

## Chapter 8

# Addressing climate change issues in eastern and southern Africa: the EAC, COMESA, SADC and the TFTA

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### 1. Introduction

Climate change poses a serious challenge to sustainable economic and socioeconomic development in developing and least developed countries. This is especially the case for countries in Africa, due to their reliance on climate-sensitive natural resources, including rain-fed agriculture for economic growth and development, trade and food security. It is projected that by 2020, 75 to 250 million people in Africa will be exposed to increased water stress, and yields from rain-fed agriculture could be decreased by up to 50%, posing a severe challenge for food security in the region.

Production of rain-fed agriculture is highly vulnerable to the impact of climate change due to changes in rainfall patterns and increasing temperatures. This can pose severe challenges to the socioeconomic development of the region due to climate change affecting key social, physical, ecological and economic systems across the African continent, including water resources, agriculture, energy, transport, health, forestry, wildlife, infrastructure and disaster management. Changes in climate can have varied effects on the different geographical and climatic regions in Africa. However, the overall impact of climate change in Africa is expected to include a decrease in crop yield, an increase in food insecurity, melting of snow caps and glaciers, an increase in the frequency and intensity of droughts and floods, a decrease in the supply of fresh water, an increase in pests and diseases in wildlife and crop

production, diminished hydro-power generation potential, loss of biodiversity, ecosystem degradation, destruction of infrastructure and rising sea levels. These effects will mostly be felt by the poor rural and urban communities. The adverse effects associated with climate change can have diverse effects on different social groupings, increasing inequality across the region. This will be a major setback for the Millennium Development Goals (MDGs), halting or reversing any development gains already achieved.

In order to adapt to and mitigate the current and potential future impact of climate change on countries in eastern and southern Africa Member States of the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) have committed to addressing the effects of climate change on their natural resources, environment and sustainable development. These commitments not only include the development and implementation of regional and national laws, regulations and strategies, and adaptation and mitigation interventions to address climate change issues in the three Regional Economic Communities (RECs), but also commitments made by all 26 countries participating in the negotiations of the Tripartite Free Trade Area (TFTA) to address climate change issues throughout eastern and southern Africa.

The focus of this paper is to determine the manner in which countries in eastern and southern Africa are addressing climate change issues to ensure economic growth and sustainable development throughout the entire region. Regional and national legal frameworks, regulations, strategies, action plans, and mitigation and adaptation interventions can enable countries in the region to build adaptive capacity and reduce their vulnerability to the effects of climate change that would ensure sustainable current and future economic and socioeconomic development. Firstly, a brief overview of Africa's climate change vulnerabilities on the regional level is provided to establish the need for regional and national adaptation and mitigation interventions. Secondly, the paper focuses on the legal framework and mitigation and adaptation interventions implemented and under development in the Member States of the EAC, COMESA and SADC. The analyses include national and regional legal, strategic and operational instruments developed in the various Member States' priority areas for adaptation and mitigation interventions identified in their National Adaptation Programme of Actions (NAPAs) notified under the United Nations Framework Convention on Climate Change (UNFCCC) and projects that have been registered or are being developed under the Clean Development Mechanism (CDM). Lastly, the TFTA instruments and actions

to address climate change issues throughout the eastern and southern Africa region are evaluated.

## **2. Background**

African countries are faced with a variety of environmental challenges which can hamper the economic and industrial developmental of these economies. Not only are agriculture, tourism and fisheries among the largest sources of employment, economic growth and exports for many countries on the African continent, but they are also the sectors which are the most vulnerable to climate change and other environmental risks. One of the main reasons for Africa's vulnerability to the effects of climate change and climate variability is the low adaptive capacity coupled with developmental challenges in the majority of African countries. The African continent is particularly vulnerable to impacts of climate change affecting key economic drivers such as water resources, agriculture, energy, transport, health, forestry, wildlife, land and infrastructure, and disaster risk management, among others. The impacts include water stress and scarcity, food insecurity, diminished hydropower generation potential, loss of biodiversity and ecosystem degradation, increased incidence of disease burden, destruction of infrastructure, high costs of disaster management as the result of increased frequency and intensity of droughts, floods and landslides associated with the El Niño phenomenon. The impacts are most felt by the poor rural and urban populations in the region. Adaptation in most African countries is hampered by low Gross Domestic Product (GDP) per capita, poverty, weak institutions, low levels of education and limited access to capital, including markets, infrastructure and technology (UNFCCC, 2007).

The projected regional impacts of climate change show that African countries are some of the countries most vulnerable to the impact of climate change (UNEP and WTO, 2009).

- It is expected that temperatures throughout the continent in all seasons will be higher than the global average, with an annual decrease in rainfall in southern Africa and an increase in eastern Africa.
- It is projected that between 75 and 250 million people will be affected by water shortages by 2020, while the yields from rain-fed agriculture are expected to be reduced by up to 50% in some African countries by the same year.

- It is also projected that there will be an increase of between 5% and 8% in arid and semi-arid land in Africa by 2080.
- An increase in the frequency and intensity of extreme weather events is expected.
- Due to higher water temperatures it is expected that there will be a dramatic decrease in fish stocks.
- Higher expected temperatures and increased water stress can contribute to deforestation and degradation of grasslands.
- It is also estimated that the coastal infrastructure in approximately 30% of African countries (including cities in Egypt and South Africa) is at risk due to the rise in sea levels.

In east and southern Africa the impact of climate change is expected to be compounded due to the region's high poverty levels, weak infrastructure, poor management of natural resources and dependence on rain-fed agriculture. Due to climate change it is projected that there will be a net reduction of more than 10% in the production of various staples, including maize, sugar and wheat (IFAD, 2011). In the Nile Basin, countries have experienced an increase of about 0.2°C to 0.3°C per decade, while temperatures in Rwanda increased by 0.7°C to 0.9°C during the second half of the century. Drought-prone areas like Namibia, Botswana, Zimbabwe, Sudan and Ethiopia are expected to be more vulnerable to climate change compared to the more humid areas of Tanzania and Zambia (Eriksen et al., 2008).

The east African region is primary arid and semi-arid land with increasing temperatures, while the frequency, intensity and severity of droughts have been increasing over the last three decades. Future projections show that there will be an increase in the mean temperature in the region, while it is expected that the overall average annual rainfall in the region will increase. The changes in temperatures and rainfall patterns can have various effects on crop yields and productivity, availability of surface water, land degradation and human, plant and animal health.

In the EAC it is expected that climate change will lead to salt water intrusion and the contamination of fresh water wells by salt water along the coast of Tanzania, beach erosion in Kenya, and rampant floods and droughts across the region. The water temperature in lakes Edward, Albert, Kivu, Victoria, Tanganyika and Nyasa has already risen by between 0.2°C

and 0.7°C since the early 1900s. The vulnerability of east Africa to climate change is linked to the fact that the economies of the partner states are dependent on climate-sensitive natural resources including water and land resources. This is compounded by low adaptive capacities due to poverty at household level and low GDP.

The southern African region is semi-arid with high rainfall variability and frequent droughts and floods. Climate change projections show that temperatures are expected to increase by between 0.3°C and 3.6°C by 2060; a decrease in rainfall will be experienced over most of the region and there will be an increase in the mean, minimum and maximum temperatures with an overall increase in the number of hot days and heat waves (Davis, 2011).

### **3. The East African Community**

The EAC has committed to responding to the effects of climate change through adaptation, mitigation, research and addressing technical and financial constraints as well as by developing various policies, strategies and organisation bodies. The Member States of the EAC have been successful in developing a regional climate change policy, in accordance with the EAC Treaty. In 2010 the EAC embarked on formulating the regional climate-change policy with the aim of guiding the EAC Member States and other stakeholders on the implementation of collective measures to address the effects of climate change in the region through mitigation and adaptation measures; this was done to ensure sustainable social and economic development. In order to operationalise this policy a regional strategy and master plan have also been prepared and the EAC Climate Change Fund has been established. Efforts are also made to manage transboundary ecosystems in the region through specialised institutions, including the Lake Victoria Basin Commission (LVBC) and the Lake Victoria Fisheries Organisation (LVFO). A Transboundary Ecosystem Management Bill was also passed by the East African Legislative Assembly in 2010.

#### **3.1 Legal framework in the EAC to address climate change**

##### **a) The Treaty for the Establishment of the East African Community**

Article 5(c) of the EAC Treaty calls for ‘the promotion of sustainable utilisation of the natural resources of the Partner States and the taking of measures that would effectively protect the natural environment of the Partner States’. Chapter 19 of the treaty clarifies Article 5(c) in relation to cooperation in the management of the environment and the utilisation of natural

resources within the EAC. The chapter recognises that certain development activities can lead to the degradation of the environment and deplete natural resources. In order to address these issues Chapter 19 calls for cooperation among Member States for the efficient and sustainable use of natural resources, the undertaking of environmental management strategies to guard against degradation and pollution, the adoption of common policies on the movement of toxic and hazardous waste and the development of capacity-building programmes for the sustainable management of natural resources. Article 111 and 112 of the treaty also calls for the development of a common environmental management policy, the adoption of common environmental control regulations, incentives and standards, and the adoption of community environmental management programmes and common conservation policies in various areas including mineral resource, fauna and flora, forestry and marine resources.

#### **b) The Protocol on the Establishment of the EAC Common Market**

According to Article 40 of the protocol, member countries must implement those principles for environmental and natural resource management that will prevent environmental degradation taking place. The protocol also states that member countries must ensure environmental management practices in accordance with:

- The EAC Protocol on Environment and Natural Resource Management
- The EAC Protocol for Sustainable Development of Lake Victoria Basin
- The Lake Victoria Transport Act of 2008
- The Protocol on the Establishment of the EAC Customs Union
- The EAC Customs Management Act of 2004
- Any other relevant protocols and laws of the EAC

#### **c) The Lake Victoria Basin Commission (LVBC)**

The EAC Member States have identified Lake Victoria and its basin as an area of common interest and a zone for regional economic development. In order to coordinate the sustainable development of Lake Victoria and its basin, the Lake Victoria Basin Commission was established. The LVBC is a specialised institution established in accordance with the Protocol for Sustainable Development of Lake Victoria Basin (ratified in December 2004). The mandate of the LVBC includes ensuring the sustainable use of the resource and the

management and protection of the Lake Victoria Basin. The objectives and functions of the Commission include the promotion, coordination and facilitation of development initiatives in the basin. The LVBC is also a mechanism for coordinating interventions in the basin and serves as a centre for promoting investment and information sharing among the EAC Member States. The functions of the LVBC is defined in 14 focal areas: sustainable development, management and equitable utilisation of water resources, promotion of sustainable development and management of fisheries resources, promotion of sustainable agriculture and land use practices, promotion of sustainable development and management of forestry resources, promotion of development and management of wetlands, promotion of trade, commerce and industrial development, promotion of development of infrastructure and energy, maintenance of navigational safety and maritime security, improvements of public health with specific reference to sanitation, promotion of research, capacity building and information exchange, promotion of environmental protection and management of the basin, promotion of public participation in planning and decision making, integration of gender concerns in all activities in the basin, and promotion of wildlife conservation and sustainable tourism development.

#### **d) Protocol on Environment and Natural Resource Management**

The overall objective of the protocol is to promote and enhance cooperation in conservation and management of environment and natural resources among Member States, adaptation of a common vision to address challenges related to sustainable development and increasing efforts to prevent and control environmental degradation. The main focus areas of the protocol are transboundary natural resource; biological diversity and genetic resources; forestry; wildlife, water, wetland, coastal and marine fishers; minerals; energy; mountainous ecosystems; and tourism. The main aim of the protocol is to address the various challenges associated with climate change, conservation and management of natural resources in these key focal areas. These challenges include desertification and droughts; biosafety and biotechnology; chemical waste and hazardous waste management; pollution; impact assessments and audits; implementing environmental standards; enhancing environmental education and capacity building; public participation and access to information; and environmental disaster preparedness and management.

**e) The EAC Climate Change Policy (EACCCP)**

The EACCCP has been developed to ensure a more strategic and cooperative approach among Member States to respond to the impact of climate change. However, the policy recognises existing national development policies, strategies and plans implemented by Member States of the EAC. These include NAPAs in various stages of implementation in Burundi, Rwanda, Uganda and Tanzania; the National Climate Change Response Strategy prepared by Kenya; National Communications prepared by all five EAC Member States regarding the status of implementation of the UNFCCC activities concerning mitigation and adaptation actions; and national GHG inventories and CDM projects registered by Rwanda, Tanzania, Kenya and Uganda. The EACCCP also links with various regional and subregional policies, strategies, plans and programmes, including the EAC Treaty, the Protocol on Environment and National Resource Management, the Protocol for Sustainable Development of the Lake Victoria Basin and the fourth EAC Development Strategy.

The main aim of the policy is to contribute to sustainable development benefits in the region through harmonised and coordinated strategies, projects and actions (adaptation and mitigation activities prioritised in the policy) to address the effects of climate change. The overall objective of the policy is to provide a framework for mitigation (climate-resilient livelihoods and economics) and adaptation (low-carbon development) investment in the region by focusing on the development of national climate-change adaptation strategies and nationally appropriate mitigation actions, and the shift to a green economy. The policy is based on the priority areas of climate-change adaptation, mitigation, research and observations supported by capacity-building actions in technology development and transfer, education, training, and information and knowledge management. The policy includes various prioritised adaptation and mitigation strategies.

**Table 1: Priority areas for adaptation and mitigation actions**

<b>Adaptation actions</b>	<b>Mitigation actions</b>
Improve water conservation, efficiency and sustainability	Increase the availability, accessibility, reliability and affordability of renewable energy sources
Improve agricultural productivity and food security	Decrease Greenhouse Gases (GHGs) associated with the transport sector through promoting public transport systems
Develop, harmonise and adopt common policies, laws and regulations for conservation and sustainability of wildlife	Support the sustainable development needs of Member States in the forest sector
Enhance the adaptive capacity and resilience of coastal and marine ecosystems, communities and infrastructure	Promote sustainable agricultural practices
Create sustainable land use and soil management practices	Promote waste management for improved air and water quality
Promote sustainable management of forestry and wetlands	
Reduce the vulnerability of humans to climate-sensitive diseases and enhance the adaptive capacities of the health sector	
Ensure resilient tourism infrastructure and enhance climate-proofing wildlife habitats	
Develop climate-proof infrastructure	
Develop climate-resilient human settlements	
Employ disaster risk reduction to reduce the vulnerability of socioeconomic systems to climate-related disasters	
Develop and use renewable energy sustainably	

Source: EACCCP (2011)

The policy also identified the various challenges associated with mitigation and adaptation action in the EAC. These include inadequate institutional, legal and regulatory frameworks for adaptation and mitigation actions; limited financial resources; lack of capacity in technology; and high transaction costs of CDM project development. Challenges identified in terms of research and observation the policy aims to address include poor data processing and dissemination, inadequate human capacities and insufficient meteorological infrastructure.

The implementation of the policy is the responsibility of the EAC Secretariat and the EAC Member States. In order to operationalise the policy the Climate Change Strategy and Master Plan has been developed. Member States are also required to develop country-specific policies, strategies, action plans and legislation and to establish institutional arrangements in line with the EACCCP.

#### **f) EAC Climate Strategy**

The EAC Climate Change Strategy guides the implementation of the EACCCP over a five-year period, from 2011 until 2015. The strategy provides a short- to medium-term framework for implementing climate-change adaptation and mitigation programmes and projects identified in the EACCCP. The priority of the strategy is the reduction of disaster risks in various sectors due to the importance of disaster risk approaches to climate change adaptation. The strategy is based on six broad strategic objectives:

- Reduce vulnerability through enhanced adaptation
- Enhance sustainable development through mitigation measures
- Strengthen climate-change knowledge generation
- Increase climate-change education and public awareness
- Build climate-change response capacity
- Ensure a sustainable financing mechanism for climate change.

The strategy provides a framework for Member States and stakeholders to address the regional challenges and opportunities that arise from climate change in an integrated and coordinated manner. The strategy proposes various strategic actions for each of the six strategic objectives identified. These strategic actions include improving water conservation, efficiency and sustainable use; improving sustainable land use; reduce GHGs from the transport sector; production of sustainable agricultural practices with agricultural-based emission reduction; strengthening early warning systems for extreme weather and climate events; enhance information and knowledge management systems; integrate climate-change considerations into existing policies and strategies; and building adaptive capacity. The strategy consists of a detailed strategic implementation plan regarding each objective, the planned outcome based on the activities to be taken and the cost and time frame associated with the implementation of each action per strategic objective.

#### **g) EAC Climate Master Plan**

The EAC Climate Change Master Plan (EACCCMP) provides a long-term vision for operationalising actions for climate-change adaptation and mitigation in the EAC. The master plan recommends the establishment of a Climate Change Coordination Unit to coordinate and

facilitate the implementation of the EACCCS and the EACCCMP. The EACCCP, EACCCS and the EACCCMP fit together in the following manner:

- The EACCCP is a purposeful statement by the EAC Secretariat recognising the problem of climate change and committing to address the problem through specific actions. The policy looks at the preparation and implementation of collective measures to address climate change in the short and medium term in the region.
- The objective of the EACCCS is the implementation of the EAC Climate Change Policy. The strategy sets out a range of measures, taking into account those already in place in the partner states, to ensure effective implementation of the Climate Change Policy at all levels. The strategy gives the direction and scope of implementation of the policy over a short to medium time period.
- The EACCCMP is a long-term view of challenges, opportunities and priority actions to combat climate change. The master plan provides the overall picture and vision for the region for climate-change response strategies and covers the period 2011 to 2031. The master plan provides the overall picture and vision linking all three documents. This vision is operationalised by means of periodic climate-change strategies developed in consideration with the prevailing circumstances, the first of which is the EAC Climate Change Strategy 2011-2015.

The overall objective of the EAC Climate Master Plan is to strengthen regional cooperation to address climate-change issues that concern regionally shared resources. The master plan's specific objectives are to:

- Provide an effective and integrated approach to regional climate-change adaptation
- Enhance the mitigation potential of Member States in the priority sectors of energy, infrastructure, agriculture and forestry
- Streamline and harmonise existing mitigation and adaptation actions
- Foster international cooperation to address climate-change issues
- Mobilise resources to implement adaptation and mitigation actions.

In order to reach these objectives the EACCCMP focuses on eight key areas for intervention:

- Adaptation interventions

- Mitigation interventions
- Technology development and transfer
- Capacity building
- Education, training and public awareness
- Gender, youth and marginalised groups
- Climate risk management and disaster risk reduction
- Climate finance

The master plan contains a swot analysis in each of these key areas according to the priority areas identified in the EACCCP, including water, agriculture, infrastructure, land use and renewable energy. According to these analyses the master plan identifies short-, medium- and long-term actions and programmes to be implemented in each key area.

#### **h) The fourth EAC Development Strategy (2011/12-2015/2016)**

The fourth EAC Development Strategy highlights the achievements and challenges in environmental management in accordance with Article 5, 111 and 112 of the EAC Treaty. According to the strategy the EAC has been successful in developing and harmonising regional and national policies and legislation on the environment, implementing environmental assessment guidelines for minerals and shared ecosystems, and developing a climate change policy and master plan. However, there are still various challenges facing Member States to effectively manage activities that impact the environment and natural resources. These include the lack of compliance with environmental laws, weak environmental regulations, inadequate resources for capacity building and lack of enforcement mechanisms.

In order to address these challenges some of the priority areas for intervention identified in the Development Strategy are sustainable resource management, environmental conservation, and mitigation of the effects of climate change in the region. Some of the strategic interventions which will be focused on over the next four years include:

- Implementing the Protocol on Environment and Natural Resource Management
- Implementing the EAC Climate Change Policy and Master Plan

- Capacity building in the areas of environmental assessment and understanding the relationship between climate change, sea level rise and coastal erosion
- Harmonising standards and regulations and implementing the East African Framework Agreement on Air Pollution of 2008.

### 3.2 Mitigation and adaptation interventions in the EAC Member States

The five Member States of the EAC have all committed to addressing the effects of climate change within the region. Four Member States, Burundi, Rwanda, Tanzania and Uganda, have developed NAPAs that identify immediate, urgent and priority project activities that are necessary to enhance adaptation capacities that are in various stages of implementation.

**Table 2: Interventions in the NAPAs of Burundi, Rwanda, Tanzania and Uganda**

Countries	Priority areas
Burundi	Support climate forecasts for early warning
	Rehabilitation of degraded areas
	Safeguarding the most vulnerable natural environments, including the mountain rain forests and thickets of the Rusizi floodplains
	Rainwater valorisation
	Erosion control in Mumirwa
	Protection of the buffer zone in the Lake Tanganyika floodplain and around the lakes of Bugasera
	Popularisation of short-cycle and dryness-resistant food crops, including sweet potatoes, corn and sorghum
	Zero-grazing cattle breeding
	Capacity building to promote energy-saving techniques
	Stabilisation of river dynamics of river courses in Mumirwa and Imbo
	Education for climate change adaptation
Promotion of hydro-power micro stations	
Rwanda	Conservation and protection of lands against erosion and floods at district level in vulnerable regions
	Installations and rehabilitation of hydrological and meteorological stations
	Monitoring round irrigation perimeters from water flows in vulnerable regions
	Assistance to districts of vulnerable regions to plan and implement conservation measures and water storage
	Increasing climate-change adaptation capacity of villages by improving drinking water, sanitation and alternative energy services
	Increasing modes of food distribution and health support to face extreme climatic events
	Preparing and implementing a national strategy to combat deforestation and address erosion

<b>Tanzania</b>	Promoting drought-tolerant crops including sorghum and millets
	Improving the availability of water for drought-stricken communities in central Tanzania
	Adaptation through participatory reforestation in the Kilimanjaro mountains
	Promoting community-based mini-hydro projects
<b>Uganda</b>	Initiating community tree-growing projects for reforestation
	Implementing land degradation management projects to reverse land degradation
	Strengthening meteorological services
	Improving community water and sanitation projects to increase access to safe water and improved sanitation services
	Implementing a drought adaptation project
	Developing climate-change and development planning projects to integrate climate-change issues into development of planning and implementation

Source: UNFCCC (2013a)

Kenya has prepared a national climate strategy which focuses on adaptation and mitigation activities in various priority areas. This climate strategy focuses on low-carbon climate-resilient development (including geothermal power, reforestation and climate-smart agriculture), enabling policy and regulatory frameworks, adaptation and mitigation.

The EAC members have also identified various potential mitigation projects in the region, including geothermal power along the Rift Valley and wind, hydro- and solar power generation. Various projects under the CDM have been registered or are being developed in Tanzania, Kenya and Uganda. The CDM allows for emission reduction projects in developing countries to earn certified emission reduction (CER) credits which can be traded or sold and used by industrialised economies to meet their emission reduction targets under the Kyoto Protocol.

**Table 3: Example of CDM projects implemented and under development in Kenya, Tanzania and Uganda**

<b>Countries</b>	<b>CDM projects</b>
<b>Kenya</b>	Olkaria geothermal power generation project
	Lake Turkana wind power generation project
	Redevelopment of Tana hydro-power station
	Nairobi river basin biogas project
	Aberdare Range/Mount Kenya small-scale reforestation project
<b>Tanzania</b>	Mtoni landfill gas capture and energy generation
	Power production from sisal waste biogas
	Same and Mwanga forest project
<b>Uganda</b>	Nyagak mini-hydro project
	Nile basin reforestation
	Solar PV-based rural electrification
	Kigali hydro-power project

Source: UNFCCC (2013b)

#### **4. Common Market for Eastern and Southern Africa**

To address the issues pertaining to climate change in the COMESA region, various provisions in the COMESA Treaty are focused on cooperation, development and the management of natural resources, the environment and wildlife in the region. In accordance with Chapter 16 of the COMESA Treaty, which deals specifically with coordination among Member States on these issues, the COMESA Climate Initiative was developed and implemented. This initiative is also aligned with the Environmental Action Plan (EAP) and the Comprehensive Africa Agricultural Development Plan (CAADP); and multilateral and regional climate change action plans that were adopted by the COMESA Member States. Due to the importance of forestry products and energy in the region COMESA is also in the process of developing a regional forestry strategy and biomass and bio-energy policies for sustainable development.

##### **4.1 Legal framework in COMESA to address climate change**

###### **a) COMESA Treaty**

According to Article 4(6)(h) of the COMESA Treaty, Member States are required to cooperate in the development and management of natural resources, energy and the environment to enable COMESA Member States to attain their various economic and social

development objectives. This requirement is elaborated in Chapter 16 and requires Member States to cooperate in the areas of natural resources, the environment and wildlife by fostering joint and efficient management and sustainable utilisation of natural resources. Article 123 also recognises that economic development can be accompanied by environmental degradation, excessive depletion of resources and damage to natural heritage all of which require cooperated and coordinated strategies among members to protect and preserve the environment and eliminate all forms of pollution.

The article also places an obligation on the Member States to take all necessary measures to ensure that natural resources, forests, fresh fish and marine resources and wildlife within the COMESA region will be preserved. In terms of the management of the environment the Member States have undertaken to develop common environmental management policies, develop special environmental management strategies and take measures to control transboundary air and water pollution.

#### **b) COMESA Climate Initiative**

COMESA has put into place a comprehensive climate-change initiative. The goal of this initiative is to achieve economic prosperity and protect the region against the effects of climate change. Benefits associated with the Initiative include the promotion of sustainable agriculture and land-use practices, biodiversity conservation, maintenance of environmental services, successful adaptation to climate change, and improvements in rural livelihoods; added to these is the delivery of cost-effective and verifiable reductions in greenhouse gas emissions. The initiative aims to address the impact of climate change in such a way that will ensure economic and social resilience for all generations. The specific objectives of the initiative include:

- Building a shared vision on climate change for Africa
- Enhancing regional and national cooperation to address the effects of climate change
- Providing for the integration of climate-change considerations into policies at regional, national and sectoral level
- Capacity building and improving the knowledge base to effectively address climate change impacts

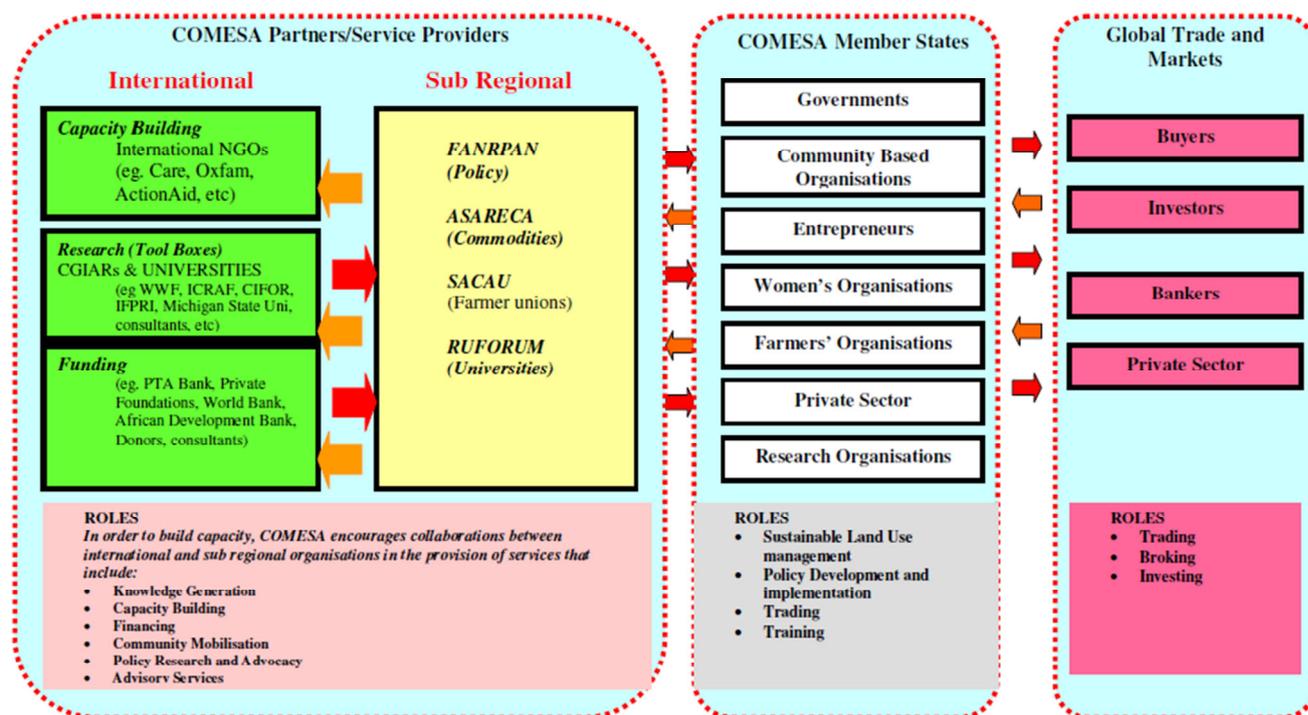
- Improving collaboration between stakeholders in climate-change matters
- Developing a framework to establish an African Bio-Carbon Facility.

The focus of COMESA's Climate Change Initiative is on supporting Africa and its peoples to adapt to climate change and safeguarding natural ecosystems, including the conservation and sustainable use of ecosystems that play an important role as CO<sub>2</sub> sinks. In this regard, COMESA is spearheading the inclusion of agriculture, forestry and other land use (AFOLU) in the international climate-change regime. In doing so, the initiative focuses on eight thematic priority areas:

- Post-Kyoto climate-change regime and beyond
- Enabling policy and institutional framework
- African bio-carbon facility
- Research, information management and communication
- Technology development and transfer
- Capacity building
- Enhancing partnerships
- Early action flagship programmes

COMESA has also developed a model for coordinating climate-change initiatives among various stakeholders. The model shows the required interaction among international and subregional organisations; governments, organisations and the private sector in Member States; and trade and markets to effectively address the impact of climate change through mitigation and adaptation actions.

Figure 1: COMESA model for coordination in climate change initiatives



Source: COMESA (2008)

#### 4.2 Mitigation and adaptation interventions in the COMESA Member States

The majority of the COMESA Member States are actively developing and implementing national legal frameworks, policies and strategies to address the impacts of climate change. This includes Mozambique that is developing the National Programme for strengthening disaster risk preparedness and the National Policy on Environment implemented in Zambia. The majority of the COMESA Member States have also notified various priority areas for action under the NAPAs to the UNFCCC. The table below shows those priority areas for the COMESA Member States which are not members of the EAC and SADC.

Table 4: Interventions according to NAPAs in Ethiopia, Eritrea, Comoros and Sudan

Countries	Priority areas in the NAPAs
Ethiopia	Promoting drought/crop insurance programs
	Enhancing drought and flood early warning systems
	Developing small-scale irrigation and water-harvesting schemes
	Improving rangeland resource-management practices in the pastoral areas
	Implementing community-based sustainable utilisation and management of wetlands
	Developing capacity building for adaptation
	Promoting the community-based carbon sequestration project in the Rift Valley

	Instituting a national research and development centre for climate change
	Promoting farm and homestead forestry and agro-forestry
<b>Eritrea</b>	Introducing community-based pilot rangeland improvement and management in selected areas in the north western lowlands rangeland
	Introducing community-based pilot projects to intensify existing production models, area and species specific to eastern lowlands, selecting suitable sheep and goat breeds
	Encourage afforestation and agroforestry through the Community Forestry Initiative
	Promoting groundwater recharging for irrigation wells
	Introducing and expanding irrigated agriculture, especially spate-irrigated agriculture
<b>Comoros</b>	Promoting varieties that are more adapted to drought
	Defending and restoring degraded soils
	Reconstituting basin slopes
	Increasing water supply
	Improving water quality
	Promoting early warning
<b>Sudan</b>	Enhancing resilience to increasing rainfall variability through rangeland rehabilitation and water harvesting in the Butana area
	Reducing the vulnerability of communities in drought-prone areas of southern Darfur through improved water harvesting
	Improving sustainable agricultural practices under increasing heat-stress in the River Nile
	Promoting environmental conservation and biodiversity restoration in northern Kordofan
	Improving strategies to adapt to drought-induced water shortages in highly vulnerable areas in central Sudan

Source: UNFCCC (2013a)

The Member States have also notified various CDM projects for consideration to the UNFCCC. These include wind and thermal power plants, reforestation and gas capturing. The table below provides an extracted list from those notified to the UNFCCC by the COMESA Member States not party to the EAC and SADC.

**Table 5: CDM projects notified to the UNFCCC**

<b>Countries</b>	<b>CDM projects</b>
<b>Egypt</b>	220 MW wind farm at Gulf of El-Zayt
	Landfill gas capturing and flaring in El-Kattamia landfill
<b>Ethiopia</b>	Thermal energy from renewable sources at African Bamboo PLC
	Aysha II wind power park project
	Reforestation of degraded land in Dangur and Guba districts
<b>Libya</b>	CFL project

Source: UNFCCC (2013b)

## **5. The Southern African Development Community**

The SADC Member States have committed to sustainable development and the protection of the environment which are reflected in the SADC Treaty and various other SADC legal instruments, including a number of protocols and the Regional Indicative Strategic Development Plan (RISDP). The commitment of the Member States is also reflected in their participation in the negotiations and ratification of various multilateral environmental agreements, including the UNFCCC, the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Convention on Biological Diversity (UNCBD).

In order to promote sustainable development SADC has also established three main environmental policy goals: (a) protect and improve the health, environment and livelihoods of the people of southern Africa; (b) reserve the natural heritage, biodiversity and life-supporting ecosystems in southern Africa; and (c) support regional economic development on an equitable and sustainable basis for the benefit of present and future generations. The Environment and Sustainable Development Programme under the Food, Agriculture and Natural Resource Directorate has also been established to ensure the sustainable use of the environment and natural resources in the region. The two main interventions in SADC to address the impact of climate change are the Climate Change Adaptation Strategy in the Water Sector (adaptation) and the SADC REDD+ Programme (mitigation).

### **5.1 Legal framework in SADC to address climate change**

#### **a) The SADC Treaty**

According to Article 5(1)(g) of the SADC Treaty one of the key objectives of the regional economic community is to ‘achieve sustainable utilisation of natural resources and effective protection of the environment’. The area of natural resources and the environment is also one of the key areas, identified in Article 21(3)(f) of the treaty, for cooperation among the SADC Member States.

#### **b) SADC protocols**

There are numerous SADC protocols applicable to achieve the SADC objective of sustainable resource utilisation and the protection of the environment. These protocols encompasses a

number of key areas including energy utilisation and development, cooperation to optimise sustainable use of aquatic resources, commonly conserving SADC forests and woodlands, water resource development and management, and the utilisation of natural resources for tourism activities in an environmentally sustainable manner. The applicable protocols are listed below.

- *Protocol on Energy*: Environmentally sound energy development and utilisation in the region should be achieved through cooperation and the development of renewable energy sources, energy efficiency and energy conservation. The protocol also aims to promote the production of renewable energy sources, including windmills, solar thermal and biogas.
- *Protocol on Fisheries*: The protocol aims to promote the responsible and sustainable utilisation of aquatic resources and ecosystems by protecting resources against overexploitation, the transfer of skills and technology, and the exchange of information regarding the state of shared resources among Member States.
- *Protocol on Forestry*: The protocol requires Member States to integrate and cooperate on the challenges facing the conservation and management of trans-boundary forests and woodlands. One of the key objectives of the protocol is the protection of the environment by harmonising sustainable forest management approaches, forest policy, legislation and enforcement. Under the protocol the SADC Support Programme on Reducing Emissions from Deforestation and Forest Degradation (REDD) was developed by the SADC Member States in 2009 with the aim of contributing to the reduction of global GHGs and the sustainable management of SADC forests, reducing poverty, and fostering sustainable development. The priority components of the programme are: (a) intersector and intrasector coordination and policy harmonisation for national REDD programmes; (b) international engagement on REDD and climate change processes; (c) capacity development to manage regional and national REDD programmes; (d) development of systems to monitor forests and carbon; (e) establishment of reference emission and reference levels for REDD; (f) knowledge management for REDD; and (g) implementing sustainable funding mechanisms for REDD.
- *Protocol on Health*: According to Article 23 of this protocol the Member States undertake to cooperate on regional environmental health issues and other concerns,

including toxic waste, waste management, air, land and water pollution, and the degradation of natural resources.

- *Protocol on Mining*: Article 8 of the protocol requires Member States to ensure that balance exists between mineral development and the protection of the environment by conducting environmental impact assessments and sharing information on environmental protection and rehabilitation initiatives.
- *Revised Protocol on Shared Watercourses*: The Revised Protocol repeals and replaces the Protocol on Shared Watercourse Systems (1995) and aims to enhance cooperation among Member States on the issues of sustainable and coordinated management, protection and utilisation of shared watercourses within SADC. The Revised Protocol seeks to facilitate the establishment of agreements and institutions that relate to shared watercourses; advance the sustainable utilisation of shared watercourses; promote coordinated, integrated and environmentally-friendly development of watercourses, and promote the harmonisation of legislation and policies on the development, conservation and protection of shared watercourses. The Revised Protocol also establishes various SADC Institutions on the matter, including the Committee of Water Ministers, the Committee of Water Senior Officials, the Water Sector Coordinating Unit and the Water Resources Technical Committee and Subcommittees.
- *Protocol on Tourism*: The main aim of the protocol is to increase regional tourism trade and the utilisation of natural and cultural resources to achieve sustainable development. However, in order to achieve this objective Member States are required to utilise their resources in an optimal and environmentally sustainable manner.
- *Protocol on Trade*: Although the main focus of the protocol is on the liberalisation of intraregional trade in goods and services, environmental conservation is also incorporated into the protocol through Article 9(h). This article allows Member States, as general exceptions, to implement measures to ensure the conservation of exhaustible natural resources and the environment.
- *Protocol on Transport, Communications and Meteorology*: The protocol aims to promote sustainable development with an emphasis on climate change and the protection of the environment by obliging Member States to strengthen their weather

and climate monitoring systems and meteorology research capacity and improve public and specialised weather services.

- *Protocol on Wildlife Conservation and Law Enforcement*: The protocol aims to develop common approaches to the conservation and sustainable utilisation of wildlife (excluding forestry and fishery resources) resources and ensure the effective enforcement of those national laws governing these resources. The protocol promotes the sustainable use of wildlife resources, harmonisation of legal instruments governing wildlife use and conservation, the enforcement of wildlife laws, facilitation of information exchange, and building national and regional capacity for wildlife management and conservation.

### **c) The Regional Indicative Strategic Development Plan**

The RISDP is a 15-year strategic roadmap to provide direction for the long-term social and economic goals of SADC. The plan was approved in 2003 and effective implementation began in 2005. The RISDP focuses on 12 priority areas for intervention which includes poverty eradication, science and technology, the environment and sustainable development, statistics and human and social development.

The goal of the interventions identified under the priority area of the environment and sustainable development is to develop mechanisms for the implementation of the Multilateral Environmental Agreements the SADC Member States have ratified and to ensure environmental sustainability in accordance with the Millennium Development Goals (MDGs). The areas the RISDP focuses on to ensure the equitable and sustainable use of the environment and natural resources in the region are harmonised policy environments and legal and regulatory frameworks; promoting environmental mainstreaming; regular assessment, monitoring and reporting on environmental conditions and trends in the region; capacity building, information sharing and creating awareness; and ensuring a coordinated regional position in the negotiations and implementation of Multilateral Environmental Agreements.

In 2011 a Desk Assessment of the RISDP was completed to review the progress made in the implementation of the interventions identified within the key priority areas in the RISDP for the period 2005 to 2010. According to the Desk Assessment progress in the area of the

environment and sustainable development in the SADC region since implementation of the RISDP has been made in the following:

- An Environmental Protocol has been drafted, but Mauritius is the only Member State which commented on the draft as of March 2011.
- The Environmental Mainstreaming Manual to facilitate mainstreaming environmental issues into socioeconomic development activities in the region was approved at the end of 2010.
- The first series of full Southern Africa Environment Outlook (SAEO) reports was published in 2008. The reports highlights the challenges associated with SADC's environment and development goals and proposes interventions necessary to achieve the goals identified.
- The SADC Secretariat has facilitated various capacity-building initiatives on biodiversity, wildlife and Multilateral Environmental Agreements in the region.

However, the Desk Assessment also identifies various challenges SADC members have faced in evolving and implementing the environmental and sustainable development interventions in the RISDP. These include the lack of comments by Member States on the Draft Environmental Protocol, the cost of production of the SAEO Reports, lack of financial resources and human capacity and the lack of manpower in the Environmental Programme Unit.

#### **d) The Regional Biodiversity Strategy**

The purpose of the strategy is to provide a framework for regional cooperation in transboundary biodiversity issues and to combine national efforts to conserve and sustainably use biodiversity in the region. According to the strategy, biodiversity, in the context of SADC, can be defined as 'the variation between ecosystems and habitats; the variation between different species; and the genetic variation within individual species. It is a system of interactions between genes, species, and the ecosystems they form, influencing and influenced by ecological and evolutionary processes. The processes help to sustain biological systems and to ensure their productivity. Biodiversity forms the foundation of the vast array of ecosystem products and services that contribute to human well-being and drives the economies of

SADC Member States' (SADC Regional Biodiversity Strategy vision, goal and objectives, 2008:2).

The strategy is built around the value and constraints of biodiversity conservation in the region. The main constraints the strategy aims to address include inadequate biodiversity monitoring and inventory systems, inadequate incentives for biodiversity conservation, weak institutional and legal frameworks, and limited and unsustainable funding for programme implementation. In order to address these constraints various strategies have been formulated. These include the development of comprehensive inventory and monitoring systems for key species, including fauna and flora; enhancing the economic value of biological resources; strengthening institutional and legal implementation frameworks for biodiversity initiatives; and the development of appropriate research and development approaches for initiatives and programmes.

#### **e) SADC Climate Change Adaptation Strategy for Water**

The SADC Climate Change Adaptation Strategy for Water aims to improve climate change resilience in the SADC region through integrated and adapted water management at the regional, national and river basin level. The objective of the strategy is to reduce climate vulnerability and to ensure water resource management systems adapt to climate variability through the implementation of various adaptation measures over the next 20 years. The SADC strategy promotes the adoption of a comprehensive and multidimensional approach to climate change adaptation aligned with an integrated water resource management system.

The adaptation measures are based on three areas of intervention, namely water governance, water management and infrastructure development. Water governance refers to the political, social, economic and administrative systems needed to develop and manage water resources. Infrastructure development is the process of developing, financing, implementing and operating structures for irrigation, drainage, water supply and sanitation, hydro-power and flood management. Water management incorporates planning, management and distribution of water resources for different uses according to water policies and regulations.

The SADC Secretariat is primarily responsible for implementing and coordinating the various objectives and actions under the strategy through the coordination and facilitation of resources under the SADC Regional Strategic Action Plan. Member States are also responsible for implementing the tactical principles of the strategy at national level.

## 5.2 Mitigation and adaptation interventions in SADC Member States

SADC Member States are actively developing and implementing national legal frameworks, policies and strategies to address the effects of climate change through various mitigation and adaptation actions. These include countries like South Africa, Malawi, Mozambique, Mauritius and Zambia. South Africa is currently implementing renewable energy feed-in tariffs as well as a National Climate Change Response Strategy; Mauritius has two approved CDM projects (waste to energy project/biogas and a coal-fired electric power plant); Malawi is implementing the National Framework on Climate Change on Adaptation and Zambia is implementing the National Disaster Management Policy and Wildlife Policy. The table below also shows the priority areas of the SADC Member States as notified in their NAPAs to the UNFCCC.

**Table 6: Priority areas in the NAPAs of SADC Member States**

Countries	Priority areas according to NAPAs
<b>Angola</b>	Promoting Alternative renewable energies for avoided deforestation
	Promoting <i>sustainable land management</i> (SLM) for increased agricultural yields
	Ensuring Basic access to health services and health monitoring
	Studying the vulnerability of fishing activities
	Extending electricity grid to rural areas
	Revising sectoral laws for proactive adaptation
	Creating an early warning system for flooding and storms
	National institutional mechanism for adaptation planning and mainstreaming
	Soil erosion control through organic methods
	Diversifying crops to less climate sensitive cultures
	Technology needs assessment
	Locally available adapted seed varieties
	Climate monitoring and data management system
	Studying the implication of climate change on disease patterns
	Increasing water availability through village-level wells and boreholes
<b>Malawi</b>	Improving community resilience to climate change through sustainable rural livelihoods
	Restoring forests in the Shire River Basin to reduce siltation
	Improving agricultural production under erratic rains
	Improving community storage for food and seed reserves
	Improving preparedness to cope with drought and floods
	Improving climatic monitoring to enhance early warning capabilities

<b>Lesotho</b>	Improving the resilience of livestock production systems
	Promoting sustainable crop-based livelihood systems in the foothills, lowlands and Senqu River Valley
	Capacity building and policy reform to integrate climate change in sectoral development plans
	Improvement of an early warning system
	Securing village water supply for communities in the southern lowlands
	Management and reclamation of degraded and eroded land in the flood-prone areas
	Conservation and rehabilitation of degraded wetlands in the mountain areas
	Improvement of community food security
	Strengthening and stabilising eco-tourism
	Promote wind, solar and biogas energy use
	Improvement of small-scale industries
<b>Mozambique</b>	Strengthening of an early warning system
	Strengthening capacities of agricultural producers to cope with climate change
	Reduction of climate-change impact on coastal zones
	Management of water resources under climate change
<b>Zambia</b>	Adaptation of the effects of drought in the context of climate change in Agro-Ecological Region I of Zambia
	Strengthening of early warning systems to improve services to preparedness and adaptation to climate change
	Promotion of alternatives sources of livelihoods to reduce vulnerability to climate change/variability to communities living around greater metropolitan areas
	Management of critical habitats
	Promotion of natural regeneration of indigenous forests
	Adaptation of land use practices
	Maintenance and provision of water infrastructure to communities to reduce human-wildlife conflict
	Eradication of invasive alien species
	Capacity building for improved environmental health in rural areas
	Climate proofing sanitation in urban areas

Source: UNFCCC (2013a)

A significant number of SADC Member States have submitted projects to the UNFCCC under the CDM mechanism. These projects range from hydro-power plants, waste heat recovery, solar PV projects and wind-power projects. The table below provides an example of the projects which have been notified to the UNFCCC by SADC Member States.

**Table 7: CDM projects notified to the UNFCCC**

Countries	CDM projects
Angola	Liapeca hydro-power plant
	Neuerth Angola lead recycling project
	Waste heat recovery at Nova Cimongola Cement Plant
Botswana	Solar thermal power plan
Lesotho	Lesotho Highlands power projects
Madagascar	Forahantsana hydro-power plant
Malawi	Kayeleka mine steam turbine project
Mozambique	Gas-fired power plant at Ressano Garcia
Namibia	60 MW wind power energy project at Walvis Bay
South Africa	Lasedi solar PV
Swaziland	Energy from wood waste
Zimbabwe	Great Zimbabwe hydro

Source: UNFCCC (2013b)

## 6. COMESA-EAC-SADC TFTA

In order to address the issues of climate change in the region the EAC, COMESA and SADC Member States signed the Tripartite Agreement for the Implementation of the Programme on Climate Change Adaptation and Mitigation in Eastern and Southern Africa at the 19th African Union Summit of Heads of State and Government in Ethiopia on 15 July 2012. The signing of this agreement allows for the inclusion of climate-change issues as one of the areas of cooperation under the Tripartite Negotiations Framework. The secretariats of the three RECs are responsible for implementing the joint programme which is funded by the European Union Commission, Ministry of Foreign Affairs of Norway and the United Kingdom Department for International Development (DFID).

### 6.1 Legal framework in the TFTA to address climate change

#### a) Tripartite Agreement for the Implementation of the Programme on Climate Change Adaptation and Mitigation in Eastern and Southern Africa

The three RECs jointly developed the five-year programme (2010-2016) focused on climate-change adaptation and mitigation in the COMESA-EAC-SADC region with the key objective of addressing the impacts of climate change through adaptation and mitigation aimed at socioeconomic resilience through Climate-Smart Agriculture (CSA). CSA is defined as

‘agriculture that sustainably increases productivity, resilience (adaptation), reduces or removes GHGs (mitigation), and enhances achievement of national food security and development goals’ (FAO, 2010).

The goal of the programme is to attract new and increase current investment in climate-resilient and carbon-efficient agriculture, with its linkages to forestry, land-use and energy practices by 2016. To reach this goal the RECs have identified seven specific objectives to attain through the programme: (a) mitigation with carbon trading benefits; (b) inclusion of climate-change issues in nation planning; (c) increasing access to adaptation funds and other climate-change financing sources and mechanisms; (d) enhancing the adoption of CSA in the region; (e) strengthening research and training capacity; (f) implementation of climate vulnerability assessments and analysis; and (g) establishment of a regional facility to support national investment in CSA programmes. Some of the expected outcomes associated with the successful implementation of the programme include the following:

- Enhanced human and institutional capacity in the secretariats of the three RECs
- Development of CSA on a national and regional level
- Creation of supporting infrastructure and services needed for conservation agriculture
- Implementing at least 14 investment projects in conservation agriculture
- Competitive research on climate-change-related issues
- Developing knowledge centres and the international transfer of knowledge
- Widely adopted mitigation solutions and technologies
- Implementing carbon trading benefiting the COMESA-EAC-SADC region
- Adopting new and increased current investments in mitigation and adaptation programmes.

The responsibility of the programme is in the hands of the Council of Ministers through existing Tripartite reporting structures, while the Climate Change Unit of COMESA and Programme Coordination Units in the EAC and SADC are responsible for the management of the programme. One of the key components of the programme is the monitoring and evaluation of all its activities and actions. The COMESA Climate Change Unit (Monitoring and Evaluation Division and Department) is the body responsible for monitoring and evaluating all aspects of the implementation and functioning of the programme.

## 6.2 Mitigation and adaption interventions in the Tripartite region

The Tripartite Climate Change Programme identifies a number of activities under each specific objective to be implemented over the next five years. However, the majority of the interventions are focused on capacity-building initiatives throughout the 26 member countries and include:

- Facilitating the design of climate-smart agriculture investment frameworks
- Supporting technical centres for climate-smart agriculture
- Supporting research activities in bio-carbon and other mitigation monitoring methodologies
- Demand-and-supply analysis of crop and agro-forestry seeds
- Supporting Member States to develop regional and national climate mitigation strategies
- Supporting Member States in developing their NAPAs
- Establishing a regional carbon fund.

To date, the following has been achieved within the Tripartite Programme (EAFF, 2013):

- Support has been provided to Member State to participate on negotiations on the Africa Position on Climate Change.
- Support of the participating delegates to the UNFCCC Conference of the Parties (COP).
- Sub-grantee agreements have been signed with participating partners to upscale the climate-smart agriculture initiatives.
- Capacity building on climate finance mobilisation has taken place in 22 of the 26 tripartite countries.

## 7. Conclusion

Climate change can result in a variety of environmental challenges faced by African countries which can hamper the economic growth and socioeconomic and industrial development in developing and least developed countries in the region. Not only are agriculture, tourism and

fisheries among the largest sources of employment, economic growth and exports for many countries on the African continent, but they are also the sectors which are the most vulnerable to climate change and other environmental risks.

One of the main reasons for Africa's vulnerability to the effects of climate change and climate variability is its low adaptive capacity coupled with developmental challenges in the majority of African countries. However, most of the countries in eastern and southern Africa are currently aiming to address the issue of low adaptive capacity by actively pursuing the development and implementation of regional and national policy frameworks, regulations, strategies and adaptation interventions to address the current and potential impact of climate change on their economies. These interventions include a regional policy, strategy and master plan on climate change in the EAC, a regional initiative to address climate change issues in COMESA, and regional strategies on biodiversity preservation and water management in SADC.

The majority of the Member States of the three RECs have also committed to address climate-change impacts through developing and implementing national climate-change policies and strategies, recognising priority areas for national mitigation and adaptation interventions, and identifying domestic emission reduction projects under the Clean Development Mechanism. The three RECs have also reaffirmed their commitment to address the challenges of climate change through the inclusion of climate-change issues as one of the areas for cooperation under the Tripartite Negotiations Framework.

Although these national and regional measures are a step in the right direction to address the current and future effects of climate change on the economies of the countries in eastern and southern Africa, various practical challenges are hampering the full utilisation of these interventions for countries to effectively adapt to and mitigate the impact of climate change. These include the lack of institutional, technical and financial capacity; bureaucratic delays in adopting and implementing policies and strategies; and the lack of awareness of the implications of climate change for future economic growth and development. To ensure the success of adaptation and mitigation actions and interventions to effectively limit the impact of climate change on the economies of countries in eastern and southern Africa these practical challenges need to be addressed on the national, regional and multilateral level.

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## **Legal texts**

### ***East African Community (EAC)***

EAC Treaty

EAC Climate Change Policy

EAC Climate Change Strategy

EAC Climate Change Master Plan (2011-2031)

Protocol for Sustainable Development of Lake Victoria Basin

Protocol on Environment and Natural Resource Management

Protocol on the Establishment of the EAC Common Market

Fourth+ EAC Development Strategy (2011/2012-2015/2016)

***Common Market for Eastern and Southern Africa (COMESA)***

COMESA Treaty

COMESA Climate Initiative

***Southern African Development Community (SADC)***

SADC Treaty

Protocol on Energy

Protocol on Fisheries

Protocol on Forestry

Protocol on Health

Protocol on Mining

Protocol on Tourism

Protocol on Trade

Protocol on Transport, Communication and Meteorology

Protocol on Wildlife Conservation and Law Enforcement

Revised Protocol on Shared Watercourses

Regional Indicative Strategic Development Plan (RISDP)

SADC Support Programme on Reducing Emissions from Deforestation and Forest Degradation (REDD)

Regional Biodiversity Strategy

Climate Change Adaptation in SADC: A strategy for the Water Sector

***Tripartite Free Trade Area (TFTA)***

Implementation Agreement between COMESA, the EAC and SADC for implementation of the Programme on Climate Change Adaptation and Mitigation in the COMESA-EAC-SADC Region

Programme on Climate Change Adaptation and Mitigation in the Eastern and Southern Africa (COMESA-EAC-SADC) Region