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ZEF POLICY BRIEF NO. 57

CONTEXTUALIZING PROGRESS IN NUTRITION AND DIETS IN MALAWI

November 2025

INTRODUCTION

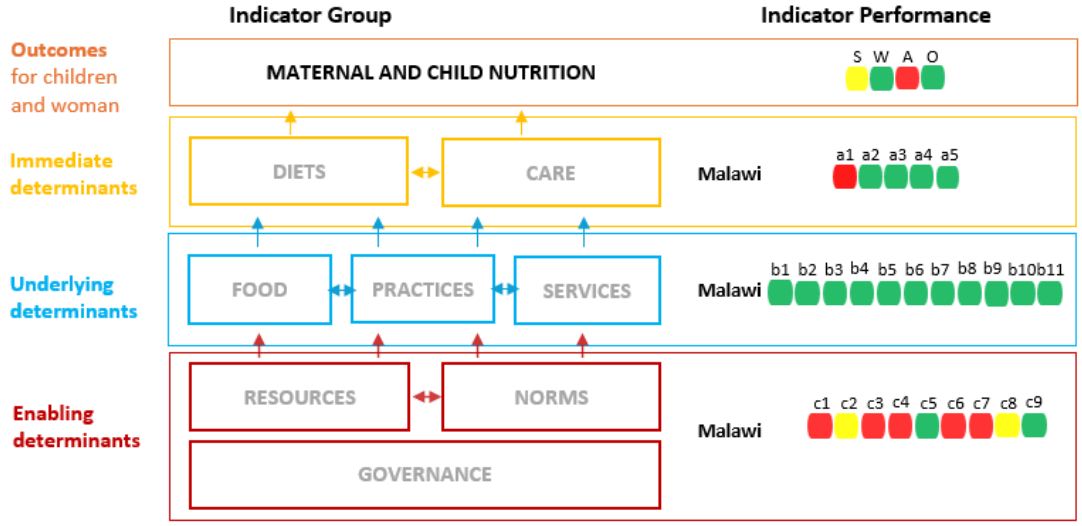
Malnutrition remains a major health concern in Malawi. Undernutrition, micronutrient deficiencies, and overnutrition, often referred to as the triple burden of malnutrition, persist and coexist despite numerous targeted efforts to reduce them.

The coexistence of these different types of malnutrition reflects a complex and evolving nutrition landscape. Causes of malnutrition are diverse, ranging from macro to micro level factors. We utilize UNICEF's Conceptual Framework on Maternal and Child Nutrition to analyze the determinants of malnutrition (1). Figure 1 provides an overall summary of the performance of the various determinants in Malawi. At the macro level, enabling determinants include socioeconomic, political, cultural, and environmental factors, which indirectly affect (mal)nutrition. These enabling factors shape the underlying determinants, including food availability and access, caregiver resources, and healthcare resources, which in turn influence immediate determinants like dietary intake, directly impacting nutrition outcomes for women and children.

Over the years, the determinants of malnutrition in Malawi have evolved, influencing the country's nutrition outcomes. While many have improved (cf. Figure 1), several have stagnated or deteriorated.

Here, we examine the trajectory of key nutrition indicators and contextualize them with the performance of both established and emerging determinants of malnutrition. These "emerging" determinants are drivers considered important in recent literature but that have not (yet) been as thoroughly investigated as established determinants. This policy brief aims to deepen the understanding of the complex and interconnected factors shaping diets and nutrition trends and to inform policy design that addresses these challenges in the context of changing food systems and recurring global and economic shocks.

Figure 1: *UNICEF conceptual framework of malnutrition and key indicator performance between 2015/16 and 2024*. Green = improvement, yellow = stagnation, red = deterioration*



S*: Stunting under 5,* ***W****: Wasting under 5,* ***A****: Anaemia in young children,* ***O****: Overweight in young children***
a1: *Excl. breastfeeding <6 mo;* ***a2:*** *Intro. of foods (6-8 mo),* ***a3:*** *Child. breastfeeding at 2 years;* ***a4:*** *Min dietary divers. (6-23 mo);* ***a5:*** *Min. meal freq. (6-23 mo);* ***b1:*** *Per capita dietary energy;* ***b2:*** *Protein supply;* ***b3:*** *Total fertility rate 15-49;* ***b4:*** *Age at first marriage;* ***b5:*** *Antenatal visits pregnancy;* ***b6:*** *Assistance during delivery;* ***b7:*** *Female sec. school attend;* ***b8:*** *Women who are literate;* ***b9:*** *Piped water at dwelling;* ***b10:*** *Pop. using open defecation;* ***b11****: Households with basic wash;* ***c1:*** *GDP growth;* ***c2:*** *GDP per capita;* ***c3:*** *Poverty;* ***c4:*** *Inflation;* ***c5:*** *Education exp.;* ***c6:*** *Health exp.;* ***c7:*** *Out-of-pocket health exp.;* ***c8:*** *Unemployment;* ***c9:*** *Literacy rate.*
**Based on the direction of change of indicators between the latest Demographic and Health Survey (DHS) rounds*
*** Based on the direction of change of indicators between the latest Joint Malnutrition Estimates (JME) rounds*

TRAJECTORIES IN NUTRITION INDICATORS

Progress has been uneven on nutrition indicators. Wasting has improved, but stunting and overweight among children under five have worsened in recent years. At the same time, micronutrient deficiencies in women of reproductive age and overweight are on the rise.

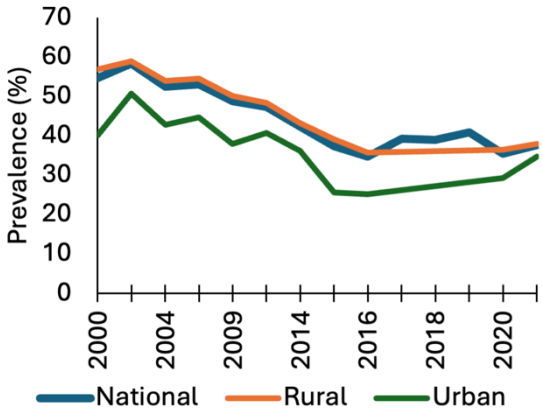
Stunting

Stunting, defined as low height-for-age, declined from 55% in 2000 to 37.1% in 2015/16; however, by 2024, there was a slight reversal, with the rate rising to 37.6% (2,3). The current rate is above the regional averages for Eastern Africa (31.2%) and Southern Africa (30.3%) (4). Between 2010 and 2016, Malawi achieved an average annual stunting reduction of 1.6 percentage points (pp) [1] but between 2016 and 2024, this progress reversed, with stunting rates increasing by 0.5pp.

This reversal coincides with multiple shocks, including the 2015/16 El Niño-induced agricultural drought, which led to crop failure, food shortages, acute food insecurity, and disruptions in health services (5,6), followed by the COVID-19 pandemic, which affected household incomes, food access, and essential health and nutrition services (7). From 2016 to 2024, urban stunting rates increased from 25% to 34.7%, a significant change compared with rural rates, which slightly declined from 38.9% to 38% (Figure 3).

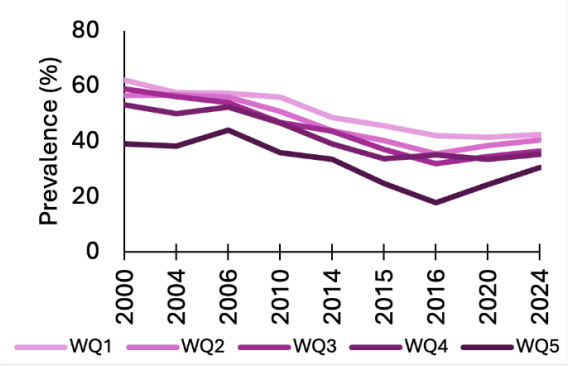
Socio-economic inequalities in stunting persist. The rate remains highest among the poorest households (42.5%), but there has also been a sharp increase among the wealthiest group from 24.3% to 30.5% (Figure 4). This is a relatively uncommon finding in the context of Sub-Saharan Africa (8).

Figure 2. *Rural and urban stunting trends*



Regional disparities also stand out. The Southern region recorded an increase from 36.6% in 2015/16 to 38.7% in 2024, while the Central region's rate remains high at 37.8%. Sixteen districts reported stunting rates above the national average, including Chitipa (50.8%) and Neno (50.0%) (2).

Figure 3. *Stunting by wealth quintile (WQ)*



Analysis of the 2015/16 DHS data (due to the unavailability of the latest 2024 DHS dataset) showed that stunting prevalence also significantly differed across maternal height groups as shown in Table 1. Stunting among children decreases as maternal height increases, from 54% for mothers shorter than 150 cm to 23% for mothers 160 cm or taller, indicating that shorter maternal stature is associated with a higher risk of child stunting. This emphasizes the intergenerational nature of chronic malnutrition and the importance of targeted interventions to make progress.

[1] This figure was obtained by calculating the average annual rate of change in stunting prevalence between the respective survey years that is mentioned.

Children of older mothers were also less likely to be stunted, with each additional year of maternal age reducing stunting.

Table 1. *Prevalence of stunting by mother's height*

Height group	Proportion of children U5 stunted
< 150cm	53.88
150 cm & < 160cm	36.39
>= 160cm	22.97

Wasting

The number of children under 5 affected by wasting, defined as low weight-for-height, has declined from 4.9% in 2016 to 2% in 2024 (2,3). This rate was lower than the African average of 5.4% and the Southern and Eastern Africa averages of 3% and 4.8% respectively in 2024 (9). Wasting was higher among children aged 6-11 months and in rural areas (2.1%) compared to urban areas (1.1%), with the highest prevalence observed among those in the lowest wealth quintile (2.7%). Wasting was also higher in the Northern region (2.7%).

Overweight (children)

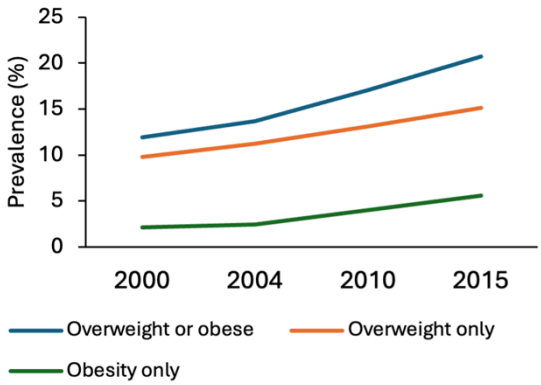
At the same time, children under 5 in Kenya are also impacted by excess body weight relative to height. Consumption of energy-dense and nutrient-poor foods represents a risk factor for overweight, obesity and non-communicable diseases (NCDs) in adulthood. In Kenya, overweight among children has shown a declining trend, standing at 3.2% which is lower than the African average of 4.9% in 2022. However, modelled estimates indicate an increase in prevalence to 4.3% in 2024 (6). Overweight was higher among

Overweight & obesity (women)

Overweight among children has increased from 1.6% in 2017 to 6.1% in 2024. Overweight was higher among children in urban areas (8.1%) compared to rural areas (5.8%), in the Central region (6.7%), among those in the highest wealth quintile (8.8%), and among children of more educated mothers (2).

Overweight and obesity among women in Malawi have also been increasing over the years. Estimates show that in 2019, the prevalence of overweight was 38.5% and obesity at 14.7% (Figure 5).

Figure 4. *Prevalence of overweight and obesity among women 20-49 years*



DETERMINANTS OF NUTRITION AND DIETS

Most underlying and immediate determinants show improvement over the previous ten years, but nearly all enabling determinants have deteriorated (cf. Figure 1).

Enabling determinants

Most enabling determinants have deteriorated between 2015 and 2024, among these are GDP growth, government expenditure on health, poverty and inflation (10). The urban population has also increased over the years and a parallel increase in urban stunting rates has been observed. Given that there has been a recent increase in stunting in the wealthiest quintile, it is yet unclear what drives these patterns. It is, however, possible that higher economic pressure from deteriorated enabling determinants and the influence of urban food environment may exacerbate each other's impact. Improvements have been seen in government expenditure on education, which is accompanied by a rise in adult literacy.

Underlying and immediate determinants

Since 2010, there has been steady progress in key underlying determinants of health. Fertility and maternal health indicators have shown

positive trends: the total fertility rate has declined, and the average age at first marriage has increased slightly. Coverage of antenatal care has expanded, and the share of births attended by skilled health personnel has risen markedly. Access to piped water and sanitation has also advanced, with open defecation decreasing and the availability of handwashing facilities increasing substantially.

Women's education and literacy have expanded, with higher secondary school attendance and literacy rates. Gender empowerment has also advanced: the share of women jointly making healthcare decisions with their husbands rose from 38.8% in 2010 to 49% in 2015/16 (3).

IYCF indicators have shown mixed progress. Exclusive breastfeeding has declined slightly in recent years, while dietary diversity and meal frequency have improved modestly, although they remain quite low at around 20%-30%. Moderate food poverty has increased to 57.2% in 2020, also contributing to poor growth outcomes (9).

The Minimum Dietary Diversity for Women indicator shows that in Malawi, 53.1% (2022) of women (15 to 49 years) consumed at least five out of ten defined food groups in the previous 24 hours. Overall food supply (kcal per capita per day) has also been increasing, which signals better food security (11).

Food environment as an emerging determinant

Local food environments are changing, driven by increased urbanization and changes in food retail environments in African countries (12). The following evidence from Malawi captures the ambiguous role of the food environment, highlighting both positive and problematic aspects of commercialization and transformation of the food retail context.

Urban areas show higher MFV and better child nutrition outcomes. This was linked to the availability of lightly and moderately processed foods (such as dried fish, canned vegetables, and powdered milk), which had stronger positive effects on child nutrition (13).

The Role of the Food Environment

In Malawi, increasing agricultural production diversity among smallholder farmers can enhance dietary diversity and nutrition, though the effect is modest and context-dependent. Where production diversity is already high, further diversification may reduce income from specialization, limiting nutritional gains. Households closer to markets, engaged in crop sales, earning off-farm income, and using productivity-enhancing technologies (e.g., fertilizers) have access to a wider variety of foods, including healthier options beyond home production (14,15).

Regional food availability also strongly shapes diets in Malawi, particularly in areas where households depend more on markets than on subsistence farming. Broader local and regional production diversity supports more varied diets (16).

Livestock diversity has also shown stronger and more consistent positive effects on nutrition. The production of meat and eggs is strongly linked to better child and adolescent nutrition (17).

CONCLUSIONS

Malawi shows mixed progress across nutrition indicators. Wasting has improved, but stunting has slightly increased, particularly in urban areas, wealthier groups, and some age cohorts. Overweight among children and women has also risen, especially in urban and higher-income populations, while anemia among women continues to worsen.

Examining the drivers of diets and nutrition, the enabling determinants are worsening: Slow and volatile GDP growth, increased poverty, and high inflation limit household income, hindering adequate nutrition and potentially contributing to worsening malnutrition. Despite this, many underlying determinants have improved. However, challenges remain, the exclusive breastfeeding rate has declined slightly, and minimum dietary diversity among children aged 6–23 months is still very low, while moderate food poverty has increased, contributing to poor growth outcomes. Government health expenditure has also

fallen, which may indirectly affect women's nutrition outcomes.

Worsening enabling determinants indicate fragility in the gains made with the underlying and immediate determinants. These gains may reflect the success of short-term stunting interventions, but lack the structural changes needed to ensure long-term, sustained improvements, leaving the population vulnerable to major shocks, including the withdrawal of external support.

Changes in local food environments indicate that higher market food variety is associated with greater dietary diversity and higher height-for-age z-scores, with lightly and moderately processed foods playing a key role in nutrient access. Increasing agricultural production diversity is not sufficient, and better market connectivity, income diversification, and access to agricultural inputs are likely to have greater and more sustained impacts on dietary diversity and nutrition than farm diversification alone.

POLICY RECOMMENDATIONS

Based on this assessment, this policy brief presents a set of policy recommendations to enable policymakers to improve diets and nutrition outcomes in Malawi

Retain progress made in Maternal and Child Nutrition Interventions: such as improving IYCF practices, including exclusive breastfeeding and minimum dietary diversity for children aged 6–23 months. Expand nutrition education and supplementation programs for women to address rising anemia and overweight prevalence.

Invest in Social Protection and Food Security Programs: Expand targeted social protection measures, including cash transfers and food support, to reduce moderate food poverty and buffer vulnerable households against economic and weather shocks. It is also important to link social protection programs with nutrition-sensitive interventions to further improve stunting and dietary outcomes.

Strengthen Market Access and Food System Connectivity:
Improve local market infrastructure and regional food system integration to ensure households, especially in rural and peri-urban areas, can access a wider variety of nutritious foods. Policies should focus on transport, storage, and distribution systems to enhance the availability of both fresh and lightly processed nutrient-rich foods.

Promote Income Diversification and Livelihood Support: Support off-farm income-generating activities and alternative livelihoods to increase household purchasing power for diverse and nutritious diets. Targeted programs for smallholder farmers and vulnerable urban populations can mitigate the adverse effects of low and volatile incomes on nutrition.

Enhance Agricultural Productivity with Focus on Livestock and High-Value Crops: Encourage productivity-enhancing technologies (e.g., fertilizers, improved seeds) and support livestock diversification, particularly meat and egg production, which have stronger impacts on child and adolescent nutrition than crop diversity alone. Integrating crop-livestock systems can increase both food availability and income.

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This brief was developed as part of the Agrifood Systems-Transformative Research and Policy (AFS-TRP) Project. AFS-TRP is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the European Union (EU).

The Project is carried out by the Center for Development Research (ZEF) at the University of Bonn and supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. This publication does not necessarily reflect the views of the BMZ, EU, or GIZ.

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For full list of references, methods and detailed discussion, please refer to the forthcoming discussion paper "Assessing progress in malnutrition amid crises in Zambia, Malawi, and Kenya: Regional and country-level insights", available at zef.de.

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Layout: Yesim Pacal and Ricarda Mundt / ZEF PR

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