

- The WTO negotiators to grant priority for products, technologies, and services imported for projects under Kyoto Protocol's Clean Development Mechanism (CDM)".

A detailed WTO rule adjustments proposal allowing climate change action is provided by Christian Häberli (2016) and is reflected in Appendix 1. This Appendix is critical for EAC negotiators in terms of framing ideas and arguments. To this end, participants are encouraged to familiarise with the proposals presented.

Exercise

(a) As individuals, to take 15 minutes to familiarize with proposals to bring climate action into the WTO rules and agreements as presented in Appendix 1.

(b) In groups, to select what you consider to be three (3) game changer rules and/or Agreements related to agriculture, and present challenges associated with the proposals to bring climate action rule adjustments from these 3 Agreements in the WTO system.

Auditing Agriculture Provisions in EAC (I)NDCs

This section audits agriculture provisions in the (I)NDCs of five EAC countries namely: Burundi, Kenya, Rwanda, Tanzania and Uganda. The (I)NDCs were retrieved from the authentic UNFCCC website. The purpose is to present a comprehensive picture in terms of what position have been taken by the individual countries and how such positions can be taken advantage of to put together a common EAC agriculture negotiation position into the future COPs starting with COP23 taking place in Bon, Germany, 2017. A summary in terms of the Paris Agreement ratification (and by default the conversion from INDCs to NDCs) status from the EAC countries is presented in table 3.3.

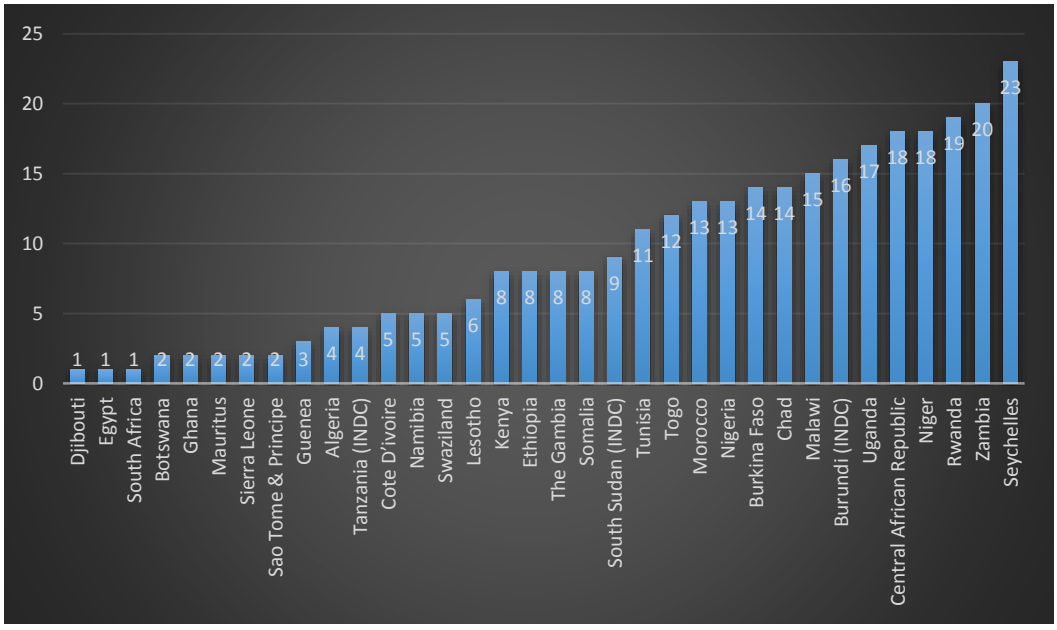
Table 3.3: EAC Status of Paris Agreement/INDC Ratification[13]

Country	*Signature*	*Ratification*	*Entry into Force*
Burundi	22 Apr 2016	-	-
Kenya	22 Apr 2016	28 Dec 2016	27 Jan 2017
Rwanda	22 Apr 2016	6 Oct 2016	5 Nov 2016
Uganda	22 Apr 2016	21 Sep 2016	4 Nov 2016
Tanzania	22 Apr 2016	-	-

Source: Author, Based on http://unfccc.int/paris_agreement/items/9444.php (Accessed 10 August 2017)

Before coming up with a detailed analysis of the manner in which agriculture has been considered in the EAC (I)NDCs, a simple word count was done. First, from a number of African countries that have submitted their (I)NDCs to the UNFCC, and secondly, a separate count in the EAC (I)NDCs as the object of further analysis. The summary is provided in Figures 3.2 and 3.3. From the 34 African countries whose (I)NDCs where retrieved, Seychelles, Zambia, Rwanda, Niger and Central Africa Republic rank among the top five in their word counts. This is significant in terms of the EAC negotiators having a quick overview on which countries to partner and make friends as they push for a strong agriculture position in the next COPs. The countries ranking poorly in terms of word count include Djibouti, Egypt, South Africa, Botswana and Ghana. As for the EAC Rwanda, Uganda and Burundi feature in the top 10.

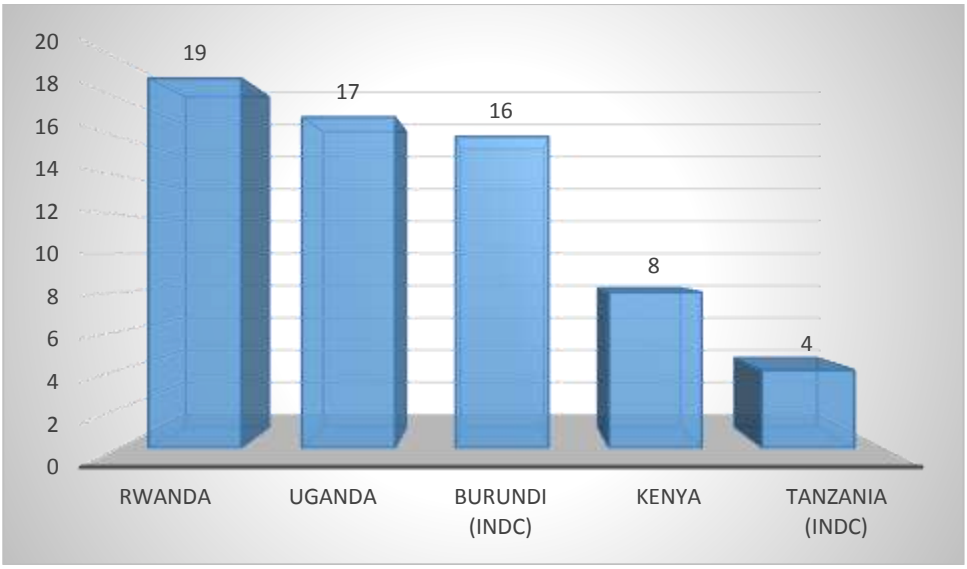
Figure 3.2: Word count for 'Agriculture' in African (I)NDCs



Source: Author (Based on various (I)NDCs

Figure 3.3: Word count for 'Agriculture' in EAC (I)NDCs

[13] As of 9 August 2017, 159 Parties of the 197 UNFCCC had ratified the Paris Agreement, effectively converting their INDCs to NDCs



Source: Author (Based on various (I)NDCs

Burundi

From Burundi's INDC, it emerged that activities relating to climate change were raised from the development and publication of its 1st and 2nd National Communications under the UNFCCC. Burundi also prepared its National Adaptation Programme of Action (NAPA) in 2007 that identified agriculture as a key and vulnerable sector to climate change (Republic of Burundi, 2015). From the NAPA, major climate change impacts in the agriculture and livestock farming sector were identified to include the following (Ibid: 3-4):

- Aggravated and more prolonged declines in crop harvests and livestock (cattle, goats, sheep and poultry);
- Frequent and severe droughts, with likelihoods of occurrence of between 40% and 60%. Meat and dairy production likely to be heavily reduced, along with fish production;
- Lightning seems to be increasing during cyclones, causing additional livestock deaths in mountainous areas; and
- There is forecasted decline in the quality and quantity of pastureland.

Adaptation Matters

The INDC addresses technical and technology transfer needs to which the main measure will be the promotion of intensified and diversified water-efficient agricultural production. The country aims to simplify access to inputs like fertilizer, subsistence crop seeds, drought-resistant fodder and crop protection products as well as access to agricultural equipment. There is a call to develop an agro-ecological approach that focuses on soil fertility management practices,

use of manure and compost, the development of agro-forestry, and water and soil conservation.

There is also the provision for the security for livestock farming and support for the association of agriculture and livestock (Republic of Burundi, 2015). This will be done through enabling the diversification of activities such as breeding of multiple species of animals, mixed farming and the sale of harvest transport services and fodder crops. The government is also working on the genetic diversity of different animals.

A number of policies and strategies were identified aimed at addressing climate change adaptation in the agriculture, livestock, forestry and fisheries sector. Among such are the following (Republic of Burundi, 2015: 6):

- National Agricultural Strategy, 2008-2015 (2008);
- National Sustainable Land Use Strategy (2007);
- National Action Programme to Fight Land Degradation (2005);
- National Strategy and Action Plan on Climate Change (2012);
- National Strategy and Action National Forestry Policy of Burundi (2012);
- Plan to Fight Soil Degradation (2011-2016);
- National Strategy and Action Plan for Biodiversity (2013-2020); and
- National Agricultural Investment Plan (2012-2017).

From the 2012 National Strategy and Action Plan on Climate Change, the promotion of climate-smart agriculture (CSA), especially agrometeorology was picked as one of the priority adaptation programmes. Capacity-building, knowledge management and communication were other priorities highlighted.

The INDC further reveals a number of existing and current initiatives to support climate change adaptation in the agriculture and livestock sector including (Republic of Burundi, 2015: 7) the following:

- ACCES (Climate Change Adaptation for Soil and Water Resources Conservation) Project, financed by the Special Fund for Energy and Climate;
- Watershed Management and Climate Resilience Improvement (PABVARC) Project;
- Communication and Early Warning Strategy for Adaptations to Climate Change;
- Integration of smart agriculture into the National Agricultural Investment Programme (NAIP);
- National Action Plan (currently being drafted); and
- A range of small grants projects financed by the Global Environment Facility (GEF).

The Republic of Burundi (2015) identify the climate change risks associated with water resources. There is potential for the drying up of lakes and other waterways, disappearance of aquatic flora, deterioration of surface water quality, increased rainwater erosion and silting of certain rivers, and increased competition for the use of unpolluted groundwater resources. To this end, contributions under technical and technological transfer include the development, rehabilitation and management of hydro-agricultural infrastructure like efficiency in irrigation to reduce water uptake as well as integrated water management.

Mitigation Issues

Under mitigation, Burundi presented its 'business as usual scenario and emissions reduction objectives' (Republic of Burundi, 2015). From this scenario, the country set up twin objective under what it termed 'unconditional' and 'conditional' objectives. Under the unconditional objective, Burundi pledged to increase its carbon dioxide sinks from 4,000 hectares of annual reforestation over the course of 15 years starting in 2016. This development and rational management of forest resources will increase forest cover to 20% by 2025. This programme will be implemented under the National Reforestation Programme. Under the conditional objective, two sub-sectors were identified namely: forestry and agriculture. From forestry, there will be twin programmes: (i) the reforestation of 8,000 ha/year to 2030 as from 2016; and (ii) 100% replacement of traditional charcoal kilns and traditional home ovens by 2030. As for agriculture, there will be the gradual and 100% replacement of mineral fertilizers with organic fertilizer by 2030.

Means of Implementation

The issue of finance is considered. Financing for agriculture is specifically mentioned under the sub-sector 'Promotion of research and development (R&D) and technology transfers'. Research and development will focus on adaptation of agriculture to climate change as well as waste recovery techniques for agriculture, forestry and livestock farming. This sector is estimated to require $25,787 million to 2030. Reforestation and agro-forestry is estimated to require $10 million for reforestation of terrains on steep slopes and agro-forestry on less steep slopes (Republic of Burundi, 2015).

Kenya

Agriculture made up of crops, livestock, fisheries, agro-forestry and associated services, remains the largest contributor to Kenya's GDP. It directly contributes about 25.4% of the GDP and another 27% indirectly via linkages to agro-based industries and the service sector, giving an overall 52% contribution to Kenya's GDP (Ministry of Agriculture, Livestock and Fisheries and Ministry of Environment and Natural Resources, 2015). The agricultural sector is dominated by subsistence farmers; contributing significantly to the country's food security, income generation, employment creation and poverty reduction efforts. Agriculture contributes over 65% of total exports, and provides 18% of formal and 60% of total employment respectively, with close to 33% of manufacturing sector output is based on agricultural products. The crops, livestock and fisheries subsectors are identified as major components of the agricultural sector as they contribute 77.6%, 19.6% and 2.0% of the Agricultural GDP respectively. The horticulture and industrial crops account for 90% of the exports (Ibid).

Kenya realises that it is bearing the brunt of climate change impacts and the associated socio-economic losses (Ministry of Environment and Natural Resources, 2015). The situation is aggravated by the country's high dependence on climate sensitive natural resources and sectors that include rain-fed agriculture and forestry. To this end, a number of policies and laws are in place and these include the National Climate Change Response Strategy of 2010, National Climate Change Action Plan of 2013, National Adaptation Plan (NAP) that was under preparation by the time of finalising the NDC and the Climate Change Act (No. 11 of 2016). Kenya is operationalising the above-mentioned policies and plans through the implementation of climate change actions afforestation and reforestation, energy efficiency, CSA and drought management.

Adaptation Matters

The Ministry of Environment and Natural Resources (2015) identifies agriculture, livestock development and fisheries as a sector under priority adaptation sectors. The actions highlighted include the desire to enhance the resilience of the agriculture, livestock and fisheries value chains by promoting CSA and livestock development. A number of other sectors and programmes with direct and significant relations with the agriculture, livestock and fisheries sector are identified for priority adaptation measure. These sectors and programmes are: land reform; science, technology and innovations; education and training; and water and irrigation. Regarding water and irrigation- the NDC calls for the mainstream of climate change adaptation in the water sector by implementing the National Water Master Plan of 2014.

The NDC makes reference to Kenya's National CSA Framework Programme (Ministry of Agriculture, Livestock and Fisheries and Ministry of Environment and Natural Resources, 2015) that identifies four strategic priorities with bearing on adaptation namely:

- National systems for enhancing climate smart agriculture best practices, technologies and approaches;
- Value chain systems approach;
- Demand-driven research for development and innovations; and
- Improving and sustaining agricultural advisory services.

Mitigation Issues

Carbon emissions through CSA is identified and the NDC makes further reference to the National CSA Framework Programme (2015-2030) (Ministry of Agriculture, Livestock and Fisheries and Ministry of Environment and Natural Resources, 2015) and its four strategic priorities with a bearing on mitigation too.

Means of Implementation

Kenya does not split financial requirements by sector and/or sub-sector as in the case with Burundi. The Government states that the NDC will be implemented through the mobilisation of both domestic and international support estimated to be over $40 billion up to 2030 (Ministry of Environment and Natural Resources, 2015).

Rwanda

In presenting its rationale and process for adaptation contribution, Rwanda's NDC maintains that the country "is highly vulnerable to climate change, as it is strongly reliant on rain-fed agriculture both for rural livelihoods and for exports of mainly tea and coffee" (Government of Rwanda, 2015: 2). The government further reveal that given Rwanda's population density, which is the highest in Africa, adaptation concerns are central to its INDC. The increase in extreme weather events, reduced return rates and magnitude are noted, which have resulted in loss of life in other instances. The NDC shows that temperature has increased by about 1.4°C since 1970, a figure higher than the global average, and is expected to rise up to 2.0°C by the 2030s based on 1970 figures (Ibid).

Adaptation Matters

From an agricultural angle, Rwanda has a long term vision to become a climate resilient economy, with strategic objectives to achieve sustainable land use and water resource management that result in food security, preservation of biodiversity and ecosystem services, as well as to ensure disaster risk reduction (DRR) that reduces vulnerability to climate change impacts.

A programme on sustainable intensification of agriculture is identified, whose main actions will be to: mainstream agro-ecology techniques using spatial plant stacking as in agro-forestry, kitchen gardens, nutrient recycling, and water conservation to maximise sustainable food production. An estimated 100% of the households involved in agriculture production are expected to implement agro-forestry sustainable food production by 2030 (Republic of Rwanda, 2015). Another action involves the utilisation of resource recovery and reuse through organic waste composting and wastewater irrigation. Given Rwanda's terrain, about 90% of its cropland is on slopes. Hence soil conservation and land husbandry is a must. The country therefore intends to expand its soil conservation and land husbandry programmes trough: the installation of land protection structures like radical and progressive terraces where these structures will be installed on 100% of the relevant area by 2030; the development and implementation of an intensive agro-forestry programme with a target of covering 100% of arable land by 2030 (Ibid).

In terms of irrigation and water management, the country intends to increase investment in irrigated agriculture to increase production and harness fresh

water resources while ensuring food security to its population. District irrigation master plans will be designed and small-scale schemes will be developed. While agricultural land fitted with operational irrigation infrastructure was estimated at 4% of the total land with irrigation potential in 2012, the overall target is to reach 11% by 2030 (Republic of Rwanda, 2015). The government also aims to develop models, improve meteorological services, water quality testing, and improve hydro-related information management. Another intervention involves the development of a National Water Security Plan that will embrace water storage and rain water harvesting, water conservation practices, efficient irrigation, and other water efficient technologies (Ibid).

Agricultural diversity in local and export markets addressed through added value to market demand for food stuffs remains key in adaptation interventions (Republic of Rwanda, 2015). The government identified challenges with food damage under extreme weather conditions, especially to rural community market. As such, the NDC presents plans to expand local markets through the constructing market infrastructure that includes roofed market facilities, serviceable road and transport networks.

Mitigation Issues

A programme on Sustainable Forestry, Agro-forestry and Biomass Energy has been identified. Among the actions planned to 2030 is a need “to promote afforestation/reforestation of designated areas through enhanced germplasm and technical practices in planting and post-planting processes” (Republic of Rwanda, 2015: 7). An estimated 97% of cooking energy for the Rwandan population comes from forests. To this end, the country intends to use mixed plant species, which contribute to the achievement of mitigation objectives. The country targets to achieve an overall 30% sustained forest cover of the total national land surface by 2030 from 28.8% in 2013 (Ibid).

Means of Implementation

It emerged that Rwanda's NDC draws from its 2011 National Strategy for Climate Change and Low Carbon Development Strategy whose implementation rests upon five enabling pillars namely: “Institutional Arrangements; Finance; Capacity Building and Knowledge Management; Technology, Innovation and Infrastructure; and Integrated Planning and Data Management” (Republic of Rwanda, 2015: 2). The government further makes it clear that the GHG emission reductions from the deviation of business as usual emissions for the year 2030 is conditional to the availability of international support for finance, technology and capacity building. However, the NDC notes that Rwanda already spends a substantial portion of its annual budget on infrastructure and the provision of social services that leads to low carbon growth trajectory and build climate resilience. From initial cost estimates, about $24.15 billion is required in the sectors of Water resource management, Agriculture and Energy up to 2030.

Tanzania

Climate change projections in the Republic of Tanzania show warming from 0.5^0C by 2025 up to about 4^0C by 2100 (Republic of Tanzania, 2015). More warming is anticipated over the South Western parts of the country, with mean seasonal rainfall projected to decrease progressively for most parts of Tanzania. However, this trend is expected to be more significantly over the North-eastern highlands, where rainfall is projected to decrease by up to 12% in 2100 (Ibid).

Adaptation Matters

The Republic of Tanzania (2015) identified adaptation priority sectors to include agriculture, livestock, fisheries and forestry. The foregone sub-sectors are usually considered to be agricultural and this analysis will consider them as such too. The water sector also popped up as one of these key sectors. The identified contributions from the INDC in the identified sub-sectors are shown in Table 3.4.

Table 3.4: Adaptation contributions

Sub-Sector	*Contributions*
Agriculture (Crops)	• Up-scaling the level of improvement of agricultural land and water management. • Increasing yields through inter alia climate smart agriculture. • Protecting smallholder farmers against climate related shocks, including through crop insurance. • Strengthening the capacity of Agricultural research institutions to conduct basic and applied research. • Strengthening knowledge, extension services and agricultural infrastructures to target climate actions.
Livestock	• Promoting climate change resilient traditional and modern knowledge on sustainable pasture and range management systems. • Enhancing development of livestock infrastructures and services. • Promoting livelihood diversification of livestock keepers. • Promoting development of livestock insurance strategies.
Forestry	• Enhancing efficiency in wood fuel utilization. • Enhancing participatory fire management. • Enhancing forest governance and protection of forest resources. • Enhancing Sustainable forest management.
Fisheries	• Enhancing conservation and fishery resource management. • Strengthening key fisheries management services for sound development and management of the fishery sector for resilience creation.
Water Resources • Promoting integrated water resources development and management	

practices.
- Investment in protection and conservation of water catchments including flood control and rainwater harvesting structures.
- Promoting waste water reuse and recycling technologies.
- Development and exploitation of groundwater resources.

Source: Author, Based on the Republic of Tanzania (2015: 4)

Mitigation Issues

On mitigation, one key agricultural sub-sector was identified as forestry. The INDC identifies the following contributions from the forestry sub-sector as mitigation measures (Republic of Tanzania, 2015: 8): enhancing and up-scaling the implementation of participatory forest management programmes; facilitating effective and coordinated implementation of actions that will enhance REDD+ related activities; strengthening national wide tree planting programmes and initiatives; strengthening protection and conservation of natural forests to maintain ecological integrity and continued benefiting from service provisions of the sector; and enhancing and conserving forest carbon stocks.

Means of Implementation

Tanzania concludes that effective implementing of the identified mitigation and adaptation contributions require a timely access to adequate and predictable financial resources. It also requires effective and timely access to appropriate technologies, appropriate knowledge and skills as well as institutional and individual capacity development (Republic of Tanzania, 2015). Overall, identified adaptation contributions require about $500 million to 1billion per annum, and a total of $60 billion per year for mitigation contributions, respectively (Ibid).

Uganda

In its summary of the NDC, Uganda portrays that “the livelihood of the people of Uganda is highly dependent on the exploitation of her natural resources, including climate. In submitting this INDC, Uganda’s priority is adaptation. The country will continue to work on reducing vulnerability and addressing adaptation in agriculture and livestock, forestry, water, and disaster risk management. Sustainable Land Management (SLM) and Climate Smart Agriculture (CSA) will be scaled up to increase resilience at the grassroots level” (Ministry of Water and Environment, 2015: 2).

Adaptation Matters

Agriculture, livestock, forestry and the water sub-sectors are among those prioritised for adaptation. A summary of the actions for adaptation per each of these sectors is presented in table 3.5. To support some of the actions outlined, there are a number of policies and strategies already in place that include the following (Ministry of Water and Environment, 2915):

- Uganda's National Adaptation Programme of Action (NAPA) 2007;
- National Policy for Disaster Preparedness and Management in 2010;
- National Climate Change Policy and its Costed Implementation Strategy in 2012/13; and
- 10-year Climate Smart Agriculture Program (2015-2025).

Table 3.5: Priority adaptation actions in identified sub-sectors

Sub-sector	*Priority Adaptation Actions*
Agriculture (Crops)	• Expanding extension services • Expanding climate information and early warning systems • Expanding Climate Smart Agriculture (CSA) • Expanding diversification of crops • Expanding value addition, post-harvest handling and storage and access to markets, including micro-finances • Expanding research on climate resilient crops • Extend electricity to the rural areas or expanding the use of off-grid solar system to support value addition and irrigation.
Livestock	• Expanding rangeland management • Expanding research on climate resilient animal breeds • Expanding diversification of livestock
Forestry	• Promoting intensified and sustained forest restoration efforts (afforestation and reforestation programmes, including in urban areas) • Promoting biodiversity and watershed conservation (including re-establishment of wildlife corridors) • Encouraging agro-forestry • Encouraging efficient biomass energy production and utilization technologies
Water • Expanding small scale water infrastructure • Improving water efficiency • Ensuring water supply to key economic sectors, especially agriculture, and domestic use, including water harvesting and storage • Managing water resource systems, including wetlands, particularly in cities, in such a way that floods are prevented and existing resources conserved (through the establishment of an Integrated Water Resources Management system) • Extending electricity or expanding use of off-grid solar system to support water supply	

Source: Ministry of Water and Environment (2015: 5-7)

Mitigation Issues

A number of measures are outlined under mitigation in the agriculture sector. For example, the NDC proposes the development of an enabling environment for forestry management that includes: community forest management groups; forest law enforcement and governance; and the strengthening of forest institutions responsible for forest management and development (Ministry of Water and Environment, 2015). Uganda has further set its sight on reversing the deforestation trend by increasing forest cover to 21% in 2030. This is based on an approximate figure and baseline of 14% in 2013. Measures to increase the forest cover include forest protection, afforestation and sustainable biomass production measures. A wetland mitigation programme is lined up that will cover the development of and enabling environment for wetland management, which will include, among other interventions the following (Government of Uganda, 2015: 8-9):

- Design and implementation of 11 RAMSAR site wetland research, eco-tourism and education centres;
- Design and implementation of 111 District wetland action plans, with carbon sink potential;
- Design and implementation of 15 RAMSAR sites and Framework wetland management plans;
- Demarcation and gazetting of 20 critical and vital wetland systems and their maintenance country wide as carbon sink; and
- Wetlands law enforcement and strengthening wetland management institutions responsible for wetlands management, conservation and governance.

An estimated increased wetland coverage to 12% by 2030, from a 2014 baseline approximated at 10.9% is planned. This will be done through the demarcation, gazetting and restoration of degraded wetlands.

Means of Implementation

The NDC shows that in the absence of adaptation actions, the total cost of the negative impacts of climate variability and change would be between $270 and $332 billion over the 40 year period (marked from 2010-2050) for the agriculture, water, infrastructure, and energy sectors (Ministry of Water and Environment, 2015). Annual costs could be between $3.2 and $5.6 billion from 2016-2025 in the four sectors identified. Lastly, the CSA Programme (2015-2025) is estimated at $476 million (Ibid).

Summary Findings

It emerged that all the five (I)NDCs audited for the EAC present significant commitments in contributing towards addressing climate change through both adaptation and mitigation measures. This forms a strong basis upon which EAC

negotiators across various international platforms that include the UNFCCC and the WTO, between others, should draw from. A summary in terms of how the EAC countries have presented their contributions in the adaptation sector is presented in table 3.6.

Table 3.6: Key Adaptation Sub-Sectors and Commitments in (I)NDCs

Sector/Country	*Burundi*	*Kenya*	*Rwanda*	*Tanzania*	*Uganda*
Agriculture (Crop)	**	**	**	**	**
Fisheries	**	**	-	**	-
Forestry	**	*	**	**	**
Livestock	**	**	*	**	**
Water (and Irrigation)	**	**	**	**	**
Value Chains and Addition	-	**	**	-	**
Seed Issues	*	-	-	-	-

Key: ** = Strong Commitment; * = Some Commitment; '-' = No Commitment
Source: Author

A lack of significant coverage on forestry in the Kenya NDC is rather worrying given the central role this sector plays in the country. The comprehensive coverage of crops, livestock and fisheries under the umbrella 'agriculture' for Kenya is noticed as a great positive. Uganda clearly indicates that its NDC will prioritise adaptation and also covers wetlands significantly. A rather surprising omission and/or silence on interventions measures is on fisheries for both Rwanda and Uganda.

As for mitigation, the main subsectors that emerged were a component of CSA and forestry, with all the countries having sufficient plans for the forestry sector.

The issue of seeds needs critical considerations in the negotiation, particularly access to local and indigenous seeds. We need to guard against the criminalisation of local and indigenous seed banks as well as small grain seed by financially and technically powerful multi-national. Burundi is the only country that mentions seeds on the periphery in terms of intensifying and diversifying agricultural production by simplifying access to inputs that include subsistence crop seeds.

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MODULE 4: SIMULATION EXERCISE

Module Objective ● ● ● ●

The emphasis of this module is to encourage holistic, substantive, collective and pragmatic thinking by the participants that enables them to sharpen skills to interact with institutions at the national, regional and global level platforms dealing with agriculture, agro-processing and climate change matters and negotiations.

Learning Outcomes ● ● ● ●

After going through this module, it is anticipated that the participants will be able to apply the knowledge gained from modules 1-3 and be able to initiate, formulate, revise, or monitor current negotiations and policy making process taking place regarding agriculture and climate change. This will result in participants from the EAC informal negotiation block being able to build relationships and present logical arguments that present the national, EAC, Africa Union and global interest in agriculture and climate change, with the view to improve livelihoods in the context of Sustainable development Goals and Africa Agenda 2063. It is also hoped that the training will build a long term platform to continuously input into the UNFCCC COPs starting with COP23 being help in Bon, Germany in November 2017.

The seed battle rages on

They used to say the wars of the 21st century will be fought over water. However, where things are going, the wars of this century will likely be over seed. Without seed rights, African and other developing nations are dead! Across Africa and the EAC; plant improvement, plant breeders and seed bills have mushroomed, many with strong backing from multinational seed

companies with the aim to criminalise traditional and subsistence seed banks (Box 4.1). As the climate change phenomenon continues taking place and becoming severe, climate resilient seeds will be needed. In addition, some of the seeds are for crops that are water thirst and require significant amounts of implements like fertilizers, herbicides and insecticides that are all bad for the environment, including the emissions of GHGs.

Box 4.1: The next wars of this century will be over seed

Participants to read the following stories online:

- Monsanto is hopeful Kenya will lift GMO ban. http://www.enca.com/africa/monsanto-is-hopeful-kenya-will-lift-gmo-ban (Accessed 25 August 2017).
- Africa's big little anti-GM revolution. http://www.downtoearth.org.in/news/africa-s-big-little-anti-gm-revolution-58118 (Accessed 25 August 2017).
- SEED: The Untold Story. http://www.pbs.org/independentlens/films/seed-the-untold-story/ (Accessed 25 August 2017).
- Accra Marches Against Monsanto Today! https://foodsovereigntyghana.org/tag/monsanto-law/ (Accessed 16 August 2017)
- Ghana's farmers battle 'Monsanto law' to retain seed freedom. http://www.theecologist.org/News/news_analysis/2605389/ghanas_farmers_battle_monsanto_law_to_retain_seed_freedom.html (Accessed 16 August 2017).
- The Seeds Of Suicide: How Monsanto Destroys Farming. http://www.globalresearch.ca/the-seeds-of-suicide-how-monsanto-destroys-farming/5329947 (Accessed 25 August 2017).
- Circle of Poison: A look at the powerful pesticide industry, its effect on the developing world and how small farmers are fighting back. http://www.aljazeera.com/programmes/specialseries/2016/11/circle-poison-pesticides-developing-world-161115084547144.html (Accessed 25 August 2017).
- Seed giant Monsanto meets its match in India. https://www.standardmedia.co.ke/business/article/2001234329/seed-giant-monsanto-meets-its-match-in-india (Accessed 25 August 2017).
- Monsanto Launches War On Scientists, Says Science Will Ruin Their Business. http://www.fooddemocracynow.org/blog/2017/mar/23 (Accessed 25 August 2017).
- Any other stories online, especially from your country.

Group Exercise

In groups of five (5) participants each:

(a) To come up with a consensus anticipated agriculture proposal and/or position for the upcoming UNFCCC COP23 addressing adaptation, mitigation and means of implementation matters;

(b) Read two (2) selected stories of choice from Box 4.1 and come up with an EAC seed position for the upcoming COP23; and.

(c) Prepare an engagement (communication and lobbying) plan to build an Africa-wide position on agriculture, based on EAC positions from 'a' and 'b' above. Your answer should also come up with a key stakeholders' map, including potential friendly and hostile entities that may include countries, negotiation blocks, NGOs, media houses, donors etc.

Appendix 1: WTO Rule Adjustments Proposals for Climate Action

Agreements	*Adjustment Proposals for Consideration (Rules to be made available)*	
	(i) for all WTO Members	*(ii) only for poor developing countries and measures without more than a minimal trade impact*
AoA	Annex 2 ('Green Box') to add a paragraph 14 allowing for climate mitigation support measures based on internationally recognised standards (e.g. best agricultural practices) and at levels with no more than a minimal impact on trade and production.	Art. 6.2 (Developing Country Green Box) to be available for climate-friendly investments and certain agricultural input subsidies for low-income or resource-poor producers.
ADP	Anti-dumping disallowed for internationally recognised climate-smart action as long as a subsidy or other incentive to a given product from a particular exporting country does not over-compensate the additional production costs due to the climate-smart action at issue. Anti-dumping is also disallowed where the importing country applies an equivalent climate smart measure.	
DSU	Adjudicators to consider context and customary international law (as per Art. 31 VCLT) and not to rule out Paris Agreement implementation measures where the underlying climate change mitigation objective cannot be attained otherwise than with a minimal trade distortion.	
GATT	1. No WTO rules shall be construed to prevent the adoption or enforcement of measures necessary for implementing the Paris Agreement (e.g. for the internalisation of carbon emission costs). WTO Members shall benefit from a new provision in GATT-Article XX (lit. k), subject to the provisions in the chapeau of Article XX, and taking into consideration the above-suggested DSU modification (establishing 'necessity'). 2. GHG emission pricing schemes and 'other duties or charges' levied on non-climate-smart imports may exceed scheduled tariff rates (Art. II:1(b)	Reintroduce clearly defined infant industry protection for climate-friendly start-ups in poor developing countries (Art. XVIII GATT).

	GATT).	
GATS	1. Foreign agricultural service suppliers may invoke their MFN and NT rights under Articles II and XVII only if their climate-impacting performance is at least equivalent to that required of domestic service suppliers. 2. Same condition to apply mutatis mutandis to claims in respect of scheduled commitments by individual members in specific sectors e.g. for restrictions of the total value of service transactions or assets. 3. Article XIV (General Exceptions) to be modified like Article XX GATT.	Review the (generally low) specific services commitments of poor developing countries under GATS-Articles XVI – XVIII.
GPA	Entities covered by this Agreement may apply internationally recognised climate standards and best agricultural practices for products or services procurement (e.g. equivalent footprint requirements).	For climate-friendly products and services procurement, Article V (Special and Differential Treatment for Developing Countries) shall be available for poor developing countries only.
LIC	Import approvals and controls for climate-related regulations based on international standards and best agricultural practices to be 'automatic' import licenses i.e. assumed not to have trade restrictive effects (Art. 2).	
NFIDC		Decision Negative effects of climate adjustment measures on NFIDC trade entitles them to support by countries implementing such measures.
PSI		Import controls by way of pre-shipment inspection of climate-friendly goods and services to be facilitated with the support of the importing country.
RoO	Pending the long-term harmonization of non-preferential rules of origin, the rules of origin for environmental goods and services should be based on a positive standard (rather than stating what does not confer origin).	
Safeguards	Clearly climate-related prudential carve-outs e.g. for financial services to be shielded from safeguard complaints.	Review the justification for developing country rights to extend the period of application of a climate-related safeguard measure for a period of (presently) only two years beyond the normal maximum.
Schedules	Principal suppliers and suppliers with substantial trade interests to favourably consider requests for bound tariff increases for climate-	

	sensitive goods (and other duties and charges applying to 'like' products), and proposals for substantially equivalent concessions initially negotiated with the applicant Member under Article XXVIII GATT.	
SCM	1. Agricultural subsidies and other incentives provided in the context of the Paris Agreement implementation shall be assumed, under the SCM Agreement, to not have 'adverse effects' on other WTO Members as long as they are clearly based on internationally recognised standards (e.g. best agricultural practices). 2. Consumer subsidies and import substitution subsidies for climate-friendly products could be challenged as actionable subsidies under the SCM Agreement (and countervailed if there are exports) only if they involve trade restrictions. 3. Fisheries (and shipping) subsidy rules may require specific adjustments.	1. Measures taken to implement the Technology Mechanism under the Paris Agreement (Art. 9) to be considered SCMcompatible. 2. Climate-exposed small fishermen and aquaculture in poor countries to benefit from Article 6.2 AoA.
SPS	WHO recommendations for climate smart health policies to be considered SPS-compatible, like the standards laid down for agricultural trade by the Codex alimentarius, IPPC and OIE (Art. 3.4 and Annex A para 3 SPS).	
TBT	Provided treatment is granted to foreign products no less favourable than that accorded to like products of national origin and to like products originating in any other country: 1. Climate-related conformity assessment procedures, and requirements for quantification and reporting of greenhouse gas emissions and reductions based e.g. on relevant ISO standards, to be assumed to fulfil a legitimate objective in the sense of Article 2.2 TBT. 2. Labelling of climate-sensitive products and best agricultural practices to be assumed to fulfil a legitimate objective in the sense of Article 2.2 TBT.	
TRIMS		Poor developing countries to benefit from a time-limited right to restrict trade as an incentive for climate-friendly investment promotion.
TRIPS		Measures taken to implement the Technology Mechanism under the Paris Agreement (Art. 10) to be considered TRIPS-compatible.
TFA	Disciplines e.g. for enhanced controls	

	or inspections (Art. 5.1) to apply to 'Paris' implementation measures.	
VAL		Provisions relevant to developing countries and relating to minimum values and importations by sole agents, sole distributors and sole dealers to also apply to product differentiation necessary for the Paris Agreement implementation.

Key for Abbreviations for Appendix 1

Acronym	Title
AoA	Agreement on Agriculture
ADP	Agreement on Implementation of Article VI (Anti-dumping)
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
GATT	General Agreement on Tariffs and Trade 1994
GATS	General Agreement on Trade in Services 1994
GPA	Agreement on Government Procurement
LIC	Agreement on Import Licensing Procedures
NFIDC Decision	Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries
PSI	Agreement on Preshipment Inspection
RoO	Agreement on Rules of Origin
Safeg	Agreement on Safeguards
Schedules	Geneva (1995) Protocol to the General Agreement on Tariffs and Trade 1994
SCM	Agreement on Subsidies and Countervailing Measures
SPS	Agreement on Sanitary and Phytosanitary Measures
TBT	Agreement on Technical Barriers to Trade
TRIMS	Agreement on Trade Related Aspects of Investment Measures
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
TFA	Agreement on Trade Facilitation (2014)
VAL	Agreement on Implementation of Article VII (Customs Valuation)

Source: Hä Berli (2016: 19-24)