Training Manual

Climate Change and Agriculture Negotiations

Towards more coherence between climate, trade and agriculture

TANZANIA TRAINING

CUTS International
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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
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 negotiations through detailed analysis of concepts, stakeholder engagement, current status, contestations and the preferred future positions from Tanzania. Hence, the course will facilitate an active involvement of Tanzania ministries' representatives involved in climate negotiations, or expected to be involved in the climate negotiations' process. The overarching objective is to build technical and related knowledge and capacity on how to engage with discourses surrounding agriculture and climate negotiations. A critical mass of these relevant stakeholders needs to be built if Tanzania 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 Tanzanian ministries' representatives involved in climate negotiations, or expected to be involved in the climate negotiations process especially on agriculture related issues, 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 Tanzania, through the regional (EAC), Africa Union to the global level.
- To increase the capacity of stakeholders to take advantage of ongoing agriculture and climate negotiation processes, drawing mainly from UNFCCC,

existing Intended Nationally Determined contributions [(I)NDCs] and other multilateral texts/submissions from both the historical and futuristic perspectives, including the upcoming 24th Conference of Parties (COP24).

- To highlight and emphasise the fact that in negotiations, contesting policy domains/groupings get what they negotiate for, and that both the Tanzania 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 developed under PACT-EAC2. Additional information and text has been sourced on agriculture and climate negotiations, including recent negotiating texts.

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 the UNFCCC.
- Be able to analyse the provisions of the (I)NDCs from Tanzania and establish how such can inform the future agreement of agreement on agriculture under the UNFCCC.
- 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 in as far as agriculture and climate change positions are concerned as informed by the need to prioritise climate change adaptation.
- Be able to come to a consensus in terms of what exactly constitute the agriculture sector in Tanzania. 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 negotiations
- Module 4: Simulation exercise: Drawing up future negotiation positions on agriculture

The above modules are designed for delivery in a highly interactive manner, making use of case studies of existing positions and policy documents, especially the (I)NDCs emerging from Paris Agreement, ongoing country proposals on agriculture and overall the Koronivia Joint Work on Agriculture. Modules 1-3 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 Tanzania and 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 and how these are taken to international platforms like the UNFCCC; and
- Discuss the positive and negative impacts between CC-FS and CC-T; and
- Determine the most important issues to take forward from the Tanzanian perspective, to the UNFCCC, especially regarding the Koronivia Joint Work on Agriculture (KJWA).

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.
- Be able to determine the most important issues to take forward from Tanzanian perspective, to the UNFCCC, especially regarding the KJWA

Module Content ● ● ● ●

The module is organised under the highlighted key sections below:

- Concepts and definitions in agriculture, climate change, food security and trade;
- Linkages between CC-FS and CC-T; and
- Positive and negative impacts between CC and agro-industry.

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.

Positive and negative impacts between climate change and trade

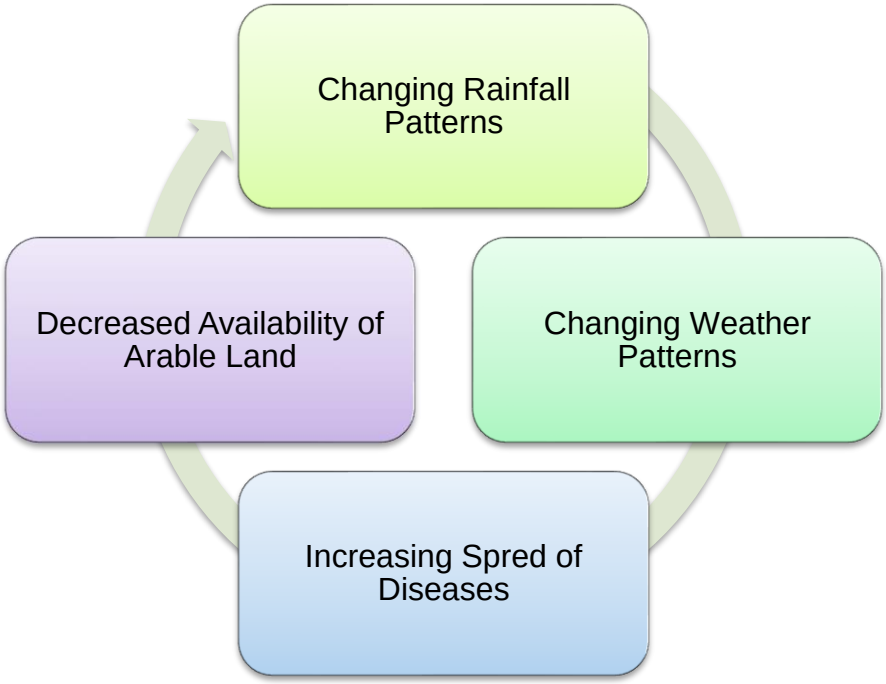
Climate change has become a global issue of concern because it poses a threat to people, ecosystems, livelihoods, and agricultural food production. The 2007 IPCC report on global climate change impacts (AR4) scenarios shows that there will be shifts in patterns of rainy seasons (IPCC, 2007). This is 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 1.1: 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).

Causes of inappropriate agricultural development in the EAC region

There are a number of key gaps identified resulting in inappropriate agricultural development in the EAC. Chief among these are misaligned policy frameworks. While most policies acknowledge the importance of agriculture, many do not clearly outline the targeted outcomes of linkages between agriculture, 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 agriculture, coupled with a lack of or poor technology for climate change adaptation.

However, 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

In plenary, to discuss the nexus between climate change, food security and trade.

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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 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 for 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; and
- 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 at the UNFCCC and the WTO.

Module Content ● ● ● ●

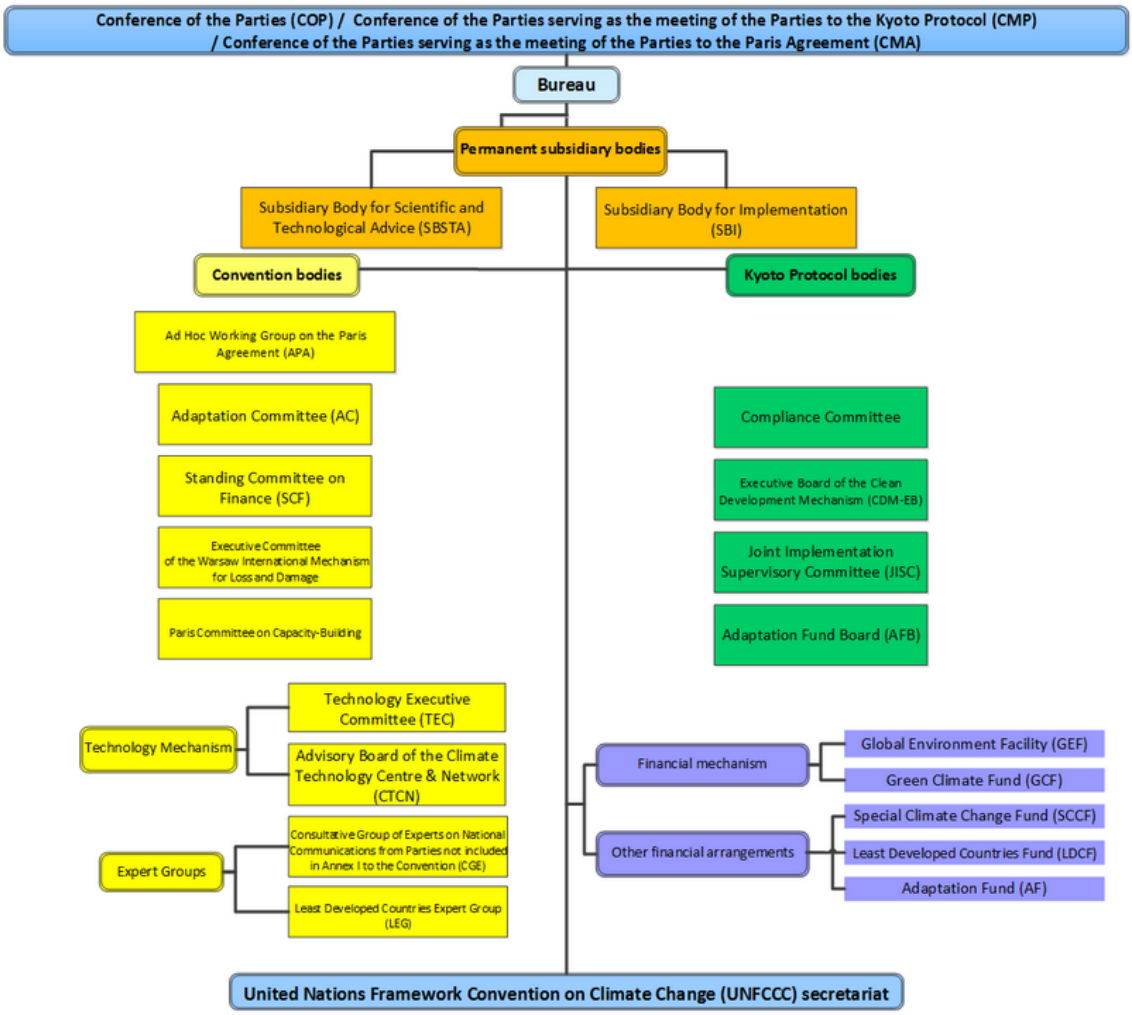
The module is organized under the following headings:

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

The United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) of 1992 remains the key institution 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 two subsidiary bodies namely (UNFCCC, 2018): The Subsidiary Body for Implementation

(SBI), and the Subsidiary Body for Scientific and Technological Advice (SBSTA). Both these subsidiary bodies support the UNFCCC. The SBI's agenda focuses on implementing the UNFCCC, Kyoto Protocol and the Paris Agreement. The key agenda matters cover transparency, mitigation, adaptation, technology, capacity building and finance. Additional mandates include organizing intergovernmental meetings and/or administrative, financial and institutional matters.

On the other hand, the SBSTA (UNFCCC, 2018) supports the UNFCCC work by providing timely information and advice on scientific and technological matters. The key areas of work include climate change impacts, vulnerability and adaptation, the promotion of development and transfer of environmentally-sound technologies. The SBSTA further conduct technical work to improve the guidelines for preparing and reviewing GHG emission inventories from Annex I Parties. The SBSTA is also tasked to develop methodologies under the Convention, the Kyoto Protocol and the Paris Agreement. Additional work comes in promoting collaboration through research and systematic observation of the climate system. The SBSTA has other roles involving linking the scientific information from the IPCC and the policy-oriented needs of the COP. Lastly, both the SBSTA and SBI collaborate on cross-cutting issues that touch on both their mandates, which include the following: vulnerability of developing countries to climate change and response measures, discussions under the Technology Mechanism, the Adaptation Committee and the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (Ibid).

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 August 2018, 23 COP sessions have been held, and the next COP (COP 24) is scheduled for December 2018, in Katowice, Poland.

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. A 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 developed countries, yet it imposes severe risks to the poor who are the least responsible and simultaneously most vulnerable to climate change impacts.

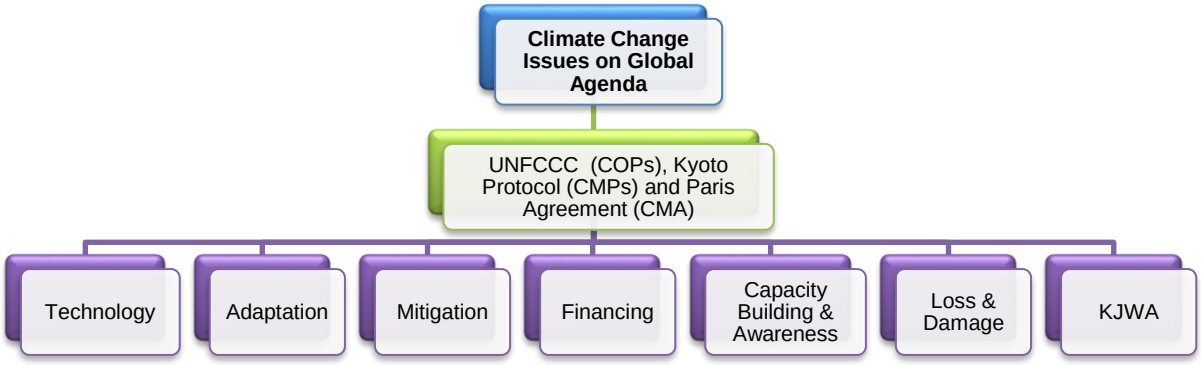
Two fundamental principles inbuilt within the UNFCCC that address climate justice are: (1) equity, and (2) common but differentiated responsibilities of Parties (Robinson et al., 2009). The responsibilities between the developed North and the developing South are evident as these regions have: unequal material wealth, social and economic situations, different historical contributions to GHG emissions as well as different financial and technological capacities. In

many occasions during the international climate policy formulation, 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.

Although the international climate negotiations follow a two-track system that incorporates the 'Convention track' and 'Kyoto track' (Ministry of the Environment, 2009), the last COP (COP 23) witnessed some shift, as the divide between Annex 1 and Non-annex 1 countries is now blurred under the Paris Agreement. As such, negotiations are progressing addressing the key provisions under the Paris Agreement, mainly the Nationally Determined Contributions (NDCs). However, the key matters discussed remain including agriculture (Figure 2.2). The abbreviations contained in figure 2.2 are as follows: COP (Conference of Parties of the UNFCCC); CMP (Meeting of the Parties to the Kyoto Protocol); and CMA (Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement).

Figure 2.2: Key issues discussed in climate negotiations

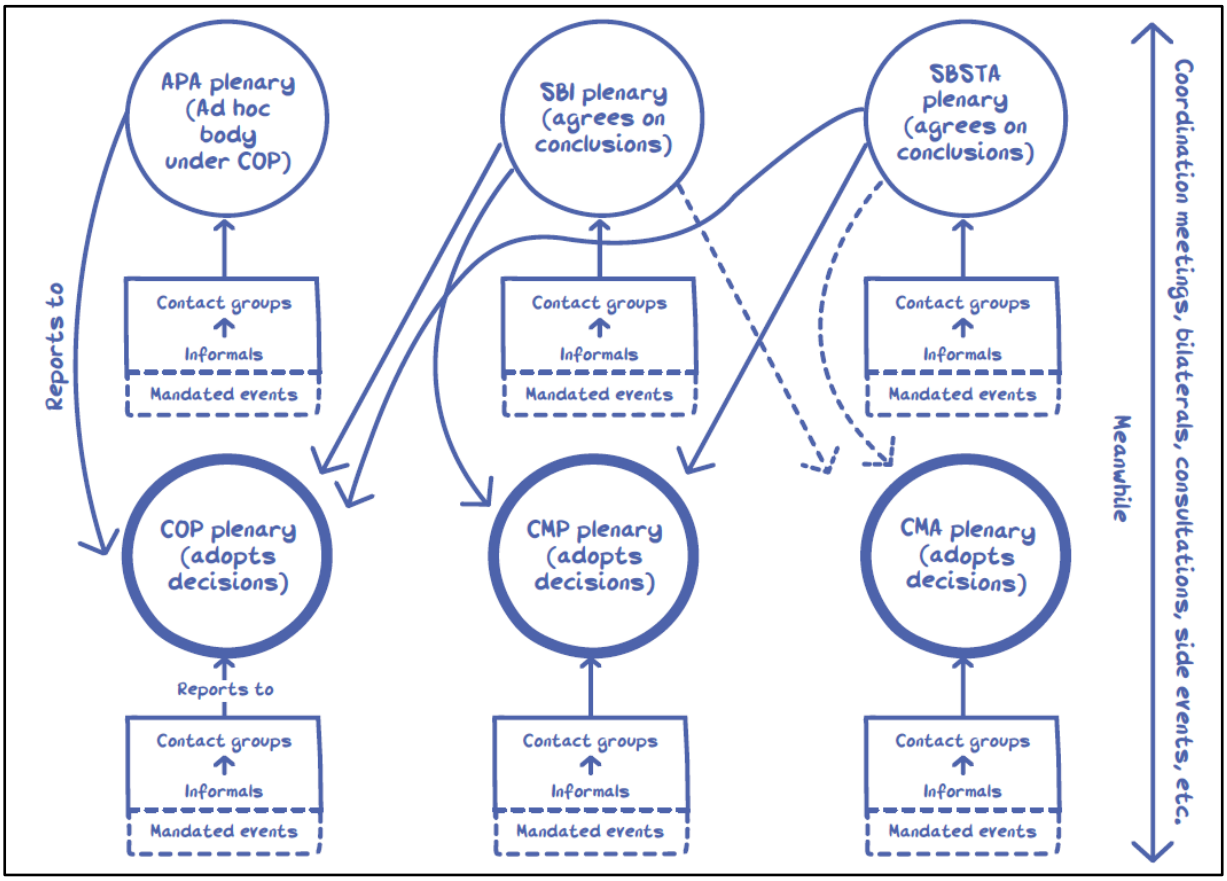


***Source**: Author*

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, they 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 the EAC in particular have to be aware of this negotiation process. A summary of the negotiating processes and meetings presented by the IIED (2016) is shown in Figure 2.3.

Figure 2.3: Hierarchy of UNFCCC meetings



Source: IIED, 2016: 33

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, which were present at COP23. Under the UNFCCC, formal negotiation groupings to which African countries were affiliated during COP 23 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 the 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, the UNFCCC Parties are organized into five regional groups that include African States, Asian States, Eastern European States, Latin American and the Caribbean States, and the Western European and Other States. Other States cover Australia, Canada, Iceland, New Zealand, Norway, Switzerland and the United States of America, excluding Japan that is in the Asian Group. EAC countries belong to a host of both formal and informal negotiating groups and the details are shown in Table 2.1 below.

Table 2.1: EAC participation in negotiating groups at COP23

Group	*EAC countries participating*
African group	All EAC Partner States
LDC	Burundi, Rwanda, Tanzania, Uganda
G77 + China	All EAC

Landlocked developing countries	Burundi, Rwanda, Uganda
Coalition of rainforest	Kenya, Uganda
OIF	Burundi, Rwanda
Cartagena Dialogue	Kenya, Rwanda

Source: Yeo (2015) and IIED (2016: 23-24)

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[1]

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[2] 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.

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

[2]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.

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:

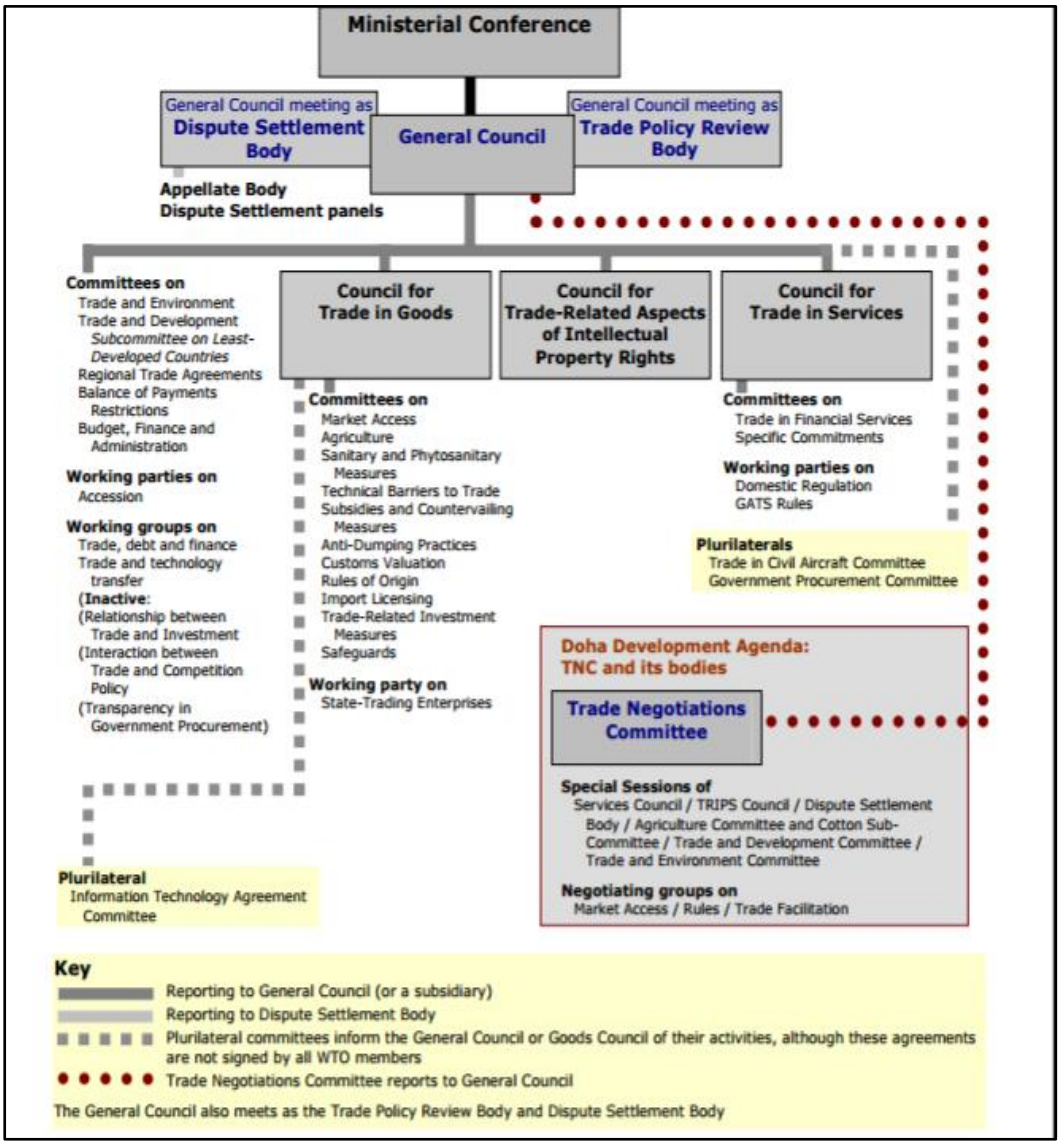
- To oversee the implementation and administration of the WTO agreements;
- To provide a forum for negotiations; and
- To provide a Dispute Settlement Mechanism

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 Dispute Settlement Understanding (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 Multilateral Environmental Agreements (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[3] (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[4]. 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 not to 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 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 2.3.

[3] 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

[4] 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

Table 2.3: 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

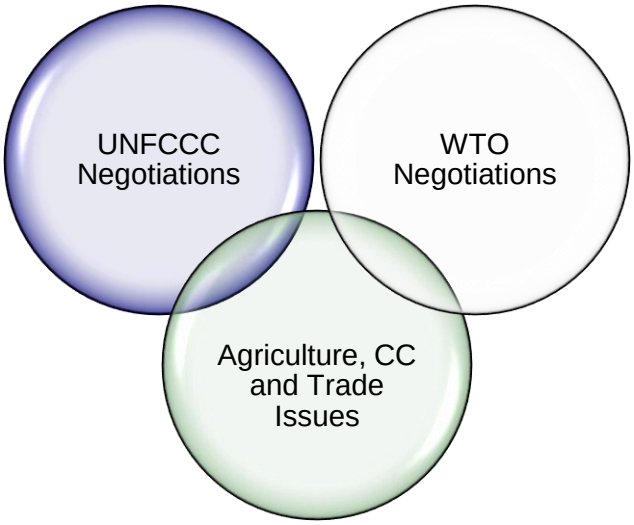
Source:https://www.wto.org/english/tratop_e/dda_e/negotiating_groups_e.htm. Accessed May 2017.

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. However, 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 2.5. 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 2.5: 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 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 2.1 provides a number of specific rules that could be relevant for measures aimed at mitigating climate change.

Box 2.1: 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 2.2.

Box 2.2: 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 2.2.

Table 2.2: 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 State16 — Certain Measures Concerning the Importation of Biodiesels	Argentina	In consultations since 17 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 Subsidies and Countervailing Measures (SCM) Agreement, 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*[5] 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).

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*[6]. 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 analysed on a case-by-case basis.

[5] Emphasis added.

[6] Emphasis added.

- 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 analysed 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 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)".

Current WTO Negotiation Issues

From the 10th to the 13th of December 2017, in Buenos Aires, Argentina. The WTO held its last Ministerial (MC11), which was chaired by Minister Susana Malcorra of Argentina. The Ministerial brought together approximately 4,000 ministers, senior trade officials and other delegates from the WTO's 164 members and observers, as well as representatives from civil societies, businesses and the media to discuss the future of the multilateral trading system.

The Ministerial concluded with a number of decisions including a commitment to secure a deal on fisheries subsidies (pertaining to the Sustainable Development Goal 14.6). With a view to adopting an agreement in 2019 on effective disciplines that prohibit certain forms of fisheries subsidies that contribute to overcapacity and overfishing, and eliminate subsidies that contribute to illegal, unreported and unregulated (IUU) fishing; also new initiatives to advance talks at the WTO on the issues of electronic commerce, investment facilitation and micro, small and medium size enterprises (MSMEs); as well as a commitment to continue negotiations in all areas.

However, no agreement was possible on a number of substantive issues that were under discussion at the conference. One key area where no agreement was possible was public

stockholding for food security purposes. Other issues under the agricultural negotiations pillar were also not concluded. Ministers expressed their disappointment over the lack of progress and gave their commitment to continuing to move forward on the negotiations related to all remaining relevant issues, including to advance work on the three pillars of agriculture (domestic support, market access and export competition) as well as non-agricultural market access, services, development, TRIPS, rules, and trade and environment. [7]

Nevertheless, although in trade policies, climate change and agricultural elements are missing, at MC11, 12 WTO members signed a Ministerial Declaration pushing for the reform and phasing out of fossil fuel subsidies, as a reduction in these subsides will have massive and positive impacts on the environment. The WTO, therefore, has a very important role to play in climate change and members that signed the statement include Chile, Costa Rica, Iceland, Liechtenstein, Mexico, Moldova, New Zealand, Norway, Samoa, Switzerland, Chinese Taipei and Uruguay. [8]

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, analyse, 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

[7] MC11 https://www.wto.org/english/thewto_e/minist_e/mc11_e/mc11_e.htm

[8] MC11 Ministerial Declaration on Fossil Fuel Subsidy Reform

https://www.norway.no/en/missions/wto-un/our-priorities/trade/wto-world-trade-organization/mc11-ministerial-declaration-on-fossil-fuel-subsidy-reform/

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 FAO is significantly involved in climate change matters as this phenomenon negatively impact of agricultural production. From its 2017 Strategy on Climate Change, FAO indicates that it had contributed to discussions and submissions leading to the United Nations' 2030 Agenda for Sustainable Development (AfSD) and its 17 Sustainable Development Goals (SDGs). FAO goes further highlighting its involvement with the UNFCCC leading to the Paris Agreement and COP 22 that came thereafter when the Paris Agreement entered into force on 4th November 2016. During COP 22 in Marrakech, Morocco, FAO elevated the need for food security and agriculture as enshrined in SDGs 2 that focuses on ending hunger, achieve food security and improved nutrition and promote sustainable agriculture. Three outcomes inform the FAO Climate Change Strategy and Plan of Action namely (FAO, 9):

- Enhanced capacities of Member Nations on climate change through FAO leadership as a provider of technical knowledge and expertise.
- Improved integration of food security, agriculture, forestry and fisheries within the international agenda on climate change through reinforced FAO engagement.
- Strengthened coordination and delivery of FAO work on climate change.

The positioning by FAO makes greater sense given that the UNFCCC does not have country presence. Hence, FAO remains a viable option. Effectively, FAO is now set to deliver mainly on three inter-related SDGs that include SDGs 1, 2 and 13, and with relevance to several other SDGs, such as 14 and 15. The details regarding the highlighted SDGs are presented in Box 2.3.

Box 2.3: FAO SDGs focus

- SDG 1: No Poverty: End poverty in all forms everywhere.
- SDG 2: Zero Hunger: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- SDG 13: Climate Action: Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy.
- SDG 14: Life below Water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- SDG 15: Life on Land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Source: FAO, 2017: 9

Exercise

As an individual, write a paragraph or two presenting your thinking and/or position on how the FAO, UNFCCC and WTO should work together as United Nations institutions to advance the food security, trade and climate change nexus agenda.

NB: You will be asked to read out your response to other participants for their comments.

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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 in climate negotiations, and vice versa. The purpose is to continue developing negotiation capacity in Tanzania and the EAC teams that will result in favourable decisions on agriculture from the UNFCCC and other global negotiation platforms such as the WTO.

Specifically, the module sets to:

- Create and increase substantive understanding of the historical and current issues related to agriculture 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; and
- Develop a critical mass to rally behind the preferred Tanzanian 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 as it relates to climate negotiations under the UNFCCC and other platforms;
- Be able to work as a Tanzanian and 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 policy entrepreneurs.

Module Content ● ● ● ●

The module is organized under the following headings:

- Agriculture at the UNFCCC
- UNFCCC Paris Agreement

- UNFCCC Recent Negotiating Texts related to agriculture
    - COP 23 Decision on Agriculture
    - Agriculture and related matters to and from Bonn 48th meetings of UNFCCC Subsidiary Bodies (SB48)
    - Talanoa Dialogue
    - Loss and Damage Mechanism
    - Negotiations on Technology and Climate Finance,
- WTO Agreements
    - Agreement on Agriculture,
    - TBT and
    - SPS
- EAC Policy Landscape
    - Climate Change Policy,
    - EAC Climate Change Master Plan and Strategy,
    - EAC Food Security Action Plan, and
    - EAC Agriculture and Rural Development Strategy

Agriculture in the UNFCCC Processes

Although there has not been a formal 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). However, work has continued and 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)	• A Decision on the Agreement on Agriculture - Koronivia Joint Work on Agriculture.

Source: Author, based on Muldowney et al. (2013: 209); FAO (2013); Richards, et al. (2015: 1); and IISD (2018: 1-2).

Paris Agreement

In his statement to the High-Level Segment opening COP21, also running as the eleventh Session of the Meeting of Parties under Kyoto Protocol (CMP11), the United Nations Secretary-General, Ban Ki-moon reflected and appealed for the voice of reason in Paris (Ki-moon, 2015: 1):

> “I have called climate change the defining issue of our time. It places our very future in jeopardy. Yet, here in Paris we have the unique opportunity to define our own destiny. … The clock is ticking towards a climate catastrophe”.

The Paris Agreement entered into force on 4 November 2016, after at least 55 Parties to the Convention, which also account for at least 55 % of the total global GHG emissions, deposited to the Secretary-General of the United Nations their instruments of ratification, acceptance, approval or accession (UNFCCC, 2016).

All the EAC members have now ratified the Paris Agreement, with Tanzania becoming the last to so following the no objection decision from its Parliament in April 2018 (Domasa, 2018). Overall, Tanzania became the 176th to ratify the Paris agreement.

The Paris Agreement in Articles format is presented in Figure 3.1. The aim of the agreement is to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty. This aim is to be achieved through:

a. Limiting global average warming to below 2 degrees Celsius (2C), above pre-industrial levels and if possible to limit of 1.5C.
b. Increasing the ability to adapt to climate change and fostering climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production.
c. Providing finances to support low greenhouse gas emissions and climate-resilient development.

Figure 3.1: Articles in the Paris agreement

Source: Author, based on UNFCCC (2015)

Under this agreement, Parties are to prepare, communicate and maintain successive Nationally Determined Contributions (NDC) that they intend to take (including domestic mitigation and adaptation measures) as their efforts towards global response to climate change. The efforts are progressive over time; responsibilities are differentiated based on capabilities and national circumstances; and recognize the need to support developing country Parties for mitigation and adaptation towards implementation of their contributions. Reporting on progress in implementation of the NDC is every five years. Countries in regional economic integration organization could also take the measures jointly. In addition, Parties are to formulate and communicate long-term low GHG emission development strategies.

From and audit to determine how adaptation issues are addressed in the EAC, it emerged that all the five EAC NDCs present significant adaptation intervention commitments. This forms a strong basis upon which the EAC and African negotiators should draw from. A summary in terms of how the EAC countries have presented their contributions in the adaptation sector is presented in Table 3.2.

From Burundi's NDC, 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.[9] 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 water and soil conservation. There is also the provision for the security for livestock farming and support for the association of agriculture and livestock. 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. The Republic of Burundi further 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.

Table 3.2: Key Adaptation Sub-Sectors and Commitments in 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

The Ministry of Environment and Natural Resources[10] identifies agriculture, livestock development and fisheries as a sector under priority adaptation sectors in Kenya. 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

[9] Republic of Burundi, Intended Nationally Determined Contribution (INDC): Burundi. Bujumbura: Government Publishers, 2015.

[10] Ministry of Environment and Natural Resources, Kenya's Intended Nationally Determined Contributions (INDCs) 23 July 2015. Nairobi: Ministry of Environment and Natural Resources, 2015.

mainstream of climate change adaptation in the water sector by implementing the National Water Master Plan of 2014.

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".[11]. The government further reveal that given Rwanda's population density, which is the highest in Africa, adaptation concerns are central to its NDC. 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. 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.

In terms of irrigation and water management, Rwanda 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[12]. 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.

The Republic of Tanzania[13] identified adaptation priority sectors to include crops, 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. In its summary of the NDC, Uganda portrays that 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".[14] The identified contributions from the Tanzania and Uganda documents are shown in Table 3.4.

[11] Republic of Rwanda, Nationally Determined Contribution (NDC) for the Republic Of Rwanda. Kigali: Government Publishers, 2015, pp. 2.
[12] Republic of Rwanda, Nationally Determined Contribution (NDC) for the Republic Of Rwanda. Kigali: Government Publishers, 2015.
[13] Republic of Tanzania, Intended Nationally Determined Contribution (INDC). Dar es Salaam: Government Publishers, 2015.
[14] Ministry of Water and Environment, Uganda's Intended Nationally Determined Contribution (INDC): Kampala: Government Publishers, 2015, pp. 2.

Table 3.4: Adaptation contributions

Sub-Sector	*Tanzania Contributions*	*Uganda Priority Adaptation Actions*
Agriculture (Crops)	• Increasing yields through climate smart agriculture • Protecting smallholder farmers against climate 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	• Expanding extension services, including climate information and early warning systems • Expanding Climate Smart Agriculture and crop diversification • 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	• Promoting climate resilient traditional and modern knowledge on sustainable pasture and range management systems. • Enhancing livestock infrastructure and services and promoting livelihood diversification of livestock keepers • Promoting livestock insurance strategies	• Expanding rangeland management • Expanding research on climate resilient animal breeds • Expanding diversification of livestock
Forestry	• Enhancing efficiency in wood fuel utilization • Enhancing participatory fire management. • Enhancing forest governance and protection of forest resources • Enhancing Sustainable forest management	• Promoting biodiversity and watershed conservation (including re-establishment of wildlife corridors) • Encouraging agro-forestry • Encouraging efficient biomass energy production and utilization technologies
Fisheries	• Enhancing conservation and fishery resource management. • Strengthening key fisheries management services for sound development and management of the fishery sector for resilience creation.	• Did not come out clearly.
Water	• 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 and exploitation of groundwater resources	• Expanding small scale water infrastructure • Improving water efficiency and conservation • Ensuring water supply to key economic sectors, especially agriculture, and domestic use, including water harvesting and storage

Source: Author[15,16]

The Paris Agreement also supports conservation of forests, requiring parties to take action to conserve and enhance sinks and reservoirs of GHGs. To this end,

[15] Republic of Tanzania, Intended Nationally Determined Contribution (INDC). Dar es Salaam: Government Publishers, 2015, pp. 4.

[16] Athours, based on the Ministry of Water and Environment, Uganda's Intended Nationally Determined Contribution (INDC): Kampala: Government Publishers, 2015, pp. 5-7.

the agreement encourages Parties to take actions such as: supporting and implementing policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, the role of conservation, sustainable management of forests, enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests. The issues of carbon market are outlined in Box 3.1.

Box 3.1: Paris Agreement and Carbon Markets

Although the Agreement is silent with regards to carbon markets, Article 6 provides for voluntary cooperation (including in internationally transferred mitigation outcomes (ITMOs)) between parties in achieving their NDCs, with use of robust accounting to avoid double counting. Notably, ITMOs are voluntary and have to be authorized by participating parties. Countries can meet their emissions reductions targets (NDCs) by trading emissions reductions (internationally transferred mitigation outcomes- ITMOs) among each other, and they can create their own governance structures to manage the process, but they must make sure the trading promotes sustainable development, and they must follow accounting principles approved by the UNFCCC. The UNFCCC will also create a centralized trading platform or mechanism (comparable to Kyoto Protocol's JI) that countries can use to trade emissions reductions. The mechanism aims to: promote greenhouse gas mitigation while fostering sustainable development; incentivize and facilitate participation by public and private entities that are authorized by a party; contribute to reduction of emissions level in host country, which can also be used by another party to fulfill its NDC; and deliver an overall reduction in global emissions. If one country transfers an emissions reduction to another country, then it can no longer deduct those emissions from its own carbon inventory. Some of the money raised from the central platform will go to maintaining the mechanism, and some will go to least-developed countries. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement adopted rules, modalities and procedures for the mechanism during its first session in Marrakech, Morocco November 2016.
Countries can also cooperate through non-market approaches, and through integrating non-market with market-based approaches. Cooperation in non-market approaches aim at: promoting mitigation and adaptation ambition; enhancing public and private participation in the implementation of NDCs; and enabling opportunities for coordination across instruments and relevant institutional arrangements. Among other appropriate areas, cooperation in non-markets approaches could be through mitigation, adaptation, finance, technology transfer and capacity-building.

Source: adapted from CEPS (2016)

In Paris Agreement, Loss and Damage (L&D), a subject which first appeared in COP19 talks in Warsaw in 2013 was accepted as an integral part of efforts to tackle climate change (UNFCCC, 2015). The aim is to avert, minimize and address L&D associated with the adverse effects of climate change, such as extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage. These adverse and extreme weather events associated with climate change affect the agriculture sector more. More specifically, Paris Agreement recognizes the importance of parties to cooperate and facilitate understanding, action and support to loss and damage associated with the adverse effects of climate change including early warning, emergency preparedness, among other areas. In addition, developed countries are to provide scaled-up finance for developing countries climate change mitigation and adaptation and report this support biennially.

The agreement is also explicit on several issues, which affect agricultural production and on food security, such as adaptation, finance and technology deployment. The agreement acknowledges "the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change". In addition, it makes references to human rights, development, gender, ecosystems and biodiversity. The importance of food production is clearly observed as the agreement aims to "strengthen the global response to climate change in a manner that does not threaten food production". The agreement gives governments freedom to decide specifically which emission sources to address, this therefore making mitigation in agriculture possible.

In addition to the agreement itself, a number of the NDCs make reference to agriculture and food production in their adaptation and mitigation actions. Although no explicit reference to the food industry is made in the NDCs, these contain ambitious emission reduction targets to which agroindustry value chains, SMEs included, will also be expected to contribute to (OECD, 2016). The paragraph above also has in-depth information on the NDCs of EAC countries.

UNFCCC Recent Negotiating Texts Related to Agriculture

COP 23 Decision on Agriculture

From COP 23 it emerges that draft decision on Agriculture is contained in the Koronivia Joint Work on Agriculture. The Koronivia Joint Work on Agriculture requested the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) to jointly deal with matters related to agriculture between 2018 and 2020 (UNFCCC, 2018).

The Koronivia Joint Work on Agriculture's adoption was not without contest and support. Of interest is the fact that the agriculture issue was first taken to plenary on 6 November 2017 and subsequently in other informal consultations that were co-facilitated by Emmanuel Dumisani Dlamini of Swaziland and Heikki Granholm of Finland (IISD, 2017). The Third World Network (TWN) recorded that developed countries rallied to deny having an outcome on the Decision on Agriculture during COP 23 (TWN, 2017). On the contrary, developed nations, including those from Africa did not wish to have such a long programme to 2020. Issues of adaptation in agriculture were also presented by the developing countries, including Africa.

From a record of proceedings by the International Institute for Sustainable Development (IISD), a number of Parties and observers had some issues to highlight (IISD, 2017). FAO, indicated that it was happy to provide technical inputs and support. The Women and Gender organisation opposed agriculture and/or forest-based carbon markets, while the YOUNGOs wished to see the work programme on agriculture harness and open avenues for youth involvement. The

farmer groups identified finance and technology transfer among the key elements to deliver improvements in agriculture. In fact, they raised their voice to the effect that the Financial Mechanism needed to assign a higher priority to agriculture. Furthermore, the farmers were of the view that civil society, particularly farmers and NGOs must not be left behind in the negotiations leading to the final Decision on Agriculture.

This implies that the advice and negotiations on agriculture will run for the next three years until COP 26 with the objective to have a draft text on the Agreement on Agriculture. Such matters will be dealt with through workshops and expert meetings. The UNFCCC Parties and observers were invited to submit their inputs by 31 March 2018 in preparation for the 48th session of the subsidiary bodies that was scheduled to take place between April and May 2018. The inputs from the EAC and the Africa Group of Negotiators is discussed in depth in the section dealing with 'Agriculture and related matters to and from Bonn 48th meetings of UNFCCC Subsidiary Bodies (SB48)' below. The matters upon which the UNFCCC Parties and observers are to address include (Ibid.):

> (a) Modalities for implementation of the outcomes of the five in-session workshops on issues related to agriculture and other future topics that may arise from this work;
>
> (b) Methods and approaches for assessing adaptation, adaptation co-benefits and resilience;
>
> (c) Improved soil carbon, soil health and soil fertility under grassland and cropland as well as integrated systems, including water management;
>
> (d) Improved nutrient use and manure management towards sustainable and resilient agricultural systems;
>
> (e) Improved livestock management systems; and
>
> (f) Socioeconomic and food security dimensions of climate change in the agricultural sector.

Agriculture and related matters to and from Bonn 48th meetings of UNFCCC Subsidiary Bodies (SB48)

As is with the tradition every year in global climate negotiations, the two-week Bonn Climate Change meeting took place from 30 April to 10 May 2018 and is now gone. However, key procedural decisions and future engagement roadmaps to COP 24 emerged. From documentation by the International Institute for Sustainable Development (IISD), the conference included the 48th sessions of the Subsidiary Body for Implementation (SBI 48), and the Subsidiary Body for

Scientific and Technological Advice (SBSTA 48), and the fifth session of the first meeting of the Ad Hoc Working Group on the Paris Agreement (APA 1-5) (IISD, 2018).

The UNFCCC made calls to parties to make inputs as per Decision 4/CP.23 of the UNFCCC – the Koronivia Joint Work on Agriculture (KJWA). Initially, Parties and observers were requested to submit their views on aspects that had to be included in the work of the SBSTA and the SBI to jointly address matters pertaining to agriculture, including through workshops and expert meetings, working with constituted bodies under the UNFCCC and taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food security. These submissions had to be made by 30 March 2018. In addition, a timetable has been agreed upon by UNFCCC Parties in addressing the KJWA to 2020 (COP 26) and the remaining matters and deadlines are presented in Table 3.5.

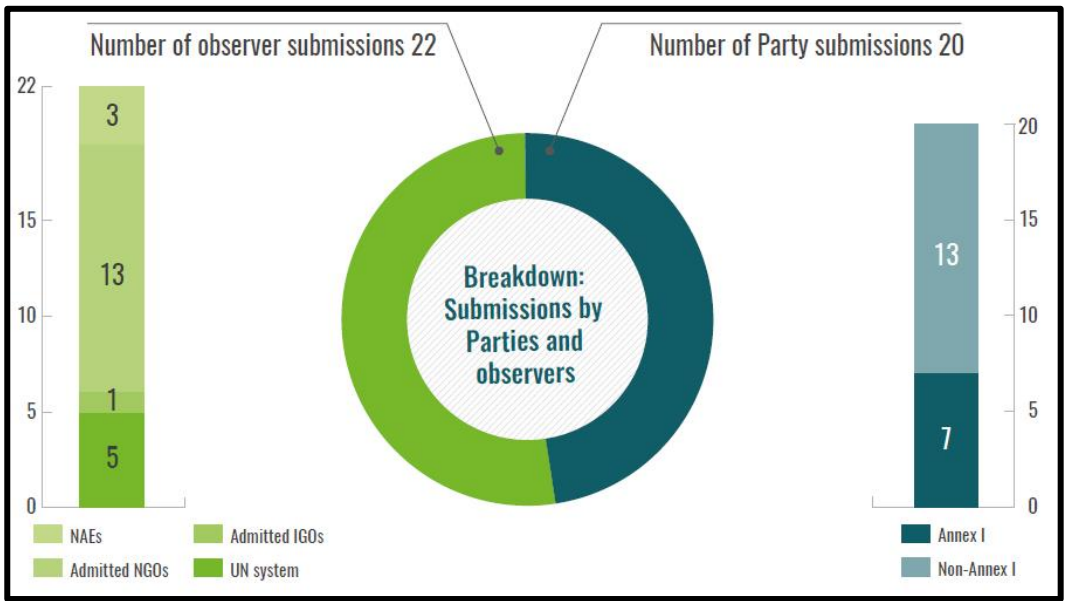
Table 3.5: KJWA Parties and observers submissions timetable (2018-2020)

Issue and Decision	*Title*	*Deadline/ Session*
Koronivia road map under the Koronivia joint work on agriculture (decision 4/CP.23)	Parties and observers to submit their views on elements to be included in the work of the SBSTA and the SBI to jointly address issues related to agriculture, including through workshops and expert meetings, working with constituted bodies under the Convention and taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food.	30/03/2018, SB 48
	Views from Parties and observers on topic 2(a) - Modalities for implementation of the outcomes of the five in-session workshops on issues related to agriculture and other future topics that may arise from this work	21/10/2018, SB 49
	Submissions from Parties and observers on: Topic 2(b) - Methods and approaches for assessing adaptation, adaptation co-benefits and resilience, and Topic 2(c) - Improved soil carbon, soil health and soil fertility under grassland and cropland as well as integrated systems, including water management.	05/05/2019, SB 50
	Submissions from Parties and observers on topic 2(d) - Improved nutrient use and manure management towards sustainable and resilient agricultural systems.	29/09/2019, SB 51
	Submissions from Parties and observers on: Topic 2(e) - Improved livestock management systems, including agropastoral production systems and others, and Topic 2(f) - Socioeconomic and food security dimensions of climate change in the agricultural sector	19/04/2020, SB 52
	Submissions from Parties and observers on future topics not listed in decision 4/CP.23 and views on the progress of the Koronivia joint work on agriculture in order to report to the Conference of the Parties as per decision 4/CP.23, paragraph 4	27/09/2020, SB 53

Source: Author, based on http://www4.unfccc.int/sites/SubmissionPortal/Pages/Home.aspx (Accessed 17 July 2018)

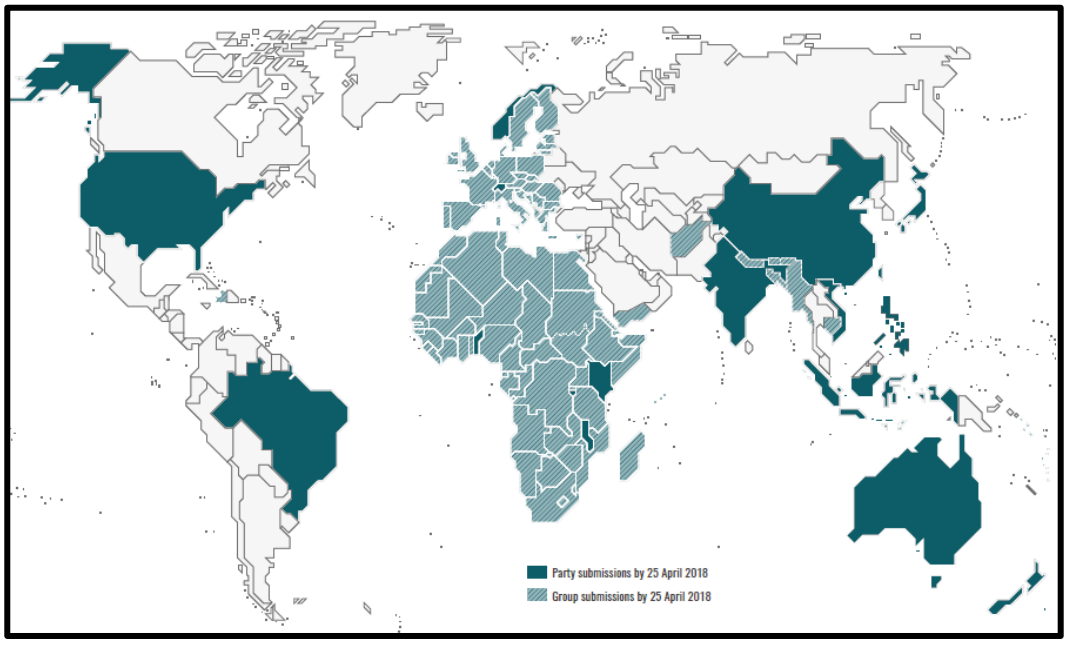
The summaries concerning the number of submissions as well as the spread across the globe are presented in Figures 3.2 and 3.3.

Figure 3.2: KJWA submissions by parties and observers (n = 42)



Source: FAO (2018: 3)

Figure 3.2: KJWA submissions Spread by Parties



Source FAO (2018: 3)

From the SB 48 Parties and observers' submissions, a number of issues emerged and are emerging. However, given the focus of this training, discussions will be limited to submissions from the Africa Group of Negotiators (AGN) and the EAC. Unfortunately, Tanzania's country submission could not be located on the UNFCCC official platform or online in general.

The AGN submission was presented by Egypt and came in the following main parts: Introduction, Agriculture and climate change in Africa, Policy Environment, and then the modalities around the guided framework from the KJWA. In its introduction, the AGN indicate that by 2050, Africa will host about 2.4 billion people compared to the current 1.2 billion (AGN, 2018). This will bring stress in terms of food security, with implications on food and nutrition security. Agriculture's forward and backward linkages are noted with the manufacturing and industry sector highlighted. The focus on an estimated 530 million smallholder farmers on the continent of which more than 50% are being women comes out too. All this comes against a background that Africa's agriculture is predominantly rainfed, making it vulnerable to climate variability and change as confirmed by the IPCCC. The majority of African farmers are said to be having low adaptive capacity. However, Africa's GHG emission from agriculture and agriculture role as carbon sink is viewed as offering potential for adaptation co-benefits.

As for the policy environment, the AGN makes reference to Africa Agenda 2063 whose first aspiration of the seven (A Prosperous Africa based on Inclusive Growth and Sustainable Development) enshrines goals dealing "focus is on modern agriculture for increased productivity and production and environmentally sustainable climate resilient economies and communities, respectively" (AGN, 2018: 2). There is also mentioning of the Malabo Declaration, which is one of the major instruments for implementing the Comprehensive African Agricultural Development Programme (CAADP) within Agenda 2063.

The AGN further acknowledges efforts made by many countries on the continent to put in place an enabling policy environment to address climate change through national and regional climate change policies, action plans and strategies, the integration of climate change into national development plans, agricultural plans, and the nationally determined contributions (NDCs) under the Paris Agreement. As for details concerning the KJWA, the submissions from the AGN that are based on the 2013-2016 five in-session workshops are summarised in Table 3.6. The guidance and/or guidelines will be addressed and developed by the SBSTA/SBI for consideration by the UNFCCC COP.

Table 3.6: Summary of KJWA submissions from the AGN

KJWA Issue	*Priority Actionable Area*	*Approach*
Modalities for implementation of the outcomes of the five in-session workshops on issues related to agriculture and other future topics that may arise from this work	• Early warning systems, contingency plans and safety nets in the agriculture sector • Vulnerability assessment and risk management including agricultural insurance • International cooperation in technology development and transfer in the agriculture sector • Engagement of non-state actors especially the private sector in the agriculture sector	Organize an in-session joint workshop SBSTA/SBI and the other constituted bodies under the Convention
Methods and Approaches for Assessing Adaptation, Adaptation co-benefits and	• Understand the different methods, tools and approaches of assessing adaptation, adaptation co-benefits and resilience • Identify appropriate methods and approaches of assessing adaptation, adaptation co-benefits and resilience	Organize in-session workshop and expert meeting

Resilience		
Improved Soil carbon, Soil health and Soil Fertility under Grassland and Cropland as well as Integrated systems, including Water Management	• Integrated landscape management, approaches, practices and tools including water management • Soil mapping to include soil fertility and carbon • Integrated soil fertility management	Organize in-session workshop.
Improved nutrient use and manure management towards sustainable and resilient agricultural systems	• Optimization and rational use of inorganic fertilizers use in agricultural systems; and • Approaches for optimizing use and management of manure.	Organize in-session workshop
Improved Livestock Management Systems	• Sustainable and efficient livestock management systems and value chains, including agro-pastoral management systems • Risk management of livestock production systems • Monitoring, Reporting and Verification (MRV) systems for agro-pastoral production systems	Organize in-session workshop and expert meeting
Socioeconomic and Food Security Dimensions of Climate Change in the Agricultural Sector	• Residual impacts of climate change on agriculture (in particular vulnerable smallholder livelihoods, migration, conflicts, security, nutritional value of food) • Efficiency of agriculture value chains and food systems • Gender and youth in agriculture.	Organize in-session workshop.
Additional Topics	1. Current and projected (potential) risks and vulnerabilities of agriculture value chains 2. Agriculture data infrastructure and innovative digital solutions; 3. Financing for Agriculture including assessment of impacts and implications of Innovative financing, if used, for investment in the agriculture 4. Potential impacts of actions taken to combat climate change on agriculture exports from Africa and measures that could be taken to contain such impacts	

Source: Author, based on the AGN (2018: 2-6)

What is of interest from the AGN submission is the list of four additional topics that include financing for agriculture. The matter of finance also comes strongly in the AGN submission's conclusion which calls for dedicated financial resources under the Green Climate Fund in order to address vulnerability of the agriculture sector to climate change and ensure food security (AGN, 2018).

The EAC submission starts by indicating its full support for the AGN (EAC, 2018). The EAC then indicates that the region is home to about 150 million people whose livelihoods are dependent of agriculture, with agriculture accounting for 43% of gross domestic product (GDP). Agriculture is acknowledged as contributing to food security, providing raw materials for local agro-processors and exports, with about 80% of the population employed in this sector. Agriculture in the EAC is heavily rainfed, making it one of the most sensitive sector to changing climates.

Agriculture in the EAC has witnessed the negative impacts of extreme weather events like droughts, floods and increasing temperatures as well as enhancing spread of pests and diseases caused by climate change. This pose major challenges to regional food security (EAC, 2018). While this is happening,

agriculture systems in the EAC are indicated as having potential to play a critical role as carbon sink and reduction of carbon emissions.

The EAC submission then goes to indicated the prevailing policy environment and mentions a number of critical polices developed so far including the following (EAC, 2018), some of which will be addressed latter in this module:

- EAC Summit Declaration on Food Security and Climate Change (2010)
- EAC Climate Change Policy (2011)
- EAC Climate Change Strategy (2012-2016), EAC Climate Change Master Plan (2012-2030)
- EAC Roadmap for the Implementation of Paris Agreement (2016)
- EAC Comprehensive African Agricultural Development Programme Compact (2017) and
- EAC Agriculture and Rural Development Strategy and EAC Food Security Action Plan (2011-2015).

As for the detailed submissions of the KJWA, the EAC presents almost word for word the AGN submission. To this end, participants are referred back to Table 3.3 as presented earlier in this section.

From IISD perspective, the Bonn meeting largely focused on advancing work on the Paris Agreement Work Programme (PAWP). The PAWP is a set of decisions aimed at operationalize the Paris Agreement and facilitate its implementation. All three subsidiary bodies that convened in Bonn were considering different PAWP issues and under pressure to deliver as the deadline for the PAWP's completion is December 2018 (IISD, 2018). The main outcomes from the PAWP were mandates given to further negotiations namely:

- the Co-Chairs of the SBSTA, SBI and APA will prepare a note that will consider all of the items and propose ways forward;
- the APA Co-Chairs will prepare "tools" that will help parties develop an "agreed basis for negotiations"; and
- there will be an additional negotiating session from 3-8 September 2018 in Bangkok, Thailand, which will comprise resumed sessions for each body: SBI 48-2, SBSTA 48-2, and APA 1-6 (IISD, 2018: 1).

UNFCCC Parties and stakeholders shared submissions following the Talanoa dialogue format that will inform a synthesis report to be presented at the Katowice Climate Change Conference in December 2018 in Poland. Both the SBI and SBSTA continued to consider issues related to the ongoing implementation of the UNFCCC and the Kyoto Protocol with the main decisions emerging being (IISD, 2018: 1):

- the SBI and SBSTA adopted a decision on the Koronivia Joint Work on Agriculture that includes a roadmap for the issues, events, and inputs to the work;
- the SBI recommended a decision to the Conference of the Parties (COP) regarding the review of the effective implementation of the Climate Technology Centre and Network; and

- the SBI also recommended that the COP conclude consideration of coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements.

As for the Koronivia Joint Work on Agriculture (KJWA), this matter was first discussed in the plenary, then forwarded to informal consultations co-facilitated by Heikki Granholm (Finland) and Milagros Sandoval (Peru) (IISD, 2018). During the informal consultations, many parties called for the development, at SB 48, of a roadmap to guide the KJWA. Parties further stressed the need to keep "farmers on the ground" at the centre of the KJWA.

A developed country party proposed a draft roadmap containing a timeline from SB 48 to SB 53. The proposed roadmap had in-session workshops and workshops at non-UNFCCC international fora. This proposed was countered by a developing country group and this counterproposal was then used as the basis for discussions. Eventually, the roadmap was agreed upon and now includes in-session workshops on each of the six topics listed in decision 4/CP.23 as highlighted earlier. The roadmap further stipulated that SB 53 would report to the COP on the progress and outcomes of the KJWA, including on potential future topics. The SBI/SBSTA conclusions (FCCC/SB/2018/L.1) are reflected in Box 3.2.

Box 3.2: SBI/SBSTA conclusions on KJWA

- request the Secretariat to organize workshops, referred to in the annex of the draft conclusions, in conjunction with the sessions also referred to in the annex, and encouraged admitted observers to participate in these workshops;
- take note of the importance of issues, including but not limited to farmers, gender, youth, local communities and indigenous peoples, and encouraged parties to take them into consideration when making submissions and during the workshops;
- request the Secretariat to prepare a report on each workshop referred to in the annex, for consideration at the sessions of the SBI and the SBSTA following the sessions in conjunction with which the workshops took place;
- request the Secretariat to invite representatives of the constituted bodies under the Convention to contribute to the work, and attend the workshops, in particular the first workshop on the modalities for implementation of the outcomes of the in-session workshops;
- invite parties and observers to submit, for each workshop referred to in the annex, their views on the subject of that workshop by the deadline specified in the annex; and
- agree to continue consideration of this agenda item at SBI 49 and SBSTA 49.

Source: IISD, 2018: 4

In its write up in the lead to Bonn 2018, the TWN (2018c), warned that there were clearly emerging differences since 2015 in interpreting what are nationally

determined contributions (NDCs). The main issue was “whether they are only about mitigation or if they also cover adaptation and the means of implementation and therefore, the information that is required to be communicated flowing from the components of the NDCs.” (Ibid., 1). The forgone is paramount when addressing the KJWA as adaptation and the means of implementation that include technology and capacity development remain key to the success of NDCs. Hence Bonn 2018 (TWN, 2018c) had a major challenge as Parties had to agree on steps towards the production of a draft negotiating text to be prepared for the various issues under the Paris Agreement Work Programme (PAWP).

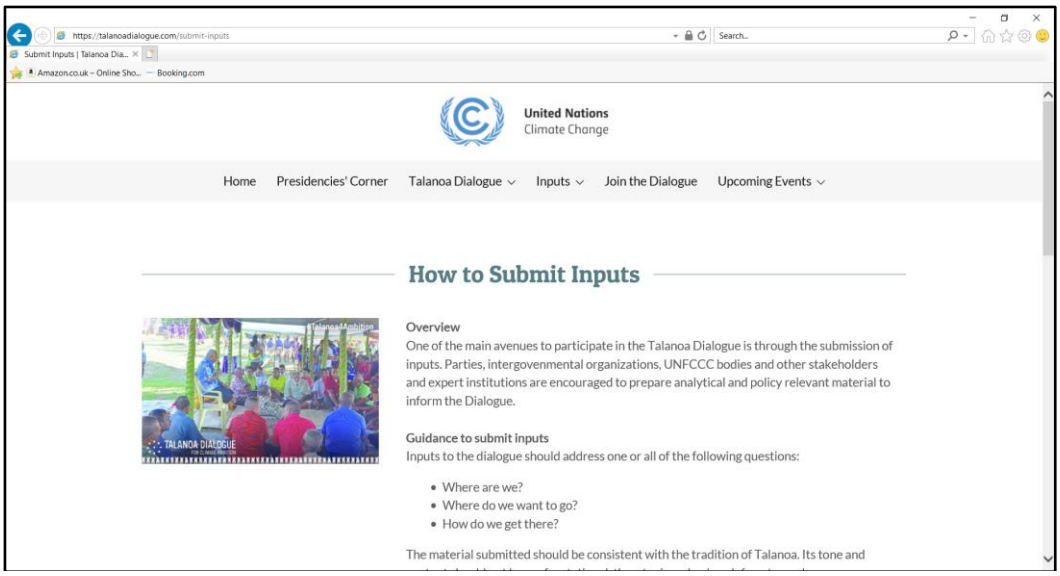
Talanoa Dialogue

Ongoing inputs from Paris Agreement Parties and non-Parties are gathered through the Talanoa Dialogue platform (Figure 3.4). Talanoa is a traditional approach used in Fiji and other parts of the Pacific to engage in an inclusive, participatory and transparent dialogue. Through Talanoa, stories are shared, empathy and trust is built as members participating advance their knowledge through common understanding. Members engage in a dialogue resulting in better decision-making for the collective good and from the focus of the paper, a prioritisation of climate adaptation in the would-be future Decision on Agriculture.

From the setup of the Talanoa Dialogue, raising matters pertaining to trade, agriculture and trade is the sole responsibility of Parties as long as these are raised within the context of the three guiding questions discussed earlier. To this end, Egypt presented views from the Africa Group in an 18 April 2018 Talanoa dialogue submission. The Africa Group indicated (in addressing the Talanoa question, “Where do we want to go?”), that confining the discussions of the Paris Agreement only to mitigation was not in line with the Paris Agreement, which also identified adaptation and the need to achieve food security as goals with similar importance. The Talanoa Dialogue will run throughout 2018.

On the TalANOA Dialogue online platform, there exist a portal, where countries will check progress and seek to increase global ambition to meet the goals of the Paris Climate Change Agreement. On this platform, Parties and Observers (non-Party stakeholders) will be able to contributing ideas, recommendations and information that can assist the world in taking climate action to the next level, in order to meet the objectives of the Paris Agreement and support the Sustainable Development Goals (SDGs). The Talanoa Dialogue focuses on taking stock of progress towards the long-term goal of the 2015 Paris Agreement, including refining the (Intended) Nationally Determined Contributions [(I)NDCs].

Figure 3.4: Talanoa Dialogue Inputs Platform on UNFCCC



Source: Author, based on https://talanoadialogue.com/submit-inputs (Accessed 4 July 2018)

Loss and Damage Mechanism

During COP 19 in Warsaw Poland, Parties established the Warsaw International Mechanism (WIM) for L&D associated with Climate Change Impacts - Implementation of the Mechanism is guided by an executive committee (IISD, 2017). The functions of the Mechanism are to promote the implementation of approaches to address loss and damage associated with the adverse effects of climate change in a comprehensive, integrated and coherent manner by enhancing knowledge and understanding of comprehensive risk management approaches, strengthening dialogue, coordination, coherence and synergies among relevant stakeholders and enhancing action and support, including finance, technology and capacity-building. Areas of WIM's work, include: migration and displacement from climate change; loss and damage that happens from slow events like sea level rise, desertification and glaciers melting; losses from non-economic things like identity, culture and language; how to implement systems like insurance as one way to deal with risk; as well as how to provide financial, technological and capacity building support.

During COP 22 in Marrakech, finance for L&D was a high-profile issue although no commitment to this was made. Developing countries have put a strong case for financing for L&D and have called for strategic work stream on finance whose work will include exploring ways of raising funds, including looking at industries like the fossil fuel industry and the aviation industry.

From Egypt's 18 April 2018 Talanoa submission on behalf of the Africa Group, the country indicated that Africa was expecting developed countries to stop making promises on finance and other means of implementation including technology and

capacity building. Adding to contributions under the 'how do we get there?" question, Egypt raised the following matters:

- Desire for meaningful support for adaptation and L&D that follows country ownership and not lead to further debt burden on developing countries.
- Need for a significant increase in public climate finance that focuses on supporting implementation for both adaptation and mitigation with some tailor-made public policies in developed countries to facilitate access to such resources; and
- Enhanced, accountable private capital flow leading some instances and complementary in others (not simply off load finance to private sector).

Negotiations on Technology

Under Article 10.4 of the Paris Agreement, "a technology framework is hereby established to provide overarching guidance to the work of the Technology Mechanism [TM] in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of this Agreement…" (TWN, 2018a: 1). The Technology Mechanism under the UNFCCC refers to the Climate Technology Centre & Network (CTCN) as well as the Technology Executive Committee (TEC).

> "The CTCN is the operational arm of the UNFCCC Technology Mechanism, hosted by the UN Environment Programme and the UN Industrial Development Organization (UNIDO). The Centre promotes the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development at the request of developing countries. We provide technology solutions, capacity building and advice on policy, legal and regulatory frameworks tailored to the needs of individual countries by harnessing the expertise of a global network of technology companies and institutions" (https://www.ctc-n.org/).

The TEC is a policy body, which analyses matters and provides policy recommendations that support country efforts to enhance climate technology development and transfer. The TEC is made up of 20 technology experts that represent both developed and developing countries and meets several times a year to holds climate technology events to address key technology policy issues in climate change negotiations (http://unfccc.int/ttclear/support/technology-mechanism.html).

The main sticky issue that saw divergent views between developed and developing countries was the matter of the provision of public resources to developing countries in order to enable technology transfer to take place.

The Development and Transfer of Technologies was discussed with the main focus on the Scope and Modalities for the Periodic Assessment of the Technology Mechanism in Relation to Supporting the Paris Agreement (IISD, 2018). In the plenary, there was consideration of the report on the experience, lessons learned and best practices in conducting reviews of various arrangements under the UNFCCC and the Kyoto Protocol regarding Technology Mechanism. A number of

developing country groups and parties indicated that there was too much focus on effectiveness of the mechanism and not enough on the related subject of adequacy of support. There was also the Review of the Effective Implementation of the Climate Technology Centre and Network (CTCN) (Ibid.). Developing country parties and groups stressed the need to increase support for CTCN's capacity building, and support for developing country national designated entities. However, the developed countries appealed for balance, arguing that support was only one of the many elements of the recommendations from the independent review.

Developed countries insisted on a placeholder for the role of the Technology Mechanism in the technology framework to "avoid micro-management" (by Parties.) (TWN, 2018a). Among other matters, developing countries proposed the inclusion of two new sub-sections in the technology framework as follows for the consideration of Parties:

- under the innovation theme, they wanted a sub-section on "increasing the effective participation of developing countries in collaborative research, development and demonstration" and
- a new sub-section under the implementation theme on "assessment of technologies that are ready for transfer."

There were additional matters focusing on increasing the effective participation of developing countries in collaborative research, development and demonstration (RD&D). To this end the countries proposed the following text
for addition (Ibid.):

(a) Enhancement of the linkage between the Financial Mechanism and the Technology Mechanism with regard to the support for implementation of collaborative RD&D in developing country Parties;
(b) Promotion of financial resources for innovation in developing country Parties;
(c) Development of innovative means and supports of engaging developing country Parties in innovation; and
(d) Other possible ways to increase the effective participation of developing country Parties in collaborative RD&D.

Negotiating Climate Finance

As part of the Copenhagen and Cancún agreements, developed countries pledged to mobilize $100 billion a year in public and private finance for developing countries by 2020, including financial contributions to the: Green Climate Fund (GCF), LDCs Fund and the Adaptation Fund (UNFCCC, 2009). During COP22, developed countries were urged to continue efforts to channel a substantial share of public climate funds to adaptation activities while achieving a balance between finance for mitigation and adaptation (UNFCCC, 2016). It was decided that climate finance focus for 2017 and 2018, with a view to scaling up climate finance for mitigation and adaptation, would be on experiences and lessons learned from: articulating and translating needs identified in country-driven processes into projects and programmes; roles of policies and enabling environments for mitigation and adaptation finance; and on facilitating enhanced access. The issue of climate finance has a direct bearing on what technology can be acquired by

developing countries like Tanzania in order to enhance food security, particularly through adaptation measures and also mitigation measures.

During Bonn subsidiary bodies' meeting in May 2018, matters pertaining to Climate Finance included the identification of the information to be provided by Parties in accordance with Article 9.5 of the Paris Agreement (IISD, 2018). Article 9.5 states that "developed countries should communicate how much and how they are contributing to climate finance for mitigation and adaptation." (Climate Tracker, 2018 online). Article 9.5 stipulates a biennial reporting on finances and further encourages other countries that are financially capable like China to contribute. During Bonn, developed countries indicated that the mobilisation of climate finance has been too low and too slow. Hence, in a revised informal note, the Co-Facilitators proposed a structure with text under five sections on enhanced information. The five sections identified the following:

- Need to increase clarity on the expected levels of provision and mobilization of climate finance from different sources;
- Matters on policies, programmes, and priorities;
- Matters on actions and plans to mobilize additional finance from a range of sources;
- Issues on the balance between adaptation and mitigation; and
- Aspects on enabling environments.

The Co-Facilitators produced a second iteration of the informal note that was welcomed by parties with some parties suggesting making clarifying edits that developed countries "shall" provide information, while others are "encouraged" to do so. Additional observations from the TWN (2018b: 1) reveal that the "developing countries and experts from non-state actors and civil society underscored the need to address the finance gap for loss and damage (L&D) suffered by developing countries." In fact, Egypt (on behalf of the African Group), warned that residual damages will hamper Africa's development and L&D costs will double adaptation costs in 2030-2050 so there is a need to scale up finance for addressing it. Civil society experts called for the provision of at least US $50 billion per year by 2022 for L&D, which they said must be over and above the annual target of USD 100 billion a year for climate finance (Ibid.).

As for the next steps regarding finance, the UNFCCC Secretariat was requested to prepare a report on the Suva Expert Dialogue for consideration in mid-September 2018 (TWN, 2018b). The mandate of the two-day Suva Expert Dialogue was "to explore … ways for facilitating the mobilization and securing of expertise, and enhancement of support, including finance, technology and capacity-building, for … loss and damage" (http://www.climatenetwork.org). Before the Suva Expert Dialogue, it was deemed appropriate and necessary for Parties to take up these issues at the UNFCCC's 2018 Forum of the Standing Committee on Finance [SCF] that took place on 5-6 July in Songdo, in the Republic of Korea. The topic of the forum was "The Climate Finance Architecture: Enhancing collaboration, seizing opportunities" and provided opportunities to focus on the need for identification and development of new financial instruments for addressing L&D and mapping various sources of finance (Ibid.).

WTO Agreements

Agreement on Technical Barriers to Trade

The Agreement on Technical Barriers to Trade (TBT) deals with standards-related measures and is meant to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles to trade. These obstacles are considered as non-tariff barriers to trade. Although countries are prohibited from instituting such measures, the agreement recognizes their right to adopt standards they consider appropriate for the protection of human, animal or plant life or health, as well as the for the protection of the environment or to meet other consumer interests. These measures may come in the form of requirements for technical performance standards a product is required to meet for it to be imported or exported. Such may include energy-efficiency standards for machinery as well as environmental, health and labor standards or the standards required during the life cycle of a product such as forest products being from sustainably managed forests. The agreement gives direction as to when such barriers may be allowed and required the following conditions to be met before such measures are instituted: notification of measures, transparency in developing the rules, and the use of international standards when appropriate, among other requirements.

The agreement contains binding disciplines relating to government-instituted standards as well as a code for Good Practice for both governments and nongovernmental or industry bodies, which are standards that are prepared, adopted, and applied voluntarily. There are over 200 standard-setting bodies which apply the code. The agreement requires that procedures used to decide whether a product conforms to relevant standards or not have to be fair and equitable. It discourages methods that would give domestically produced goods an unfair advantage over imported ones.

The agreement also encourages mutual recognition of standards where countries recognize each other's procedures for assessing whether a product conforms to the required standards. Such recognition eliminates the need for products being tested twice, first by the exporting country and then by the importing country.

In response to Climate Change, developed nations are implementing trade regimes aimed at addressing Climate Change. Carbon-trade based response measures such as Border Tax Adjustments (BTAs) and Product Carbon Footprint (PCF) are among these regimes. Two typical examples related to product carbon footprints are: (1) the forced shift from exporting bottled wine to bulk containers in South Africa (Ntombela, 2013) that led to lost employment opportunities and (2) the food miles saga that witnessed the East African Community (EAC) horticulture industry dump flowers in the mid to late 2000s (Garside et al., 2008).

Agreement on Application of Sanitary and Phytosanitary Measures

The Agreement on application of Sanitary and Phytosanitary measures (SPS Agreement) is complementary to the TBT Agreement. It seeks to promote standards that are "necessary" to protect humans, animals and plants from certain hazards associated with the movement of pla
nts, animals and foodstuffs in international trade. These may include measures instituted to protect the environment or human, animal and plant health against:

a. Risks from pests, diseases and disease-related organisms entering the country with the traded goods; and
b. The risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs.

The implementation of the SPS standards have been associated with restrictive measures on international trade in goods particularly food related products. This has implications for EAC in terms of the trade in food related products. High SPS standards among EAC member countries on agricultural exports increase the compliance costs for farmers and thus reduce the competitiveness of their products in foreign markets and within the region. This translates into proliferation of Non-Tariff Barriers and limited intra-EAC trade. Similarly, food availability in cases of food shortages will be restricted if some members of the EAC apply high standards.

The absolute standards set in the TBT and SPS Agreements usually create complications in the conduct of trade. These rules sometimes set the bar so high that developing countries are unable to export their products as explained.

Agreement on Agriculture

The overall aim of the WTO agreement on agriculture (AoA), which came into force in 1995, is to establish a fairer trading system that will increase market access and improve the livelihoods of farmers around the world. The Agreement provides a framework for the long-term reform of agricultural trade and domestic policies.

Although the agreement does not mention agroindustry, the scope of the product coverage by the agreement is primarily agricultural products and their worked and /or prepared products (Article 2 and Annex 1 of the agreement)[17]. Hence all

[17] Article 2 of the AoA states the product coverage of the agreement as agricultural products, which are listed in Annex 1 of the agreement. Annex 1 lists these products as: products of HS Chapters 1 to 24 less fish and fish products, plus: mannitol; sorbitol; essential oils; albuminoidal substances,

products in the agricultural product value chain including agro-processed products are covered and hence agro-industry is implied. The agreement provides rules and commitments in three areas (the pillars of the AoA): market access, domestic support and export competition. The process of reforming the agricultural sector through these areas continues up to date under the Doha Development Agenda (DDA). Rules and commitments under these areas have an implication on agricultural trade, food security, climate change and industrial development in EAC hence it is important for policy makers in EAC to understand them. More discussion on these three pillars of the AoA follows below.

The AoA emerges as one of the two main sectorial agreements from the Uruguay Round Agreements. These sectoral agreements make provision for specific rules in the liberalization of agricultural products (Glipo, 2003). Since the main goal of the AoA is to establish a fair and market-oriented trade mechanism in agriculture, the AoA therefore obliges parties to increase market access and reduce trade distorting agricultural subsidies. The developed countries should have implemented the AoA by 2000 and those from developing regions by 2004. However, this has not been the case. To this end the AoA has come under heavy criticism when it comes to food security and poverty reduction in developing regions as the playing field has not been levelled, given the continued heavy subsidization of agricultural production in developed countries.

The main components of the AoA are: market access, domestic support and export subsidy. Through tariffication, all countries were scheduled to remove all non-tariff barriers such as import bans, import quotas and the like and convert them into tariffs. Domestic support deals with national government's support to local producers and three categories of domestic support exist in the AoA namely: amber Box, Green Box and Blue Box. Further explanations on these categories are given below.

Lastly, countries that were providing export subsidies were due to reduce them based on their 1988-1990 levels by an average of 36% in value and 21% in volume for the developed countries over 6 years. For the developing countries the reductions were supposed to be by 24% and 14% respectively over 10 years (GATT, 1994). Progress in export subsidy reduction has been slow. During the Nairobi Ministerial Conference in 2015, it was agreed that developed countries would eliminate their export subsidies immediately while developing countries have to eliminate them by 2018 (WTO, 2015). In addition, developing countries will keep the flexibility of subsidies covering marketing and transport costs for agriculture exports until the end of 2023.

Negotiations in the domestic support and market access have also progressed at a slow phase. Consequently, impediments to market access including high tariffs, tariff escalation (higher tariffs on processed products than on raw materials, resulting in greater effective protection), tariff peaks (relatively high tariffs, usually on "sensitive" products, amid generally low tariff levels), high levels of disparities in tariff levels among members, limitations to tariff rate quotas (whereby quantities

modified starches, glues; finishing agents; sorbitol; hides and skins; raw furskins; raw silk and silk waste; wool and animal hair; raw cotton, waste and cotton carded or combed; raw flax; and raw hemp.

inside a quota are charged lower import duty rates than those outside) and non-tariff measures have continued to be of concern. Tariff escalation particularly discourages agro-processing value addition. For instance, exporters in Kenya pay 8% duty for coffee substitutes that contain coffee (CUTS, 20). This kind of tariff escalation is one which involves tariff rates that increase with degree of processing, hence limiting exporting countries capacity to upgrade in the coffee value chain.

Market access

It was during the Uruguay Round that a key systematic change was made: *"the switch from a situation where a myriad of non-tariff measures impeded agricultural trade flows to a regime of bound tariff-only protection plus reduction commitments." (WTO, 2017).* The objective of this change is to allow more growth in the agriculture industry by stimulating investment, production and trade. The concrete ways declared by WTO (1995) in which this is to be achieved are: (i) making agricultural market access conditions more transparent, predictable and competitive; (ii) establishing or strengthening the link between national and international agricultural markets, and thus; (iii) relying more prominently on the market for guiding scarce resources into their most productive uses both within the agricultural sector and economy-wide.

In addition to 'tariffcation', countries were required to make two types of commitments: bind their tariffs (set maximum tariffs, and make commitment not to increase respective tariffs beyond these maximum set levels); and make commitments to reduce agricultural protection. Under the agreement, developed countries were expected to reduce their tariffs by 36% (of the bound tariff rates before 1995; or of applied tariffs applicable in 1988, when Uruguay Round began) between the period 1995-2000; while developing countries under the Special and differential Treatment (S&DT) were expected to reduce their tariff by 24% during the period 1995-2004. As a part of S&DT, least developed countries (LDCs) were not required to make commitments to reduce tariffs hence this provision provides EAC LDCs including Burundi, Rwanda, Uganda and Tanzania additional protection for their agro-industry development.

Negotiations to further reduce tariffs in agricultural trade under the current DDA have progressed at a slow phase. Consequently, impediments to market access including high tariffs, tariff escalation (higher tariffs on processed products than on raw materials, resulting in greater effective protection), tariff peaks (relatively high tariffs, usually on "sensitive" products, amid generally low tariff levels), high levels of disparities in tariff levels among members, limitations to tariff rate quotas (whereby quantities inside a quota are charged lower import duty rates than those outside) and non-tariff measures have continued to be of concern to many countries including EAC Partner State countries. Persistence of tariff escalation (higher tariffs levied on processed products than on raw materials, resulting in greater effective protection for the importing country) discourage agro-processing for the exporting country and thus could retard agroindustry development in EAC.

Domestic support

It was also under the Uruguay Round that crucial changes were made on the way domestic support in favor of agricultural producers was treated. The objective of this pillar is to stimulate member states to reduce domestic support by disciplining them, while, leaving freedom for national governments to introduce policies that allow them to respond to the various circumstances each country might face. This approach also serves to ensure that the commitments abided by member states in the pillars of market access and export competition are not undermined through domestic support.

Box 3.5: Domestic Support

***Amber Box**:* These are measures that are considered trade-distorting and are therefore subject to reduction. These are kinds of support that have effects on production such as price support and input subsidies.

***Green Box**:* These measures are assumed not to have effects on production and therefore considered not trade-distorting. They are acceptable under AoA and are not subjected to reduction. They include government support for research, marketing assistance, infrastructure services, domestic food aid, environmental protection and regional development programmes, etc.

***Blue Box**:* These are measures such as direct payments to farmers that are intended to limit production. These are considered acceptable and are not subject to reduction, either.

Source: Glipo (2003: 2)

Domestic support policies that have direct effect on production and trade (those classified under the amber box) were the subject of reduction. Reductions were based on domestic support measured as “total aggregate measurement of support” or “Total AMS”) for the base years of 1986-88. Developed countries were to reduce such support by 20% over six years starting in 1995 while developing countries were to reduce by 13% over 10 years, and least-developed countries were not required to make such reductions. Domestic support on a small scale (5% or less for developed countries and 10% or less for developing countries, of the total value of the agricultural sector or of the value of agricultural products supported) known as “de minimis” was also exempted from domestic support reductions commitments.

Negotiations on reduction of domestic support have continued under the current DDA, abeit at a slow phase. Meanwhile, market support especially by developed countries has continued to present distortions in the international markets.

Export subsidies

The AoA prohibited export subsidies on agricultural products unless the subsidies were specified in a member's lists of commitments, and where they were listed, countries were required to reduce both the amount of money spent and the quantities of exports that receive subsidies. Developed countries were to reduce the value of export subsidies by 36% and reduce the quantities of subsidized exports by 21% over a period of six years. Developing countries were to reduce the amount of money spend on subsidies by 24% and quantities of subsidized exports by 14% over a 10-year period. In addition to this flexibility accorded to developing countries, they were also allowed under certain conditions to use subsidies to reduce the costs of marketing and transporting exports during the implementation period. As a part of S&DT, LDCs were exempted from reducing their export subsidies.

Like the agricultural market access and domestic support negotiations under the DDA, export subsidy reduction has been slow and export subsidies have remained a key issue of negotiation in successive WTO Ministerial Conferences under the DDA. During the Nairobi Ministerial Conference in 2015 however, it was agreed that developed countries would eliminate their export subsidies immediately while developing countries have to eliminate them by 2018 (WTO, 2015). In addition, developing countries will keep the flexibility of subsidies covering marketing and transport costs for agriculture exports until the end of 2023.

EAC countries can leverage on various flexibilities provided under the market access, domestic support and under export subsidies so as to increase their exports of both agricultural and agro-processed products, thus developing their agro-industries. Apart from Kenya (which is a developing country), the other EAC Partner State countries are LDCs and are hence exempt from making the market access, domestic support and export competitions commitments under the AoA. Further, elimination of export subsidies by developed countries levels the export playing field, improving competition of agricultural and agro-processed products' markets. Elimination of export subsidies presents an opportunity for EAC countries to participate in agricultural markets and to develop their agricultural value chains and by extension their agro-industry.

Effect of AoA on trade, food security, climate change and agro- industry development

The AoA has an objective of reforming agricultural sector policies for a fair trade and provides flexibilities to developing countries and LDC on market access, domestic support and export subsidies. In addition, in nine instances the agreement makes reference to food security. For instance, article 12(a) highlights

that “the Member instituting the export prohibition or restriction shall give due consideration to the effects of such prohibition or restriction on importing Members' food security”. It also provides for public stockholding for food security purposes particularly national stockholding programmes in developing countries.

Despite the foregoing, there have been reservations on the AoA to address food security in developing countries such as Africa and the EAC. In fact, more evidence points to the fact that since the implementation of the AoA in 1995, the capacity of developing regions to address food security, both in the short, medium and long-term time horizons have been dwindling. Agriculture subsidies from the developed countries have increased and there has been an artificial flooding of cheap food imports in developing countries, an element that has resulted in the substitution of domestic food production (Glipo, 2003). Same arguments are held by Hawkes and Plahe (2010); and by Action Aid (2005), who are of the view that the AoA has provided protection for rich nations and has led to increase in agribusiness dumping, depressing world market prices; In as much as there has been a decrease in subsidies classified under Amber Box in many developed countries, there has been increases in the other two boxes (Green and Blue). Although agricultural production support remains high, there is a notable decrease in such support for OECD countries, Australia, Canada, and the EU while in other countries such as US and China agricultural production support has been on the increase. *OECD database* shows that such support for OECD countries was about 249 US$ Billion in 2010 while in 2015 it was about 212 US$ Billion. For US and china, such support was about 30 and 136 US$ Billion respectively in 2010 but increased to about 38 and 307 US$ Billion respectively in 2015. Domestic support (subsidies) provided by developed countries and newly industrialized economies distort global markets by artificially lowering the global agricultural prices, while undermining small scale farmers and maintaining poverty in many developing countries and LDCs including in EAC. This in turn undermines climate change management and agro-industry development.

To reduce the negative impacts of AoA, Action Aid presents a number of calls, among them, the phasing out of Amber Box subsidies and the elimination of Blue Box subsidies. Details regarding other recommendations from Action Aid then are presented below.

Box 3.6: Action Aid Calls on AoA reforms

- The phasing out of Amber Box subsidies in developed countries.
- The immediate elimination of Blue Box subsidies.
- A review of disciplines in the Green Box in developed countries to assess their impact on production and trade. All Green Box subsidies must be fully decoupled from production (and targeted only at the delivery of public goods). Production related subsidies should be eliminated. The amount of remaining Green Box subsidies should be capped.
- A prohibition of agricultural dumping.
- The introduction of a counter balancing mechanism within the AoA for developing countries. The aim would be to address the problem of the accumulated effects of high levels of production and trade distorting subsidies provided to agriculture from developed countries by allowing developing countries to adjust their tariff levels in accordance with the level of subsidies in the exporting country. No proof of injury would be required from the importing country. The sole existence of subsidies to a product would be sufficient to trigger the measure.

- An agreement that only developing countries should have the flexibility to deal with price volatility and import surges through the special safeguard mechanism. The mechanism should be available for all products.
- An agreement whereby developing countries should have the long-term flexibility to exempt agricultural products from tariff reductions – on the basis of a positive list approach - on the grounds of concerns related to food security, rural development, poverty alleviation and livelihood conservation. They should have the flexibility to increase low bound tariffs and no compensation should be required.

EAC Policy Landscape

East African Community Climate Change Policy

The aims of the EAC climate change policy are to address the adverse impacts of climate change in the EAC region and to contribute to the development of policies and programmes aimed at widening and deepening cooperation among Partner States in line with the EAC Treaty (EAC, 2010).

The general objective is to guide EAC Partner States and other stakeholders on the preparation and implementation of collective measures to address Climate Change in the region while assuring sustainable social and economic development.

The Community's policy is founded on three key pillars of **adaptation, mitigation and climate change research** (monitoring, detection, attribution and prediction). The pillars are to be supported by the several capacity building areas including: technology development and transfer, finance, education, training and public awareness, information and knowledge management systems. Given the differentiated impacts of climate change on women, men and youth, and the roles of women specifically in addressing climate change, the policy attempts to take gender considerations into attention.

On adaptation, the Policy aims at implementing urgent and immediate adaptation priorities identified in the National Adaptation Programmes of Action (NAPAs), National Adaptation Plans (NAPs) and climate change strategies.

Adaptation priorities identified include: strengthening meteorological services and improving early warning systems; disaster risk management through; risk reduction, preparedness, mitigation and reconstruction, scaling up of efficient use of water and energy resources, irrigation, crop and livestock production, strengthening pre and post agricultural losses, protection of wildlife and key fragile ecosystems such as wetlands, coastal, marine and forestry ecosystems, improving land use, soil protection, tourism, climate proofing social infrastructure, and reducing climate sensitive vector and water borne diseases.

On mitigation, policy reiterates the importance of the EAC region to contribute to the reduction of GHG in the atmosphere through the preparation of Nationally Appropriate Mitigation Actions (NAMAs) for sectors with potentially high emission factors. This is important although the region has negligible contribution to global greenhouse gases (GHGs) emissions.

Critical sectors for mitigation measures identified include: energy, transport, agriculture, waste management and industry. The policy observes that Mitigation actions should not compromise the region's social and economic development but should position the region towards the low carbon development pathways. mitigation measures prioritized in the Policy include; forestation, reforestation, promotion of energy efficiency, efficient crop and livestock production systems and efficient transport systems, waste management while capturing opportunities in emission reductions in the region provided for under the Clean Development Mechanism (CDM) of the Kyoto Protocol.

For implementation, each EAC Partner State is expected to create an enabling environment through policy, legislative and institutional frameworks so as to operationalize the provisions of the Policy. Partner States are to develop: national policies, strategies and institutional arrangements.

At the regional level, the Policy provides for an establishment of a regional Climate Change Coordination structure at the EAC Secretariat and an EAC Climate Change Fund. The aim of the Fund is to mobilize financial resources for the implementation of the Policy and instruments of implementing the Policy including the EAC Climate Change Strategy and Master Plan. The EAC Secretariat, other organs and institutions of the Community are to develop effective approaches to initiate follow up actions and establish partnership to ensure the successful implementation of the Policy. The approaches to be developed include: capacity building in terms of technical skills, knowledge and monitoring tools and address challenges related to technology development and transfer and access to finance.

Climate Change Master Plan and Strategy

To implement the climate change policy, the EAC region has developed a climate change strategy and master plan. The two documents provide guidance and monitoring of implementation the CCP. The plan (2011-2030) sets out a long-term vision and a basis for EAC Partner States to operationalize a comprehensive framework for adapting to and mitigating climate change in line with the EAC Protocols on: Environment and Natural Resources Management and with international climate change agreements. It takes into account the EAC Climate Change Policy, EAC Climate Change Strategy, the EAC Protocol on Environment and Natural Resources Management and the EAC Food Security Action Plan. Recent projects on climate in EAC region are shown in the box 3.3.

Box 3.3: Recent Projects on Climate Change in EAC

1. National Climate Change Roundtables in the Partner States facilitated by EAC Secretariat (since 2009)
2. Climate Change Adaptation and Mitigation in Eastern and Southern Africa is an initiative of COMESA, EAC and SADC (2010 - 2014) that includes Climate-Smart Conservation Agriculture.
3. Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development (PREPARED) program (2012-2016).
4. Adapting to Climate Change In Lake Victoria Basin (2017-2019)
5. FAO's Natural landscapes rehabilitation and Climate Change Adaptation in the region of Mumirwa in Bujumbura (2018-202)
6. Enhancing the Role of Civil Society in Climate Change Adaptation in Kenya (2018-2020)
7. Kenya adaptation to climate change in arid and semi-arid lands (KACCAL) (2016-2017)
8. Strengthening Climate resilience of Communities in Northern Rwanda (2018-2024).
9. Rwanda Climate Change and Development Network (2017-2021)
10. Capacity Building Support to National Environment and Climate Change Fund (FONERWA) (ongoing)
11. Mainstreaming Environment and Climate Change Adaptation in the Implementation of National Policies in Tanzania (2012-2015)
12. Strengthening Climate Change Governance in Zanzibar (2012-2015)
13. Mainstreaming Climate Change Adaptation Through Small Grants Programmes in Tanzania (2011-2015)
14. Integrated approaches for climate change adaptation (2014-2019)
15. Strengthening Climate Information and Early Warning Systems for Climate Resilient Development and Adaptation to Climate Change in Uganda (2014-2017)

EAC Food Security Action Plan (2011-2015)

The 10th meeting of the EAC Sectoral Council of Minister on Agriculture and Food Security discussed the formulation of a second phase for the EAC food security action plan. This phase will cover the years from 2017 to 2021.

EAC Agriculture and Rural Development Strategy

The EAC Agriculture and Rural Development Strategy (EAC-ARDS- 2005- 2030) provides a road map of the strategic interventions by stakeholders for the accelerated development of the rural economy. The strategy identifies the causes of declining performance of agricultural sector in the region as inadequacy in policy formulation and implementation; low technology development and transfer; poor supporting physical infrastructure and utilities; climatic and weather variability; natural resource degradation; and other factors such as HIV and aids. The objectives of the strategy include:

a. Attaining food security in the community,
b. Liberalizing regional cross-border trade,
c. Harmonizing agricultural policies and regulations,
d. Increasing production of crops, livestock, fishery and forestry products,
e. Attaining sustainable utilization of natural resources,
f. Developing markets and marketing infrastructure,
g. Reducing post-harvest losses,
h. Promoting value addition through agro-processing, and
i. Protecting human, plant and environmental safety.

The strategy integrates all the three relevant areas of this training manual: food security, trade and climate change. Among the key intervention areas identified are: improving food security; accelerating irrigation development; strengthen research, training and extension; increasing intra and inter-regional trade; promoting improvement of physical infrastructure and utilities; improving regulatory framework; promoting agro-industries development and value addition; promoting emerging industries; mainstreaming cross cuttings issues of HIV aids, and gender; promoting sustainable utilization of natural resources, improving accesses to reproductive resources including credit; controlling animal and plant pest diseases; and; finance agriculture and agro-processing.

As observed by PLUM – Uganda (2014), implementation of this strategy through respective policies including the EAC food security action plan, climate change policy and trade policy has made some strikes towards achieving its objectives, particularly the objective of improved conducive environment for promotion of Agricultural production, productivity and trade. However, agricultural production and productivity and food security have remained low while and agro-processing has remained stagnant. The limited performance of the strategy (PLUM- Uganda 2014) has been associated with implementation gaps at the regional and national levels, particularly limitations in synchronisation of programmes, action plans and prioritisation of actions at both levels. Financial and human resources especially with respect to national Ministries responsible for implementation also pose implementation challenges. Construction of the institutional implementation structure, particularly the inter-Ministerial Coordination Team, made up of all the stakeholders has also remained a challenge.

Exercise

(a) *Suggestions/discussions on the workplan proposed for the implementation of the KJWA at the last SB48.*

(b) *Look at EAC submission on KJWA, have its inputs being reflected in the agreed workplan at SB48?*

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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 how Tanzania continues to contribute towards taking forward the Koronivia Joint Work on Agriculture pursuant to the Decision at the UNFCCC SB48.

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 contribute meaningfully towards the Koronivia Joint Work on Agriculture pursuant to the Decision at the UNFCCC SB48.

The contributions must not only address the national interest of Tanzania, but must be linked to the EAC, and the wide and global interest of Africa as well. Given the fact that Tanzania's national interest must be looked after, the soon to be NDC becomes an important platform to have such.

Auditing Agriculture Provisions in Tanzania's INDC

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). Just for interest and noting, Table 4.1 shows the status of Paris Agreement (and by default (I)NDCs ratifications)

Table 4.1: Ratification of the Paris Agreement and Conversion of INDCs into NDCs

Country	Ratified	Country	Ratified	Country	Ratified
Algeria	20 Oct 2016	Ethiopia	9 March 2017	Niger	21 Sep 2016
Angola	-	Gabon	2 Nov 2016	Nigeria	16 May 2017
Benin	31 Oct 2016	Gambia, The	7 Nov 2016	Rwanda	6 Oct 2016
Botswana	11 Nov 2016	Ghana	21 Sep 2016	Sao Tome and Principe	2 Nov 2016
Burkina Faso	11 Nov 2016	Guinea	21 Sep 2016	Senegal	21 Sep 2016
Burundi	17 Jan 2018	Guinea-Bissau	-	Seychelles	29 April 2016
Cabo Verde	21 Sep 2017	Kenya	28 Dec 2016	Sierra Leone	1 Nov 2016
Cameroon	29 July 2016	Lesotho	20 Jan 2017	Somalia	22 April 2016
Central African Republic	11 Oct 2016	Liberia	-	South Africa	1 Nov 2016
Chad	12 Jan 2017	Libya	-	South Sudan	-
Comoros	23 Nov 2016	Madagascar	21 Sep 2016	Sudan	2 Aug 2017
DRC, Dem. Rep.	13 Dec 2017	Malawi	29 June 2017	Swaziland	21 Sep 2016
Congo, Rep.	21 April 2017	Mali	23 Sep 2016	Tanzania	18 May 2018
Cote d'Ivoire	25 Oct 2016	Mauritania	23 Feb 2017	Togo	28 Jun 2017
Djibouti	11 Nov 2016	Mauritius	22 April 2016	Tunisia	10 Feb 2017
Egypt, Arab Rep.	29 June 2017	Morocco	21 Sep 2016	Uganda	21 Sep 2016
Equatorial Guinea	-	Mozambique	-	Zambia	9 Dec 2016
Eritrea	-	Namibia	21 Sep 2016	Zimbabwe	6 Sep 2017

Source: Author, based on http://unfccc.int/2860.php (Accessed 25 April 2018).

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 emerged as one of these key sectors. The identified contributions from the INDC in the identified sub-sectors are shown in Table 4.2.

Table 4.2: 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).

Group Exercise

In groups of five (5) participants each:

From what you have read and gathered in the Tanzanian NDC,

(a) What should be the main elements of Tanzanian contributions to take forward the Koronivia Joint Work on Agriculture pursuant to the Decision at the UNFCCC SB48 to 2020 be in general?

(b) How best can the key positions from Tanzania on the Koronivia Joint Work on Agriculture be integrated into a future NDC.

NB: Participants can refer to the documents cited herein that are available online and any other.

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