



SBSTA SUBMISSION BY COMESA ON ISSUES RELATING TO AGRICULTURE

This submission is made by the Common Market for Eastern and Southern Africa (COMESA) in response to the SBSTA 38 conclusions that invited Parties to submit views on the current state of scientific knowledge on how to enhance the adaptation of agriculture to climate change impacts while promoting rural development, sustainable development and productivity of agricultural systems and food security in all countries, particularly in developing countriestaking into account the diversity of agricultural systems and the differences in scale as well as possible adaptation co-benefits (Document FCCC/SBSTA/2013/L.20 para 2).

Recognizing that agriculture holds the key to Africa's sustainable and rural development, a top priority is how to feed her projected 1.5 billion people by 2050. This task is formidable given that more than one-third of the world's poor and malnourished people live in Africa and close to 80% small scale farmers directly or indirectly relying on rain-fed agriculture as a source of livelihood. Africa's capacity to produce food is likely to be challenged by the combined effects of resource degradation and increasing adverse impacts climate variability and change. Thus, ensuring food security in this region requires urgent actions to improve the productivity and climate resilience of agriculture and to enhance the food value chains to ensure adequate and affordable food supplies.

From the global perspective, it is appreciated that due to uncertainties in climate projections and other factors, including carbon dioxide fertilization, socio-economic development pathways and the differential adaptive capacities of countries in the region, projections of the impacts of climate change on agriculture are not spatially explicit and depend heavily on scenario assumptions that fail to mimic the future climate conditions. Various studies have been conducted on the impacts of climate change on agriculture in Africa amidst several limitations. The major constraints could be attributed to the gaps in the scientific knowledge of climate change impacts on agriculture that have hitherto not been modeled due to data limitations. For example, there is limited understanding of: (1) direct impact of climate change on pastoralism and African agricultural and livestock farming systems; (2) the prevalence and impact of pests and diseases in changing climate; (3) the socio-economic impact of extreme weather and climate events as current GCM scenarios do not account for such events and yet they are increasingly becoming common in Africa; and (4) what adaptations would be efficient for either African farmer or African governments. This is further constrained by inadequate data, technical and institutional capacities that hinder effective application of climate modeling to inform national development planning and decision making at different levels.

In light of the foregoing, the Africa Group has identified three priority areas that the international community through SBSTA could support Africa so that it could have the most

current state of knowledge that would enhance Africa's adaptive capacity to address climate change impacts and build climate resilient agriculture sector. These are:

- 1. Capacity building on the development and application of tools and methods for climate monitoring, modeling, uncertainty analysis, downscaling, early warning and updatability for climate change:** Africa is vulnerable to several climate change related challenges and impacts that are tied closely to the region's geographical diversity, economy and population patterns. Since there is paucity of accurate historical climate and agricultural data in Africa, there is need to study in detail the indicators of exposure, sensitivity and adaptive capacity. In addition, it is imperative for the international community to put in place a programme of work on capacity building on development and application of various tools and methods, particularly for climate monitoring, modeling, downscaling and early warning for developing countries, especially Africa with a view to building the requisite technical capacity and strengthening institutional infrastructure.
- 2. Assessment, development and identification of research and technological options and practices for agricultural adaptation and adaptation co-benefits, including understanding positive impacts and monitoring systems for adaptation:** The motivation for research and technological options is the need to develop innovations tailored to the local scale that directly and indirectly enhance adaptive capacity of Africa's agriculture in a changing climate. Enhanced research, including competitive research funding and better-managed programs is critical for innovation to improve agricultural productivity to alleviate global poverty and hunger.
- 3. Identification of approaches to enhance integration of indigenous and science-based knowledge:** Indigenous knowledge (IK) plays a critical role in decision making by Africa's small scale farmers in their quest to manage climate related risks including extreme weather events and cope with the impacts. Such coping strategies and indigenous knowledge vary by sub-region or country and to a great extent are localized. On the other hand, science-based knowledge systems such as weather forecasting, though useful, need downscaling for them to be meaningfully applied at the local scale. Therefore, to be more effective in dealing with the increasing challenges of climate change impacts in Africa, it is imperative to integrate indigenous knowledge and science-based knowledge systems.

Finally, we note that it would be helpful for SBSTA to welcome the participation of the IPCC at the workshop as it will have released the Working Group I report, "The Physical Science Basis" of its Fifth Assessment Report (AR5).