

**SUBMISSION BY THE REPUBLIC OF GABON ON BEHALF OF THE AFRICAN
GROUP OF NEGOTIATORS (AGN)**

Joint SBSTA/SBI agenda items 2e & 2f

for Koronivia Joint Work on Agriculture (KJWA)

Preamble

Agriculture in Africa is driven by smallholder farmers under predominantly rain-fed conditions with low external input use due to underdeveloped infrastructure, markets and input supply systems and disproportionately affected by impacts of climate change.

Overall, the agricultural sector contributes for more than 20% of the continent's Gross Domestic Product (GDP) and supports the livelihoods of the majority of the population. African agriculture employs about 50% of the work force creating most of the jobs in Africa; 40% of these workers are women.

Africa is highly vulnerable to climate change, not only because of its exposure to climate change drivers, but also because many African communities have low capacity to respond or adapt to the impacts of climate change. Warming trends are already evident across the continent. The IPCC reports indicate that it is likely that the change in the continent's average annual temperature will exceed +2°C by 2100. Also, changes in precipitation patterns are also of concern: even if precipitation amounts remain constant despite temperatures, existing water stress will be amplified, putting further pressure on agricultural systems and the livelihoods of the majority of the population. The combination of climatic and non-climatic determinants and stressors will exacerbate the vulnerability of African agricultural systems to climate change, but the effects will not be universally felt. Already there is evidence that climate change will affect farmers differently depending on several factors. Different agricultural systems will also be affected in different ways, and adaptation to these impacts will need to be context specific.

About 80% of the Nationally Determined Contributions (NDCs) submitted by African countries have identified agriculture as one of the priority areas, with some countries having developed National Agricultural Action Plans (AgriNAPs). With the continent having the highest population growth rate, rapid urbanization trends and rising GDP in many countries, which are known to drive changing food consumption patterns, African agricultural systems

will need to become resilient and adapt to meet growing demand-to maintain food and nutrition security.

In accordance with the roadmap of the Koronivia Joint Work on Agriculture (KJWA), the African Group submits its views and proposals on topics 2e and 2f as follows:

(a) KJWA topic 2e: Improved livestock management systems, including agro-pastoral and other production systems

The livestock sector makes significant contributions to African countries' economies' and food and nutrition for most communities. It is one of the major land-use practices and a key source of livelihood for over 270 million people and employs over 60% of Africa's rural population. The sector accounts for about 30% of the gross value of agricultural production in Africa, of which 92% comes from the production of beef cattle, dairy cattle, goats, sheep and chicken.

The livestock sector, however, is highly vulnerable to the adverse effects of climate change, a situation that is expected to worsen under the projected rapid and significant increase in extreme weather events and degradation and grazing resources, especially in the pastoral systems. This will adversely affect livelihoods, household incomes and ultimately increase the vulnerability of millions of households across the continent. Future climate projections have shown that there will be a decline in quantity and quality of feeds, increased frequencies of zoonotic diseases and heat stress. This will be exacerbated by increasing demands for livestock products driven by human population growth, increasing per capita income, and urbanization. This calls for support to the livestock production systems and practices so that they are not only responsive to the increasing demands but are also climate resilient.

In Africa, livestock production depends on natural resources, primarily on pasture and water. Climate change, therefore, affects livestock production directly through impacts on livestock performance, and indirectly through impacts on the environment, society and economy experienced on forage yield, livestock productivity, ecological processes and farm-level profitability. Climate change in the livestock sector will be recognized by changes in the quality and quantity of vegetation, availability of fodder and water and an increase in climate-related diseases. It is therefore important to consider the interactions between different parameters in considering the impacts of climate change and the livestock sector.

Heat stress: Livestock are more tolerant than crops against extreme weather events such as heat and drought, but it is not certain that elevated mean temperatures and increased frequency of extreme heat stress can be tolerated by existing genotypes of livestock in Africa. Extreme temperature increase induces reduced growth and reproduction rates and higher mortality. Most intensive dairy production systems in eastern and southern Africa exposed to heat and drought will lead to reduce feed intake and thus milk production and in the tropics lead to energy deficits and decreased cow fertility, fitness and longevity.

Water availability and use Water supply: Water use in the livestock sector include water used at a farm level for drinking, growing of feed crops, and other services and product processing. Climate change will also affect groundwater recharge rates, and the increased reliance on groundwater for both the cattle sector and for urban water supply could lead to unsustainable use of water resources. Less precipitation may cause more frequent and severe droughts, destructive bush fires and increased desertification. Livestock water consumption will increase with both temperature and drought.

Climate change and diseases: Increasing temperature and fluctuating water supply cause changes in the pattern of livestock disease according to the ecosystem, the type of land use, disease-specific transmission dynamics, the susceptibility of the populations at risk and sensitivity of the pathogen to temperature and humidity. Higher temperatures may increase the rate of development of pathogens or parasites and changes in rainfall and temperature regimes may affect both the distribution and the abundance of livestock disease vectors.

Droughts may cause overgrazing, mass migration and concentration around pastures, and water resource, leading to increased infections of diseases such as Foot and Mouth Disease and Peste of Small Ruminants.

Impacts of climate change on rangeland livestock systems: In arid and semi-arid areas, livestock production has the greatest potential to meet the subsistence needs of humans, maintain ecosystem health and minimize the negative global impacts of climate change. However, many rangeland areas in these regions are experiencing high population growth and resource competition, both of which force expansion of grazing into areas of marginal productivity, placing extreme pressure on an already stressed ecosystem. Development approaches have undermined adaptive capacity of many pastoralists rendering them highly vulnerable to climate change. It is therefore important to rebuild this capacity by restoring governance over natural resources and to build human capital (for example through education)

that will enable pastoralists to make informed choices about the adaptation strategies that are at their disposal.

In this regard, the African Group is of the view that the following issues be considered under 2f::

- i. Improving and conserving African local communities' livestock breeds and production systems to build climate resilience.
- ii. Developing a methodological framework for practical livestock data collection and analysis for monitoring effects of climate change on different livestock production systems, different socioeconomic and climate scenarios and their implications on the productivity of different livestock systems, in particular pastoral and agro-pastoral systems.
- iii. Enhancing water and pasture management technologies and approaches to improve the efficiency of livestock production and provide safety nets for people in pastoral and agro-pastoral production systems.
- iv. Promoting research on and dissemination of technologies and practices that increase the productivity of livestock systems through integrated systems and to combat pests and diseases affecting livestock production, including zoonoses.
- v. Financing and investing in climate actions and technical capacities that support innovations and technology diffusion in the different livestock production systems and value chain.

(b) KJWA topic 2f: Socio-economic and food security dimensions of climate change in the agricultural sector

Agriculture is the backbone of many African economies, with significant contribution to food security and nutrition. It is the main source of livelihood for a majority of rural households. The impact of socioeconomic factors such as population and economic growth interacting with climate change will considerably reduce farmer incomes, investments and their expenditure, the rural poor being the most affected. This is likely to have implications on the achievement of SDGs, particularly those relating to poverty, land, food, water and energy security and health.

Climate change in Africa affects all four dimensions of food security including food availability, access, utilization and stability. In addition to its effects on agricultural production, climate change has ripple effects on food value chains and systems, especially in Africa where storage, marketing, and retail systems are underdeveloped with substantial food waste and losses. Africa also faces water security constraints with the highest intra-annual variability of water supply occurring in sub-Saharan Africa.

Limited participation of African women & youth in agriculture and natural resource management is due to knowledge gaps, lack of capital and poor access to arable land and other inputs is a threat to food security in the continent. Improving their socioeconomic status is therefore critical to building resilient livelihoods among the most vulnerable and poor especially women and youth, as well as enhancing nutrition, health and education levels.

In this regard, the African Group is of the view that the following issues be considered under 2f:

- i. Mainstreaming socioeconomic issues in both climate adaptation and mitigation actions.
- ii. Enhancing the application of climate information and early warning systems to help protect the most vulnerable groups, especially women and youth, and improve institutional responses to slow-on set emergencies.
- iii. Enhancing climate risk assessment and management tools, including crop and livestock insurance and other safety nets.
- iv. Supporting research on the effects of climate change on nutrient composition and the implications for health and nutrition.
- v. Increase innovative investment opportunities for green jobs along agricultural value chains to accelerate African women & youth involvement in agriculture and agri-business.
- vi. Financing and investing in climate actions that address socio-economic and food security dimensions of climate change.