

OP-ED: MAINSTREAMING CLIMATE SMART AGRICULTURAL PRACTICES INTO POLICIES AND PROGRAMMES

With over 50% of the population living below the poverty line, Zambia's vulnerable communities do not have sufficient capacity to cope with, or adapt to, the impacts of extreme weather events. **Zambia's climate has been highly variable and over the last few decades characterized by a series of climatic extremes, e.g. droughts, seasonal floods and flash floods, extreme temperatures and dry spells, many of these with increased frequency, intensity and magnitude.** Evidence indicates that Zambia has contributed to climate change by her engagement in massive deforestation. Forests are important in absorbing carbon dioxide, which is a product of fossil fuel combustion and has been responsible for global climate change. **Currently, the country loses about 79,000 to 150,000 hectares of forests per year.**

Therefore, there has been need to develop adaptation and mitigative measures to address climate change especially in the agricultural sector. Research indicates that about 8.8% of smallholder households have adopted Conservation Agriculture (CA) as a climate smart agricultural technique in the 2013/14 farming season. **The global community and the Zambian Government in particular, have developed strategies and policies that present the bare minimum number of activities that must be implemented with urgency in order to enable vulnerable communities cope with the adverse effects of climate change.**

The following are some of the policy interventions by Government and how they have attempted to mainstream Climate Smart Agricultural (CSA) practices:

Seventh National Development Plan (2017-2021); this policy document emphasizes adoption of agricultural environment-friendly practices; climate smart and organic techniques such as conservation farming, less use of chemical fertilizer and creating public awareness on the adverse effects of climate change.

National Climate Change Policy (2016); the overall objective of the policy is to provide a framework for coordinating climate change programmes in order to ensure climate resilient and low carbon development pathways for sustainable development towards the attainment of Zambia's Vision 2030. The policy advocates for the promotion and adoption of appropriate Climate Smart Agricultural (CSA) technologies for different agro-ecological zones as well as the promotion of landscape-based livelihood diversification.

National Agriculture Policy (2016); One of key objectives of the policy is to mainstream all issues of the environment and climate change into the agricultural sector. To promote adoption of CSA's, the policy proposes that

farmers accessing the Government - supported Farmer Input Support Program (FISP) are required to practice conservation farming as a prerequisite for access to inputs. The policy also recognizes and promotes the need for CSA practices for livestock and the integration of agroforestry into crop-livestock production systems; and improved housing and feeding practices.

National Energy Policy, (2008); The National Energy Policy seeks to promote cross sectoral linkages between the energy sector and other key social and economic sectors such as agriculture. The policy promotes sustainable agriculture by emphasizing the development of biomass energy technologies, and providing agricultural support to farmers wishing to grow energy crops such as Jatropha, sugarcane and sweet sorghum.

National Agricultural Advisory and Extension Strategy (NAAES) 2016-2020; the strategy looks at plans to strengthen agricultural extension service delivery by advocating for the improvement of the efficiency and effectiveness of the existing extension staff, and promoting private extension service provision to supplement the public extension system. The strategy also looks at measures aimed at **reducing greenhouse gases by promoting forestation/ reforestation, mulching techniques, organic production and utilization of waste materials/ bio-energy.**

The Zambia's National Climate Change Response Strategy (2010); The strategy took a sectoral approach to addressing climate change adaptation and mitigation, **focusing on investments in sustainable land use (agriculture and forestry sectors), early warning, and agro-climatic information.** The strategy was pivotal in advocating for the development of an appropriate climate change governance (policy, legal and institutional) framework including mainstreaming climate change in all the key sectors of the economy.

National Policy on the Environment (2009), serves to enhance efforts by Government institutions to protect and safeguard the natural resources and environment and ultimately improve public health in the country. As a linkage to the agricultural sector, the policy promotes environmentally sound agricultural development by ensuring sustainable crop and livestock production through ecologically appropriate production and management techniques, and appropriate legal and institutional framework for sustainable environmental management

National Strategy for Reducing Emissions from Deforestation and Forest Degradation (REDD+) 2015. The Strategy advocates for interventions that address the need for agricultural intensification leading to reduced

frequency of clearance of forests for increased agricultural productivity through collaboration and coordination between the Forestry Department and the Ministry of Agriculture leading to staff being trained in farming systems diagnosis focusing on a selection of areas for specific agricultural intensification practices.

The National Agriculture Investment Plan NAIP (2014-2018); the policy promotes sustainable utilization of natural resources through the Sustainable Utilization of Natural Resources Programme. One of the programme objectives of the Sustainable Utilization of Natural Resources programme is to create and enhance the sustainable use and maintenance of the existing agricultural resource base to be able to efficiently support vibrant and resilient agricultural production systems. However, there is a need to review the performance NAIP before developing the successor programme which is long overdue, since NAIP came to an end in 2018.

National Forestry Policy (2009); the policy advocates for the promotion of a land-use system that ensures the protection of headwaters, river basins and terrestrial resources; promotes sufficient and sustainable allocation of land between major competing uses and sectors such as agriculture, energy and mining. The policy further promotes the development of a management system that enhance the functional role of forestry in maintaining ecological and climatic functions.

RECOMMENDATIONS

In order to encourage adoption of Climate Smart Agriculture (CSA), due consideration needs to be given to the following recommendations;

- The Ministry of Agriculture (MOA) and other stakeholders need to upscale field schools among small scale farmers to effectively promote the adoption of CSAs.
- MOA needs to adequately package Zambia Metrological Department (ZMD) information and distribute it to those farmers that would be the most affected by crop failure and there is need to narrow the communication gap between the ZMD and District authorities at different levels.
- MOA needs to employ more extension staff to meet the recommended ratio of 400:1 farmer to one extension officer. Extension officers play a key role in training farmers on CSA practices and in building resilience against climate change effects.
- Successful adoption of CSA practices such as Conservation Agriculture (CA) having being linked

to land rights. In this vein, the Government should address the issue of land rights by improving the land tilting procedures and waiting time.

- In all sustainable land approaches in the Agriculture sector, Government should use the landscape approach that takes into account the multiple functions of land and other ecosystems. The approach ensures that the best possible balance is achieved among a range of **different development objectives, including climate change mitigation and adaptation, environmental and biodiversity conservation, enhanced economic productivity, and improved livelihoods.**
- We urge Government to extend carbon tax to all other sectors that use fossil fuels as opposed to motor vehicle only. Carbon tax can serve both purposes of mitigation and adaptation. The resources realized from the tax can be utilized to promote Climate Smart Agriculture (CSA) practices and provision of relief food to families worst hit by the impacts of climate change. Carbon tax is a Pigovian tax since it returns the cost of global warming to their producers and can consequently reduce carbon emissions as a mitigative measure. Zambia can learn from South Africa who in May 2019 enacted a long-delayed carbon tax into law as one of the continent's worst polluters.



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