



MAINSTREAMING OF CLIMATE SMART AGRICULTURE IN ZAMBIA'S POLICIES

Zambia's climate has been highly variable and over the last few decades characterized by a series of climatic extremes, e.g. droughts, seasonal and flash floods, extreme temperatures and dry spells, whose frequency, intensity and magnitude has increased. For the population living below the poverty line, there is insufficient capacity to cope with, or adapt to, the impacts of extreme weather events.

The majority of the population in Zambia depend on agriculture for their livelihoods. The majority of this population is rural-based at 58.2 %. Agriculture is the main economic activity engaged in by 58.5 % of households which can further be broken down as 89.4 % of households in rural areas and 17.9 % in urban areas. Therefore, there is need to develop adaptation and mitigative measures to address climate change.

According to the Living Conditions Monitoring Survey of 2015, poverty levels in Zambia are high and account for 54.4 % of Zambia's population; with rural poverty worse at 76.6 % compared to 23.4 % in urban areas. There is insufficient capacity to cope with, or adapt to, the impacts of extreme weather events.



76.6%
in Rural Area

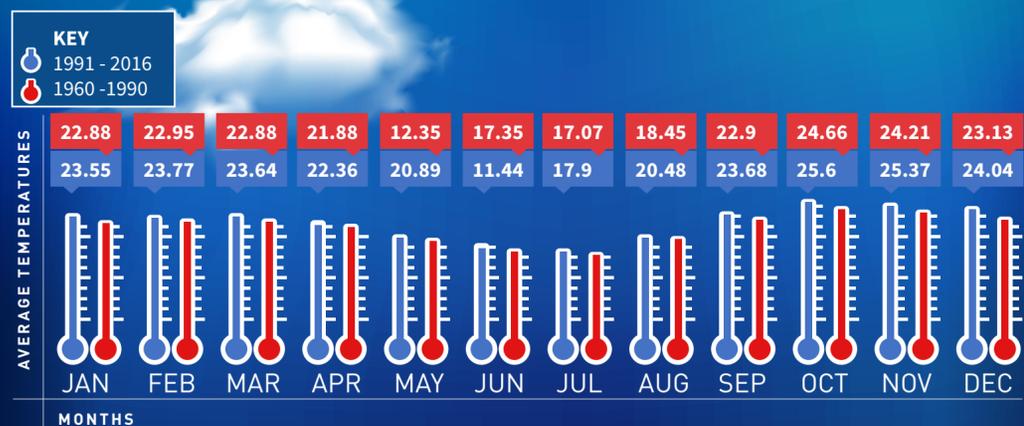
23.4%
in Urban Area

TEMPERATURES

Data from the World Bank Group Climate Knowledge Portal indicates that temperatures have been on the rise while precipitation (rainfall) has dropped. Mean annual temperature has increased by 1.3°C since 1960, at an average rate of 0.29°C per decade. Daily temperature observations show significantly increasing trends in the frequency of hot days and nights in all seasons.

Figure 1: Average monthly temperatures

Figure 1 shows that the average temperature for each month has increased when comparing periods 1960-1990 and 1991-2016

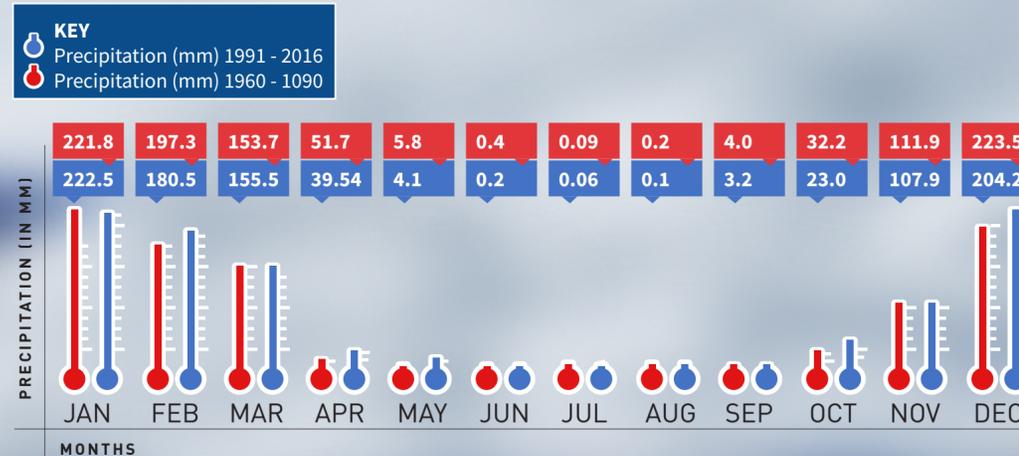


ANNUAL RAINFALL

Average annual rainfall over Zambia has decreased by an average rate of 1.9mm per month per decade since 1960 primarily due to rainfall decreases from December to February (World Bank Group, Climate Knowledge Portal)

Figure 2: Average Annual Precipitation

The average monthly precipitation for the months of September, October, November, December and February had reduced when comparing periods 1960-1990 and 1991-2016.



RECOMMENDATIONS

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

- The Ministry of Agriculture (MOA) and other stakeholders need to upscale field visits among small scale farmers to effectively promote the adoption of Climate Smart Agriculture (CSA) practices.
- MOA is urged to adequately package Zambia Meteorological Department (ZMD) information and distribute it to farmers that would be the most affected by crop failure.
- Government through the Ministry of Finance (MOF) and MOA needs to further provide tax incentives on all farming inputs that enhance CSA approaches.
- MOA needs to employ more extension staff to meet the recommended ratio of 400:1 (four hundred farmers to one extension officer). Extension officers play a key role in training farmers on CSA practices.
- Successful adoption of CSA practices such as Conservation Farming (CA) having been linked to land rights. In this vein the Government is urged to address the issue of land rights by improving the land titling procedure and waiting time.
- In all sustainable land approaches in the Agriculture sector, Government is urged to 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.

MAINSTREAMING OF CLIMATE SMART AGRICULTURE IN POLICY DOCUMENTS



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 fertilizers 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 agriculture sector. To promote adoption of CSA practices, 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.

Impact of Climate Change on Zambia's GDP

- Climate Change variation has led to reduced hydro power generation.
- The country is forced to import power.
- By November 2019, ZESCO had increased the extent of load shedding to fifteen (15) hours per day.
- The economic impact has been severe, with key economic sectors such as mining, manufacturing and agricultural sectors scaling down production and employment.
- One estimate of the economy-wide effects of load shedding indicates that economic losses were equivalent to around 18.8% of annual GDP in 2014/15 of which 1.6 % was loss to the Agricultural GDP.

Impact of Climate Change on Agriculture

- An increase in the incidence of hunger due to destruction of crops.
- Reduction in cultivable land and increased soil erosion.
- The production of staple crops has been dropping e.g. Crop Forecast for the 2018/19 Agriculture Season where Maize production declined from 2,394,907 metric tonnes in 2017/18 farming season to 2,004,389 metric tonnes in 2018/19 accounting for 16% decline



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