Climate change and child malnutrition:

A double threat to resilience in Southern Africa

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CLIMATE CHANGE AND CHILD MALNUTRITION: A double threat to resilience in Southern Africa.

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About SADC
The Southern African Development Community is an organisation founded and maintained by countries in Southern Africa that aims to further socio-economic, political, and security cooperation among its Member States and foster regional integration, in order to achieve peace, stability, and wealth. The Member States are: Angola, Botswana, Union of the Comoros, Democratic Republic of the Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia, and Zimbabwe.

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Introduction

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Climate change and child malnutrition are two of the greatest threats facing the Southern African Development Community (SADC) today. They converge geographically, share common systemic and societal drivers, and both threaten the future economic growth, prosperity and resilience of nations.

The 2018 SADC Regional Vulnerability Assessment and Analysis Synthesis Report[1] indicates that the impacts of climate change are escalating food insecurity, weakening social capital and leading to widespread vulnerabilities in the SADC region. As a result, millions of families are struggling to meet their children's nutritional needs, leading to multiple forms of malnutrition that hinder children's healthy growth, development, future prosperity and resilience. It is estimated globally that, by 2050, climate change will cause an additional 28 million children to be wasted (acutely malnourished) and 40 million children to be stunted (chronically malnourished).[2]

The SADC Climate Change Strategy and Action Plan (2020-2030) provides a broad outline for harmonized and coordinated actions by SADC Member States to address and respond to the impacts of climate change and plan for a low-carbon resilient future.[3] Building on this strategy, innovative, context-specific actions are needed to safeguard child nutrition in the context of a changing climate. This brief aims to inform policy- and decision-makers of the links between climate change and child nutrition, and key policy and programmes actions that can be built into policies, plans and investment cases, with an emphasis on climate adaptation. Actions are intended to be led by SADC Member States, with potential for the involvement of multiple stakeholders and regional coordination given the shared nutrition, environmental, economic and political landscape.

1 The climate crisis is having a dramatic and far-reaching impact on countries in Southern Africa

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Earth's global average temperatures
increased by **1.1° C**
since pre-industrial times

Atmospheric concentrations of greenhouse gases (GHGs) are at their highest levels in 800,000 years due to human activities, largely driven by energy use, industry, agrifood systems and transport. These GHGs trap heat, leading to an increase of the Earth's global average temperatures by around 1.1° C since pre-industrial times. The Paris Agreement, adopted in 2015, aims to limit temperature rises to well below 2° C, ideally to 1.5° C, to avoid the worst impacts. However, unless emissions are reduced rapidly, the world is likely to fail to reach these targets.[4]

Although Africa emits the lowest GHGs of all regions in the world (5 per cent), emissions are rising rapidly and are projected to reach 11 per cent by 2030.[5] While global agrifood systems generate around one third of GHG emissions, the contribution of agrifood is much higher in Africa at 67 per cent,[6] stemming from the dominance of agriculture and land-use changes.[7] While agricultural practices dominate, the entire food value chain contributes to emissions including through the processing, packaging, transportation, and retail of foods. The consumption of imported foods, especially ultra-processed foods, is rising rapidly in Africa, which in turn increases food system related GHG emissions in other parts of the world, contributing to global temperature increases.

Resulting rising average global temperatures are leading to profound changes to the climate in Southern Africa. Rainfall patterns are changing, weather patterns and seasons are becoming more erratic and unpredictable, sea levels are rising, and oceans are becoming warmer and more acidic. These changes result in slow-onset hazards, such as the salinisation of freshwater and soils, desertification, biodiversity loss, and the breakdown of ecosystems. Extreme weather events – including cyclones, storms, heatwaves, wildfires, droughts, and floods – are also increasing in frequency and intensity.[8] An estimated 39 per cent of the total population across the 16 SADC Member States is confronted with risks from sea level rise and extreme weather. Many others face risks of more challenging conditions for food production, water, livelihoods and population health and wellbeing.[2]

Africa is extremely vulnerable to the impacts of climate change, due to the interaction of multiple stresses, including high dependence on rainfed agriculture, widespread poverty and weak adaptive capacity.[9] Urgent action is needed in the SADC region to adapt to climate change, compensate for related loss and damage, and curb rising emissions to avoid the reversal of years of investments and progress in national development.

2 Malnutrition affects tens of millions of children in Southern Africa

SADC Member States experience a triple burden of malnutrition including undernutrition, manifested in child stunting and wasting, 'hidden hunger' (micronutrient deficiencies), and overweight and obesity. These different forms of malnutrition coexist in the same countries, communities and even families. The scale of the challenge is immense. Among children under five years of age in the SADC region, an estimated 34 per cent (23 million children) are stunted, 5 per cent are wasted and 5 per cent are overweight.[10] Levels of overweight and obesity are rising rapidly among school age children and adolescents, increasing 1.7 times between 1990 and 2019, to 15 per cent and 18 per cent among boys and girls aged 2-19 years respectively.[11]

33 million children aged 6-59 months in the SADC region live in child food poverty, 11 million of whom live in severe child food poverty.

Malnutrition is the result of the failure of multiple systems to deliver the services that children need. For example, food systems fail to provide nutritious, safe, affordable and sustainable foods for children. It is estimated that 33 million children aged 6-59 months in the SADC region live in child food poverty, 11 million children of whom experience severe child food poverty, meaning that they consume foods from two or less food groups per day.[12] At the same time, food systems increasingly flood shops, markets and schools with energy dense, nutrient-poor, unhealthy, ultra-processed foods. These products are aggressively marketed to children and adolescents, influencing their preferences and driving their increased consumption.[13] This contributes to very poor diets and increasing levels of overweight and obesity. Millions of families also lack access to essential health and nutrition services, such as immunizations and micronutrient supplementation, clean water and sanitation, and social protection.

3 Child nutrition is projected to worsen considerably under climate change if timely action is not taken

The impacts of climate change in Southern Africa exacerbate this situation. The ability of food systems to deliver nutritious foods is further reduced because rising temperatures and extreme weather reduce crop, livestock, and fisheries productivity through heat stress, disease and water scarcity, alter ecosystems and disrupt food supply chains and distribution networks. Higher carbon dioxide levels also decrease the nutritional quality of staple crops, projected to result in many more children experiencing zinc, iron, and protein deficiencies by 2050. Climate disruptions drive food price increases and volatility, while driving down incomes from agricultural and fisheries livelihoods, making nutritious foods less affordable and accessible, especially for vulnerable families. This increases reliance on often imported, high-carbon, cheap, ultra-processed, and unhealthy foods.

Care and feeding practices are undermined by the impacts of climate change. This is because the growing burden on women's time to seek incomes and increasingly scarce water, food and fuel resources, reduces the time available for child care and feeding. Climate-driven heat stress, displacement, and maternal malnutrition also create significant barriers to breastfeeding.

Climate change also disrupts the delivery of services necessary to support child nutrition, while simultaneously increasing population needs. For example, extreme weather damages health infrastructures and creates surges in demand for, and barriers to accessing, health and nutrition clinics and antenatal care services. Climate events also disrupt water, sanitation, and hygiene services which compromises water quality, increasing the transmission of diseases that precipitate malnutrition. Education services experience closures and reduced attendance, disrupting the delivery of school meals and nutrition services for school aged children. Social protection systems also face increased pressure on already limited resources due to growing levels of poverty and deprivation.

Disadvantaged children living in poverty and in low- and lower middle-income countries are disproportionately affected by these issues. Vulnerable children and families face greater challenges accessing nutritious diets and nutrition services and have limited capacity to cope with and adapt to the consequences of climate change.

Care and feeding practices
are undermined by the impacts of climate change.

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4 Poor child nutrition reduces the productivity and development of whole nations and threatens resilience to climate change today and tomorrow

Children who experience malnutrition during childhood face consequences throughout the life course and into the next generation. This includes increased risk of mortality and morbidity, reduced cognition and poor learning and education outcomes during childhood[15] and reduced work opportunities, poorer economic productivity and increased risk non-communicable diseases into adulthood. Women who were malnourished during childhood also have increased risk of poor pregnancy outcomes, including low birth weight of their infants, who themselves have increased risk of malnutrition during childhood.[16]

And so the intergenerational cycle of malnutrition continues.

Children and households that are less nutrition secure are more vulnerable to the impacts of climate change and less able to withstand, endure and recover from climate-related shocks. Investing in the systems that support child nutrition is therefore essential to strengthen population resilience to climate change and protect the productivity and development of whole nations.

5 Urgent investments are needed in climate adaptations in Southern Africa that safeguard children's nutrition in the context of a changing climate

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Protecting children's nutrition in the context of increasing climate pressures requires adaptations in the systems that deliver children's services.[17] Adaptation means adjusting in response to actual or expected climatic changes and their effects. 'Business as usual' will no longer work – we must do things differently, as follows.

Food systems can adapt to ensure nutritious and sustainable diets for all children by:

- Adapting food standards, guidelines, policies and fiscal measures to increase the availability of nutritious and sustainable foods for children (especially "first foods" for the youngest children) and protect children from harmful practices of the food industry.
- Adapting how food is produced in the agriculture, livestock and fisheries sectors to support environmental sustainability, reduce GHG emissions, and deliver foods that meet the unique nutrition requirements of children. This means prioritizing children's needs in food systems transformation efforts, and incentivizing African companies to produce nutritious, safe, affordable and sustainable foods for children.
- Adapting nutrition information, counselling and support for families and influencing social behaviours to increase demand for healthy and sustainable foods and encourage planet-friendly food practices.

Health systems can adapt to ensure the delivery of essential nutrition services to children to prevent climate-induced malnutrition by:

- Intensifying the delivery of preventive nutrition services for children, including support for the uptake of optimal nutrition practices[a] and micronutrient supplementation, and using health service delivery models that can flex and expand in anticipation of surges in demand, including for the early detection and treatment of child wasting.
- Ensuring that essential nutrition supplies (including micronutrient supplements and wasting treatment supplies) are produced in Africa for Africa, supported by national budgets, with buffer stocks in place to support climate-induced surges in need.
- Investing in and equipping community-based nutrition workforces to support uptake of optimal nutrition practices, the 'last mile delivery' of essential nutrition services, and to respond to the impacts of climate change on child nutrition, including delivery of emergency nutrition services when climate-induced emergencies hit.

Social protection systems can adapt to reduce nutrition vulnerability to the impacts of climate change by:

- Adapting national cash transfer programmes to ensure that nutritionally vulnerable children have access to social protection, and that support can expand in anticipation of climate shocks to prevent climate-induced malnutrition.
- Developing climate risk insurance packages to help families worst affected by climate hazards to absorb impacts and recover to avoid negative coping mechanisms that threaten children's nutrition.
- Supporting families most affected by climate hazards to diversify their livelihoods and build adaptive capacities.

Education systems can invest in the healthy and sustainable diets and practices of school-age children adolescents by:

- Strengthening school feeding programmes that use local, sustainable and nutritious foods, as a crucial social safety net for school-aged children.
- Adapting school food policies and standards to ensure that children can access healthy and sustainable foods in and around schools, and to protect them from the negative influences of food industry.
- Adapting the school curricula to provide practical, planet friendly nutrition education, for example through climate smart school gardens, and to engage young people as advocates for nutrition and climate justice.

Investments must also be made in climate resilient **water and sanitation** infrastructures and systems, especially among populations vulnerable to climate risks, to prevent diseases that drive malnutrition. This means providing immediate access to clean drinking water and sanitation facilities for children in underserved areas and implementing rapid responses to waterborne disease outbreaks. Nutrition vulnerability indicators must also be built into **climate early warning systems** to enable climate risk informed anticipatory responses that prevent surges in malnutrition.

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a Exclusive breastfeeding for the first 6 months of life and consumption of nutritious, safe, affordable and sustainable foods alongside continued breastfeeding during the complementary feeding period (6-23 months) and beyond.

6 SADC Member States must take all opportunities to embed climate nutrition priorities within national nutrition and climate policies and plans

Political will and national and global investments in climate-nutrition action require national policy change. Opportunities exist to embed context-specific climate nutrition actions within updates of multi-sectoral nutrition policies and plans, and those for relevant individual sectors, including food and agriculture, health, social protection, education and water and sanitation.

Investments in climate nutrition action also require their inclusion in national climate commitments, policies and plans. This includes Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and other documents including National Health Adaptation Plans (NHAPs). **As SADC Member States revise and enhance their NDCs and NAPs in 2025, there is a unique opportunity to ensure that they include measures to safeguard child nutrition as a core component of climate action.** By aligning climate and nutrition actions, countries can enhance the resilience of food systems, improve public health, and achieve sustainable development goals.

Policy commitments must be followed by national budget commitments and the inclusion of climate-nutrition actions within investment cases and proposals to access regional and global climate finance, including from UNFCCC finance mechanisms, and African Development Bank.

With 2024 being the hottest year on record, we call on SADC Member States to garner strong political will to drive climate-nutrition action to safeguard the nutrition, health, wellbeing and resilience of children both today and for tomorrow.

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Endnotes

1 Southern African Development Community (SADC). SADC regional vulnerability assessment and analysis (RVAA) synthesis report on the state of food and nutrition security and vulnerability in Southern Africa 2018. SADC Secretariat, Maseru, Lesotho, 2018.

2 The Gates Foundation. The race to nourish a warming world: Goalkeepers 2024 report. The Gates Foundation, 2024.

3 Southern African Development Community (SADC). SADC climate change strategy and action plan, 2020-2030. SADC Secretariat, Gaborone, 2020.

4 Intergovernmental Panel on Climate Change (IPCC). Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. H. Lee and J. Romero (eds.). IPCC, Geneva, 2023, pp. 1–34.

5 Institute for Security Studies (ISS). Climate Change in Africa: Challenges and Solutions. African Futures Project, Pretoria, 2023.

6 Crippa, Monica, et al. Food systems are responsible for a third of global anthropogenic GHG emissions. Nat Food 2, 2021, pp. 198–209.

7 Dhakal, Shobhakar, et al. Emissions Trends and Drivers, in: Shukla, P.R., et al. (Eds.), Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Cambridge, 2022.

8 Intergovernmental Panel on Climate Change (IPCC). Regional Focus: Southern Africa. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by Valérie Masson Delmotte et al. Cambridge: Cambridge University Press, 2021.

9 African Union Commission. Agenda 2063: The Africa We Want. Africa Union Commission, Addis Ababa, 2015.

10 United Nations Children's Fund (UNICEF), World Health Organization (WHO) & The World Bank. Joint Child Malnutrition Estimates: Levels and Trends – Key Findings. UNICEF, New York, 2025.

11 United Nations Children's Fund (UNICEF) and Southern African Development Community (SADC). Preventing the Rising Tide of Childhood and Adolescent Overweight and Obesity in the Southern African Development Community. SADC Secretariat, Gaborone, September 2024.

12 United Nations Children's Fund (UNICEF). Child Food Poverty: Nutrition Deprivation in Early Childhood. UNICEF, New York, 2024.

13 United Nations Children's Fund (UNICEF). Transforming Food Systems for Children. UNICEF, New York, 2023.

14 Myers, Samuel, et al., Climate Change and Global Food Systems: Potential Impacts on Food Security and Undernutrition. Annual Review of Public Health 38, 2017, pp. 259–277.

15 Victora, Cesar, et al., Maternal and child undernutrition: consequences for adult health and human capital. The Lancet, Volume 371, Issue 9609, 2008, pp. 340-357.

16 Black, Robert, et al. Maternal and child undernutrition: global and regional exposures and health consequences. The Lancet 371, no. 9608, 2008, pp. 243–260.

17 United Nations Children's Fund (UNICEF). Child Nutrition and the Climate Crisis. UNICEF framework for action. UNICEF, New York, March 2025.

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