



CLIMATE CHANGE IN SOUTHERN AFRICA



World Food
Programme

SAVING
LIVES
CHANGING
LIVES

ALLIANCE



June 2021

OVERVIEW FROM REGIONAL DIRECTOR



Lola Castro

The WFP Regional Bureau in Southern Africa is proud to present our first climate change position paper to all our stakeholders. This is a critical moment that we take stock of and discuss the global challenge of climate change and its impact on our region. As we all know, climate change is having a significant growing impact in Southern Africa. It is hitting the most vulnerable the hardest. The recurrent impacts of climate change are contributing to food insecurity and displacing populations. Increasingly, water resources are becoming scarce due to rainfall variability and droughts. Climate change acts as a risk multiplier for development, making the root causes of existing challenges much worse. In addition, COVID-19 has exacerbated matters in some contexts and makes the situation very difficult. Amidst existing inequalities in the region, which are some of the highest globally, we see how these climatic factors amplify the existing social tensions.

In recent years, we have seen prolonged droughts, such as in Madagascar or Angola. The devastating floods that have been taking place due to cyclones and locusts in Namibia and Zambia have affected the food security and nutrition of millions of people in this region.

The 2021 Global Report on Food Crisis found that the COVID-19 pandemic, protracted conflicts and climate change - the three C's - have created an untenable situation for almost 155 million people, and probably more. This year, the number of hungry will reach a five-year high. Unfortunately, the worst is yet to come. According to a recent report by the Norwegian Refugee Council, climate disasters in Southern Africa in 2020 have displaced almost half a million people. In 2019, we had millions displaced due to climate disasters.

We all also know that climate change does not only become a problem for food security and food systems as a whole, but also it has enormous implications in making development outcomes reachable and attaining, and impossible for the countries to reduce the problems related to root causes of poverty and food insecurity. Thus, the SDGs are farther ahead to reach with climate change impact as we see every day.

I am grateful to the International Center for Tropical Agriculture (CIAT) – CGIAR and their scientists for their contribution to this position paper to underpin scientific observations and future

climate projections to help our work in the region.

In the future, the development community in Southern Africa needs to think differently, and we need to think far ahead and respond to the situation of tomorrow, today. We need to adapt to climate change on a massive scale and provide innovative solutions and technologies to match the needs that are out there. We must invest in long programming to address this long-term challenge. This year, we see between 40 to 51 million people who are food insecure in the region. This food insecurity is mostly related to climate change and economic factors related to COVID-19.

I hope that as we face these increasing adverse conditions, we are responding with dedicated efforts to improve resilience of livelihoods and work with governments and all partners to increase the capacities to adapt to the effects of climate change. But we know and acknowledge that we cannot do all this by ourselves - that we need all the stakeholders to come with the same idea to the table. I am confident that we can take climate action today to support all our national partners and rural and urban communities of Southern Africa.

Lola Castro
Regional Director
**WFP Regional Bureau in
Southern Africa**



CLIMATE CHANGE IN SOUTHERN AFRICA

A position Paper for the World Food Programme in the region

Based on the technical paper Ramirez-Villegas J, Ghosh A, Craparo A, Thornton P, Manvatkar R, Bogart B, Läderach P. 2021. Climate change and its impacts in Southern Africa: A synthesis of existing evidence in support of the World Food Programme's position paper. CCAFS Working paper No. 358. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

Regional Leaders spoke during the online climate change symposium organized by WFP Regional Bureau in Southern Africa on May 25, 2021:

“

Climate change has also emerged as undoubtedly one of the major developmental challenges of our time. There is increased scientific knowledge and evidence to illustrate the current potential future social, economic and environmental impacts of climate change. Although the SADC regions contribution to increasing concentrations of greenhouse gases is small, in proportion compared to other regions, the region is highly vulnerable to several impacts arising from climate change. These challenges are further exacerbated by the pressure and the pressing socio-economic challenges and the low adaptive capacity of the region. The impacts of climate change are and will continue to impede on regional economic growth and development prospects, including its effort to reduce poverty, achieve food security and attain Sustainable Development Goals.” – Dr. Stergomena Tax, Executive Secretary, Southern African Development Community (SADC)

Regional Leaders spoke during the online climate change symposium organized by WFP Regional Bureau in Southern Africa on May 25, 2021:

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A lot has been said about the relationship between a pandemic and climate change. What I would like to say simply is both are in many ways, quite similar, because they are manmade catastrophes, they are manmade cataclysms. The speed with which we react to both of them is dramatically different, of course, because the pandemic threatens not only lives but also the livelihoods, in a more drastic and more clear way than climate change. But climate change, at the end of the day, might even be more dangerous to the survival of human civilization. And I think we can learn a lot from the reaction to the pandemic, in bringing about change to the climate, to the looming climate catastrophe that that we have to fight. Even if we managed to reach the goals set out in the Paris Agreement five years ago on limiting the rise of global average temperatures, we will have to adapt to the impact of irreversible climate change, at least for the foreseeable future, for the next generations or so. Successful climate strategies must therefore simultaneously pursue both mitigation of greenhouse gas emissions and adaptation to the impact of climate change that we will undoubtedly face. Mitigation and adaptation policies must go hand in hand and must be properly coordinated.”

- H.E. Martin Schäfer, German Ambassador to South Africa (Eswatini, Lesotho, South Africa)

Regional Leaders spoke during the online climate change symposium organized by WFP Regional Bureau in Southern Africa on May 25, 2021:

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It is critical, if we're to avert an even greater humanitarian emergency, that action is taken now. And not just a small amount of action, but a massive increase in efforts to mitigate and adapt to climate change, and to reduce the risk of disasters in the period ahead.” – Gemma Connell, Head of Regional Office for Southern & Eastern Africa, United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

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Some of the things that we have noted are that our continent has a larger population of young people and these young people do not find interest in some of these things in food production, i.e. where they eat, what they eat, how it impacts to the environment. People do not care about it, yet they are the largest chunk of the continent.” - **Jean-Bertrand Mhandu Earth Day - Regional Director Africa & African Youth Initiative on Climate Change Zimbabwe - National Coordinator**

Regional Leaders spoke during the online climate change symposium organized by WFP Regional Bureau in Southern Africa on May 25, 2021:

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Young people want to feel the interest and see the need to participate in environmental issues. We need to start investing so that they come up with the market, they process their own projects, they add value in terms of whatever that is being produced. And they also find themselves attracted to some of these areas where production is quite key and fundamental. And they can also be part of the development agenda, determining where the country should go, where the world should go.” - **Jean-Bertrand Mhandu Earth Day - Regional Director Africa & African Youth Initiative on Climate Change Zimbabwe - National Coordinator**

CLIMATE CHANGE IN SOUTHERN AFRICA

A position Paper for the World Food
Programme in the region



WFP/ Rafael-Campos

EXECUTIVE SUMMARY

Climate change is a long-term threat to food security and nutrition in the Southern African region. It affects all pillars of food security including availability, access, utilization, and stability.

Climate change increases risk and uncertainty in the region which is characterized by low adaptive capacity. Impacts of changes in temperatures and rainfall patterns include increased water scarcity, pest infestations, increased frequency and intensity of droughts and floods. Observed weather patterns show that the region experienced normal rainfall in only two of the last nine cropping seasons.

Climate change is a threat multiplier, especially for the poor and most vulnerable sections of society. It can exacerbate existing vulnerabilities such as poverty, hunger, poor health and hamper progress toward the Sustainable Development Goals set for 2030.

Without adaptation, by 2050, approximately 30% of the entire SADC region will be exposed to various climate hazards. Altered weather patterns are severely affecting crop production, with detrimental effects on food and nutrition security. Over the last decade, cereal production has fallen, and the region has been recording cereal deficits ranging between 0.1 and 8.9 million metric tonnes.

Climate change-associated extreme weather events are affecting livelihoods, economies, and the environment, in turn exacerbating existing vulnerabilities in the region. In 2019, while Cyclone Idai was the deadliest storm to hit Mozambique in terms of lives taken, Cyclone Kenneth was only the second Category 4 storm ever to strike Mozambique and was, together with Eline, the strongest ever to hit mainland Africa. Southern Africa faced its worst drought in 35 years during the 2016 El Nino period. After failed 2018-19 rains, Zambia faced one of its worst droughts in decades. Southern Madagascar is currently facing severe drought conditions that have driven an estimated 1.35 million people to the brink of survival.

The interaction between food systems and the climate is complex and bidirectional. Climate change threatens to break down food systems by increasing the frequency and severity of natural hazards, with a disproportionate impact on vulnerable food-insecure households. At the same time, food systems contribute to climate change by increased greenhouse gas emissions.

Smallholders are the backbone of regional food supply on the production side, generating 90% of total agricultural output. However, 30% of this production is likely at risk from climate hazards. The most important climate hazard in the region is heat stress, represented by high growing season temperatures. Heat stress can lower the productivity of crops, such as wheat and maize, and also of livestock. It also affects human labour and increases the risk of natural disasters and reduce the growing season. The second most prevalent hazard category identified for the SADC region encompasses several combinations of the various individual hazards such as floods, rainfall variability, reduction in growing season. In some cases, four or more of the hazards occur simultaneously.

Southern Africa epitomizes the link between climate and the water-energy-food nexus, as multiple challenges collide across a very diverse socioeconomic spectrum of countries. According to the Intergovernmental Panel on Climate Change (IPCC), major water scarcity issues are expected in the region due to ongoing exploitation and degradation, coupled with increased demand and climate change.

Climate Change is predicted to increase the number of undernourished children under 5 years by an additional 2.4 million in Sub-Saharan Africa by 2050. It is estimated that by 2050, moderate

stunting will increase by up to 29% globally, while severe stunting could increase by 23% in Sub-Saharan Africa due to climate change. Increased carbon dioxide levels lead to the reduced nutritional quality of food, with the iron, zinc and protein content in maize, wheat, rice, peas and soy decreasing by up to 3-17%.

Women and girls are the most affected during climatic shocks. Throughout the region, the impact of climate change on women and girls is intrinsically linked to intersecting discriminations and violations of their human rights and dignity. Droughts and desertification can mean that women (and girls) must travel further each day searching for water and firewood (or other fuel), increasing their workload and exposing them to risks of violence.

Global warming and climate change in the SADC region already contributes to rural-urban migration. With more crop failure associated with the recurrence of droughts, more and more people, especially the subsistence farmers, abandon their land and migrate into towns and cities to seek alternative income-generating opportunities. Climate change is expected to exacerbate the environmentally induced migration patterns.

Social protection can be part of a proactive approach to managing climate-induced migration and, on the other hand, it can reduce distress migration and erosive coping strategies. In particular, public employment opportunities can create assets that enhance livelihood opportunities and explicitly address the impacts of climate change in both rural and urban areas and in places of origin and destination.



HOW DOES CLIMATE CHANGE AFFECT FOOD SYSTEMS, FOOD SECURITY AND NUTRITION?

Climate change is a long-term threat to food security and nutrition in the Southern African region. The Fifth Assessment Report by the Intergovernmental Panel on Climate change (IPCC) mentions a direct impact of climate change on food security, especially in Southern Africa,¹ a region heating up at twice the rate of the global average. This has negative implications for rural livelihoods, ecosystems, and biodiversity, with direct consequences across all dimensions of the food system. The relationship between climate change and food systems moves in two directions based on mutually reinforcing feedback loops. Food systems contribute to changing the climate through greenhouse gas emissions. In turn, climate change impacts food systems, leading to food insecurity and malnutrition as depicted in Figure 1 below.

yields due to rainfall variability (inconsistencies between predicted and actual seasonal rainfall); as well as pests and diseases.

However, food availability is not the only dimension of food security impacted by a changing climate. Food access is also restricted due to reduced income levels of farmers, spikes in food prices, destruction of trade and transport systems, and damage to shops and other basic infrastructure.

Stability is impacted by increased variability in the food supply, instability of incomes and food prices over long periods, as well as increased outmigration and civil unrest due to crop failures. Utilization is impacted by

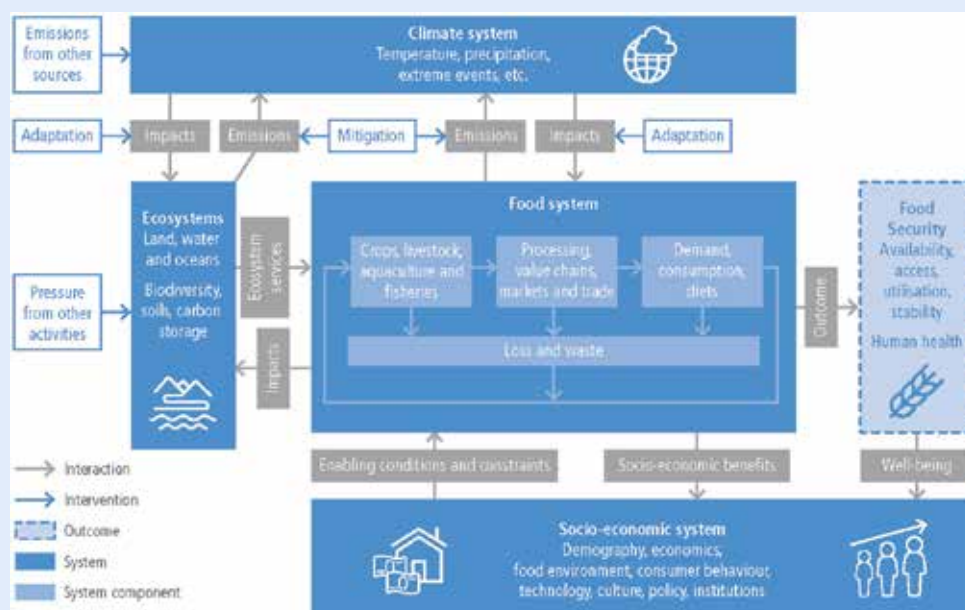


Figure 1: Interlinkages between the climate system, food system, ecosystems (land, water and oceans) and socio-economic system. Food security is an outcome of the food system leading to human well-being, which is also indirectly linked with climate and ecosystems through the socio-economic system. Adaptation measures can help to reduce negative impacts of climate change on the food system and ecosystems. Mitigation measures can reduce GHG emissions coming from the food system and ecosystems. (Source: IPCC Fifth Assessment Report, Chapter 5)

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