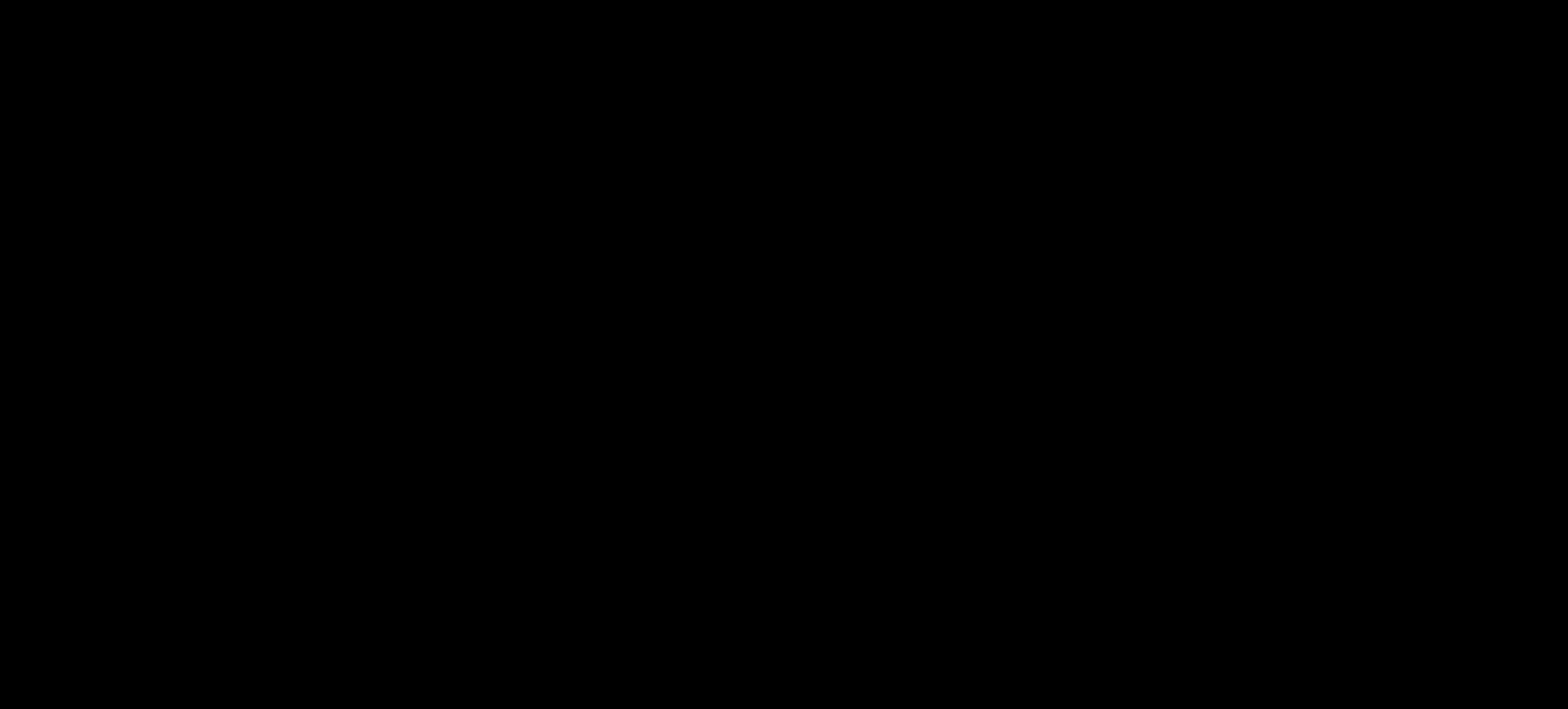


# 2023

## GLOBAL HUNGER INDEX

THE POWER OF YOUTH IN SHAPING FOOD SYSTEMS





# 2023

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## THE POWER OF YOUTH IN SHAPING FOOD SYSTEMS

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Bonn / Dublin  
October 2023

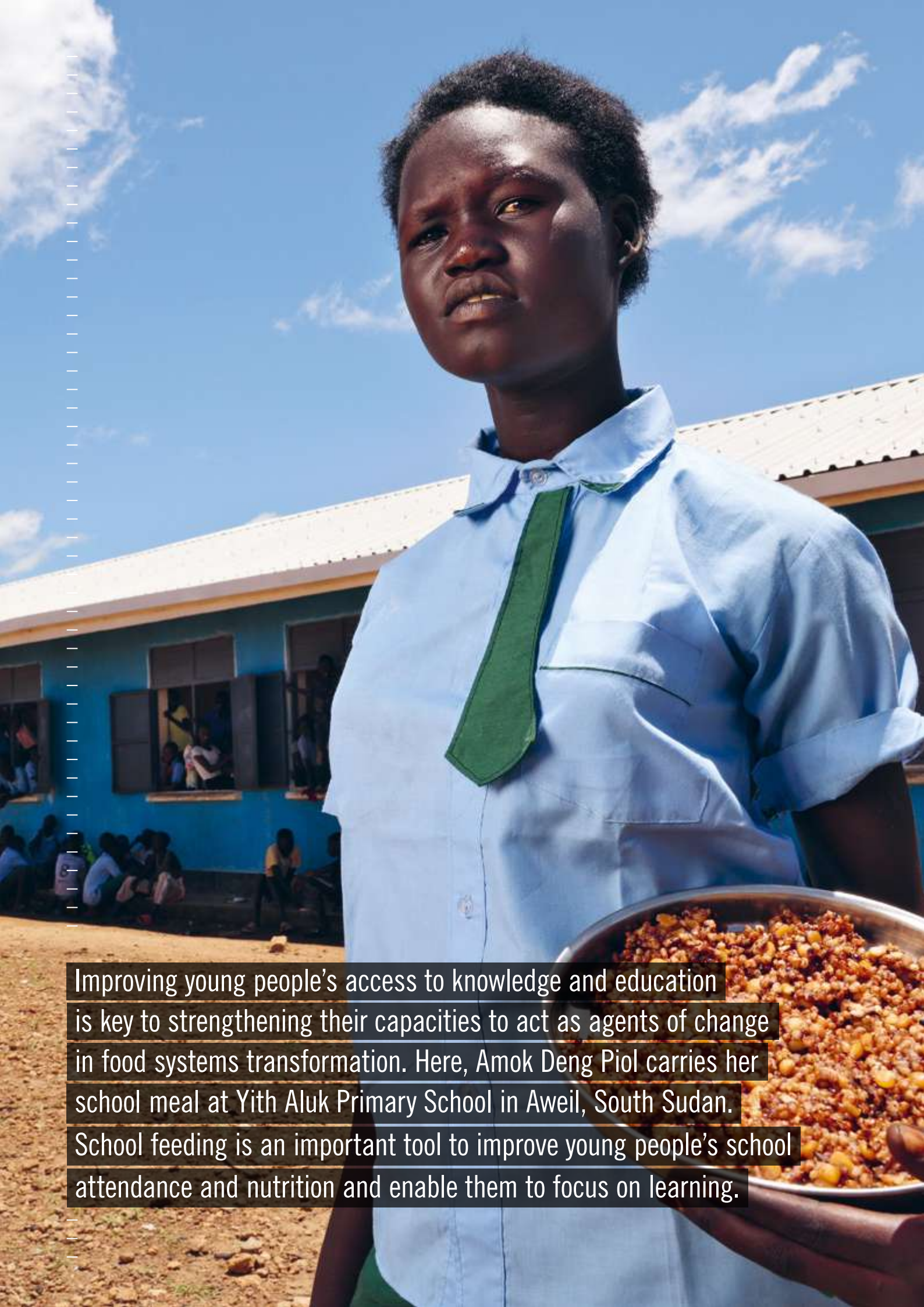


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#GHI2023

A Peer-Reviewed Publication







Improving young people's access to knowledge and education is key to strengthening their capacities to act as agents of change in food systems transformation. Here, Amok Deng Piol carries her school meal at Yith Aluk Primary School in Aweil, South Sudan. School feeding is an important tool to improve young people's school attendance and nutrition and enable them to focus on learning.

# FOREWORD

As the year 2030 looms and just seven years remain to achieve the Sustainable Development Goals, nearly three-quarters of a billion people are unable to exercise their right to adequate food. Hunger is not new, and neither are its drivers. What is new is that we now live in a time of what has been termed “polycrisis”: the compounding impacts of climate change, conflicts, economic shocks, the global pandemic, and the Russia-Ukraine war have exacerbated social and economic inequalities and slowed or reversed previous progress in reducing hunger in many countries.

The 2023 Global Hunger Index (GHI) shows that, after many years of advancement up to 2015, progress against hunger worldwide remains largely at a standstill. As the effects of crises multiply and intensify, more and more people are experiencing severe hunger, with the situation expected to worsen throughout the year.

Large demographic groups such as women and youth are carrying the burden of these crises. This year’s GHI report considers the ways in which current food systems are failing young people. In their essay for this report, Wendy Geza and Mendy Ndlovu, two scholars from South Africa, write from the perspective of the current generation of youth. They note that today’s youth are poised to inherit food systems that are unsustainable, inequitable, non-inclusive, and increasingly vulnerable to the dangerous effects of climate change. The actions we take now—and those we fail to take—will determine future food system outcomes, but it is today’s young people who will live with these outcomes for decades to come.

In many parts of the world, young people face a set of stark realities. They are more likely than adults to be affected by extreme poverty and food insecurity, with young women particularly affected, despite the importance of their health and nutrition status for future generations. Young people are three times more likely to be unemployed. They often lack access to the resources, land, skills, and opportunities that would enable them to productively engage in food systems. These barriers—as well as the challenges of climate change, land degradation, exposure to risks, difficult or precarious working conditions, and low social recognition—have turned many young people away from agricultural and rural livelihoods.

Although youth are underrepresented in policy- and decision-making related to food systems, they have a legitimate interest in shaping their future, and their voices must be heard. Youth are equal holders of the right to food, and good nutrition is essential for personal growth and development during this critical life stage. Furthermore, young people constitute an important and growing demographic cohort, particularly in food-insecure countries. Forty-two percent of the world’s people are under 25 years of age, and the global population of adolescents and young adults, at 1.2 billion, is the largest in history.

This report spotlights the experiences of youth and highlights the need for young people in their diversity to play a central role in shaping the systems of today for a sustainable, equitable, and resilient future. Together, Welthungerhilfe (WHH) and Concern call for increased representation of youth in policy- and decision-making related to food systems. To break down the barriers to their full participation in food systems, young people’s capacities must be strengthened and agriculture and food systems must be promoted as viable and attractive livelihoods. Meaningfully engaging youth as leaders can unlock their potential as innovative agents of change and harness their energy and dynamism to transform food systems.

The forces of climate change and inequality are changing the world. It is vital that governments do much more to end hunger by 2030 and work beyond that to transform food systems. An exceptional effort is needed to ensure that the right to adequate food is respected, protected, and fulfilled, not only for the millions of people who currently go to bed hungry each night but also for the billions who will shoulder the burden of crises not of their making—the worsening impacts of conflict and climate change—far into the future.



**Mathias Mogge**  
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# SUMMARY

## Progress on Hunger Has Largely Stalled

This year's Global Hunger Index (GHI) shows that, though some countries have made significant headway, little progress has been made in reducing hunger on a global scale since 2015. The 2023 GHI score for the world is 18.3, considered *moderate*—less than one point below the world's 2015 GHI score of 19.1. Furthermore, since 2017 the prevalence of undernourishment, one of the indicators used in the calculation of GHI scores, has been on the rise, and the number of undernourished people has climbed from 572 million to about 735 million. South Asia and Africa South of the Sahara are the world regions with the highest hunger levels, with GHI scores of 27.0 each, indicating *serious* hunger. For the past two decades, these two regions have consistently had the highest levels of hunger. While both regions achieved considerable progress between 2000 and 2015, progress since 2015 has nearly halted, mirroring the trend seen for the world as a whole.

## Hunger Remains *Serious* or *Alarming* in 43 Countries

According to the 2023 GHI scores and provisional designations, 9 countries have *alarming* levels of hunger: Burundi, Central African Republic, Democratic Republic of the Congo, Lesotho, Madagascar, Niger, Somalia, South Sudan, and Yemen. In a further 34 countries, hunger is considered *serious*. Many countries have seen hunger worsen in recent years: since 2015, hunger has increased in 18 countries with *moderate*, *serious*, or *alarming* 2023 GHI scores. An additional 14 countries with *moderate*, *serious*, or *alarming* 2023 GHI scores experienced a decline of less than 5 percent between their 2015 and 2023 GHI scores, indicating negligible progress during that period. At the current pace, 58 countries will not achieve *low* hunger by 2030. Nonetheless, there are also examples of progress. Seven countries whose 2000 GHI scores indicated *extremely alarming* hunger levels—Angola, Chad, Ethiopia, Niger, Sierra Leone, Somalia, and Zambia—have all made progress since then. Also, seven countries have achieved reductions of five points or more between their 2015 and 2023 GHI scores: Bangladesh, Chad, Djibouti, Lao People's Democratic Republic, Mozambique, Nepal, and Timor-Leste. These reductions in hunger are particularly impressive given the challenges facing the world and the stagnation in hunger levels at the global level in recent years.

## The Fight against Hunger Is Impeded by Overlapping Crises

Overlapping crises, including the fallout from the COVID-19 pandemic, the Russia-Ukraine war, and multiple violent conflicts and

climate disasters around the world, have pushed some countries into food crises, while other countries have been more resilient. Low- and middle-income countries, which tend to be more vulnerable to crises, have been particularly hard hit relative to high-income countries. The extent to which countries are able to recover from shocks depends largely on underlying factors, such as state fragility, inequality, poor governance, and chronic poverty. Given that the world is expected to be subject to increased shocks in future years, particularly as a result of climate change, the effectiveness of disaster preparedness and response is likely to become increasingly central to the outlook on food security.

## Youth Must Play a Central Role in Transforming Food Systems

Young people are emerging into adulthood in a context of unequal and unsustainable food systems that fail to deliver food and nutrition security and are highly vulnerable to climate change and environmental degradation. Yet youth participation in making decisions that will affect their futures is limited. The pursuit of food sovereignty—the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods—presents an opportunity to engage youth in transforming failing food systems. Young people can apply their energy and innovation to help food systems become more sustainable, more just, and better able to meet the needs of all the world's people, especially the most vulnerable.

## Solutions Must Look beyond 2030

Current food systems policies and investments are failing to address the intergenerational cycle of hunger in many parts of the world. Solutions must embrace a long-term perspective beyond 2030 and reflect young people's livelihoods, options, and choices. The right to food must be central to food systems policies, programs, and governance processes, and people must be able to realize their right to food in ways that are socially, culturally, and ecologically appropriate for their own local context. It is critical to invest in young people's capacities to become leaders in food systems transformation. This means investing in their education and skills development, as well as their health and nutrition. Governments must also improve equitable access to resources and economic and social programs for young people of all genders. Furthermore, governments must ensure that food systems offer viable and attractive livelihoods to young people by investing in diversified, locally appropriate agricultural production and well-functioning markets and by supporting better working conditions and fair wages.

# 01



After learning about the importance of good health and nutrition for the well-being of both mothers and their children, this young mother from Nepal is preparing vegetables together with her toddler. However, young women often carry the burden of unpaid care work, which keeps them from pursuing education and income-generating activities.



# GLOBAL, REGIONAL, AND NATIONAL TRENDS IN HUNGER

Note: The results within this 2023 Global Hunger Index report supersede all previous GHI results. The 2000, 2008, and 2015 scores and indicator data contained within this report are currently the only data that can be used for valid comparisons of the GHI over time.

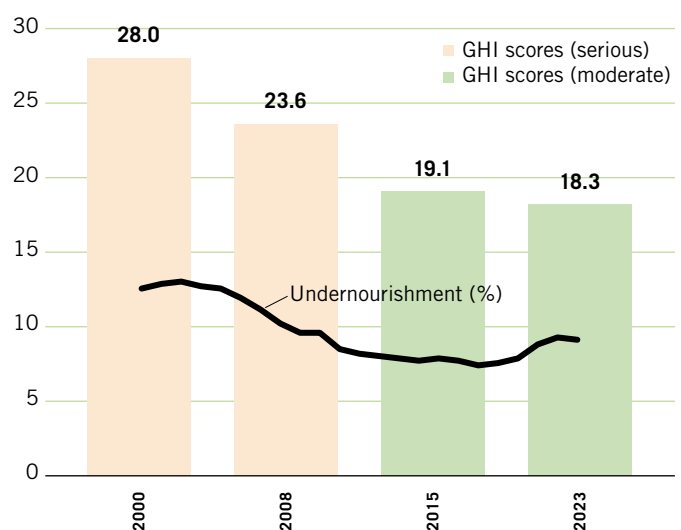
## Key Messages

- **Global hunger remains too high, and progress on reducing hunger has largely stalled.** The 2023 global GHI score is 18.3—considered *moderate*—down less than one point from the 2015 global score of 19.1. The right to adequate food is being violated for nearly three-quarters of a billion people every day.
- **This stagnation relative to 2015 largely reflects the combined effects of several crises.** These include the COVID-19 pandemic, the Russia-Ukraine war, economic stagnation, the impacts of climate change, and the intractable conflicts facing many countries of the world. Their compounding effects have led to a cost-of-living crisis and exhausted the coping capacity of many countries, especially those where hunger was already high before the crises hit due to power imbalances and structural obstacles to food and nutrition security.
- **The crises have aggravated inequalities between regions, countries, and groups.** While some countries have weathered them relatively well, others have experienced deepening hunger and nutrition problems.
- **The global effects of the COVID-19 pandemic, the Russia-Ukraine war, and higher food prices may be easing somewhat in 2023, but climate conditions are worsening and for many people the price of food is still unaffordable in many areas.** Less resilient regions, countries, and communities around the world are expected to experience lasting hunger and nutrition setbacks and stand less prepared for future crises.
- **According to GHI projections, at the current pace, 58 countries will not achieve *low* hunger by 2030.** Projections suggest that none of the GHI indicators will meet the 2030 targets set by the Sustainable Development Goals (SDGs): the prevalence of undernourishment, child stunting, child wasting, and child mortality are all off track.
- **Many youth in low- and middle-income countries are particularly vulnerable to food security and nutrition crises.** This vulnerability is worrisome given the importance of young people's health and nutrition status for the well-being of generations to come.

## The World: In the Face of Crises, Global Progress on Hunger Has Stalled

The 2023 Global Hunger Index shows that since 2015 little progress has been made in reducing hunger. The 2023 GHI score for the world is 18.3, considered *moderate*. This is less than one point below the world's 2015 GHI score of 19.1, indicating that progress on reducing hunger has largely stalled. In contrast, between 2000, 2008, and 2015, the world made significant headway against hunger. There has been an increase in the prevalence of undernourishment, one of the indicators used in the calculation of GHI scores, rising from a low of 7.5 percent in 2017 to 9.2 percent in 2022 (Figure 1.1). The number of undernourished people in the world increased from 572 million to 735 million in this period (FAO et al. 2023a). The 2023 GHI scores are based on data from 2018–2022, including the latest data available in this period for each of the four GHI indicators (see Appendix A). Because the vast majority of these data are from 2020 or later, they can more fully capture the effects of the COVID-19 pandemic than the data in previous GHI reports.

FIGURE 1.1 WORLD GHI SCORES AND PREVALENCE OF UNDERNOURISHMENT IN RECENT DECADES



Note: GHI scores are calculated based on four indicators of hunger. Undernourishment—one of the four indicators—shows the share of people whose caloric intake is insufficient. GHI scores for the year 2000 include data from 1998–2002; 2008 GHI scores include data from 2006–2010; 2015 GHI scores include data from 2013–2017; and 2023 GHI scores include data from 2018–2022. Data on undernourishment are from FAO (2023). The undernourishment values are for the world as a whole, including countries both included in and excluded from the GHI. For a complete list of data sources for the calculation of GHI scores, see Appendix A.

## BOX 1.1 ABOUT THE GLOBAL HUNGER INDEX SCORES

The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels. GHI scores are based on the values of four component indicators:<sup>1</sup>



**Undernourishment:** the share of the population with insufficient caloric intake.



**Child wasting:** the share of children under age five who have low weight for their height, reflecting *acute* undernutrition.

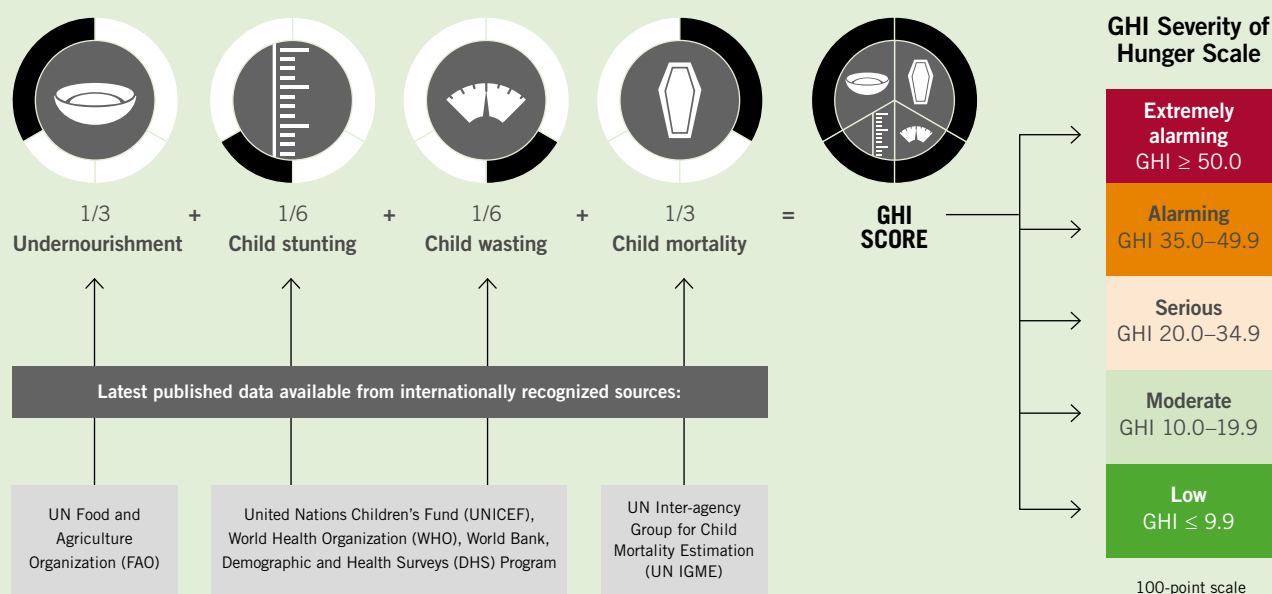


**Child stunting:** the share of children under age five who have low height for their age, reflecting *chronic* undernutrition.



**Child mortality:** the share of children who die before their fifth birthday, partly reflecting the fatal mix of inadequate nutrition and unhealthy environments.

These four indicators are aggregated as follows:



Based on the values of the four indicators, a GHI score is calculated on a 100-point scale reflecting the severity of hunger, where 0 is the best possible score (no hunger) and 100 is the worst.<sup>2</sup> Each country's GHI score is classified by severity, from *low* to *extremely alarming*.

<sup>1</sup> Each of the indicators is standardized; see Appendix A for details.

<sup>2</sup> GHI scores are comparable only within each year's report, not between different years' reports. To allow for tracking of a country's or region's GHI performance over time, this report provides GHI scores for 2000, 2008, and 2015, which can be compared with 2023 GHI scores. For a detailed explanation of the concept of the GHI, the date ranges and calculation of the scores, and the interpretation of results, see Appendix A.

The 2023 GHI score for the world reflects a dangerous array of overlapping global and local crises, including the fallout of the COVID-19 pandemic, the Russia-Ukraine war, and multiple violent conflicts and climate disasters around the world. These events have pushed some countries into food crises, while other countries have responded with relative resilience (IFPRI 2023). Low- and middle-income countries have been particularly hard hit relative to high-income countries (FAO et al. 2023a). The extent to which countries are able to recover from situations like these depends largely on underlying factors such as state fragility, inequality, poor governance, and chronic poverty. Given that the world is expected to be subject to further shocks in future years, particularly as a result of climate change, food security will increasingly depend on the effectiveness of disaster preparedness and responses (IFPRI 2023).

Many countries are experiencing severe hunger in 2023, with the situation expected to worsen throughout the year. Though circumstances in 2023 are not yet captured by the data in this year's GHI scores (see Appendix A), early warning resources indicate that many areas of the world are in crisis. The countries at the highest level of concern for 2023 are Afghanistan, Haiti, Nigeria, Somalia, South Sudan, Sudan, and Yemen, as well as Burkina Faso and Mali in the Sahel region. While conflict and climate change are key drivers of these crises, economic downturns are an even more pervasive factor (WFP and FAO 2023).

The Russia-Ukraine war contributed to global food price spikes in 2022 and continues to pose a threat to food security. Because of the large quantities of grain and fertilizer produced by Ukraine and Russia, disruptions to supply chains in the region can have significant ripple effects throughout the world, as evident in February 2022, when food prices spiked, mostly in anticipation of future grain and supply shortages. The Black Sea Grain Initiative, signed by Russia and Ukraine in July 2022, allowed for the export of agricultural products out of Ukraine and calmed international markets (Glauber et al. 2023). However, the agreement's expiration in 2023 without a guarantee of its renewal, and other events such as the destruction of the Nova Kakhovka dam in Ukraine, have highlighted the vulnerability that arises from the world's dependence on exports from this volatile region (Glauber et al. 2023; Reuters 2023).<sup>3</sup>

<sup>3</sup> On July 17, 2023, Russia announced the suspension of the Black Sea Grain Initiative, which remained suspended at the time the GHI report went to press (Bonnell 2023).

*“One thing relates to the other. When the routes are blocked because of the armed gangs, women vendors can’t go through, and therefore the food goes to waste and then the ones who have food sell it more expensively. When the reserves run out, we can’t get more nutritious food.”*

—Alexis Lourdrona (age 21), Haiti

*“People were already struggling with the impact of COVID-19, then came the Russia-Ukraine war, which affected the price of food—that has made the situation worse. In these times of crisis, it’s difficult to eat three meals a day. People are struggling to eat one meal or maybe two at best. It is different from normal times without conflict.”*

—Mohamed Ali Mohamed (age 20), Somalia

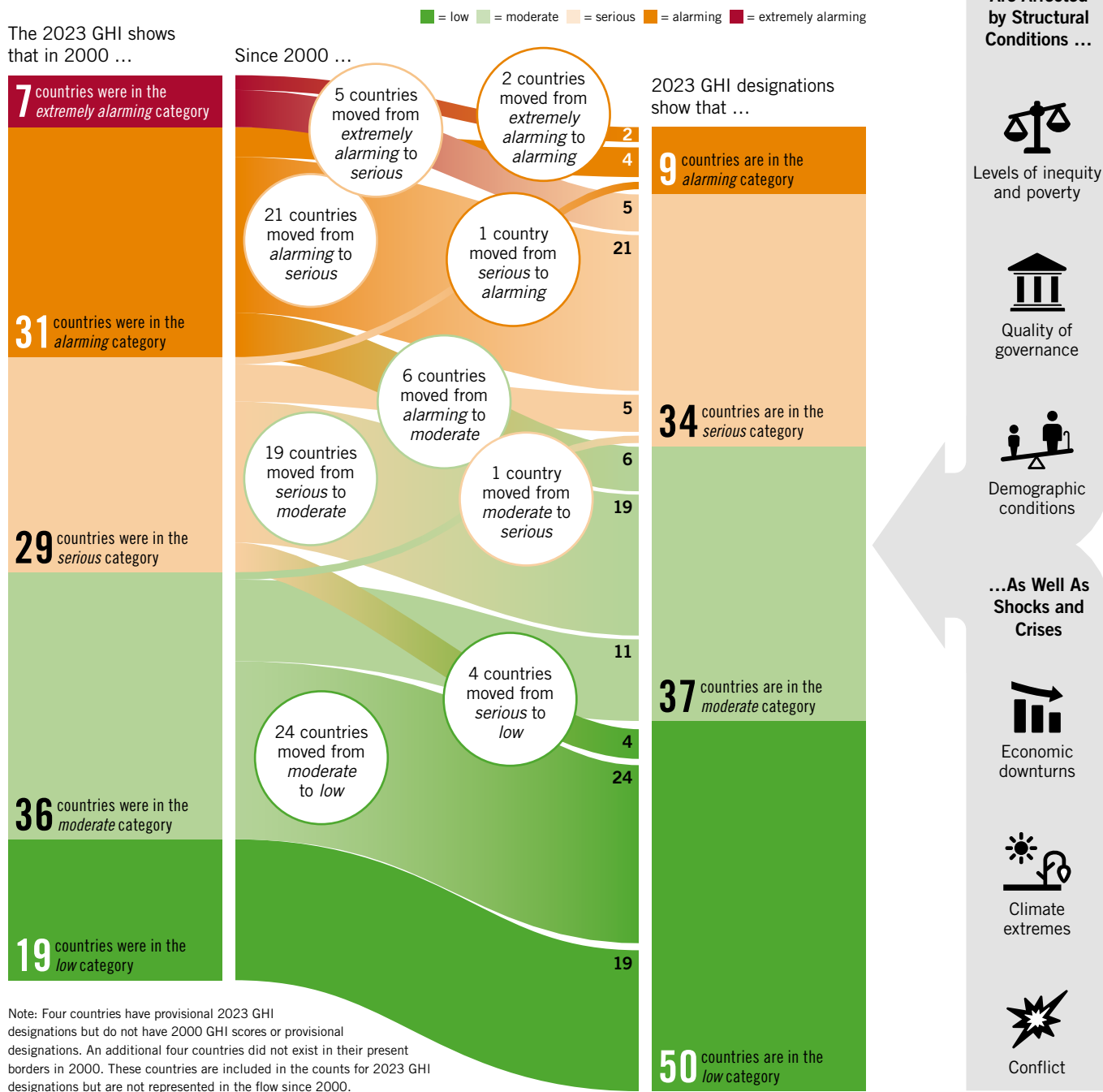
Today’s youth not only are affected by the current food crises but also will shoulder the burden of the looming disasters if concerted action is not taken. According to GHI projections, at the current pace, 58 countries will not achieve *low* hunger by 2030.<sup>4</sup> Projections suggest that none of the GHI indicators will meet the 2030 targets set by the Sustainable Development Goals (SDGs): the prevalence of undernourishment, child stunting, child wasting, and child mortality are all off track (FAO et al. 2023a; UNICEF et al. 2023b; UN IGME 2023b). Failure to meet the nutritional needs of children and young people today diminishes their capacity to fully engage in the societies and economies of the future, and results in lost opportunities to realize their full potential.

<sup>4</sup> The projections for 2030 are linear projections based on the existing 2000, 2008, 2015, and 2023 GHI scores for each country, and only countries with sufficient data for the calculation of these scores are included in the analysis. These projections are not comparable to projections from previous GHI reports owing to changes in data availability and revisions of existing data.



FIGURE 1.2 HUNGER SINCE 2000: A STORY OF PROGRESS AND STAGNATION

The World Has Made Progress in Reducing Hunger since 2000, but Hunger Is Still *Serious* or *Alarming* in 43 Countries



Since 2015, Progress Against Hunger Has Stagnated

The 2023 GHI score for the world is 18.3, considered *moderate*—less than one point below the world's 2015 GHI score of 19.1.

In **14** countries with *moderate, serious, or alarming* 2023 GHI scores, progress has largely stalled—their 2023 GHI scores declined by less than 5 percent from their 2015 GHI scores.

In **18** countries with *moderate, serious, or alarming* 2023 GHI scores, hunger has increased since 2015.

The world pledged to achieve zero hunger by 2030, but with the current trajectory,



**58** countries will not reach *low* hunger—much less zero hunger—by 2030.

Where Progress Has Been Notable

Despite the challenges facing the world and the stagnation in hunger levels at the global level in recent years, some countries—including **Bangladesh, Chad, Djibouti, Lao PDR, Mozambique, Nepal, and Timor-Leste**—have shown remarkable progress since 2015.

Note: Details on the GHI scores and categories for individual countries, as well as their changes over time, appear in Table 1.1 and Appendix C.

## The Regions: Cause for Concern in All World Regions

**South Asia and Africa South of the Sahara are the world regions with the highest hunger levels, with GHI scores of 27.0 each, indicating serious hunger in both regions.** For the past two decades, these two regions have consistently had the highest levels of hunger, which were considered *alarming* in 2000 and *serious* according to the 2008 and 2015 GHI scores. While both South Asia and Africa South of the Sahara achieved considerable progress between 2000 and 2015, a comparison of the 2015 and 2023 scores shows that progress has nearly halted, reflecting the trend seen for the world as a whole.

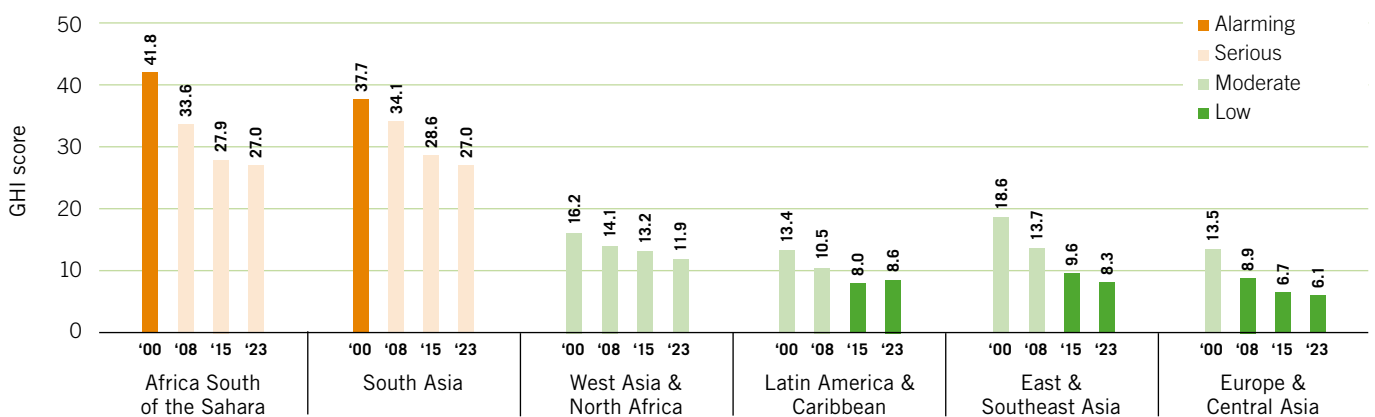
**South Asia's GHI score and indicator values reflect worryingly high rates of child undernutrition as well as a substantial level of undernourishment facing the population as a whole.** The 2022 child wasting rate of South Asia is 14.8 percent, the highest of any world region and more than twice the child wasting rate of Africa South of the Sahara of 6.0 percent (UNICEF et al. 2023b). Child wasting in South Asia is characterized by a high prevalence of wasting at birth and in infancy and prolonged periods of wasting in the first two years of life. This pattern suggests that one important explanation for the region's high child wasting rate is poor maternal nutrition (Banerjee et al. 2022; Torlesse and Tram Le 2020). Women in the region have higher rates of short stature and thinness than do those in Africa South of the Sahara, and poorer, less educated women in South Asia

are more likely to deliver babies with low birth weight than women with higher socioeconomic status (Sathi et al. 2022). There is also a high prevalence of simultaneous child wasting and child stunting in South Asia (Torlesse and Tram Le 2020), and its child stunting rate of 31.4 percent is nearly identical to that of Africa South of the Sahara, at 31.5 percent (UNICEF et al. 2023b). Meanwhile, the COVID-19 pandemic contributed to rising undernourishment in the region, which reached 15.9 percent in 2020–2022, compared with 13.5 percent in 2014–2016 (FAO 2023; Schipper et al. 2022).

**Africa South of the Sahara has the highest level of undernourishment of any world region, at 21.7 percent—a sizable increase compared with 16.8 percent in 2010–2012 (FAO 2023).**<sup>5</sup> Africa South of the Sahara also has the highest child mortality rate of any region in the world, at 7.4 percent (UN IGME 2023b). As mentioned, Africa South of the Sahara's child stunting rate of 31.5 percent is nearly identical to South Asia's rate of 31.4 percent (UNICEF et al. 2023b). Climate change—along with other factors, including the COVID-19 pandemic and the Russia-Ukraine war—has increased food insecurity in Africa South of the Sahara. Adverse climate events such as droughts, which have negative impacts on agriculture and food security, occur disproportionately in Africa South of the Sahara and can further compound already high levels of poverty and hunger (Kemoe

<sup>5</sup> This figure includes Sudan, which FAO groups with Northern Africa for some calculations.

FIGURE 1.3 REGIONAL 2000, 2008, 2015, AND 2023 GLOBAL HUNGER INDEX SCORES



Source: Authors.

Note: See Appendix A for data sources. The regional and global GHI scores are calculated using regional and global aggregates for each indicator and the formula described in Appendix A. The regional and global aggregates for each indicator are calculated as population-weighted averages, using the indicator values reported in Appendix B. For countries lacking undernourishment data, provisional estimates provided by the Food and Agriculture Organization of the United Nations (FAO) were used to calculate aggregates only but are not reported in Appendix B. Appendix D shows which countries are included in each region.

et al. 2022). Africa is the one region of the world projected to experience a significant increase in the number of undernourished people, from 282 million in 2022 to an expected 298 million in 2030 (FAO et al. 2023a).

**West Asia and North Africa is the region with the third-highest hunger level according to 2023 GHI scores.** With a 2023 GHI score of 11.9, West Asia and North Africa's hunger level is considered *moderate*. Conflict-torn Yemen and Syria have the highest country-level 2023 GHI scores in the region, at 39.9 and 26.1, respectively. The region is contending with looming threats, including growing water scarcity and the increasing effects of climate change (Belhaj and Soliman 2021; Wehrey and Fawal 2022). Climate change, its effects on agricultural production, and rapid population growth are projected to increase the region's high level of dependence on food imports in the coming years (Le Mouél et al. 2023). These growing resource constraints are expected to exacerbate governance issues in the region and possibly contribute to future conflicts (Wehrey and Fawal 2022).

**The increase in GHI scores for Latin America and the Caribbean since 2015 is particularly troubling.** It is the only region whose GHI scores have increased in this period. Nine countries in the region have seen an increase in hunger since 2015, including Argentina, Bolivia, Brazil, Costa Rica, Ecuador, Haiti, Paraguay, Trinidad and Tobago, and Venezuela. The average cost of a healthy diet is higher in Latin America and the Caribbean than in any other world region, and the cost of food there is rising. Latin America and the Caribbean also has the highest level of income inequality of any region of the world. These factors—along with the COVID-19 pandemic, which hit the region particularly hard in terms of fatalities and job cuts—have exacerbated hunger in the region (FAO et al. 2023b).

**East and Southeast Asia, dominated by populous China, has the second-lowest 2023 GHI score of any region in the report.** China's population constitutes two-thirds of the region's population (UN DESA 2022), and it has the lowest 2023 GHI score in the region, with a value of less than 5. However, there is substantial variation among the 2023 GHI scores for other countries in the region. The scores of the Democratic People's Republic of Korea, Papua New Guinea, and Timor-Leste are considered *serious*. Hunger in several countries is classified as *moderate*, while in China, Fiji, and Mongolia the 2023 GHI scores are considered *low*. Diets in East and Southeast Asia are heavily dependent on rice, which, in contrast to wheat and other grains, has been relatively unaffected by the Russia-Ukraine war. However, flooding in Pakistan and the emergence of the El Niño weather pattern in 2023 may decrease rice production, leading to

increased prices and lower availability and access to this key staple grain in the near future (Mamun and Glauber 2023).

**The region with the lowest 2023 GHI score is Europe and Central Asia, whose score of 6.1 is considered low.** Despite the region's low score, some populations within the region continue to experience food insecurity. In 2020–2022, 10.5 percent of the population of Eastern Europe and 18.4 percent of the population of Central Asia experienced moderate or severe food insecurity (FAO et al. 2023a). A recent study by FAO found that 47 percent of the rural population in Eastern Europe and Central Asia does not receive social protection benefits, and only 10.1 percent of the region's gross domestic product (GDP) is invested in social protection programs compared with 19.3 percent in the European Union (FAO 2022).<sup>6</sup> The Russia-Ukraine war has put obvious pressure on food security in Ukraine itself, with the livelihoods of food producers challenged by decreased production levels and increased costs of inputs, storage, and transportation. Domestic food price inflation has reduced the affordability of food throughout Europe and Central Asia in recent years. Surveys conducted in 2021 and 2022 found food security to be the biggest poverty-related concern in Central Asia (Jungbluth and Zorya 2023).

**Even in regions not covered by the GHI, such as North America and parts of Europe, food insecurity continues to pose a challenge.** Inclusion in the GHI is determined based on prevalence of undernourishment and child mortality data dating back to 2000. Only countries with values above the “very low” threshold for one or both of these indicators since 2000 are included in the GHI (see Appendix A for the full inclusion criteria). Based on these criteria, many countries in North America and Northern, Southern, and Western Europe are not included in the index. However, 7.8 percent of the population of Northern America<sup>7</sup> experienced moderate or severe food insecurity in 2020–2022, as did 5.1 percent of the population of Northern Europe, 8.5 percent of the population of Southern Europe, and 4.9 percent of the population of Western Europe (FAO et al. 2023a). Northern America and Europe experienced a slight increase in moderate or severe food insecurity between 2021 and 2022, and this upward trend was seen in all subregions of Europe other than Southern Europe (FAO 2023; FAO et al. 2023a). High domestic food price inflation has put pressure on low- and high-income countries alike, including those in North America and Europe (World Bank 2023a).

<sup>6</sup> The study covered 18 countries and territories, all of which are included in the GHI regional grouping of Europe and Central Asia, except for Kosovo and Türkiye.

<sup>7</sup> The terms North America and Northern America, which encompass slightly different regions, are both used here following the terminology used in the sources cited.

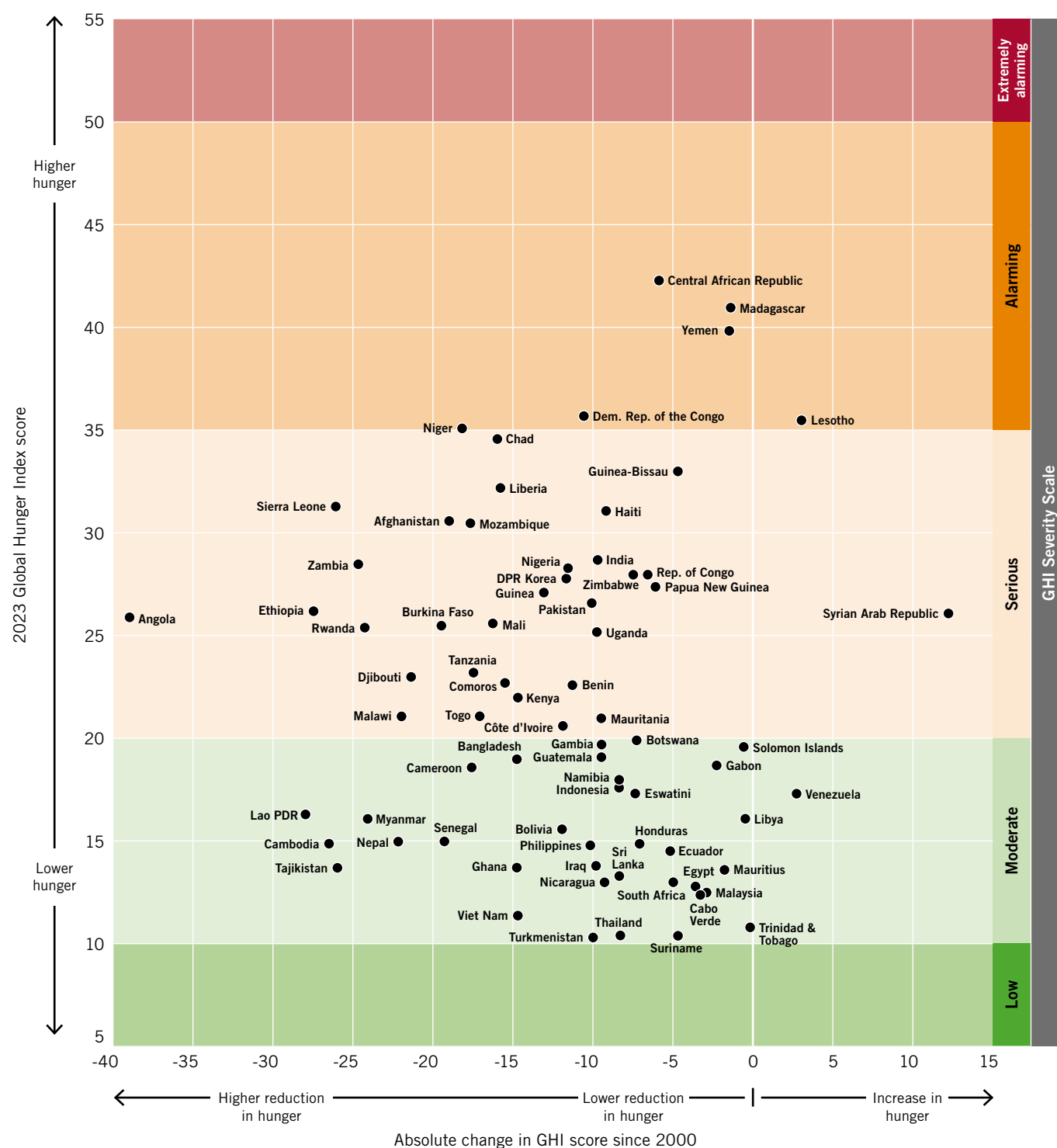


TABLE 1.1 GLOBAL HUNGER INDEX SCORES BY 2023 GHI RANK

Note: As always, rankings and index scores from this table cannot be accurately compared to rankings and index scores from previous reports (see Appendix A).

Rank <sup>1</sup>	Country	2000	2008	2015	2023	Rank <sup>1</sup>	Country	2000	2008	2015	2023
2023 GHI scores less than 5, collectively ranked 1–20 <sup>2</sup>	Belarus	<5	<5	<5	<5	69	Senegal	34.3	21.8	18.0	15.0
	Bosnia & Herzegovina	9.4	6.5	5.3	<5	71	Bolivia (Plurinational State of)	27.6	22.1	14.7	15.6
	Chile	<5	<5	<5	<5	72	Libya	16.6	12.8	18.5	16.1
	China	13.4	7.1	<5	<5	72	Myanmar	40.2	29.7	17.3	16.1
	Croatia	<5	<5	<5	<5	74	Lao PDR	44.3	30.4	21.8	16.3
	Estonia	<5	<5	<5	<5	75	Eswatini	24.7	25.0	19.3	17.3
	Georgia	12.1	6.6	<5	<5	75	Venezuela (Bolivarian Republic of)	14.6	8.8	11.1	17.3
	Hungary	6.7	5.6	5.0	<5	77	Indonesia	26.0	28.5	21.9	17.6
	Kuwait	<5	<5	<5	<5	78	Namibia	26.4	29.2	22.2	18.0
	Latvia	<5	<5	<5	<5	79	Cameroon	36.0	29.0	20.7	18.6
	Lithuania	7.6	5.1	<5	<5	80	Gabon	21.0	20.2	17.3	18.7
	Moldova (Republic of)	18.6	17.0	<5	<5	81	Bangladesh	33.8	30.6	26.2	19.0
	Montenegro	—	5.2	<5	<5	82	Guatemala	28.6	24.0	20.6	19.1
	North Macedonia	7.5	5.3	5.3	<5	83	Solomon Islands	20.2	18.2	23.4	19.6
	Romania	7.9	5.8	5.1	<5	84	Gambia	29.2	24.9	24.3	19.7
	Serbia	—	5.8	<5	<5	85	Botswana	27.2	26.8	22.2	19.9
Slovakia	7.2	5.7	5.7	<5	* Jordan	—	—	—	10–19.9*		
Türkiye	10.1	5.7	<5	<5	86	Côte d'Ivoire	32.5	36.0	22.1	20.6	
United Arab Emirates	<5	6.8	5.6	<5	87	Mauritania	30.5	18.8	22.4	21.0	
Uruguay	7.6	5.3	<5	<5	88	Malawi	43.1	29.2	22.9	21.1	
21	Uzbekistan	24.2	14.9	5.9	5.0	88	Togo	38.2	29.6	25.7	21.1
22	Costa Rica	6.9	<5	<5	5.1	90	Kenya	36.7	29.5	22.5	22.0
23	Bulgaria	8.6	7.7	7.3	5.4	91	Benin	33.9	26.4	23.3	22.6
24	Kazakhstan	11.3	11.0	5.7	5.5	92	Comoros	38.2	30.4	24.0	22.7
25	Armenia	19.2	11.7	6.3	5.6	93	Djibouti	44.4	33.9	29.6	23.0
26	Russian Federation	10.2	5.8	6.3	5.8	94	Tanzania (United Rep. of)	40.7	30.2	24.6	23.2
27	Tunisia	10.3	7.4	6.4	5.9	95	Uganda	35.0	29.0	27.8	25.2
28	Mexico	10.2	9.9	6.7	6.0	96	Rwanda	49.7	33.1	28.3	25.4
28	Paraguay	11.8	10.1	5.1	6.0	97	Burkina Faso	45.0	33.7	28.0	25.5
30	Albania	16.4	15.5	8.8	6.1	98	Mali	41.9	32.2	27.1	25.6
31	Argentina	6.8	5.5	5.3	6.4	99	Angola	64.9	42.9	25.7	25.9
32	Brazil	11.7	6.8	5.4	6.7	100	Syrian Arab Republic	13.9	16.2	23.9	26.1
33	Algeria	14.7	11.1	8.5	6.8	101	Ethiopia	53.3	40.5	26.5	26.2
34	Azerbaijan	24.9	15.0	9.3	6.9	102	Pakistan	36.7	31.3	28.8	26.6
35	Colombia	11.0	10.2	7.5	7.0	103	Sudan	—	—	28.5	27.0
36	Peru	20.6	14.0	7.7	7.2	104	Guinea	40.2	29.3	28.4	27.1
37	Saudi Arabia	12.3	10.6	9.1	7.3	105	Papua New Guinea	33.5	32.9	28.5	27.4
38	Jamaica	8.5	8.6	8.6	7.5	106	DPR Korea	39.5	30.4	24.8	27.8
38	Kyrgyzstan	17.5	12.9	9.1	7.5	107	Congo (Republic of)	34.6	32.4	26.2	28.0
38	Mongolia	29.9	16.7	7.4	7.5	107	Zimbabwe	35.5	30.7	27.6	28.0
41	Iran (Islamic Republic of)	13.7	8.8	7.7	7.7	109	Nigeria	39.9	31.2	27.8	28.3
42	Panama	18.6	13.0	8.7	7.9	110	Zambia	53.2	44.9	33.2	28.5
43	El Salvador	14.7	12.0	9.8	8.1	111	India	38.4	35.5	29.2	28.7
44	Ukraine	13.0	7.1	7.1	8.2	112	Timor-Leste	—	46.5	35.9	29.9
45	Oman	14.8	11.2	11.2	8.3	113	Mozambique	48.2	35.6	37.0	30.5
46	Dominican Republic	15.1	13.9	9.4	8.6	114	Afghanistan	49.6	36.5	30.4	30.6
47	Morocco	15.8	12.2	9.1	9.0	115	Haiti	40.3	40.2	30.1	31.1
48	Guyana	17.2	15.1	11.3	9.3	116	Sierra Leone	57.4	45.4	32.8	31.3
49	Fiji	9.3	8.6	10.4	9.7	117	Liberia	48.0	36.4	32.9	32.2
*	Lebanon	—	—	—	0–9.9*	118	Guinea-Bissau	37.7	29.6	33.3	33.0
50	Turkmenistan	20.3	14.5	11.4	10.3	119	Chad	50.6	49.9	40.1	34.6
51	Suriname	15.1	11.0	10.6	10.4	120	Niger	53.3	39.5	35.2	35.1
51	Thailand	18.7	12.2	9.4	10.4	121	Lesotho	32.5	27.8	30.6	35.5
53	Trinidad & Tobago	11.0	10.7	10.7	10.8	122	Dem. Rep. of the Congo	46.3	40.2	36.4	35.7
54	Viet Nam	26.1	20.1	14.5	11.4	123	Yemen	41.4	37.8	42.1	39.9
55	Cabo Verde	15.7	12.4	14.6	12.4	124	Madagascar	42.4	36.6	38.9	41.0
56	Malaysia	15.4	13.7	12.0	12.5	125	Central African Republic	48.2	43.7	44.0	42.3
57	Egypt	16.4	16.9	15.2	12.8	*	Somalia	63.6	59.2	—	35–49.9*
58	Nicaragua	22.3	17.5	14.6	13.0	*	Burundi and South Sudan	—	—	—	35–49.9*
58	South Africa	18.0	16.8	13.9	13.0	■ = low ■ = moderate ■ = serious ■ = alarming ■ = extremely alarming Note: For the 2023 GHI report, data were assessed for 136 countries. Out of these, there were sufficient data to calculate 2023 GHI scores for and rank 125 countries (by way of comparison, 121 countries were ranked in the 2022 report). <sup>1</sup> Ranked according to 2023 GHI scores. Countries that have identical 2023 scores are given the same ranking (for example, Mexico and Paraguay are both ranked 28th). <sup>2</sup> The 20 countries with 2023 GHI scores of less than 5 are not assigned individual ranks, but rather are collectively ranked 1–20. Differences between their scores are minimal. — = Data are not available or not presented. Some countries did not exist in their present borders in the given year or reference period. * For 11 countries, individual scores could not be calculated and ranks could not be determined owing to lack of data. Where possible, these countries were provisionally designated by severity: 1 as <i>low</i> , 1 as <i>moderate</i> , and 3 as <i>alarming</i> . For 6 countries, provisional designations could not be established (see Table A.3 in Appendix A).					
60	Sri Lanka	21.7	17.6	17.1	13.3						
61	Mauritius	15.4	13.9	13.5	13.6						
62	Ghana	28.5	22.2	15.7	13.7						
62	Tajikistan	40.1	29.9	16.9	13.7						
64	Iraq	23.6	20.3	16.5	13.8						
65	Ecuador	19.7	18.1	11.7	14.5						
66	Philippines	25.0	19.1	18.3	14.8						
67	Cambodia	41.4	25.6	19.0	14.9						
67	Honduras	22.0	19.2	15.0	14.9						
69	Nepal	37.2	29.0	21.3	15.0						

FIGURE 1.4 2023 GHI SCORES AND PROGRESS SINCE 2000



Source: Authors.

Note: This figure illustrates the change in GHI scores since 2000 in absolute values. It features countries where data are available to calculate 2000 and 2023 GHI scores and where 2023 GHI scores show moderate, serious, alarming, or extremely alarming hunger levels. Some likely poor performers may not appear due to missing data.

## The Countries: Too Many Countries Still Suffer from Hunger

According to the 2023 GHI scores and provisional designations, nine countries have **alarming** levels of hunger and 34 have **serious** levels of hunger. There are six countries with 2023 GHI scores in the *alarming* range—Central African Republic, Madagascar, Yemen, Democratic Republic of the Congo, Lesotho, and Niger—and three additional countries that are provisionally designated as *alarming* despite insufficient data for the calculation of GHI scores: Burundi, Somalia, and South Sudan.

**Central African Republic, with a 2023 GHI score of 42.3, has the highest score of any country in this year's report.** The country's 2020–2022 undernourishment rate of 48.7 percent means that nearly half of the population is consistently unable to meet minimum dietary energy needs. One in 10 children does not live until their fifth birthday, 40.0 percent of children are stunted, and 5.3 percent of children are wasted. Central African Republic has suffered from conflict in recent years, which, along with population displacement, widespread poverty, and underemployment, drives hunger (United Nations 2022; WFP et al. 2022).

**Madagascar has the second-highest 2023 GHI score in this year's report, which, at 41.0, is considered *alarming*.** More than half of the population—51.0 percent—is undernourished, 39.8 percent of children are stunted, 7.2 percent of children suffer from wasting, and the child mortality rate is 6.6 percent. Madagascar has been severely affected by climate change, and its near famine in 2021/2022 was described as potentially being the first climate-change-induced famine in history (Baker 2021; UN News 2021). Still, climate change is not the only challenge; deep structural and governance weaknesses also underpin Madagascar's vulnerability (Rice 2022).

**The third-highest score in the 2023 GHI is held by Yemen, at 39.9.** Child undernutrition is widespread in Yemen, with 48.7 percent of children stunted and 14.4 percent of children wasted—the second-highest rate in this year's report. Meanwhile, more than one-third of the population is undernourished, at 34.5 percent, and the child mortality rate is 6.2 percent, up from 6.1 percent in 2015. Though this is a small increase, it is concerning, given that just three other countries (Fiji, Mauritius, and Venezuela) in this year's GHI experienced an increase in child mortality rates in this period. Yemen's ongoing conflict, now in its ninth year, has been hugely detrimental to the economy, and the children of the country have suffered tremendously (UNICEF 2023c).

**Democratic Republic of the Congo, Lesotho, and Niger each have *alarming* 2023 GHI scores, between 35.1 and 35.7.** Niger's GHI score is driven up by its very high rate of child stunting, high rate of child wasting, and very high child mortality rate—the highest in this year's report, at 11.5 percent. Its prevalence of undernourishment for the population as a whole is of medium significance, at 16.1 percent. The children of Niger have suffered in recent years from conflict-driven internal displacement and an influx of refugees from neighboring countries, as well as the climate crisis and rising food prices (ActuNiger 2023; UNICEF and MHA 2022). Lesotho's *alarming* GHI score is driven up mainly by its very high undernourishment rate, at 46.0 percent as of 2020–2022, up from 31.9 percent in 2014–2016 and precipitously higher than its 2007–2009 undernourishment rate of just 12.3 percent. One factor in this increase is the decline in Lesotho's agricultural productivity in recent decades due to unpredictable weather conditions, including inconsistent rains and persistent and recurring droughts (WFP 2023b). Democratic Republic of the Congo (DRC) has high or very high values for each of the indicators, with the exception of child wasting, which is of medium significance. DRC is adversely affected not only by conflict, which has resulted in mass displacement and decreased agricultural activity in recent years, but also by weather extremes, crop pests, livestock diseases, and high food prices (FSIN and GNAFC 2023). The country has more than 6.2 million internally displaced people as well as more than half a million refugees from neighboring countries (UNHCR 2023b).

*“Most of the time, conflict is the root cause of hunger in our community. I am a farmer, and when conflict breaks out, we all flee, and I have to leave my field and crops behind. Wherever we end up, we are newcomers. We have no fields, no reserves. This always makes us vulnerable. We have left everything behind in our home village.”*

—Ruth Yumba (age 20), Democratic Republic of the Congo  
(name changed for security reasons)



**Somalia, provisionally designated as *alarming*, has endured a prolonged drought since late 2020, severely impacting food production.**

Although it has insufficient data for the calculation of GHI scores, Somalia has the second-highest prevalence of undernourishment in this year's report, at 48.7 percent as of 2020–2022 (identical to Central African Republic), and the second-highest child mortality rate, at 11.2 percent as of 2021. Six consecutive rainy seasons with below-normal rainfall have made crop production and care for livestock nearly impossible in Somalia (IRC 2023; UNHCR 2023a). The country was estimated to have incurred approximately 43,000 excess deaths in 2022, with half of these occurring in children under age five. In addition to drought, the crisis has been driven by global price rises, ongoing insecurity, and the aftermath of the COVID-19 pandemic (FSIN and GNAFC 2023). A large-scale humanitarian response has so far been able to avert famine during the ongoing drought, but continuing and scaled-up resources are needed (UN OCHA 2023a).

**Hunger in South Sudan is provisionally designated as *alarming*: the country's child mortality rate is nearly 10 percent, and roughly one in five people in the country was undernourished in 2020–2022.**

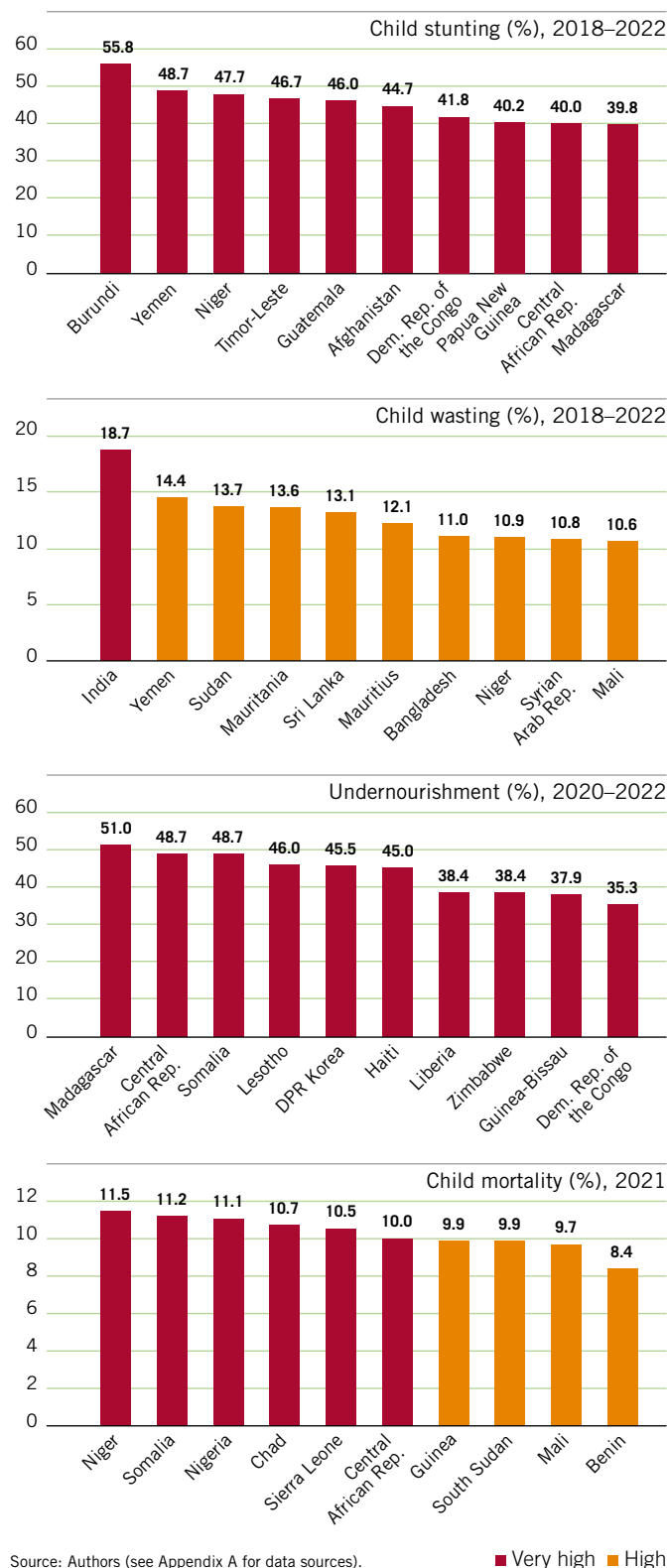
According to the *Global Report on Food Crises*, in the second quarter of 2022 nearly two-thirds of the population was estimated to be experiencing crisis-level or worse food insecurity. Multiple interconnected factors are driving hunger in South Sudan, including ongoing conflict, high food and fuel prices, severe flooding, and low foreign currency reserves (FSIN and GNAFC 2023).

**Burundi, also provisionally designated as *alarming*, has the highest child stunting rate of any country in this year's report, at 55.8 percent.** Approximately two-thirds of the country's population cannot afford a nutritious diet (Bella 2022). Burundi has one of the highest poverty rates in the world, at more than 70 percent. This, along with factors such as rapid population growth, climate-related shocks, and inadequate access to clean water and health and education services, drives food insecurity in the country (WFP 2023a).

*“Our school is located in the area that is constantly affected by food insecurity due to climatic changes. This usually has a very negative impact on children's education, especially school attendance.”*

—Clémence Kwizera (age 43), Burundi

FIGURE 1.5 WHERE THE INDICATORS OF HUNGER ARE HIGHEST



Since 2015, hunger has increased in 18 countries with *moderate, serious, or alarming* 2023 GHI scores (Appendix C). Of these, eight are in Africa South of the Sahara, five are in Latin America and the Caribbean, three are in East and Southeast Asia, and there is one each in South Asia and in West Asia and North Africa. An additional 14 countries with *moderate, serious, or alarming* 2023 GHI scores experienced a decline of less than 5 percent between their 2015 and 2023 GHI scores, indicating negligible progress in that period. Three countries have higher 2023 GHI scores than 2000 scores: Lesotho, Syrian Arab Republic, and Venezuela. This deterioration of conditions over the past two decades is particularly troubling.

**Examination of the individual indicators used in the calculation of GHI scores reveals the extremes experienced by some countries** (Figure 1.5). For example, at 55.8 percent, more than half of children in Burundi are stunted, reflecting chronic undernutrition. India has the highest child wasting rate in the world, at 18.7 percent, reflecting acute undernutrition. More than half of the population of Madagascar is undernourished, at 51.0 percent. And 10–12 percent of children do not live to their fifth birthdays in six countries, all in Africa South of the Sahara: Central African Republic, Chad, Niger, Nigeria, Sierra Leone, and Somalia.

**Despite the many countries and regions experiencing distressingly high levels of hunger and undernutrition, there are also examples of progress and hope.** Seven countries whose 2000 GHI scores indicated *extremely alarming* hunger levels—Angola, Chad, Ethiopia, Niger, Sierra Leone, Somalia, and Zambia—have all made progress since then. According to the 2023 GHI scores, five of these countries have made enough headway to reduce their hunger levels to *serious*, and Niger’s 2023 GHI score, at 35.1, is very near the *serious* category. Somalia, however, is provisionally designated as *alarming*. Also, seven countries have achieved reductions of five points or more between their 2015 and 2023 GHI scores: Bangladesh, Chad, Djibouti, Lao PDR, Mozambique, Nepal, and Timor-Leste. These reductions in hunger are particularly notable given the challenges facing the world and the stagnation in hunger levels at the global level in recent years.

## Food Insecurity and Malnutrition Jeopardize the Life Chances of Youth

Youth are “emerging into adulthood in a context of inherently unequal and unsustainable food systems that fail to deliver food and nutrition security and that are highly vulnerable to climate change and environmental degradation,” as described in chapter 2, “Beyond 2030: Youth, Food Systems, and a Future of Food Sovereignty.” These shortcomings are particularly problematic given the unique food and nutrition needs of youth and the data showing these needs are not being met in low- and middle-income countries.

*“Nutritious food means health and fewer costs; work means a better life; land means prosperity.”*

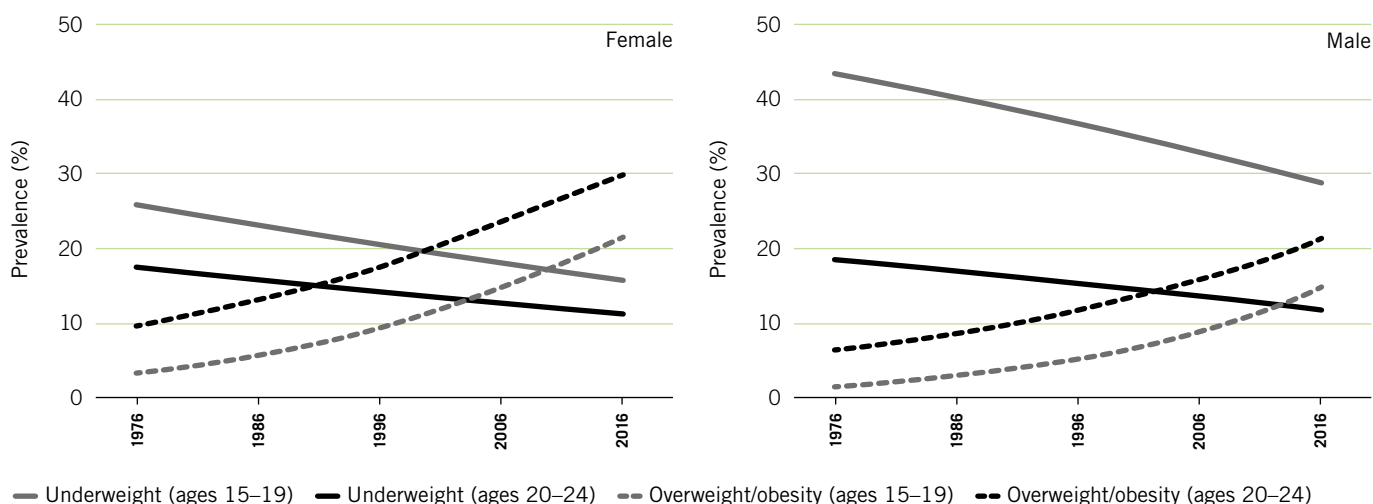
—Hervève Clémentine (age 29), Madagascar

**Youth—the period of adolescence and early adulthood—is a key developmental stage when a proper diet and nutrition are critical.** Nutritional needs before birth and during infancy and early childhood are relatively well understood and have rightfully garnered considerable international attention in recent years. In contrast, there has historically been insufficient emphasis on adolescent nutrition, though international organizations and national governments are increasingly focusing on this important life stage (SPRING and Save the Children 2018). Lack of proper nutrition and poor eating habits during adolescence can have long-term consequences, including delayed sexual maturation, lower adult height, osteoporosis, elevated levels of lipids in the blood stream, and obesity (Norris et al. 2022; Wahl 1999).

**Other than early childhood, adolescence is the period of most rapid physical growth and development.** Adolescents have critical nutritional needs, including high levels of protein and micronutrients. The start of menstruation creates additional iron requirements for adolescent girls. While children aged 5–19 have an opportunity to make up for inadequate nutrition in their earlier years and even to catch up in terms of height, they also face challenges and potential pitfalls in this period (Kupka et al. 2020).

**Food insecurity and hunger are formidable barriers facing youth during this critical period of their lives.** Relevant data are sparse because major indicators of food insecurity and hunger are rarely broken down by age group. However, existing data confirm that youth experience significant levels of food insecurity. Data from

FIGURE 1.6 UNDERWEIGHT AND OVERWEIGHT/OBESITY AMONG YOUTH IN LOW- AND MIDDLE-INCOME COUNTRIES, 1976–2016



Source: Based on IFAD (2019, Figure 6.5).

school-based surveys in 95 countries found that 25.5 percent of students aged 11–14 had experienced food insecurity in the previous 30 days, as had 30.0 percent of students aged 15–18. For these young people, food insecurity was associated with poorer outcomes in terms of nutrition, mental health, behavior, and bullying victimization (Fram et al. 2022). Nonstudents in these age groups may face even greater challenges. One study found that slightly more than half of young farmers in Kenya, Nigeria, and Uganda were food insecure, as measured by the Food Consumption Score, and dietary diversity was low among this group (Adeyanju et al. 2023).

**In addition to food access and availability, social factors can affect the food choices young people make.** External pressures such as advertising of ultra-processed foods, pressure to maintain societal images of ideal body types, and peer pressure are all factors that can influence youth decisions regarding food consumption (Fleming et al. 2020). Given that the transition to adulthood is a period when lifelong dietary habits are often formed, reaching this age group with positive messages regarding diet and nutrition is key (Kupka et al. 2020).

**The prominence of high-calorie, low-nutrient foods in modern diets puts youth at risk of the double burden of malnutrition—namely, overweight/obesity accompanied by micronutrient deficiencies.** At the individual level, overweight youth are found to have nutritional deficiencies—a combination of conditions that is associated with

*“Life became very difficult. We had no market for our products because of the restrictions of movement set by the government. Hence my dream of going back to school was shattered because money became scarce. At a “Green College” I have learned new skills. I now grow organic vegetables and sell them. I have an income and a perspective.”*

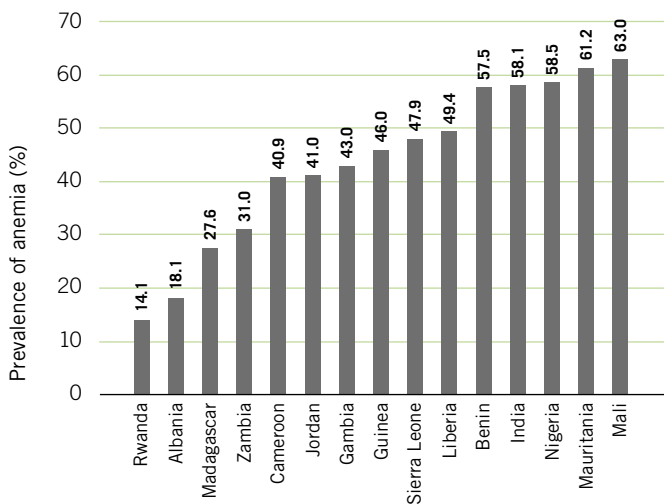
—Kabarungi Latisha (age 20), Uganda

*“My hope is that our children will grow up healthy, less sick, and that the role of women can be strengthened in all areas, thus ensuring a better South Sudan and a more successful next generation.”*

—Joyce Abalo (age 34), South Sudan



FIGURE 1.7 PREVALENCE OF ANEMIA IN WOMEN AGED 15–24 IN SELECTED COUNTRIES



Source: ICF (2023).

Note: Countries shown are those with data collected since 2018 and included in ICF (2023). Data are shown for the most recent year available.

high consumption of foods low in nutritional content and low levels of physical activity (IFAD 2019; WHO 2020). At the national level, governments are simultaneously grappling with the health implications of undernutrition and overnutrition. While the prevalence of underweight is declining among youth globally, rates of overweight and obesity are rising (Figure 1.6; IFAD 2019).

**One important consideration related to the nutritional needs of young women is the potential for motherhood and the implications of their nutrition status for both themselves and their children.** Close to one-third of women in low- and middle-income countries give birth to their first child at age 19 years or younger (UNFPA 2022). Low weight and height of mothers are associated with stunting and wasting in their children, and child undernutrition tends to occur in the same regions as maternal undernutrition (UNICEF 2023b). Anemia often occurs during pregnancy when the mother has insufficient iron intake, which can result in not only health risks for the mother but also anemia for the infant (American Society of Hematology 2023). The prevalence of anemia is high and persistent in many countries (Figure 1.7), and currently no region of the world is on track to meet the 2030 target to halve the rate of anemia in adolescent girls and women (UNICEF 2023b).

## Conclusion

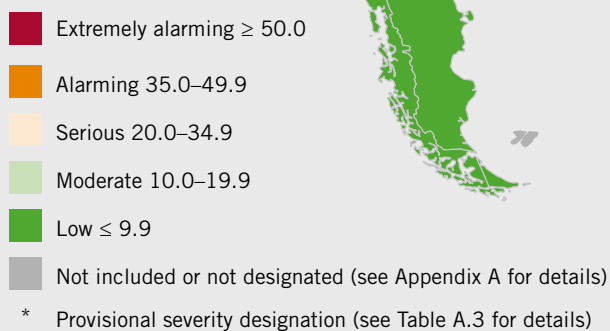
The crises the world has faced in recent years have undermined progress toward ending hunger, and the future portends a continuing onslaught of crises for which the world is not prepared. Underpinning this unfortunate expectation is the acceleration of climate change, which is likely to generate not only direct, weather-related crises such as droughts, flooding, extreme storms, and heat but also indirect crises such as pandemics, conflict, and displacement—all of which can contribute to hunger without adept responses. Given the vast inequality in today's world, these burdens will be disproportionately shouldered by those who already suffer the most from hunger, poverty, conflict, and poor governance.

At the global level, endless summits and ambitious declarations have pledged to address hunger and malnutrition and their underlying causes, but if these commitments are never translated into action, the next generation will face increasing levels of food and nutrition insecurity. It is more critical than ever to break this intergenerational cycle, and it is increasingly apparent that this will require the holistic transformation of food systems and improvements to governance structures, energy and infrastructure systems, social protection systems, and more—all of which are currently inadequate to achieve Zero Hunger. The right to food is violated for millions of people each day, and a robust political commitment to inclusive governance of food systems is needed to ensure this injustice is ended once and for all.

*“Our parents are farmers, our ancestors were farmers, and we understand the challenges a small-scale farmer faces. If we don’t address our problems, then who will?”*

—Chethan Kumar B. G. (age 31), India

## 2023 GLOBAL HUNGER INDEX BY SEVERITY









Young women draw water from a well in Kolloma village, Tahoua, Niger. Climate change is degrading safe access to clean water, which is critical to food security now and for generations to come. Youth, whose advocacy for climate change action has garnered an inadequate response, must be meaningfully involved in decisions that affect them and their futures.



# BEYOND 2030: YOUTH, FOOD SYSTEMS, AND A FUTURE OF FOOD SOVEREIGNTY

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## Key Messages

- **Young people are emerging into adulthood in a context of unequal and unsustainable food systems that fail to deliver food and nutrition security and are highly vulnerable to climate change and environmental degradation.** Youth not only suffer from the failures of current food systems but will inherit these troubled food systems and their looming challenges.
  - **Food insecurity and undernutrition are highest and most persistent in South Asia and Africa South of the Sahara, which are also home to the largest share of the youth population.** At the same time, many young people perceive farming as unappealing and unprofitable.
  - **Current food systems suffer from a lack of food sovereignty—that is, the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and the right to define their own food and agriculture systems.** As a result, indigenous and local farming and knowledge systems are under widespread threat.
  - **Youth participation in making decisions that will affect their futures is limited.** Although policymakers have begun to seek out young people's voices and perspectives, the share of youth in formal decision-making forums is negligible, and the increased focus on youth participation in some policy dialogues has not necessarily translated into meaningful impact.
  - **The pursuit of food sovereignty presents an opportunity to engage youth in transforming failing food systems to become more sustainable, more just, and better able to supply the needs of all the world's people, especially the most vulnerable.** Young people can bring their energy and innovation to help reclaim contextualized food sovereignty, improving nutrition while strengthening the resilience of local food systems under ecological and climate stress. A transformation to sustainable, resilient, and equitable food systems can provide youth with employment opportunities that are fair, interesting, and sustainable.
- **Leaders must take a long-term perspective and invest in sectors that can improve young people's well-being, including health, education, and skills development, while also engaging youth in policymaking to promote inclusivity, equity, and sustainability.** Young people must seize opportunities to participate in food systems governance and integrate their perspectives into policy to enable just, sustainable food systems for all.

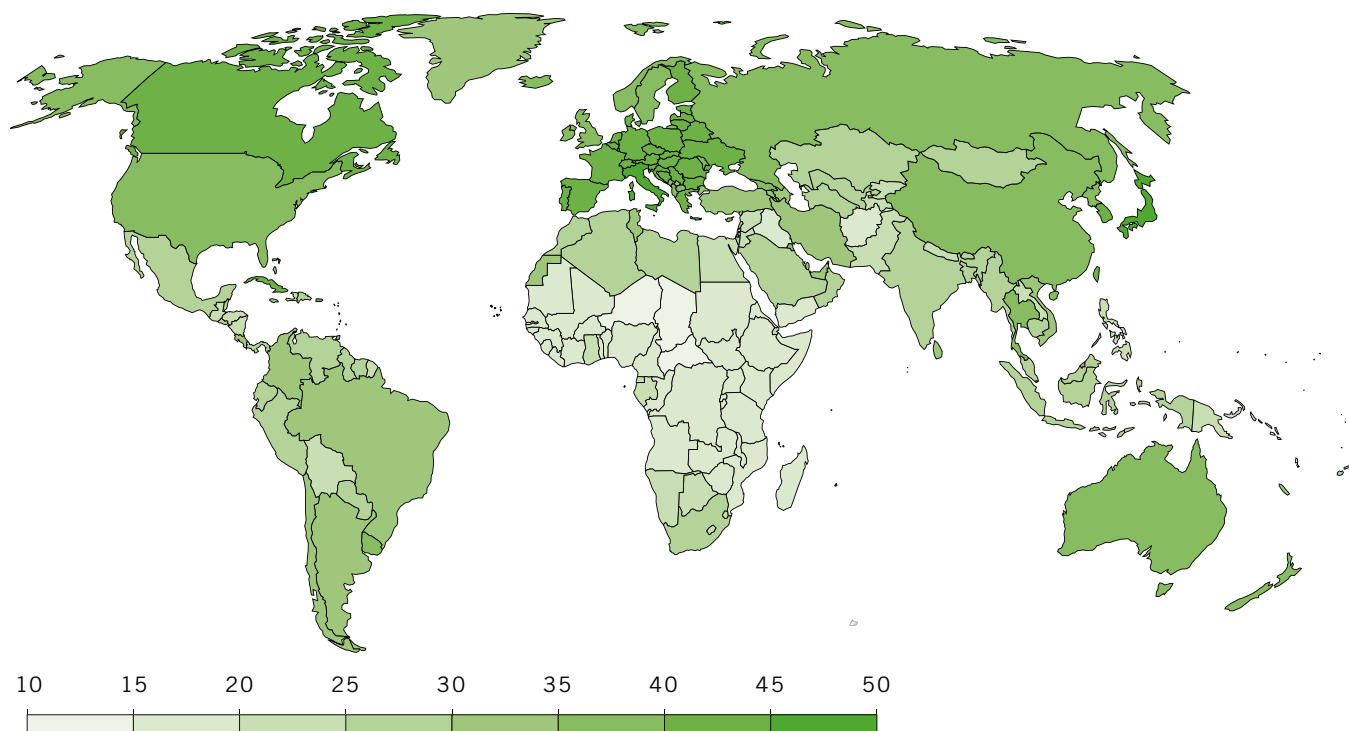
Global food systems are outdated, unsustainable, vulnerable, and often lack inclusivity and equity (Nguyen 2018; Mabhaudhi et al. 2019; Sampson et al. 2021; Bjornlund et al. 2022). They fail to provide all people, particularly the marginalized in low- and middle-income countries, with adequate and nutritious food in recognition of basic human rights and within safe and sustainable planetary boundaries. Current discussions center largely on addressing global challenges and promoting sustainable development through 2030—just seven years from now—when the Sustainable Development Goals (SDGs) reach their target date. For global youth, this perspective is too shortsighted. Young people are looking much further ahead in a century increasingly shaped by dysfunctional food systems.

The global youth population, currently estimated at 1.2 billion, is the largest in history (see Box 2.1), with the great majority of these young people living in low- and middle-income countries in South Asia, East Asia, and Africa (Figure 2.1; Glover and Sumberg 2020). These youth are among those who have suffered the most from the impacts of the COVID-19 pandemic on their well-being and livelihoods (HLPE 2021). At the same time, they are emerging into adulthood in a context of inherently unequal and unsustainable food systems that fail to deliver food and nutrition security and are highly vulnerable to climate change and environmental degradation. We, as young people in our 20s, are keenly aware that our generation not only suffers from the failures of current food systems but will inherit these troubled food systems and their looming challenges. Those challenges threaten the realization of our right to food as well as other human rights, such as health, education, decent work, and livelihoods.

Young people are entitled to expect a long and healthy future. As heirs to current food systems, we deserve a stronger voice in transforming those food systems to meet our current and future needs,

Note: The views expressed in this chapter are those of the authors. They do not necessarily reflect the views of Welthungerhilfe (WHH) and Concern Worldwide.

FIGURE 2.1 WHERE YOUNG PEOPLE LIVE: MEDIAN AGE BY COUNTRY, 2021



Source: Ritchie and Roser (2022), based on data from UN DESA, Population Division (2022).

### BOX 2.1 YOUTH: AN AGE OR A STAGE?

One way of defining “youth” is based on age ranges. The United Nations defines youth as people between 15 and 24, whereas the African Union uses an age range of 15 to 35. More broadly, it may be more useful to think of “youth” as a transition stage from childhood to adulthood, where young people evolve in positions of power, authority, and social worth (Christiansen et al. 2006). Young people construct identities, gain independence, assume responsibility, and develop skills and knowledge during this period. As youth shape their lives and develop into adults, they do so within the boundaries of their social, economic, and political contexts (Molgat 2007; Heinz 2009). Though youth can be grouped based on this life stage, they have different identities and needs influenced by, among other things, gender, education level, skills, wealth, income, and location (urban, peri-urban, or rural).

primarily through a focus on food sovereignty, which will give all people greater power to shape their food systems in line with their cultural, socioeconomic, developmental, and environmental values.

### Current Food Systems Are Largely Failing Youth

The world’s youth are in line to inherit food systems that are failing on multiple fronts. At the most basic level, current food systems are not providing all people with sufficient nutritious food. Approximately 735 million people were affected by hunger in 2022, and more than 3.1 billion could not afford nutritionally rich diets in 2022 (FAO et al. 2023a). While global hunger figures do not report specifically on hunger among youth, we know food insecurity and undernutrition are highest and most persistent in South Asia and Africa South of the Sahara, which are also home to the largest share of the youth population (Glover and Sumberg 2020; FAO et al. 2023a).

Gender also plays a role in youth’s experiences of hunger and undernutrition. Women and girls make up about 60 percent of severely hungry people (WFP 2023c). In many low- and middle-income countries, women, particularly in lower-income groups, are responsible for producing and preparing food and obtaining water and firewood.

*Young people are entitled to expect a long and healthy future. As heirs to current food systems, we deserve a stronger voice in transforming those food systems to meet our current and future needs, primarily through a focus on food sovereignty, which will give all people greater power to shape their food systems in line with their cultural, socioeconomic, developmental, and environmental values.*

During periods of food scarcity, women and girls often eat last and least, making them more vulnerable to food and nutrition insecurity (Botreau and Cohen 2020).

In many countries, young people, especially young women, are finding it increasingly difficult to obtain decent employment (ILO 2020). In 2020 the global youth unemployment rate was estimated at 18.4 percent—more than three times the adult rate (Figure 2.2). Globally, more than one in five young people are not in education, employment, or training (ILO 2022). The COVID-19 pandemic led to millions of job losses, significantly affecting young people, who are particularly vulnerable to job losses and crises (HLPE 2021). In addition, young workers are twice as likely as adult workers to live in extreme poverty—on less than US\$1.90 a day—and are far more likely to be informally employed (ILO 2022). The burden of unpaid care work keeps young women out of the workforce by leaving them with limited time, energy, and opportunities to pursue income-generating activities. Unpaid care also perpetuates gender inequality and is a root cause of poverty and hunger (Action Against Hunger 2021).

For youth in low- and middle-income countries, employment in the agrifood system is more accessible than in other sectors because of low entry requirements in terms of capital and skills (Christiaensen et al. 2021). Furthermore, projections suggest that increased demand for food and rising food prices present opportunities for jobs and business enterprises in agrifood systems in Africa South of the Sahara (Chipfupa and Tagwi 2021). For many young people, however, farming is considered “an occupation of last resort and low productivity” (Filmer and Fox 2014). They have little interest in agricultural activities because of a lack of support, innovation, and education and a perception that agriculture does not offer opportunities for prosperity or self-realization (Chipfupa and Tagwi 2021; Girdziute et al. 2022). Many youth who work in food systems have informal jobs with minimal job security, low income, and gender inequality (Dolislager et al. 2020; Fox and Gandhi 2021). In some countries in Africa South of the Sahara, the number of hours youth spend working in agriculture has declined over time, and many youth opt out of agriculture entirely (Chipfupa and Tagwi 2021).

## **BOX 2.2 A YOUTH PERSPECTIVE FROM KWAZULU-NATAL, SOUTH AFRICA**

Zamo Zuma (age 23) is a member of the Nceboyenkosi Youth Cooperative based in Swayimane, KwaZulu-Natal, South Africa. The young people of the cooperative farm on communal land and have a vegetable garden at the local high school. In an April 2023 interview, Zamo described the challenges she faces:

I am an unemployed graduate; I am struggling to find work. My father is a casual worker, and we rely solely on his income to buy food. Because of financial constraints, it is common for us not to have enough money to buy certain types of food. So we eat twice a day instead of three times per day for approximately five days a week. We also try to reduce food portions and use vegetables from the garden, such as leafy vegetables, maize, and beans. If things get complicated, my mother relies on neighbors for assistance, and we use bean seeds that we stored to plant in the next season.

The Nceboyenkosi Youth Cooperative to which Zamo belongs has received support from the uMngeni Resilience Project (URP), based in KwaZulu-Natal, which aimed to improve the resilience of small-scale farmers in the uMgungundlovu district and reduce their vulnerability to the impacts of climate change. As part of the project, URP supported youth agricultural cooperatives by providing farming inputs, training, and capacity building. In response to requests from the youth, URP organized a workshop on planting and crop selection for different seasons under climate change.



The challenges within food systems will increase in the future, particularly given the increasing impacts of climate change, to which low- and middle-income countries and their youth populations are disproportionately vulnerable. Without immediate action, more people in vulnerable low- and middle-income countries, which lack adaptive capacity, will grapple with worsened food and nutrition security challenges. Although the voices of young people echo globally, expressing the need for urgent climate change action, progress remains stagnant.

## The Loss of Food Sovereignty Weakens Food Systems

As youth, we see the lack of food sovereignty as one of the greatest weaknesses of current food systems. We view the pursuit of food sovereignty as an enormous opportunity to engage youth in transforming food systems to become more sustainable, more just, and better able to supply the needs of all the world's people, especially the most vulnerable.

The concept of food sovereignty draws attention to four critical factors: people and their rights, the quality of food produced, cultural aspects of food systems, and environmental well-being. A global forum held in Nyéléni Village, Mali, in 2007 resulted in a declaration that defined food sovereignty as “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and

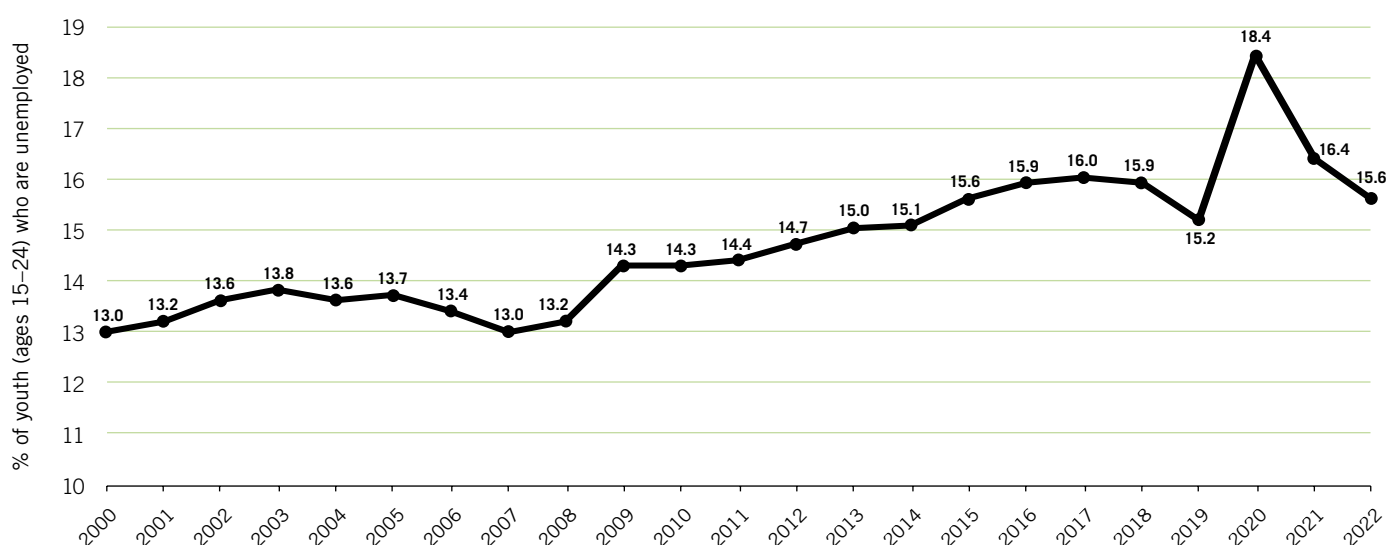
sustainable methods, and their right to define their own food and agriculture systems” (Declaration of Nyéléni 2007).<sup>1</sup>

The loss of food sovereignty, particularly in the world's low- and middle-income countries, has been hastened by several major factors, including colonialism, poor governance, the intensive capitalization of food systems, the widespread growth of monocultures in agriculture, and some of the negative outcomes of the Green Revolution (Weiler et al. 2015; Shilomboleni 2017). As a result, indigenous and local farming and knowledge systems are under widespread threat. They have been not only sidelined in research and policy but also neglected as young people's participation in food systems alongside elders, who are often left behind in rural areas, has decreased (Gunaratne et al. 2021).

In many areas, local farmers are excluded from seed systems and have limited control over what they plant, relegating indigenous crops to the status of neglected crops (Mabhaudhi et al. 2018; Sidibé et al. 2020; Mudau et al. 2022). Many seed-related bills and laws have emerged across Africa, Asia, and South America.

<sup>1</sup> The concept of food sovereignty was introduced at the 1996 World Food Summit by La Via Campesina, an international farmers' movement. The movement articulated seven principles of food sovereignty: food as a basic human right, the need for agrarian reform, protection of natural resources, reorganization of food trade to support local food production, reduced multinational concentration of power, social peace, and greater democratic control of the food system (Sampson et al. 2021).

FIGURE 2.2 GLOBAL YOUTH UNEMPLOYMENT, 2000–2022



Source: World Bank (2023c).

## CASE STUDY

### Training for Future-Proof Jobs in Mali

Mali faces crises on multiple fronts—including violent conflict and climate change (UNICEF 2023d)—and its large youth population suffers from a shortage of decent jobs and farming opportunities. One young mother, Fatoumata Zara Nikingam, describes her often limited access to affordable and nutritious food options: “High food prices and a decrease in income from sales during the rainy season, from July to August, make it difficult for us to acquire the necessary sustenance for ourselves and our children,” she says.

Karim Yalcouye confronts similar difficulties. Karim had to leave school at the age of 14 to provide for his family. “Being the sole provider for my family comes with its challenges,” he says. “Daily expenses, such as food, clothing for the children, and school-related costs, often put a strain on our financial situation. However, I face these challenges, determined to ensure that my wife, daughter, and extended family have their basic needs met.”

Fatoumata and Karim are both participants in the Skill Up! project Promoting Green Jobs for Youth in Future-Proof Sectors.<sup>2</sup> The project aims to boost employment of vulnerable youth aged

<sup>2</sup> This case study was prepared by Welthungerhilfe (WHH). The project is funded by Ms. Bauer through the Bauer Charity gGmbH and implemented by Welthungerhilfe (WHH) and its partners: AgriSup, DoniLab, and Viamo.



**Karim Yalcouye (age 24) and his family sit amid his thriving tree nursery in the Ségou region of Mali.**



**Fatoumata Nikingam (age 29) is pictured with her production equipment for ecofriendly charcoal in the Ségou region of Mali.**

18–35 in the Ségou region of Mali through vocational and entrepreneurial training in sectors like sustainable agriculture, digital innovation, waste recycling, and renewable energy.

“Participating in the Skill Up! program has been a turning point in my journey,” says Karim. “The program has provided me with valuable skills and knowledge to improve my business operations and expand my customer base. Through Skill Up! I envision a future where I can better support my family and make a positive impact in our community.”

Karim believes in young people as key agents of change. “I believe that with the right support and opportunities, individuals like myself can create lasting change. Together, we can build a better future, not just for ourselves but for the generations to come.”

With entrepreneurial energy, Fatoumata engages in small-scale trading of clothing, helps her husband in their family-owned shea butter production business, and leads Marta Briquette, a company that manufactures ecofriendly charcoal made from plant residues such as wild shrubs, mango skins and pits, and shea nut shells.

“Being part of Skill Up! will open new possibilities for my business,” she says. “The trainings are already helping me improve my skills and product quality.” She adds: “In the coming years, I aspire to expand my business to reach more customers and make a bigger impact in Mali. I dream of being a role model to inspire others in my community to adopt sustainable practices and care for the environment.”

## CASE STUDY

### Strengthening Farming and Nutrition Knowledge in Bangladesh



**Hosenare Aktar (age 28) is pictured with her two-year-old son Rakib at their home in Bagerhat District, Bangladesh.**

Hosenare Aktar is a participant in the Collective Responsibility, Action and Accountability for Improved Nutrition (CRAAIN) program in Bagerhat District, Bangladesh.<sup>3</sup> The program, which aims to assist 500,000 people, works to improve participants' nutrition through activities involving government, civil society, the private sector, and community groups.

As part of the program, Hosenare received training on nutrition, climate-smart agriculture techniques, water use, and sanitation and was provided with a goat and four ducks. Her participation helped her build up her small farm while enabling her family to withstand the negative consequences of climate shocks such as typhoons and flooding. "Before the CRAAIN project," she says, "there was nothing here. Since receiving the training and different types of counseling, I have created my farm."

Hosenare has been able to produce a surplus for sale. "For the last three months the vegetables I grew went to my family to eat, and I lent some to my neighbor. I also sold [produce worth] around 1,000 taka [€8.30], which I will keep and use for my child's education." She continues: "I feel empowered and have a dream of increasing my small farm. I received just 1 goat, and now I have 3. I dream of having 10 or more to help me earn more and preserve my farm."

Hosenare also transfers her new knowledge to others in her community: "All of my neighbors have increased their interest in learning from me. I am counseling them on how to cultivate and how to do better."

<sup>3</sup> This case study was prepared by Concern Worldwide. CRAAIN is implemented by a consortium consisting of Concern Worldwide, WaterAid, and two local nongovernmental organizations, Rupantar and Jagrata Juba Shangha (JJS).

Section 326 of Kenya's Seeds and Plant Varieties Act of 2012, for example, criminalizes the exchange of seeds for all "unregistered crop varieties"—often traditional crop varieties—restricting farmers' choices regarding food production and agricultural and food systems (GRAIN and La Via Campesina 2015; Dena 2022). By robbing people of their livelihoods, food and nutrition security, and food sovereignty, these monopolized and restrictive legal frameworks threaten

the human rights of all—especially those in marginalized settings and youth, as they stand to suffer the consequences of these actions for years to come.

The consequent lack of food sovereignty has contributed to multiple challenges, including widespread food and nutrition insecurity and adverse health outcomes (Gunaratne et al. 2021; Sampson et al. 2021; Bjornlund et al. 2022). Although food-security-specific

*Young people worldwide are forming their own organizations and initiatives, reshaping perceptions of global challenges while driving social innovation and demonstrating a willingness to be part of the solution.*

interventions, such as the promotion of major, high-yielding food crops, pushed down global hunger between 1990 and 2017, both the share and the number of undernourished people have stagnated or risen since 2017 (FAO et al. 2023a). This reversal underscores the urgent need for a new direction in food systems transformation.

Although little policy action has taken place to reinstate food sovereignty since the 1996 World Food Summit, there is a growing global conversation and an increased focus on social justice and the need to realize and protect people's right to food (La Via Campesina 2021; Sampson et al. 2021; Bjornlund et al. 2022; GFFA 2023). Greater food sovereignty will likely involve reinstating indigenous and neglected crops<sup>4</sup> and mixed crop-and-livestock farming systems to diversify and localize current globalized food systems, making them more accessible, sustainable, and inclusive and increasing their resilience to climate stresses (Mabhaudhi et al. 2018, 2019; Akinola et al. 2020; Wijerathna-Yapa and Pathirana 2022). This will require a more inclusive and integrated seed system framework to support solutions that seek to reduce the vulnerability of food systems (Mabhaudhi et al. 2018; Wijerathna-Yapa and Pathirana 2022).

Locally resilient, diverse, innovative, and less input-intensive smallholder farming systems—if they are supported, promoted, and extended—may constitute a sustainable solution to current food and nutrition challenges and a path out of poverty and hunger for vulnerable populations (Mabhaudhi et al. 2018; Mudau et al. 2022; Wijerathna-Yapa and Pathirana 2022). Such an approach also supports human rights for marginalized groups, which are currently being sidelined by the design of food and seed systems. Innovations are needed to achieve inclusive, sustainable food systems and food sovereignty for all within planetary boundaries. Youth, as the inheritors of injustice, have the potential to drive these innovations.

## Youth Have Little Voice in Policy Processes

In practice, food sovereignty involves interaction between stakeholders from national, local, and community-based institutions and knowledge holders, such as local elders. This inclusive interaction could create opportunities for young people to bring their energy and innovation to help reclaim contextualized food sovereignty, thus

improving nutrition while strengthening the resilience of local food systems under ecological and climate stress.

There is a long way to go to ensure the meaningful participation of young people in policy processes that can influence food systems and promote food sovereignty. At a formal, governmental level, the share of youth in decision-making forums is negligible. In most regions, the average age of members of parliament is at least 50 (Stockemer and Sundström 2022). The representation of youth aged 30 or under in parliaments is low in all regions (Table 2.1) and even lower for women under the age of 30, especially in Asia, the Pacific, the Middle East and North Africa, Africa South of the Sahara, and Western Europe. Because youth do not fully participate in legislative decision-making, their specific priorities and needs are often not considered (Stockemer and Sundström 2022).

As they confront global challenges, policymakers have begun to seek out young people's voices and perspectives by encouraging youth participation in workshops, conferences, and working groups. Additionally, young people worldwide are forming their own organizations and initiatives, reshaping perceptions of global challenges while driving social innovation and demonstrating a willingness to be part of the solution. Examples include Act4Food Act4Change, the Asian Indigenous Youth Platform, the Global Youth Innovation Network (GYIN), Innovative Food Systems Solutions (IFSS), Nutrition Connect, the Slow Food Youth Network, the Youth Working Group

**TABLE 2.1 GLOBAL AND REGIONAL PERCENTAGE OF MEMBERS OF PARLIAMENT (MPs) AGED 30 AND UNDER**

Region	Total number of MPs	Share of MPs aged 30 and under
Americas	4,604	3.5%
Asia	6,494	1.5%
Europe	11,975	4.1%
Middle East and North Africa	3,415	1.8%
Pacific	660	1.7%
Sub-Saharan Africa	5,059	2.2%
World	32,307	2.9%

Source: IPU Parline (2023).

<sup>4</sup> "Neglected crops were traditionally cultivated for subsistence, but during the 20th century were gradually displaced by crops better suited to commercial farming" (Lefebvre et al. 2023).



### BOX 2.3 **“THERE IS NO POINT IN OUR BEING INVOLVED IN SPACES THAT HAVE NO ACTION PLAN THAT INCLUDES YOUTH”**

Sophie Healy-Thow (age 23) of Ireland is a co-founder of Act4Food Act4Change. She is also a global youth campaigns coordinator for the Global Alliance for Improved Nutrition (GAIN), a Lead Group member of the Scaling Up Nutrition (SUN) Movement, and a board member of ActionAid UK. She has served as co-chair of the United Nations Food Systems Summit Youth Liaison group. In a May 2023 interview, she gave her perspective on the vital importance of engaging young people:

Investing in young people is essential; youth engagement and inclusion should be more meaningful and sustainable. It should not be seen as a fad. Youth engagement opportunities are often just a box-ticking exercise, and nothing tangible happens post-engagement gatherings, such as conferences, seminars, and workshops. We need to change this narrative.

Young people should be not only spoken to but spoken with. Young people should be board directors in the NGO space and the business world because we bring a different perspective, and expectations do not bind us. Youth should also be involved as policy co-creators to encourage the development of responsive and sustainable policies. Making decisions about our future without including us in decision-making makes absolutely no sense.

Governments should invest in youth development in all aspects, such as in-school nutrition programs to ensure food and nutrition security from early childhood to the university level. This will improve education outcomes and opportunities for young people to contribute to society.

of the International Planning Committee for Food Sovereignty, and Young Leaders for Nutrition. These youth-led organizations currently advocate for food systems transformation by raising awareness about food issues, food sovereignty, sustainable food production, nutrition, and environmental protection, including pledges to encourage policy action.

This increased focus on youth participation in policy dialogues has not necessarily translated into meaningful impact. Youth participation in decision-making appears superficial and limited (see Box 2.3). Despite, for instance, young people's advocacy for climate change action and food systems transformation, progress is still too slow. The opinions and ideas expressed by youth have only minimal tangible outcomes, and their perspectives are not integrated into the design or implementation of policy interventions (Yunita et al. 2018; Macauley et al. 2022; Orsini and Kang 2023).

### **Empowering Youth by Driving toward Food Sovereignty**

Leaders at all levels have a moral and economic imperative to tap into young people's energy, creativity, and dynamism to transform food systems. Engaging young people in conversations on and governance of food systems transformation is a strategic way to adapt and adopt innovations for improved nutrition and food security outcomes, especially in the context of a move toward food sovereignty (Figure 2.3 on page 32). The right to food is increasingly recognized, and a shift toward food sovereignty will allow people to realize that right in a socially, culturally, and ecologically conscious way (Blue Bird Jernigan et al. 2021; Sampson et al. 2021). Youth can help advance the progressive realization of the right to food in several ways. They can innovate to transform food systems to align with their local context and deliver improved nutrition and food security. They can help reinstate diverse indigenous and traditional cropping systems currently under threat, and cultivate indigenous and neglected crops to create more resilient, context-specific food systems.

Leaders must pursue, and youth must demand, investments in sectors that can improve young people's well-being, including health, education, skills development, and social connectivity. High-quality education and training not only enable youth to become more productive and employable but serve as foundations for personal development and well-being, help fight poverty and unemployment, promote equality, and positively influence individuals' lives while benefiting society (Idris et al. 2012). Rigorous evaluations of agricultural skills training programs for youth are needed to provide evidence on employment outcomes, which could encourage governments and donors to scale up such programs (Maïga et al. 2020).



Josef Quetal (age 27) operates a food stall in the Ti Ayiti market, Cité Soleil, Haiti.

## CASE STUDY

### Supporting Local Food Vendors in Haiti

The people of Haiti are experiencing a period of exceptional instability and heightened violence, with deepening levels of poverty, displacement, and hunger, particularly in the capital, Port-au-Prince. The epicenter of this turmoil is the densely populated commune of Cité Soleil, where gang warfare has reached unprecedented ferocity. On one day alone, July 8, 2022, gang members murdered 95 people in the area, including six children (UN OHCHR 2023).

As violence has intensified and people's movement within Cité Soleil has become increasingly restricted, residents have become more reliant on local vendors, who find their supplies constrained by the challenging environment. Available food is low in quality, and the population's nutrition is worsening.

The Manje pi Byen ("Eat Better") program, implemented by Concern and local partners<sup>5</sup> and supported by the U.S. Agency for International Development, aims to improve the resilience of extremely vulnerable people in Cité Soleil and help them move out of extreme poverty. The program has four core components:

1. nutrition and food security assistance;
2. economic recovery and market systems;
3. protection from gender-based violence, and
4. water, sanitation, and hygiene.

The program's nutrition awareness activities are designed to improve people's nutrition habits in the long term, and its capacity-strengthening activities are aimed at sustainably strengthening vendors' livelihoods and income sources while also helping them provide high-quality food items to their communities.

Josef Quetal, a food vendor who is married with two children, lives in the neighborhood of Ti Ayiti in Cité Soleil. He reports significant benefits from the Manje pi Byen program: "I have been a participant in the program for two years. Manje pi Byen has helped me improve my business and the nutrition of my customers, but it has also helped my family to live and eat better. I can afford school fees."

He adds: "Before participating in the Mange Pi Byen program, there wasn't enough food for the community here. There wasn't enough money for supplies. Before the project I was selling to about 10 people, but now I sell to over 50, maybe 60 people, in the community. I sell fruits, vegetables, beans, pulses, eggs, vegetable oil, and meat. I hope the program will continue in the future because I would like to grow my business even more and expand to selling construction materials, as well as food."

<sup>5</sup> This case study was prepared by Concern Worldwide. Two Haitian partners work with Concern Worldwide on the protection sector of the Mange pi Byen program. IDEO supports psychosocial activities, especially individual support, while Nègès Mawon leads gender-based violence (GBV) survivor case management and provides peer-to-peer support for GBV survivors.

*Empowering youth as agents of change in transforming food systems should recognize the diversity, intersectionality, and context specificity of youth needs, challenges, and aspirations.*

A transformation to sustainable, resilient, and equitable food systems can provide fair, interesting, and sustainable employment opportunities for the current population of young people and future generations (Nguyen 2018; Mabhaudhi et al. 2019). Such food systems can enable freedom of choice and innovation in agrifood systems, encouraging creativity and allowing young people to tap into niche production opportunities. Realizing this vision requires boosting young people's access to green jobs, land, youth-sensitive credit and financial services, productive resources and equipment, and markets.

Aspirational career paths should provide opportunities and remove barriers for youth seeking to work in agricultural value chains. For young people not inclined to work on farms, including those without access to land or productive resources, governments and the private sector could help position them in nonfarm activities that drive agricultural transformation, such as improving rural markets and promoting environmental sustainability (Geza et al. 2021). Improving rural markets would entail investing in infrastructure for transportation, water, electricity, and postharvest handling and storage, as well as

making investments downstream in the value chain. These efforts could be facilitated by including youth in the implementation of existing global policies to address food system challenges—such as the SDGs and the Paris Agreement on climate change—through further collaboration with international youth organizations and forums already involved in this work.

To develop youth-inclusive and youth-specific policies, policy-makers need timely, reliable data on current youth roles in food systems activities and policy processes (HLPE 2021). In addition, the conditions, capacities, and opportunities faced by youth vary widely based on their context, so empowering youth as agents of change in transforming food systems should recognize the diversity, intersectionality, and context specificity of youth needs, challenges, and aspirations.

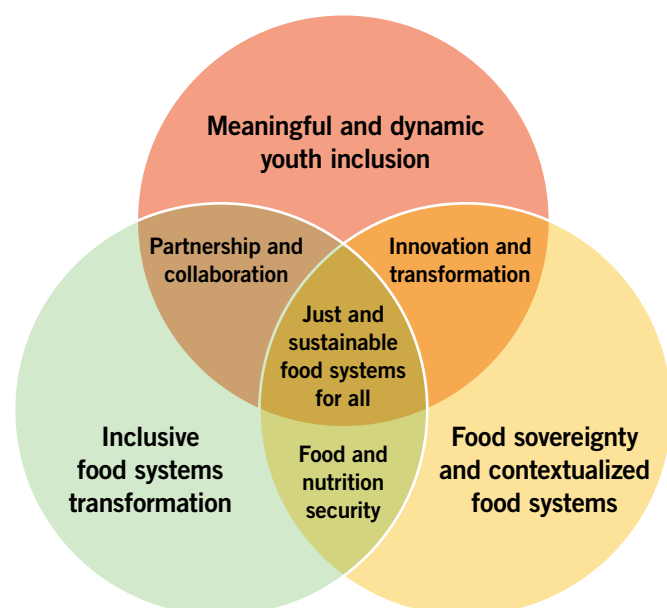
## Conclusion

As youth, we see that current food systems are unsustainable, inequitable, non-inclusive, and vulnerable to external shocks and risks. Our generation, which will inherit these food systems and live with them for decades to come, has a huge stake in ensuring that the food systems of the 21st century are inclusive, equitable, sustainable, resilient, and localized. A shift toward sustainable food systems is necessary for planetary health and human well-being. Such systems will promote broader economic, social, and environmental sustainability and contribute to reduced greenhouse gas emissions and more effective adaptation to and mitigation of climate change.

Most young people involved directly or indirectly in food systems livelihoods are located in rural areas. Therefore, addressing youth participation in food systems requires a holistic approach broadly focused on improving rural economies, social well-being, and service delivery. Efforts must be made to create a supportive environment for youth to pursue careers and interests in food systems. Increasing agricultural productivity and promoting and investing in innovations such as mechanization, farm advisories, and irrigation to make farming more profitable and less laborious could attract youth into agriculture by unlocking diverse employment opportunities.

To build such food systems and engage youth for generations to come, leaders at all levels should ensure that the direction and targets of policy go further than 2030 to look toward 2050 and beyond.

FIGURE 2.3 **ACHIEVING JUST AND SUSTAINABLE FOOD SYSTEMS FOR ALL**



Source: Authors.

As they embark on this long-term pathway, they must do more than simply pursue dialogue with young people. They must engage youth in policymaking to promote inclusivity, equity, and sustainability. At the same time, young people must seize opportunities to participate

in food systems governance, advocate for social justice, promote gender equity, protect every human's right to food and food sovereignty, spur climate change action, and integrate their perspectives into policy to enable just, sustainable food systems for all.



**Nazaire Namkomana (age 29) has completed his training in poultry farming and is now steadily increasing his own flock.**

#### CASE STUDY

### Youth Entrepreneurship for Resilience in the Central African Republic

Successive crises in the Central African Republic have weakened public and private institutions, led to the destruction of social and educational infrastructure, and worsened people's living standards. Young people are particularly affected, as they often have not yet developed basic skills and, if not integrated into social life, easily become targets for recruitment by armed militias (UN OCHA 2023b).

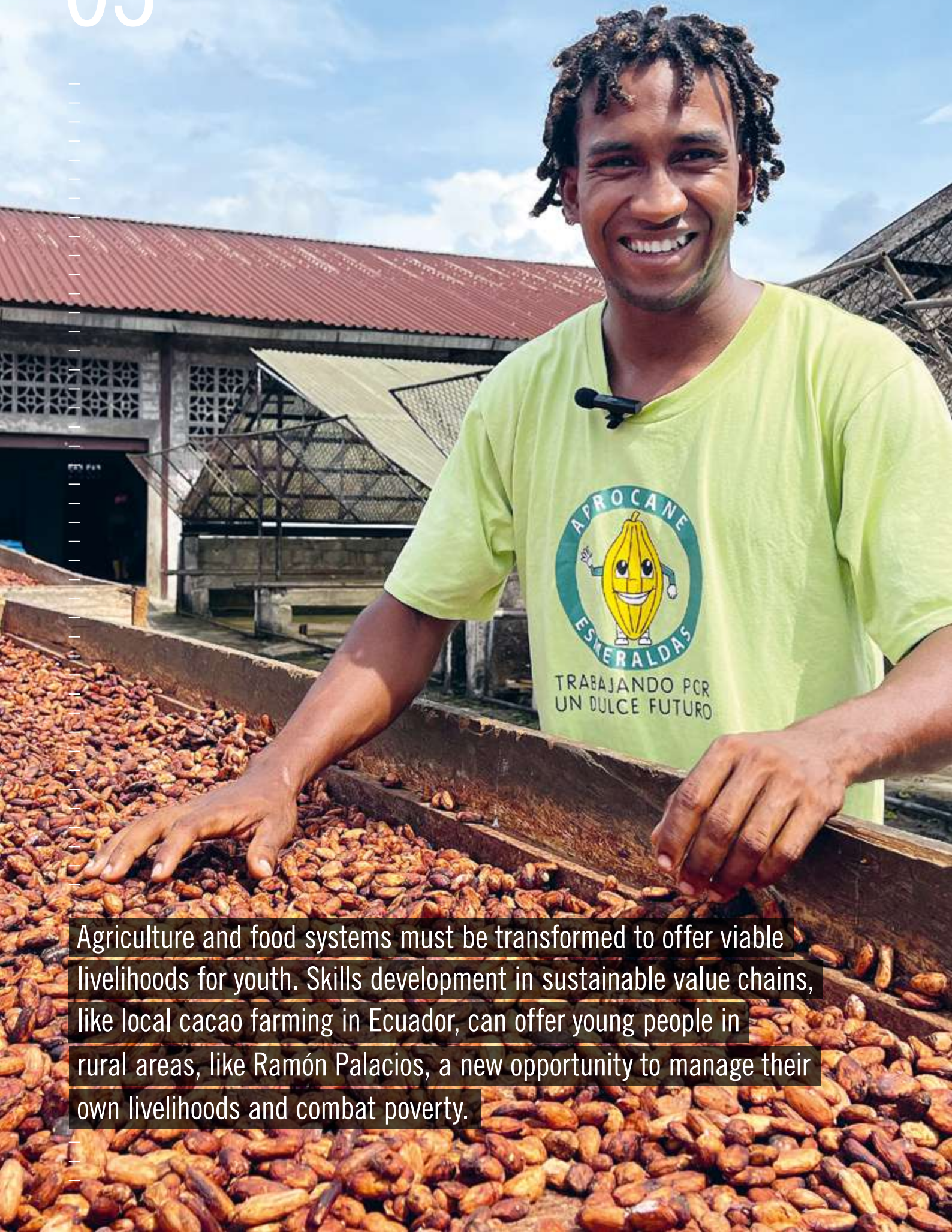
Against this background, the project Agricultural Vocational Training for Unemployed and Internally Displaced Youth aims to help make the lives of young people between the ages of 18 and 35 in the Bangui region more socially and economically stable and reduce migration and crime. The project trains participants in several agricultural sectors and—supplemented by another project—helps them start their own businesses so they can sustainably integrate into community economic and food systems.<sup>6</sup>

Nazaire Namkomana is a graduate of the agricultural vocational training center for poultry farming, which he entered in 2019. With his new skills, he can generate income and ensure his family's food security. "Before the training I had to worry about providing for my family; sometimes we didn't have enough to eat," he says. "Now my children's schooling is assured. I had no knowledge of poultry farming or any possibility of practicing it, although I had a passion for the field. After the training, I started to run a flock of 50, then 100, then 150 chicks, and I have now ordered 200 chicks."

After his training, Nazaire shared his skills with other young people: "My aim is to turn my unit into a large production company so that I can not only look after my family and send my children to top schools but also reduce poverty among young people in my community."

<sup>6</sup> This case study was prepared by Welthungerhilfe (WHH). The supplementary project is called Creating Employment Opportunities for Women and Young Adults. Both projects are funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by WHH.





Agriculture and food systems must be transformed to offer viable livelihoods for youth. Skills development in sustainable value chains, like local cacao farming in Ecuador, can offer young people in rural areas, like Ramón Palacios, a new opportunity to manage their own livelihoods and combat poverty.



# POLICY RECOMMENDATIONS

The world is confronting overlapping crises that are exacerbating social and economic inequalities and reversing progress against hunger. Large demographic groups such as women and youth are carrying the burden of these crises but are underrepresented in policy discussions and decisions on food systems that affect them.

These recommendations highlight the interest of youth in shaping their future as well as their right to do so. Generational and gender justice must underpin equitable, sustainable, and resilient food systems that fulfill the right to adequate food for current and future generations.

## **1 Put the right to food for all at the heart of food systems transformation.**

- The right to food must be central to food systems policies, programs, and governance processes. It should be enshrined in national law and supported by accountability mechanisms. People need to be able to define their own food systems so they can realize their right to food in ways that are socially, culturally, and ecologically appropriate for their own local context.
- Youth must play a central role in making decisions that affect them. Policy- and decision-making on all governance levels need to meaningfully reflect diverse youth voices.
- Young people's participation in designing, implementing, and monitoring food systems policies and programs should be expanded to reflect the size of their demographic cohort, to incorporate their long-term perspective, and to tap into their creativity and dynamism.

## **2 Invest in young people's capacities to be leaders in food systems transformation.**

- To engage in food systems, youth need greater access to education and training, skills development, and tailored capacity building related to agriculture and other food system activities. Therefore, additional resources should be invested in the relevant curricula, teachers, and training institutions.
- Investments in the health and nutrition status of youth, especially young women, are critical to the well-being of the future population. These investments, both financial and political, should include support for affordable locally sourced, healthy foods. Governments need to provide young people with nutrition education and employ tax and regulatory policies to support healthy diets and discourage the consumption of ultra-processed food.

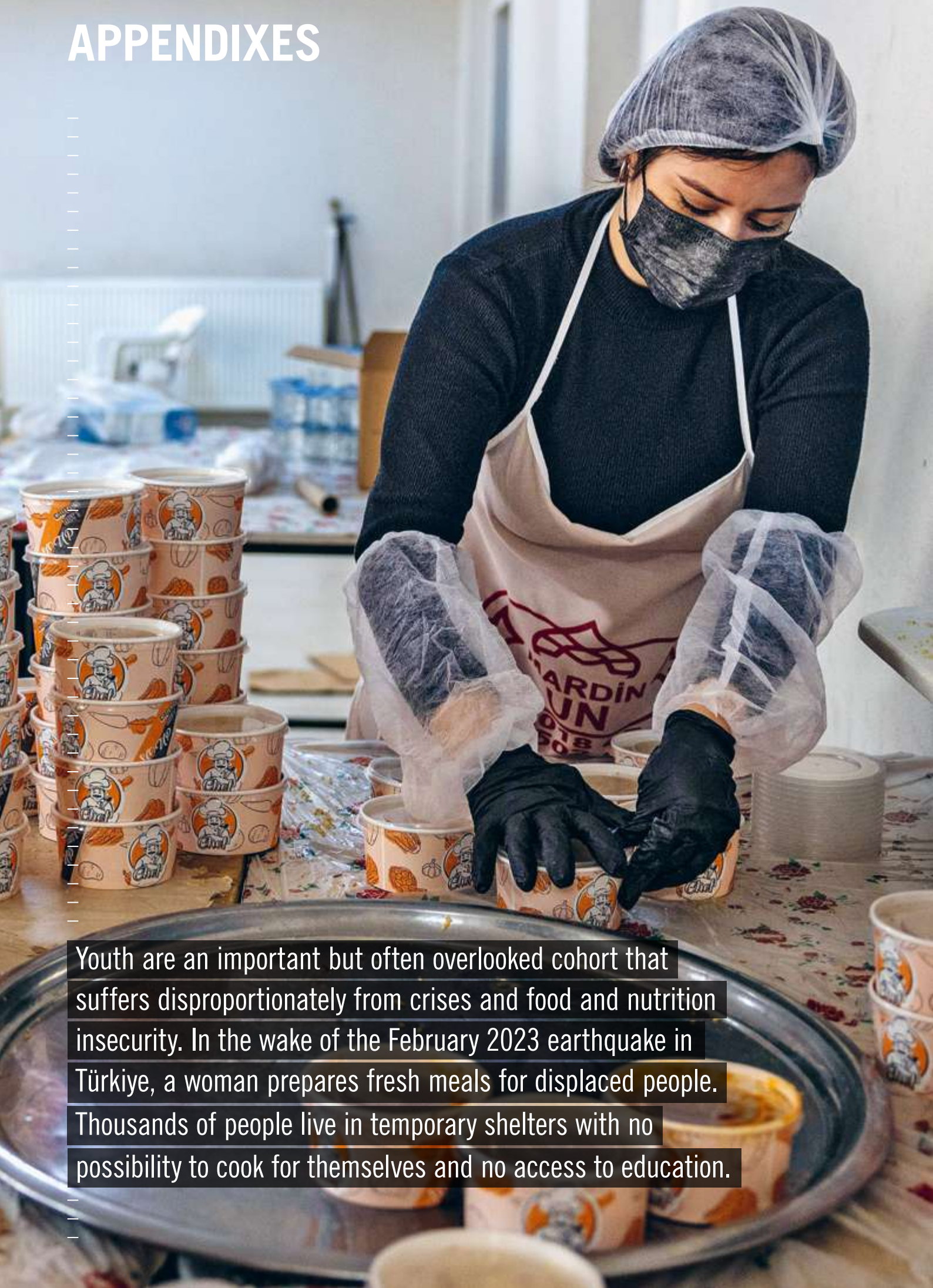
→ Governments must improve young people's access to productive resources. Reforms to land and property rights are needed to enable young people to profitably and sustainably engage in farming. Context-appropriate, youth-sensitive credit and financial services should be introduced to provide youth with opportunities to save and borrow. Policies and programs should also seek to boost young people's access to agricultural inputs for participation in the food system.

→ Social and economic programs should incorporate gender equity to remove barriers to education and employment for young women and to help reduce their burden of unpaid care work.

## **3 Invest in sustainable, equitable, and resilient food systems to ensure they offer viable and attractive livelihoods to young people.**

- Governments must support and diversify agricultural production that integrates indigenous and traditional knowledge as well as modern technology, mechanization, and irrigation to make farming more profitable and less laborious. This may include enhancing equitable access to digital tools, such as weather forecasts and financial, advisory, and market services.
- Governments and donors should invest in diversified rural economies to improve social well-being, strengthen service delivery, and promote youth inclusion. Enterprise policies should enable social innovations and encourage investments in the creation of non-agricultural jobs within food systems. By investing in local and regional markets as well as pre- and postharvest activities such as processing, storage, marketing, and transport, governments can help localize and transform food systems at all levels.
- Governments must improve employment conditions and ensure fair wages within food systems so that young people will see agriculture and food systems as sectors where they can profitably earn their livelihoods and build their careers.
- Current food systems policies and investments are failing to address the intergenerational cycle of hunger in many parts of the world. Solutions should embrace a long-term perspective that extends beyond 2030 and reflects young people's aspirations for a just, sustainable, and food- and nutrition-secure future.

# APPENDIXES



Youth are an important but often overlooked cohort that suffers disproportionately from crises and food and nutrition insecurity. In the wake of the February 2023 earthquake in Türkiye, a woman prepares fresh meals for displaced people. Thousands of people live in temporary shelters with no possibility to cook for themselves and no access to education.



# METHODOLOGY

Note: The results within this 2023 Global Hunger Index report supersede all previous GHI results. The 2000, 2008, and 2015 scores and indicator data contained within this report are currently the only data that can be used for valid comparisons of the GHI over time.

The Global Hunger Index (GHI) is a tool designed to comprehensively measure and track hunger at global, regional, and national levels, reflecting multiple dimensions of hunger over time.<sup>1</sup> The GHI is intended to raise awareness and understanding of the struggle against hunger, provide a way to compare levels of hunger between countries and regions, and call attention to those areas of the world where hunger levels are highest and where the need for additional efforts to eliminate hunger is greatest.

## How the GHI Is Calculated

Each country's GHI score is calculated based on a formula that combines four indicators that together capture the multidimensional nature of hunger:



**Undernourishment:** the share of the population whose caloric intake is insufficient;



**Child stunting:** the share of children under the age of five who have low height for their age, reflecting chronic undernutrition;



**Child wasting:** the share of children under the age of five who have low weight for their height, reflecting acute undernutrition; and



**Child mortality:** the share of children who die before their fifth birthday, reflecting in part the fatal mix of inadequate nutrition and unhealthy environments.<sup>2</sup>

Using this combination of indicators to measure hunger offers several advantages (see Table A.1). The indicators included in the GHI formula reflect caloric deficiencies as well as poor nutrition. The undernourishment indicator captures the food access situation of the population as a whole, while the indicators specific to children reflect the nutrition status within a particularly vulnerable subset of the population for whom a lack of dietary energy, protein, and/or micronutrients (essential vitamins and minerals) leads to a high risk of illness, poor physical and cognitive development, and death. The inclusion of both child wasting and child stunting allows the GHI to document both acute and chronic undernutrition.

<sup>1</sup> For further background on the GHI concept, see Wiesmann, von Braun, and Feldbrügge (2000), Wiesmann (2006), and Wiesmann et al. (2015).

<sup>2</sup> According to Black et al. (2013), undernutrition is responsible for 45 percent of deaths among children under the age of five.

### BOX A.1 WHAT IS MEANT BY “HUNGER”?

The problem of hunger is complex, and different terms are used to describe its various forms.





**Hunger** is usually understood to refer to the distress associated with a lack of sufficient calories. The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as the habitual consumption of too few calories to provide the minimum dietary energy an individual requires to live a healthy and productive life, given that person's sex, age, stature, and physical activity level.<sup>3</sup>

**Undernutrition** goes beyond calories and signifies deficiencies in any or all of the following: energy, protein, and/or essential vitamins and minerals. Undernutrition is the result of inadequate intake of food in terms of either quantity or quality, poor utilization of nutrients in the body due to infections or other illnesses, or a combination of these immediate causes. These, in turn, result from a range of underlying factors, including household food insecurity; inadequate maternal health or childcare practices; or inadequate access to health services, safe water, and sanitation.

**Malnutrition** refers more broadly to both undernutrition (problems caused by deficiencies) and overnutrition (problems caused by unbalanced diets that involve consuming too many calories in relation to requirements, with or without low intake of micronutrient-rich foods). Overnutrition—resulting in overweight, obesity, and noncommunicable diseases—is increasingly common throughout the world, with implications for human health, government expenditures, and food systems development. While overnutrition is an important concern, the GHI focuses specifically on issues relating to undernutrition.

In this report, “hunger” refers to the index based on the four component indicators (undernourishment, child stunting, child wasting, and child mortality). Taken together, the component indicators reflect deficiencies in calories as well as in micronutrients.

<sup>3</sup> The average minimum dietary energy requirement varies by country—from about 1,660 to 2,040 kilocalories (commonly, albeit incorrectly, referred to as calories) per person per day for all countries with available data for 2022 (FAO 2023).

 <b>Undernourishment</b>	 <b>Child stunting</b>	 <b>Child wasting</b>	 <b>Child mortality</b>
<ul style="list-style-type: none"> <li>• Measures inadequate food access, an important indicator of hunger</li> <li>• Refers to the entire population, both children and adults</li> <li>• Is used as a lead indicator for international hunger reduction targets, including Sustainable Development Goal 2 (Zero Hunger)</li> </ul>	<ul style="list-style-type: none"> <li>• Go beyond calorie availability, consider aspects of diet quality and utilization</li> <li>• Reflect children's particular vulnerability to nutritional deficiencies</li> <li>• Are sensitive to uneven distribution of food within the household</li> <li>• Are used as nutrition indicators for SDG 2 (Zero Hunger)</li> </ul>		<ul style="list-style-type: none"> <li>• Reflects that death is the most serious consequence of hunger, and children are the most vulnerable</li> <li>• Improves the GHI's ability to reflect deficiencies of essential vitamins and minerals</li> <li>• Complements stunting and wasting, which only partially capture the mortality risk of under-nutrition</li> </ul>

By combining multiple indicators, the index minimizes the effect of random measurement errors. These four indicators are all part of the indicator set used to measure progress toward the United Nations Sustainable Development Goals (SDGs).

**GHI scores are calculated using a three-step process:**

**Step 1:** Values are determined for the four component indicators for each country, drawing on the latest published data available from internationally recognized sources.

**Step 2:** Each of the four component indicators is given a standardized score based on thresholds set slightly above the highest country-level values observed worldwide for that indicator since 1988.<sup>4</sup> For example, the highest value for undernourishment estimated in this

<sup>4</sup> The thresholds for standardization are set slightly above the highest observed values to allow for the possibility that these values could be exceeded in the future.

period is 76.5 percent, so the threshold for standardization is set slightly higher, at 80 percent.<sup>5</sup> In a given year, if a country has an undernourishment prevalence of 40 percent, its standardized undernourishment score for that year is 50. In other words, that country is approximately halfway between having no undernourishment and reaching the maximum observed level. Here are the formulas used to standardize each indicator:

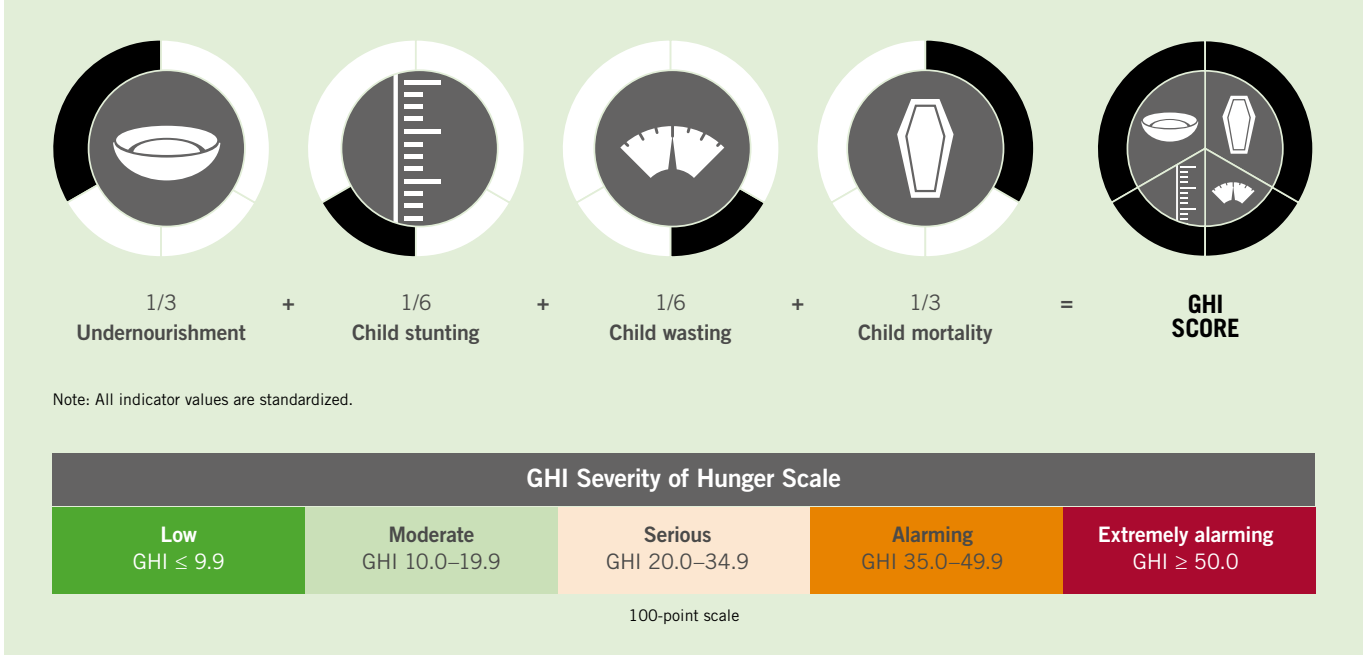
$\frac{\text{Prevalence of undernourishment}}{80}$	$\times 100$	=	standardized under-nourishment value
$\frac{\text{Child stunting rate}}{70}$	$\times 100$	=	standardized child stunting value
$\frac{\text{Child wasting rate}}{30}$	$\times 100$	=	standardized child wasting value
$\frac{\text{Child mortality rate}}{35}$	$\times 100$	=	standardized child mortality value

**Step 3:** The standardized scores are aggregated to calculate the GHI score for each country. Undernourishment and child mortality each contribute one-third of the GHI score, while child stunting and child wasting each contribute one-sixth of the score, as shown in the formula (Figure A.1).

This calculation results in GHI scores on a 100-point scale, where 0 is the best score (no hunger) and 100 is the worst. In practice, neither of these extremes is reached. A value of 100 would signify that a country's undernourishment, child wasting, child stunting, and child mortality levels each exactly meets the thresholds set slightly above the highest levels observed worldwide in recent decades. A value of 0 would mean that a country had no undernourished people in the population, no children younger than five who were wasted or stunted, and no children who died before their fifth birthday.

5 The threshold for undernourishment is 80, based on the observed maximum of 76.5 percent; the threshold for child wasting is 30, based on the observed maximum of 26.0 percent; the threshold for child stunting is 70, based on the observed maximum of 68.2 percent; and the threshold for child mortality is 35, based on the observed maximum of 32.6 percent. While the thresholds were originally established based on the maximum values observed between 1988 and 2013, covering 25 years' worth of available data prior to the methodological review process, these values have not been exceeded since then.

**FIGURE A.1 COMPOSITION OF GHI SCORES AND SEVERITY DESIGNATIONS**





## Where the Indicator Data Come From

Data used in the calculation of GHI scores come from various UN and other multilateral agencies, as shown in Table A.2. The GHI scores reflect the latest revised data available for the four indicators.<sup>6</sup> Where original source data were unavailable, estimates for the GHI component indicators were made based on the most recent available data.

## How Hunger Severity Is Determined for Countries with Incomplete Data

In this year's GHI report, 136 countries met the criteria for inclusion in the GHI, but 11 had insufficient data to allow for calculation of a 2023 GHI score. To address this gap and give a preliminary picture of hunger in the countries with missing data, provisional designations of the severity of hunger were determined based on several known factors (Table A.3):

- those GHI indicator values that are available,
- the country's last known GHI severity designation,
- the country's last known prevalence of undernourishment,<sup>7</sup>
- the prevalence of undernourishment for the subregion in which the country is located, and/or
- assessment of the relevant findings of the 2021, 2022, and 2023 editions of the *Global Report on Food Crises* (FSIN and GNAFC 2021, 2022, 2023).<sup>8</sup>

<sup>6</sup> For previous GHI calculations, see von Grebmer et al. (2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008); IFPRI, WHH, and Concern Worldwide (2007); and Wiesmann, Weingärtner, and Schöninger (2006).

<sup>7</sup> Previously published undernourishment values, GHI scores, and GHI severity classifications are not considered valid once superseding reports have been issued, but are used as benchmarks to consider the plausibility of a country falling into a broad range of undernourishment values and GHI scores.

<sup>8</sup> The *Global Reports on Food Crises* report on acute food insecurity, which is different from chronic hunger as measured by the prevalence of undernourishment. However, the 2021, 2022, and 2023 *GRFCs* were used to confirm whether a country experienced extreme hunger crises such as famine, threat of famine, and/or repeated hunger crises in 2020, 2021, and 2022.

For some countries, data are missing because of violent conflict or political unrest (FAO et al. 2017; Martin-Shields and Stojetz 2019), which are strong predictors of hunger and undernutrition. The countries with missing data may often be those facing the greatest hunger burdens. Of the three countries provisionally designated as *alarming*—Burundi, Somalia, and South Sudan—it is possible that with complete data, one or more of them would fall into the *extremely alarming* category. However, without sufficient information to confirm that this is the case, we have conservatively categorized each of these countries as *alarming*.

In some cases even a provisional severity designation could not be determined, such as if the country had never previously had a prevalence of undernourishment value, GHI score, or GHI designation since the first GHI report was published in 2006. In the cases of Somalia and South Sudan, data were unavailable for two out of four GHI indicators. However, a review of the relevant information in the 2021, 2022, and 2023 editions of the *Global Report on Food Crises* as well as consultations with experts on food and nutrition insecurity in these two countries made clear that designations of *alarming* were justified.

TABLE A.2 DATA SOURCES AND REFERENCE YEARS FOR THE GLOBAL HUNGER INDEX COMPONENT INDICATORS, 2000, 2008, 2015, AND 2023

Indicator	Data sources	Reference years for indicator data			
		2000 GHI scores (122 countries)	2008 GHI scores (125 countries)	2015 GHI scores (125 countries)	2023 GHI scores (125 countries)
Prevalence of undernourishment	FAO 2023	2000–2002 <sup>a</sup>	2007–2009 <sup>a</sup>	2014–2016 <sup>a</sup>	2020–2022 <sup>a</sup>
Child stunting and wasting	WHO 2023; UNICEF et al. 2023a; UNICEF 2023a, 2013, and 2009; MEASURE DHS 2023	1998–2002 <sup>b</sup>	2006–2010 <sup>c</sup>	2013–2017 <sup>d</sup>	2018–2022 <sup>e</sup>
Child mortality	UN IGME 2023a	2000	2008	2015	2021

Note: The number of countries for which sufficient data were available to calculate GHI scores for each year or time span is shown in parentheses.

<sup>a</sup> Three-year average.

<sup>b</sup> Data collected from the years closest to 2000; where data from 1998 and 2002 or 1999 and 2001 were available, an average was used.

<sup>c</sup> Data collected from the years closest to 2008; where data from 2006 and 2010 or 2007 and 2009 were available, an average was used.

<sup>d</sup> Data collected from the years closest to 2015; where data from 2013 and 2017 or 2014 and 2016 were available, an average was used.

<sup>e</sup> The latest data gathered in this period.

TABLE A.3 EXISTING DATA AND PROVISIONAL SEVERITY DESIGNATIONS FOR COUNTRIES WITH INCOMPLETE DATA

Country	2023 GHI provisional severity designation	Child stunting, 2018–2022 (%)	Child wasting, 2018–2022 (%)	Child mortality, 2021 (%)	Last GHI categorization	Last prevalence of undernourishment value (%)	Subregional prevalence of undernourishment (%)	Range of prevalence of undernourishment values for provisional designation (%)
Lebanon	Low	7.0	1.4	0.8	Moderate (2022)	10.9 (2022)	10.5	0.0–16.2
Jordan	Moderate	7.4	0.6	1.5	Moderate (2022)	16.9 (2022)	10.5	15.4–39.4
Burundi	Alarming	55.8	4.9	5.3	Extremely alarming (2014)	67.3 (2014)	28.4	33.3–69.3
Somalia	Alarming	—	—	11.2	Extremely alarming (2021)	48.7 (2023)	28.4	**
South Sudan	Alarming	—	—	9.9	—	21.4 (2023)	28.4	**
Bahrain	Not designated	3.1*	1.8*	0.7	—	—	10.5	N/A
Bhutan	Not designated	18.3*	2.6*	2.7	—	—	15.9	N/A
Equatorial Guinea	Not designated	25.2	3.9	7.7	—	—	28.4	N/A
Eritrea	Not designated	—	—	3.8	Extremely alarming (2014)	61.3 (2014)	28.4	N/A
Maldives	Not designated	15.3	9.3	0.6	—	—	15.9	N/A
Qatar	Not designated	1.9	1.2	0.5	—	—	10.5	N/A

Source: Authors, based on sources listed in Appendix A and previous GHI publications included in the bibliography.

Note: Years in parentheses show when the relevant information was published in the GHI report.

\*Authors' estimate. \*\*Designation based on FSIN and GNAFC (2021, 2022, 2023) and expert consultation.

N/A = not applicable; — = not available.

# Understanding and Using the Global Hunger Index: FAQs

## Which countries are included in the GHI?

Inclusion in the GHI is determined based on prevalence of undernourishment and child mortality data dating back to 2000. Countries with values above the “very low” threshold for one or both of these indicators since 2000 are included in the GHI. Specifically, countries are included if the prevalence of undernourishment was at or above 5.0 percent and/or if the child mortality rate was at or above 1.0 percent for any year since 2000. Data on child stunting and child wasting, the other indicators used in the calculation of GHI scores, are not included in the inclusion criteria because their availability varies widely from country to country, with data especially limited for higher-income countries.<sup>9</sup> Non-independent territories are not included in the GHI, nor are countries with very small populations (under 500,000 inhabitants), owing to limited data availability.

Because data for all four indicators in the GHI formula are not available for every country, GHI scores could not be calculated for some. However, where possible, countries with incomplete data are provisionally categorized according to the GHI Severity of Hunger Scale based on existing data and complementary reports (see Table A.3). Several of these countries are experiencing unrest or violent conflict, which affects the availability of data as well as the food security and nutrition situation in the country. It is possible that one

or more of these countries would have a higher GHI score than the Central African Republic—the country with the highest 2023 GHI score—if sufficient data were available.

## Why is a certain country's GHI score so high (or so low)?

The key to understanding a country's GHI score lies in that country's indicator values, especially when compared with the indicator values for other countries in the report (see Appendix B for these values).

For some countries, high scores are driven by high rates of undernourishment, reflecting a lack of calories for large swathes of the population. For others, high scores result from high levels of child wasting, reflecting acute undernutrition; child stunting, reflecting chronic undernutrition; and/or child mortality, reflecting children's hunger and nutrition levels, in addition to other extreme challenges facing the population. Broadly speaking, then, a high GHI score can be evidence of a lack of food, a poor-quality diet, inadequate child caregiving practices, an unhealthy environment, or a combination of these factors.

While it is beyond the scope of this report to provide a detailed explanation of the circumstances facing each country with a GHI score, Chapter 1 describes the situation in select countries. Furthermore, this report offers other avenues for examining a country's hunger and nutrition situation: country rankings based on 2023 GHI scores appear in Table 1.1, GHI scores for selected years for each country appear in Appendix C, and regional comparisons appear in Appendix D. (Case studies of the hunger situation in specific countries appear on the GHI website, [www.globalhungerindex.org](http://www.globalhungerindex.org).)

<sup>9</sup> Even though food insecurity is a serious concern for segments of the population in certain high-income countries, nationally representative data for child stunting and child wasting are not regularly collected in most high-income countries. In addition, although data on child mortality are usually available for these countries, child mortality does not reflect undernutrition in high-income countries to the same extent it does in low- and middle-income countries.

### Does the 2023 GHI reflect the situation in 2023?

The GHI uses the most up-to-date data available for each of the GHI indicators, meaning the scores are only as current as the data. For the calculation of the 2023 GHI scores, undernourishment data are from 2020–2022; child stunting and child wasting data are from 2018–2022, with the most current data from that range used for each country; and child mortality data are from 2021. Any changes that occur in 2023 are not yet reflected in the data and scores in this year's report.

### How can I compare GHI results over time?

Each report includes GHI scores and indicator data for three reference years in addition to the focus year. In this report, the 2023 GHI scores can be directly compared with the GHI scores given for three reference years—2000, 2008, and 2015 (Appendix C). The reference years are selected to provide an assessment of progress over time while also ensuring there is no overlap in the range of years from which the data are drawn.

### Can I compare the GHI scores and indicator values in this report with results from previous reports?

No—GHI scores are comparable within each year's report, but not between different years' reports. The current and historical data on which the GHI scores are based are continually being revised and improved by the United Nations agencies that compile them, and each year's GHI report reflects these changes. Comparing scores between reports may create the impression that hunger has changed positively or negatively in a specific country from year to year, whereas in some cases the change may partly or fully reflect a data revision.

Moreover, the methodology for calculating GHI scores has been revised in the past and may be revised again in the future. In 2015, for example, the GHI methodology was changed to include data on child stunting and wasting and to standardize the values (see Wiesmann et al. 2015). This change caused a major shift in the GHI scores, and the GHI Severity of Hunger Scale was modified to reflect this shift. In the GHI reports published since 2015, almost all countries have had much higher GHI scores compared with their scores in reports published in 2014 and earlier. This does not necessarily mean their hunger levels rose in 2015—the higher scores merely reflect the revision of the methodology. The 2000, 2008, 2015, and 2023 GHI scores shown in this year's report are all comparable because they all reflect the revised methodology and the latest revisions of data.

### Can I compare the GHI rankings in this report to those in previous reports to understand how the situation in a country has changed over time relative to other countries?

No—like the GHI scores and indicator values, GHI rankings cannot be compared between GHI reports, for two main reasons. First, the data and methodology used to calculate GHI scores have been revised over time, as described above. Second, the ranking in each year's report often includes different countries because the set of countries for which sufficient data are available to calculate GHI scores varies from year to year. Thus, if a country's ranking changes from one report to the next, this may be in part because it is being compared with a different group of countries.

## DATA UNDERLYING THE CALCULATION OF THE 2000, 2008, 2015, AND 2023 GLOBAL HUNGER INDEX SCORES

Guide to the colors shown in Appendix B

The colors shown in the table represent the following categories:

Very low = Very low Low = Low Medium = Medium High = High Very high = Very high

They are based on thresholds for the different indicator values, as follows:

Category	Undernourishment	Child wasting	Child stunting	Child mortality
Very low	<5%	<2.5%	<2.5%	<1%
Low	5–<15%	2.5–<5%	2.5–<10%	1–<4%
Medium	15–<25%	5–<10%	10–<20%	4–<7%
High	25–<35%	10–<15%	20–<30%	7–<10%
Very high	≥35%	≥15%	≥30%	≥10%

Note: Threshold values for the prevalence of undernourishment are adapted from FAO (2015). Threshold values for child stunting and child wasting are from de Onis et al. (2019). Threshold values for child mortality are adapted from those shown in UN IGME (2023b) but condensed to the five categories shown.

DATA UNDERLYING THE CALCULATION OF THE 2000, 2008, 2015, AND 2023 GLOBAL HUNGER INDEX SCORES

Country	Undernourishment (% of population)				Child wasting (% of children under five years old)				Child stunting (% of children under five years old)				Child mortality (% of children under five years old)			
	'00-'02	'07-'09	'14-'16	'20-'22	'98-'02	'06-'10	'13-'17	'18-'22	'98-'02	'06-'10	'13-'17	'18-'22	2000	2008	2015	2021
Afghanistan	46.4	25.4	21.3	30.1	10.9 *	8.4 *	9.5	3.7	50.3 *	50.8 *	40.4	44.7	12.9	9.6	7.0	5.6
Albania	4.9	7.4	4.3	4.1	7.5 *	9.6	4.2 *	1.6	32.0 *	23.2	15.7 *	11.3	2.7	1.6	1.0	0.9
Algeria	8.1	5.6	2.6	<2.5	3.1	4.1	4.1	2.7	23.6	15.4	11.7	9.8	4.2	3.0	2.5	2.2
Angola	67.8	43.6	13.5	21.6	9.2 *	8.3	4.9	6.0 *	50.4 *	29.2	37.6	29.4 *	20.5	13.8	8.8	6.9
Argentina	3.1	3.4	2.7	3.2	2.1 *	1.2	1.9 *	2.7	10.4 *	8.2	8.1 *	12.3	2.0	1.5	1.2	0.7
Armenia	25.7	5.8	<2.5	<2.5	2.5	4.1	4.4	3.3 *	17.3	20.9	9.4	10.9 *	3.1	2.1	1.4	1.1
Azerbaijan	16.8	<2.5	<2.5	<2.5	9.0	6.8	3.2	3.6 *	24.2	26.5	17.8	12.0 *	7.5	4.3	2.6	1.9
Bahrain	—	—	—	—	2.2 *	1.9 *	1.8 *	1.8 *	4.1 *	3.3 *	3.1 *	3.1 *	1.2	0.9	0.7	0.7
Bangladesh	15.6	12.9	14.8	11.2	12.5	17.5	15.6	11.0	51.1	43.2	32.7	23.6	8.6	5.5	3.8	2.7
Belarus	<2.5	<2.5	<2.5	<2.5	2.4 *	2.1 *	2.1 *	1.9 *	6.4 *	3.9 *	3.4 *	3.4 *	1.3	0.7	0.4	0.3
Benin	17.3	9.1	8.1	9.9	9.0	5.2	4.5	5.0	36.2	37.4	34.0	32.2	13.7	11.4	9.8	8.4
Bhutan	—	—	—	—	2.6	4.5	3.1 *	2.6 *	47.7	34.9	25.3 *	18.3 *	7.7	4.8	3.3	2.7
Bolivia (Plurinat. State of)	27.8	24.9	16.0	19.4	1.6	1.4	2.0	1.5 *	33.2	27.1	16.1	18.1 *	7.6	4.7	3.2	2.5
Bosnia & Herzegovina	3.4	<2.5	<2.5	<2.5	7.4	4.0	3.6 *	3.4 *	12.1	11.8	8.6 *	7.5 *	1.0	0.8	0.6	0.6
Botswana	23.8	22.3	24.1	22.9	5.9	7.3	6.0 *	5.4 *	29.1	28.9	18.9 *	16.7 *	7.4	6.9	4.5	3.5
Brazil	10.7	5.1	<2.5	4.7	2.8 *	1.8	2.1 *	3.1	10.0 *	7.0	7.1 *	7.2	3.5	2.1	1.6	1.4
Bulgaria	3.9	4.4	3.7	<2.5	4.9 *	4.7	5.9	4.2 *	11.1 *	9.2	7.0	6.5 *	1.7	1.1	0.8	0.6
Burkina Faso	22.9	15.4	13.3	16.2	15.5	11.3	10.2	10.1	41.4	35.1	30.1	22.1	17.9	13.3	10.1	8.3
Burundi	—	—	—	—	8.1	6.0 *	5.1	4.9	64.0	56.8 *	55.9	55.8	15.5	10.3	6.8	5.3
Cabo Verde	15.0	13.3	21.4	18.2	4.1 *	3.2 *	3.1 *	3.0 *	15.0 *	10.0 *	8.7 *	7.8 *	3.8	2.8	2.0	1.4
Cambodia	24.3	15.2	6.9	4.8	17.1	9.1	9.7	9.6	49.0	39.5	32.4	21.9	10.6	5.1	3.2	2.5
Cameroon	22.7	11.1	4.4	6.4	7.3	7.6	5.2	4.3	36.6	37.6	31.7	28.9	14.4	11.8	8.8	7.0
Central African Republic	38.5	32.6	49.1	48.7	10.4	12.1	6.2	5.3	44.4	43.6	38.0	40.0	16.6	13.7	11.6	10.0
Chad	38.6	40.2	26.2	31.4	13.9	16.3	13.3	8.3	38.9	38.7	39.8	28.0	18.4	15.6	12.9	10.7
Chile	3.5	3.6	3.1	2.5	0.5	0.3	0.3	0.3 *	3.0	2.0	1.8	1.9 *	1.1	0.9	0.8	0.7
China	10.1	3.9	<2.5	<2.5	2.5	2.6	1.9	1.7 *	17.8	9.8	6.5	4.8 *	3.7	1.8	1.1	0.7
Colombia	8.9	11.5	4.9	6.6	1.0	0.9	1.6	1.0 *	18.2	12.6	12.7	10.2 *	2.5	2.0	1.6	1.3
Comoros	25.2	20.0	12.4	13.5	13.3	9.2 *	10.6 *	9.9 *	46.9	39.9 *	30.2 *	28.6 *	9.6	7.8	6.1	5.0
Congo (Republic of)	27.0	36.1	27.7	33.3	9.2 *	8.0 *	8.2	7.8 *	30.8 *	26.7 *	21.2	24.0 *	11.4	6.9	5.3	4.3
Costa Rica	4.7	3.9	4.2	3.0	1.9 *	0.7	1.1 *	1.8	10.9 *	5.6	5.2 *	9.0	1.3	1.1	0.9	0.8
Côte d'Ivoire	18.2	18.9	11.9	7.7	6.9	14.3	6.1	8.4	31.2	39.0	21.6	23.4	14.3	11.4	9.0	7.5
Croatia	6.9	<2.5	<2.5	<2.5	1.3 *	1.1 *	1.1 *	1.0 *	1.3 *	0.9 *	0.9 *	0.8 *	0.8	0.6	0.5	0.5
Dem. Rep. of the Congo	27.9	28.4	30.2	35.3	15.9	10.4	8.1	6.4	44.4	45.8	42.7	41.8	16.0	12.3	9.6	7.9
Djibouti	42.1	21.3	21.3	16.8	19.4	17.0	13.9	10.6	27.1	33.0	28.0	20.9	10.1	8.1	6.6	5.4
Dominican Republic	20.6	16.2	7.4	6.3	1.5	2.3	2.4	2.2	7.7	10.1	7.1	6.7	4.0	3.6	3.5	3.3
Ecuador	21.0	21.1	9.0	13.9	2.7	2.1	1.6	3.7	27.9	25.9	23.9	23.0	3.0	2.1	1.5	1.2
Egypt	5.2	5.5	5.8	7.2	7.0	7.9	9.5	5.4 *	24.4	30.7	22.3	21.2 *	4.7	3.1	2.3	1.9
El Salvador	7.3	10.0	9.6	7.7	1.5	1.6	2.1	1.0 *	32.3	20.8	13.6	13.3 *	3.3	2.1	1.5	1.2
Equatorial Guinea	—	—	—	—	9.2	3.1 *	3.0 *	3.9 *	42.7	28.6 *	24.4 *	25.2 *	15.6	12.0	9.4	7.7
Eritrea	—	—	—	—	15.0	14.6	—	—	43.0	52.5	—	—	8.5	6.0	4.6	3.8
Estonia	3.5	<2.5	<2.5	<2.5	1.5 *	1.5 *	1.5	1.3 *	1.5 *	1.1 *	1.2	1.2 *	1.1	0.5	0.3	0.2
Eswatini	10.5	11.6	14.4	11.6	1.7	1.1	2.0	1.2 *	36.5	40.4	25.5	28.2 *	11.2	10.4	6.4	5.3
Ethiopia	46.7	33.5	14.5	21.9	12.4	10.6 *	9.4	6.8	57.4	49.9 *	39.4	36.8	14.0	9.2	6.2	4.7
Fiji	4.0	3.7	9.2	6.6	7.0 *	6.2 *	5.7 *	4.6	6.7 *	5.6 *	4.7 *	7.2	2.3	2.4	2.4	2.8
Gabon	10.8	16.8	16.3	23.0	4.2	3.8 *	3.3 *	3.4	25.9	19.7 *	16.5 *	14.4	8.4	6.7	5.0	4.0
Gambia	18.0	15.4	15.9	19.6	9.1	8.5	11.0	5.1	24.1	25.5	24.6	17.5	11.4	8.1	6.0	4.8
Georgia	7.2	3.5	3.6	2.9	3.1	1.3	0.6 *	0.6	16.1	11.8	6.0 *	5.8	3.7	1.7	1.0	0.9
Ghana	14.9	8.1	8.2	4.9	9.9	8.7	4.7	6.0	30.6	28.4	18.8	17.5	10.0	7.6	5.5	4.4
Guatemala	22.7	18.2	15.7	13.3	3.7	1.0	1.3	0.8	51.0	51.5	45.0	46.0	5.2	3.8	2.8	2.3
Guinea	18.0	12.2	12.9	12.9	10.3	7.2	8.1	9.2	46.9	34.0	32.4	30.3	16.6	12.7	11.3	9.9
Guinea-Bissau	15.8	16.1	35.1	37.9	11.8	5.9	6.0	6.4	33.8	32.0	27.6	27.9	17.4	12.6	9.2	7.4
Guyana	6.4	7.6	4.5	<2.5	12.1	6.9	6.4	6.5	13.9	18.6	11.3	9.5	4.7	3.9	3.3	2.8
Haiti	49.2	47.0	38.8	45.0	5.5	10.2	3.7	3.9 *	28.8	29.6	21.9	19.1 *	10.4	8.3	7.0	5.9
Honduras	22.4	21.0	15.5	18.7	1.3	1.4	1.3 *	1.9	35.5	29.8	24.3 *	18.7	3.7	2.7	2.1	1.7
Hungary	<2.5	<2.5	<2.5	<2.5	4.8 *	4.5 *	4.2 *	4.0 *	9.8 *	7.6 *	6.8 *	6.4 *	1.0	0.7	0.5	0.4
India	18.3	16.2	14.0	16.6	17.8	20.0	18.0	18.7	51.0	47.8	38.3	35.5	9.2	6.5	4.4	3.1
Indonesia	19.0	17.4	7.3	5.9	5.5	14.8	13.5	10.2	42.3	40.1	36.4	30.8	5.2	3.7	2.8	2.2
Iran (Islamic Republic of)	5.0	5.8	6.3	6.1	6.1	4.3 *	4.3	4.1 *	20.4	8.0 *	4.8	7.1 *	3.6	2.2	1.6	1.3
Iraq	21.7	16.9	17.3	16.3	6.6	5.8	4.4 *	3.0	28.1	27.5	16.7 *	12.6	4.4	3.7	3.0	2.5
Jamaica	7.6	9.4	8.0	8.3	2.0	2.6	3.5	3.2	7.2	6.2	7.7	4.6	2.1	1.8	1.5	1.2
Jordan	—	—	—	—	3.5	1.6	1.6 *	0.6	11.7	8.2	7.6 *	7.4	2.7	2.1	1.8	1.5
Kazakhstan	6.3	4.2	<2.5	<2.5	2.5	4.9	3.1	3.9 *	13.2	17.5	8.0	8.5 *	4.3	2.5	1.2	1.0
Kenya	32.3	27.0	20.0	27.8	7.4	6.9	5.6	4.9	40.8	35.5	28.0	17.6	9.9	6.3	4.6	3.7
Korea (DPR)	35.7	40.3	40.5	45.5	12.2	5.2	2.5	6.1 *	51.0	32.4	19.1	16.8	6.0	3.2	2.1	1.5
Kuwait	2.8	<2.5	<2.5	<2.5	2.2	2.2	3.0	2.3	4.0	5.1	5.2	6.4	1.3	1.1	0.9	0.9
Kyrgyzstan	14.6	8.5	5.8	4.8	2.6 *	1.4	2.8	2.0	22.0 *	22.6	12.9	11.8	5.0	3.4	2.2	1.7
Lao PDR	31.4	18.6	6.7	4.7	17.5	7.4	9.7	7.3 *	47.5	47.7	35.5	26.0 *	10.7	7.5	5.4	4.3
Latvia	4.6	<2.5	<2.5	<2.5	1.8 *	1.6 *	1.6 *	1.6	1.3 *	0.6 *	0.6 *	0.5	1.4	0.9	0.5	0.4
Lebanon	—	—	—	—	3.4 *	3.0 *	2.9 *	1.4	13.5 *	10.7 *	9.3 *	7.0	2.0	1.2	0.9	0.8



# DATA UNDERLYING THE CALCULATION OF THE 2000, 2008, 2015, AND 2023 GLOBAL HUNGER INDEX SCORES

Country	Undernourishment (% of population)				Child wasting (% of children under five years old)				Child stunting (% of children under five years old)				Child mortality (% of children under five years old)			
	'00-'02	'07-'09	'14-'16	'20-'22	'98-'02	'06-'10	'13-'17	'18-'22	'98-'02	'06-'10	'13-'17	'18-'22	2000	2008	2015	2021
Lesotho	20.7	12.3	31.9	46.0	6.1 *	3.8	2.8	2.1	43.5 *	42.0	33.4	34.6	10.7	11.1	8.2	7.3
Liberia	36.3	29.5	35.9	38.4	7.4	7.9	4.3	3.4	45.3	39.6	30.1	29.8	18.9	10.8	8.8	7.6
Libya	3.5	5.6	6.1	8.4	8.8 *	6.5	10.2	8.1 *	32.0 *	21.0	38.1	29.8 *	2.8	1.9	1.3	1.1
Lithuania	<2.5	<2.5	<2.5	<2.5	6.5 *	5.2 *	5.2 *	4.8	10.1 *	5.6 *	5.1 *	4.1	1.1	0.7	0.5	0.3
Madagascar	34.1	30.7	40.4	51.0	9.6 *	8.8 *	7.5	7.2	54.2 *	49.4	48.9	39.8	10.5	7.5	6.6	6.6
Malawi	23.4	18.3	13.9	17.8	6.8	1.9	3.7	2.3	54.7	48.8	40.5	35.2	17.4	9.3	5.7	4.2
Malaysia	<2.5	3.5	6.1	2.7	15.3	13.2	8.0	9.7	20.7	17.5	17.7	21.8	1.0	0.8	0.8	0.8
Maldives	—	—	—	—	13.4	10.6	9.1	9.3 *	31.9	19.0	15.3	15.3 *	3.9	1.6	1.0	0.6
Mali	16.6	9.6	4.2	12.8	12.6	12.2	13.0	10.6	42.5	32.7	29.7	21.8	18.8	14.3	11.6	9.7
Mauritania	8.2	6.9	6.8	8.7	15.3	8.1	14.8	13.6	38.6	23.6	27.9	25.1	9.9	6.1	4.9	4.0
Mauritius	5.8	5.0	5.9	6.8	14.7 *	13.7 *	12.7 *	12.1 *	12.8 *	11.8 *	10.8 *	10.3 *	1.9	1.5	1.5	1.7
Mexico	3.2	4.4	3.9	<2.5	2.0	3.5	1.0	1.7	21.4	17.5	12.4	12.8	2.8	2.1	1.6	1.3
Moldova (Republic of)	24.4	27.7	<2.5	<2.5	4.2 *	3.3 *	3.0 *	2.7 *	13.4 *	8.1 *	6.4 *	5.2 *	3.1	1.8	1.6	1.4
Mongolia	30.5	21.9	7.6	8.0	7.1	1.7	1.2	0.9	29.8	15.4	7.3	9.4	6.4	3.1	1.9	1.5
Montenegro	—	<2.5	<2.5	<2.5	—	4.2	2.8	2.2	—	7.9	9.4	7.2	—	0.8	0.4	0.2
Morocco	6.3	5.7	3.8	6.3	4.0 *	3.4 *	3.0 *	2.3	25.3 *	19.2 *	15.1 *	14.2	5.2	3.5	2.4	1.8
Mozambique	36.9	29.2	39.5	30.5	8.1	4.2	4.4	3.9	50.7	43.5	42.3	37.5	17.1	11.3	8.4	7.0
Myanmar	38.6	18.1	4.1	3.8	10.7	7.9	6.6	7.4	40.8	35.1	29.4	26.7	8.9	9.9	5.2	4.2
Namibia	15.6	30.6	20.3	17.1	10.0	7.6	7.1	5.7 *	29.3	29.2	22.7	16.6 *	7.7	5.5	4.6	3.9
Nepal	24.1	13.1	6.3	5.4	11.3	12.7	11.5	7.7	56.1	49.1	37.2	24.8	7.9	5.1	3.6	2.7
Nicaragua	27.1	20.9	19.3	17.8	2.3	1.5	1.3 *	1.2 *	25.1	23.1	16.8 *	15.5 *	3.9	2.6	1.9	1.3
Niger	23.3	17.8	12.4	16.1	16.2	13.4	13.6	10.9	53.5	45.4	46.4	47.7	22.9	14.5	12.0	11.5
Nigeria	8.8	6.7	9.3	15.9	13.1 *	9.7 *	7.3	6.5	48.9 *	40.1 *	33.0	31.5	18.2	14.2	12.6	11.1
North Macedonia	7.4	2.8	3.6	3.6	1.8	2.4 *	2.4 *	3.4	8.0	6.8 *	5.8 *	4.3	1.6	1.2	1.1	0.5
Oman	12.4	9.0	6.3	2.8	7.8	7.1	7.5	6.6 *	15.8	9.8	14.1	10.8 *	1.6	1.2	1.1	1.0
Pakistan	20.8	15.2	12.1	18.5	14.1	11.7 *	10.5	7.1	41.4	41.1 *	45.0	37.6	10.8	9.1	7.6	6.3
Panama	24.5	14.1	7.3	5.3	1.4 *	1.2	1.1 *	1.1	21.6 *	19.0	14.5 *	15.9	2.6	2.1	1.7	1.4
Papua New Guinea	26.8	27.6	22.5	23.4	7.7 *	7.9 *	7.3 *	7.1 *	47.6 *	46.8 *	42.8 *	40.2 *	7.1	6.1	5.1	4.3
Paraguay	10.4	9.5	2.6	4.2	1.6	1.4 *	1.0	1.3 *	14.0 *	11.3 *	5.6	7.7 *	3.4	2.8	2.2	1.8
Peru	21.4	11.4	5.5	7.0	1.1	0.8	0.6	0.4	31.3	28.0	14.7	11.5	3.8	2.2	1.7	1.4
Philippines	18.9	11.3	9.1	5.2	8.0	6.6	6.8	5.7	38.3	32.0	33.1	29.6	3.8	3.3	3.0	2.6
Qatar	—	—	—	—	1.6 *	1.2 *	1.2 *	1.2 *	2.2 *	1.4 *	1.3 *	1.9 *	1.2	1.0	0.8	0.5
Romania	<2.5	<2.5	<2.5	<2.5	4.3	3.2 *	3.3 *	3.3 *	12.8	10.8 *	9.6 *	8.7 *	2.1	1.4	0.9	0.6
Russian Federation	4.0	<2.5	<2.5	<2.5	4.9	2.9 *	4.5 *	4.4 *	16.7 *	11.2 *	11.1 *	10.9 *	1.9	1.1	0.8	0.5
Rwanda	38.0	28.6	32.6	31.6	8.7	5.1	2.2	1.1	47.9	46.6	37.6	33.1	18.5	7.6	4.8	3.9
Saudi Arabia	5.4	5.8	4.6	3.8	6.6 *	5.8 *	5.5	4.4	18.1 *	15.2 *	13.7	10.8	2.2	1.4	0.9	0.7
Senegal	24.5	11.8	9.5	5.7	10.0	8.5 *	8.4	8.1	26.0	21.6 *	19.1	18.4	13.0	7.4	5.1	3.9
Serbia	—	<2.5	<2.5	<2.5	—	4.0	3.9	2.6	—	7.4	6.0	5.4	—	0.8	0.6	0.5
Sierra Leone	50.4	40.1	23.7	27.8	11.6	7.5	4.6	6.3	35.5	32.7	29.1	26.3	22.6	17.6	14.1	10.5
Slovakia	6.1	4.9	5.5	2.8	1.6 *	1.4 *	1.4 *	1.3 *	11.9 *	9.1 *	8.5 *	8.6 *	1.0	0.7	0.6	0.6
Solomon Islands	12.7	12.8	21.6	19.0	6.5 *	4.3	8.5	5.6 *	35.1 *	32.8	31.7	28.6 *	3.1	2.8	2.3	1.9
Somalia	70.6	70.5	58.2	48.7	19.3	14.3	—	—	29.2	25.3	—	—	17.3	16.7	13.4	11.2
South Africa	3.8	3.6	6.5	7.9	4.5	5.1	4.6	3.2 *	30.1	24.9	21.4	19.9 *	7.1	6.8	3.7	3.3
South Sudan	—	—	—	21.4	—	—	—	—	—	—	—	—	—	—	9.9	9.9
Sri Lanka	16.5	10.8	9.1	5.3	15.9	13.5	15.1	13.1 *	18.3	18.7	17.3	13.1 *	1.7	1.2	0.9	0.7
Sudan	—	—	9.7	11.9	—	—	16.3	13.7 *	—	—	38.2	38.5 *	—	—	6.6	5.5
Suriname	11.8	8.4	9.0	9.0	7.0	5.0	5.1 *	5.5	14.1	9.7	8.9 *	8.3	3.1	2.5	2.0	1.7
Syrian Arab Republic	7.6	3.9	11.1	27.8	4.9	10.9	12.9 *	10.8 *	24.3	28.3	34.0 *	27.0 *	2.3	1.9	4.2	2.2
Tajikistan	40.4	34.4	16.3	9.3	9.4	5.6	3.5	5.0 *	42.1	34.1	19.6	17.1 *	8.4	4.6	3.7	3.1
Tanzania (United Rep. of)	32.8	25.6	20.5	23.5	5.6	2.9	4.2	3.3	48.3	43.2	34.6	30.0	13.0	8.0	5.8	4.7
Thailand	17.3	10.6	6.9	5.2	7.6 *	4.7	5.4	7.7	21.7 *	15.7	10.5	13.4	2.2	1.5	1.1	0.8
Timor-Leste	42.8	33.0	27.6	22.3	13.7	21.3	12.2	8.3	55.7	57.2	49.2	46.7	—	7.7	6.2	5.1
Togo	31.6	25.8	19.8	17.4	12.1	6.0	6.6	4.7 *	28.8	26.9	27.6	22.2 *	12.0	9.5	7.6	6.3
Trinidad & Tobago	10.0	9.7	11.3	12.2	5.2	5.3 *	5.0 *	5.1 *	5.3	5.8 *	5.3 *	5.7 *	2.8	2.4	2.0	1.6
Tunisia	4.4	3.8	2.8	3.0	2.9	3.4	2.9 *	2.1	16.8	9.0	8.6 *	8.4	3.0	1.9	1.7	1.6
Türkiye	<2.5	<2.5	<2.5	<2.5	3.0	1.0	1.9	1.7	18.8	12.5	10.0	6.0	3.8	2.1	1.3	0.9
Turkmenistan	6.4	3.9	5.5	5.7	8.0	7.2	4.2	4.1	27.2	18.9	11.5	7.2	7.0	4.6	4.2	4.1
Uganda	18.4	20.7	30.2	31.6	5.0	5.3	4.2	3.6	44.9	38.3	31.8	25.4	14.6	8.7	5.6	4.2
Ukraine	3.0	<2.5	<2.5	4.8	8.2	2.6 *	2.6 *	2.7 *	22.9	16.8 *	17.0 *	16.4 *	1.8	1.3	0.9	0.8
United Arab Emirates	3.1	7.4	4.8	<2.5	2.7 *	3.9 *	4.0 *	3.9 *	3.1 *	2.7 *	2.7 *	2.6 *	1.1	0.9	0.8	0.6
Uruguay	3.4	<2.5	<2.5	<2.5	1.7	1.4	1.0	1.4	15.3	11.8	7.9	6.9	1.7	1.2	0.9	0.6
Uzbekistan	18.0	11.3	<2.5	<2.5	9.0	4.4	1.8	2.4	24.9	19.6	10.8	6.5	6.1	3.3	1.9	1.4
Venezuela (Boliv. Rep. of)	14.8	2.8	10.8	17.9	3.9	4.5	3.5 *	4.8 *	17.4	14.6	11.8 *	20.7 *	2.2	1.7	1.9	2.4
Viet Nam	19.5	12.6	7.1	5.0	9.0	9.4	6.4	4.7	42.7	30.8	24.6	19.6	3.0	2.4	2.2	2.1
Yemen	26.2	25.4	38.7	34.5	15.6 *	13.8	16.4	14.4 *	53.4 *	57.0	46.4	48.7 *	9.5	6.3	6.1	6.2
Zambia	50.4	54.0	33.0	29.8	5.9	5.6	6.2	4.2	59.2	45.8	40.0	34.6	15.6	8.8	6.8	5.8
Zimbabwe	33.0	28.7	32.6	38.4	8.3	2.4	3.3	2.9	33.8	35.1	27.1	23.5	9.6	9.5	6.0	5.0

Note: The colors shown in the table represent the following categories: ■ = very low ■ = low ■ = medium ■ = high ■ = very high. For more information, see page 41.

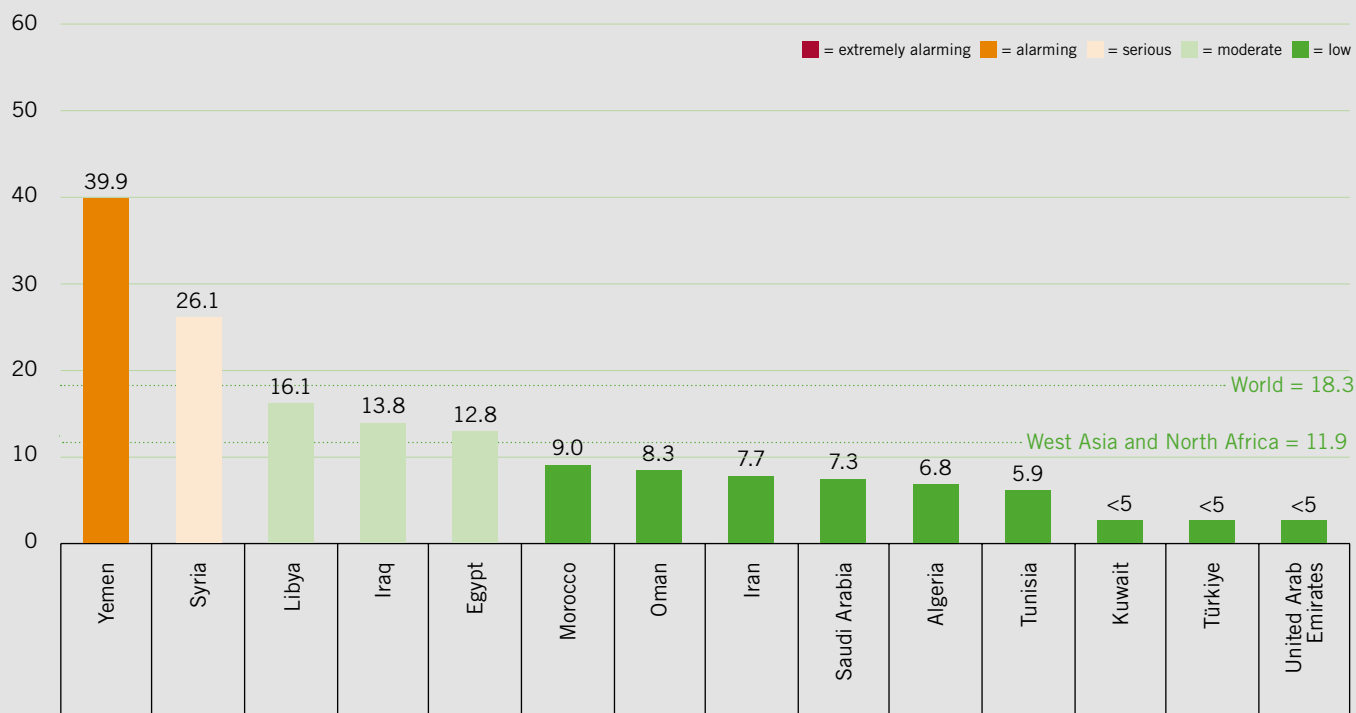
— = Data not available or not presented. Some countries did not exist in their present borders in the given year or reference period. \*GHI estimates.

## 2000, 2008, 2015, AND 2023 GLOBAL HUNGER INDEX SCORES, AND CHANGE SINCE 2015

Country with data from	2000 '98-'02	2008 '06-'10	2015 '13-'17	2023 '18-'22	Absolute change since 2015	% change since 2015	Country with data from	2000 '98-'02	2008 '06-'10	2015 '13-'17	2023 '18-'22	Absolute change since 2015	% change since 2015
Afghanistan	49.6	36.5	30.4	30.6	0.2	0.7	Lebanon	—	—	—	—	—	—
Albania	16.4	15.5	8.8	6.1	-2.7	-30.7	Lesotho	32.5	27.8	30.6	35.5	4.9	16.0
Algeria	14.7	11.1	8.5	6.8	-1.7	-20.0	Liberia	48.0	36.4	32.9	32.2	-0.7	-2.1
Angola	64.9	42.9	25.7	25.9	0.2	0.8	Libya	16.6	12.8	18.5	16.1	-2.4	-13.0
Argentina	6.8	5.5	5.3	6.4	1.1	20.8	Lithuania	7.6	5.1	<5	<5	—	—
Armenia	19.2	11.7	6.3	5.6	-0.7	-11.1	Madagascar	42.4	36.6	38.9	41.0	2.1	5.4
Azerbaijan	24.9	15.0	9.3	6.9	-2.4	-25.8	Malawi	43.1	29.2	22.9	21.1	-1.8	-7.9
Bahrain	—	—	—	—	—	—	Malaysia	15.4	13.7	12.0	12.5	0.5	4.2
Bangladesh	33.8	30.6	26.2	19.0	-7.2	-27.5	Maldives	—	—	—	—	—	—
Belarus	<5	<5	<5	<5	—	—	Mali	41.9	32.2	27.1	25.6	-1.5	-5.5
Benin	33.9	26.4	23.3	22.6	-0.7	-3.0	Mauritania	30.5	18.8	22.4	21.0	-1.4	-6.2
Bhutan	—	—	—	—	—	—	Mauritius	15.4	13.9	13.5	13.6	0.1	0.7
Bolivia (Plurinat. State of)	27.6	22.1	14.7	15.6	0.9	6.1	Mexico	10.2	9.9	6.7	6.0	-0.7	-10.4
Bosnia & Herzegovina	9.4	6.5	5.3	<5	—	—	Moldova (Rep. of)	18.6	17.0	<5	<5	—	—
Botswana	27.2	26.8	22.2	19.9	-2.3	-10.4	Mongolia	29.9	16.7	7.4	7.5	0.1	1.4
Brazil	11.7	6.8	5.4	6.7	1.3	24.1	Montenegro	—	5.2	<5	<5	—	—
Bulgaria	8.6	7.7	7.3	5.4	-1.9	-26.0	Morocco	15.8	12.2	9.1	9.0	-0.1	-1.1
Burkina Faso	45.0	33.7	28.0	25.5	-2.5	-8.9	Mozambique	48.2	35.6	37.0	30.5	-6.5	-17.6
Burundi	—	—	—	—	—	—	Myanmar	40.2	29.7	17.3	16.1	-1.2	-6.9
Cabo Verde	15.7	12.4	14.6	12.4	-2.2	-15.1	Namibia	26.4	29.2	22.2	18.0	-4.2	-18.9
Cambodia	41.4	25.6	19.0	14.9	-4.1	-21.6	Nepal	37.2	29.0	21.3	15.0	-6.3	-29.6
Cameroon	36.0	29.0	20.7	18.6	-2.1	-10.1	Nicaragua	22.3	17.5	14.6	13.0	-1.6	-11.0
Central African Republic	48.2	43.7	44.0	42.3	-1.7	-3.9	Niger	53.3	39.5	35.2	35.1	-0.1	-0.3
Chad	50.6	49.9	40.1	34.6	-5.5	-13.7	Nigeria	39.9	31.2	27.8	28.3	0.5	1.8
Chile	<5	<5	<5	<5	—	—	North Macedonia	7.5	5.3	5.3	<5	—	—
China	13.4	7.1	<5	<5	—	—	Oman	14.8	11.2	11.2	8.3	-2.9	-25.9
Colombia	11.0	10.2	7.5	7.0	-0.5	-6.7	Pakistan	36.7	31.3	28.8	26.6	-2.2	-7.6
Comoros	38.2	30.4	24.0	22.7	-1.3	-5.4	Panama	18.6	13.0	8.7	7.9	-0.8	-9.2
Congo (Republic of)	34.6	32.4	26.2	28.0	1.8	6.9	Papua New Guinea	33.5	32.9	28.5	27.4	-1.1	-3.9
Costa Rica	6.9	<5	<5	5.1	—	—	Paraguay	11.8	10.1	5.1	6.0	0.9	17.6
Côte d'Ivoire	32.5	36.0	22.1	20.6	-1.5	-6.8	Peru	20.6	14.0	7.7	7.2	-0.5	-6.5
Croatia	<5	<5	<5	<5	—	—	Philippines	25.0	19.1	18.3	14.8	-3.5	-19.1
Dem. Rep. of the Congo	46.3	40.2	36.4	35.7	-0.7	-1.9	Qatar	—	—	—	—	—	—
Djibouti	44.4	33.9	29.6	23.0	-6.6	-22.3	Romania	7.9	5.8	5.1	<5	—	—
Dominican Republic	15.1	13.9	9.4	8.6	-0.8	-8.5	Russian Federation	10.2	5.8	6.3	5.8	-0.5	-7.9
Ecuador	19.7	18.1	11.7	14.5	2.8	23.9	Rwanda	49.7	33.1	28.3	25.4	-2.9	-10.2
Egypt	16.4	16.9	15.2	12.8	-2.4	-15.8	Saudi Arabia	12.3	10.6	9.1	7.3	-1.8	-19.8
El Salvador	14.7	12.0	9.8	8.1	-1.7	-17.3	Senegal	34.3	21.8	18.0	15.0	-3.0	-16.7
Equatorial Guinea	—	—	—	—	—	—	Serbia	—	5.8	<5	<5	—	—
Eritrea	—	—	—	—	—	—	Sierra Leone	57.4	45.4	32.8	31.3	-1.5	-4.6
Estonia	<5	<5	<5	<5	—	—	Slovakia	7.2	5.7	5.7	<5	—	—
Eswatini	24.7	25.0	19.3	17.3	-2.0	-10.4	Solomon Islands	20.2	18.2	23.4	19.6	-3.8	-16.2
Ethiopia	53.3	40.5	26.5	26.2	-0.3	-1.1	Somalia	63.6	59.2	—	—	—	—
Fiji	9.3	8.6	10.4	9.7	-0.7	-6.7	South Africa	18.0	16.8	13.9	13.0	-0.9	-6.5
Gabon	21.0	20.2	17.3	18.7	1.4	8.1	South Sudan	—	—	—	—	—	—
Gambia	29.2	24.9	24.3	19.7	-4.6	-18.9	Sri Lanka	21.7	17.6	17.1	13.3	-3.8	-22.2
Georgia	12.1	6.6	<5	<5	—	—	Sudan	—	—	28.5	27.0	-1.5	-5.3
Ghana	28.5	22.2	15.7	13.7	-2.0	-12.7	Suriname	15.1	11.0	10.6	10.4	-0.2	-1.9
Guatemala	28.6	24.0	20.6	19.1	-1.5	-7.3	Syrian Arab Republic	13.9	16.2	23.9	26.1	2.2	9.2
Guinea	40.2	29.3	28.4	27.1	-1.3	-4.6	Tajikistan	40.1	29.9	16.9	13.7	-3.2	-18.9
Guinea-Bissau	37.7	29.6	33.3	33.0	-0.3	-0.9	Tanzania (United Rep. of)	40.7	30.2	24.6	23.2	-1.4	-5.7
Guyana	17.2	15.1	11.3	9.3	-2.0	-17.7	Thailand	18.7	12.2	9.4	10.4	1.0	10.6
Haiti	40.3	40.2	30.1	31.1	1.0	3.3	Timor-Leste	—	46.5	35.9	29.9	-6.0	-16.7
Honduras	22.0	19.2	15.0	14.9	-0.1	-0.7	Togo	38.2	29.6	25.7	21.1	-4.6	-17.9
Hungary	6.7	5.6	5.0	<5	—	—	Trinidad & Tobago	11.0	10.7	10.7	10.8	0.1	0.9
India	38.4	35.5	29.2	28.7	-0.5	-1.7	Tunisia	10.3	7.4	6.4	5.9	-0.5	-7.8
Indonesia	26.0	28.5	21.9	17.6	-4.3	-19.6	Türkiye	10.1	5.7	<5	<5	—	—
Iran (Islamic Republic of)	13.7	8.8	7.7	7.7	0.0	0.0	Turkmenistan	20.3	14.5	11.4	10.3	-1.1	-9.6
Iraq	23.6	20.3	16.5	13.8	-2.7	-16.4	Uganda	35.0	29.0	27.8	25.2	-2.6	-9.4
Jamaica	8.5	8.6	8.6	7.5	-1.1	-12.8	Ukraine	13.0	7.1	7.1	8.2	1.1	15.5
Jordan	—	—	—	—	—	—	United Arab Emirates	<5	6.8	5.6	<5	—	—
Kazakhstan	11.3	11.0	5.7	5.5	-0.2	-3.5	Uruguay	7.6	5.3	<5	<5	—	—
Kenya	36.7	29.5	22.5	22.0	-0.5	-2.2	Uzbekistan	24.2	14.9	5.9	5.0	-0.9	-15.3
Korea (DPR)	39.5	30.4	24.8	27.8	3.0	12.1	Venezuela (Boliv. Rep. of)	14.6	8.8	11.1	17.3	6.2	55.9
Kuwait	<5	<5	<5	<5	—	—	Viet Nam	26.1	20.1	14.5	11.4	-3.1	-21.4
Kyrgyzstan	17.5	12.9	9.1	7.5	-1.6	-17.6	Yemen	41.4	37.8	42.1	39.9	-2.2	-5.2
Lao PDR	44.3	30.4	21.8	16.3	-5.5	-25.2	Zambia	53.2	44.9	33.2	28.5	-4.7	-14.2
Latvia	<5	<5	<5	<5	—	—	Zimbabwe	35.5	30.7	27.6	28.0	0.4	1.4

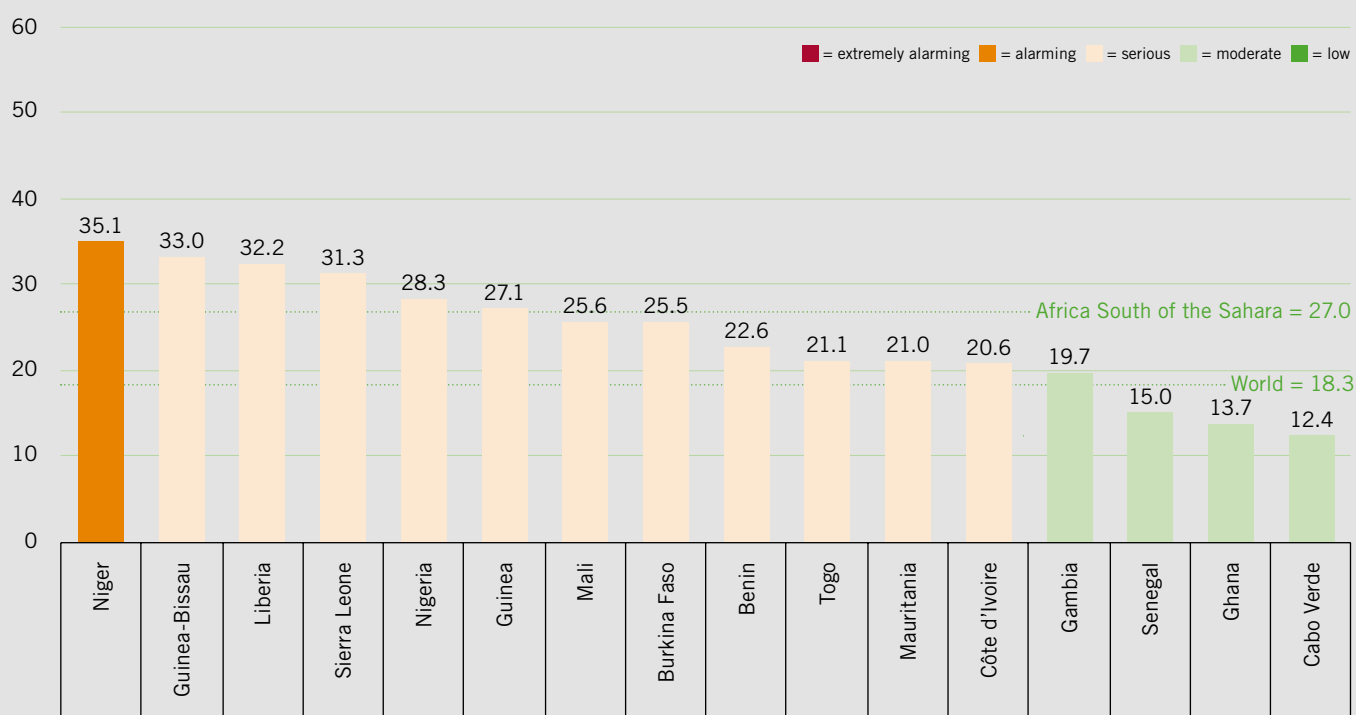
Note: — = Data are not available or not presented. See Table A.3 for provisional designations of the severity of hunger for some countries with incomplete data. Some countries did not exist in their present borders in the given year or reference period. ■ = low ■ = moderate ■ = serious ■ = alarming ■ = extremely alarming

## WEST ASIA AND NORTH AFRICA

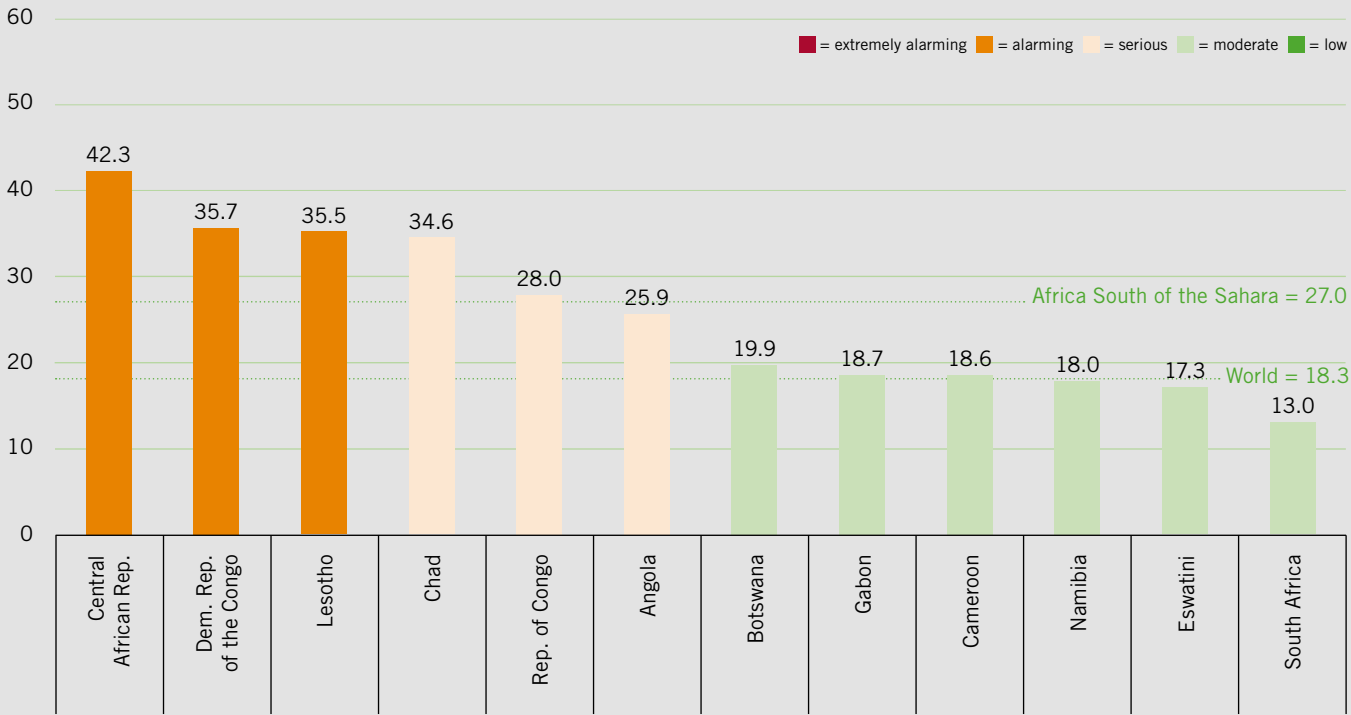


Note: Bahrain, Jordan, Lebanon, and Qatar are in the West Asia and North Africa region but are not shown, owing to insufficient data for the calculation of GHI scores. Existing data and provisional indicator values for these countries were included in the calculation of regional and global GHI scores. See Table A.3 regarding provisional designations of hunger severity for countries with incomplete data. Countries with GHI scores less than 5 are presented in alphabetical order.

## WEST AFRICA

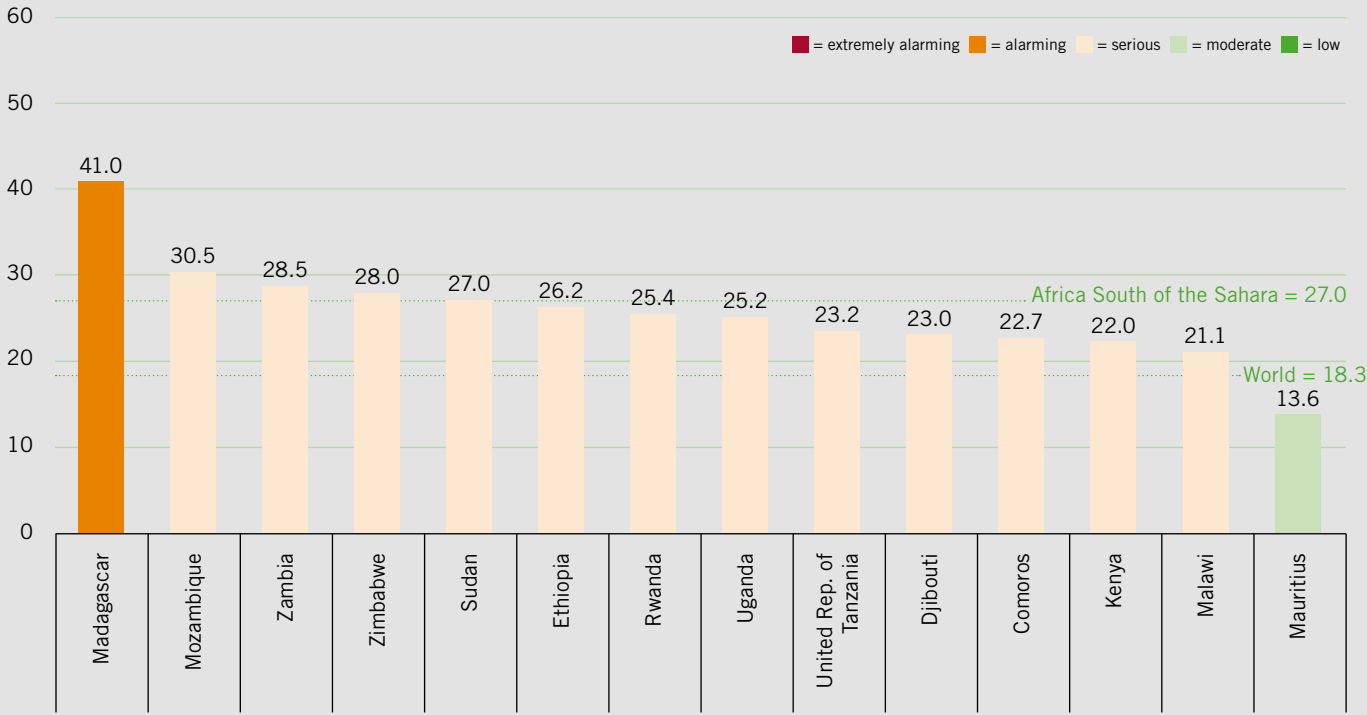


### CENTRAL AND SOUTHERN AFRICA



Note: Equatorial Guinea is in the Central Africa subregion but is not shown, owing to insufficient data for the calculation of GHI scores. Existing data and provisional indicator values for Equatorial Guinea were included in the calculation of regional and global GHI scores. See Table A.3 regarding provisional designations of hunger severity for countries with incomplete data.

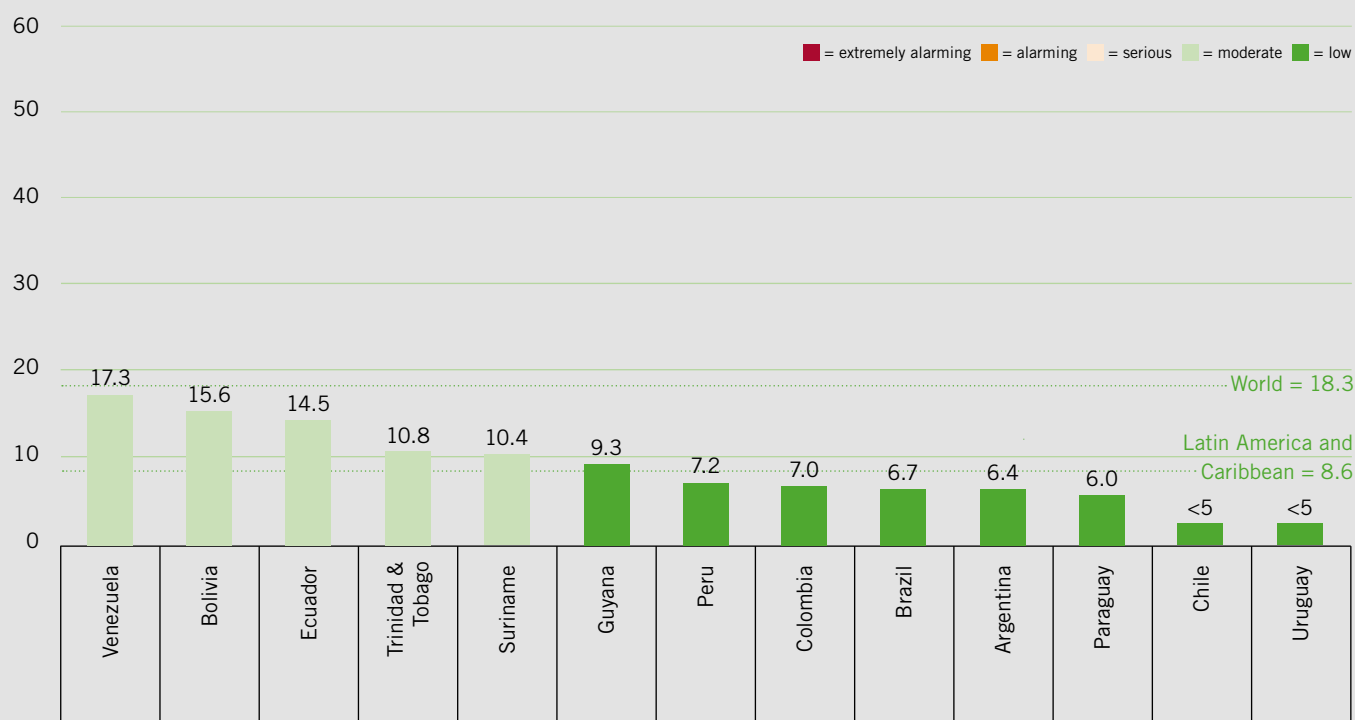
### EAST AFRICA



Note: Burundi, Eritrea, Somalia, and South Sudan are in the East Africa subregion but are not shown, owing to insufficient data for the calculation of GHI scores. Existing data and provisional indicator values for these countries were included in the calculation of regional and global GHI scores. See Table A.3 regarding provisional designations of hunger severity for countries with incomplete data.

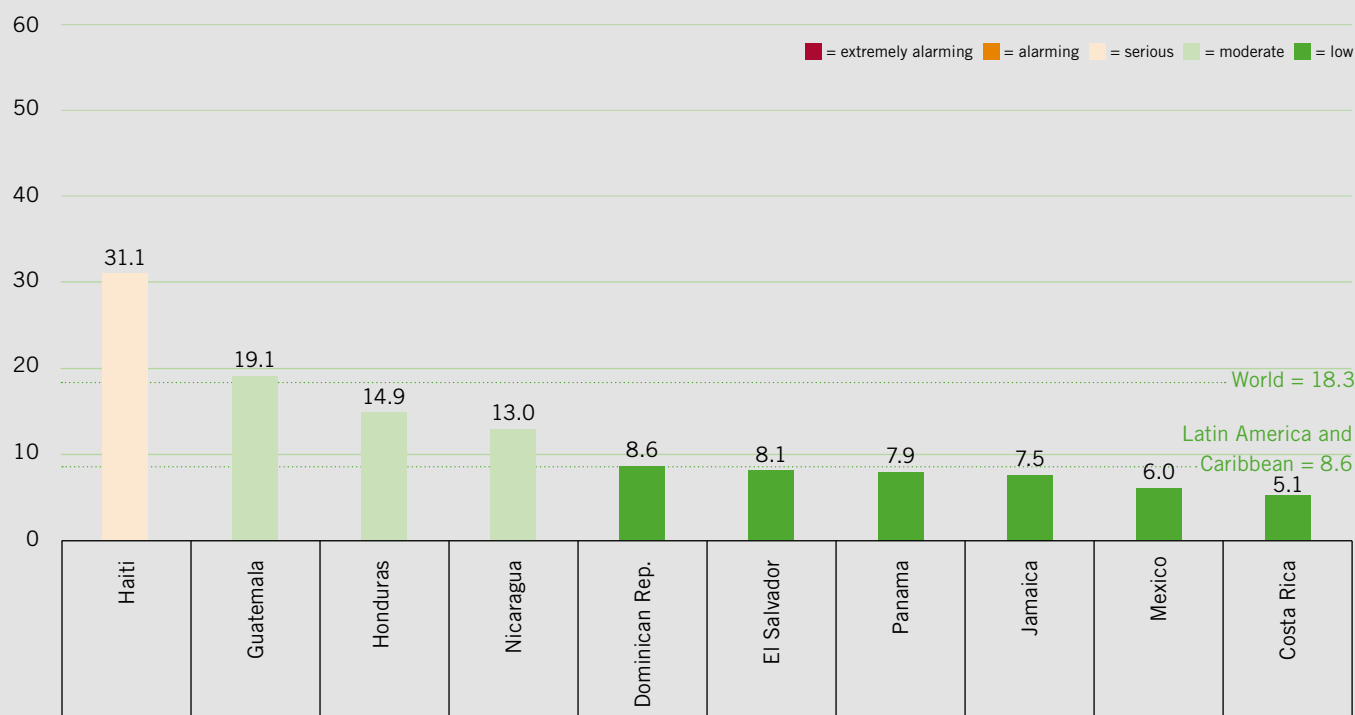


## SOUTH AMERICA

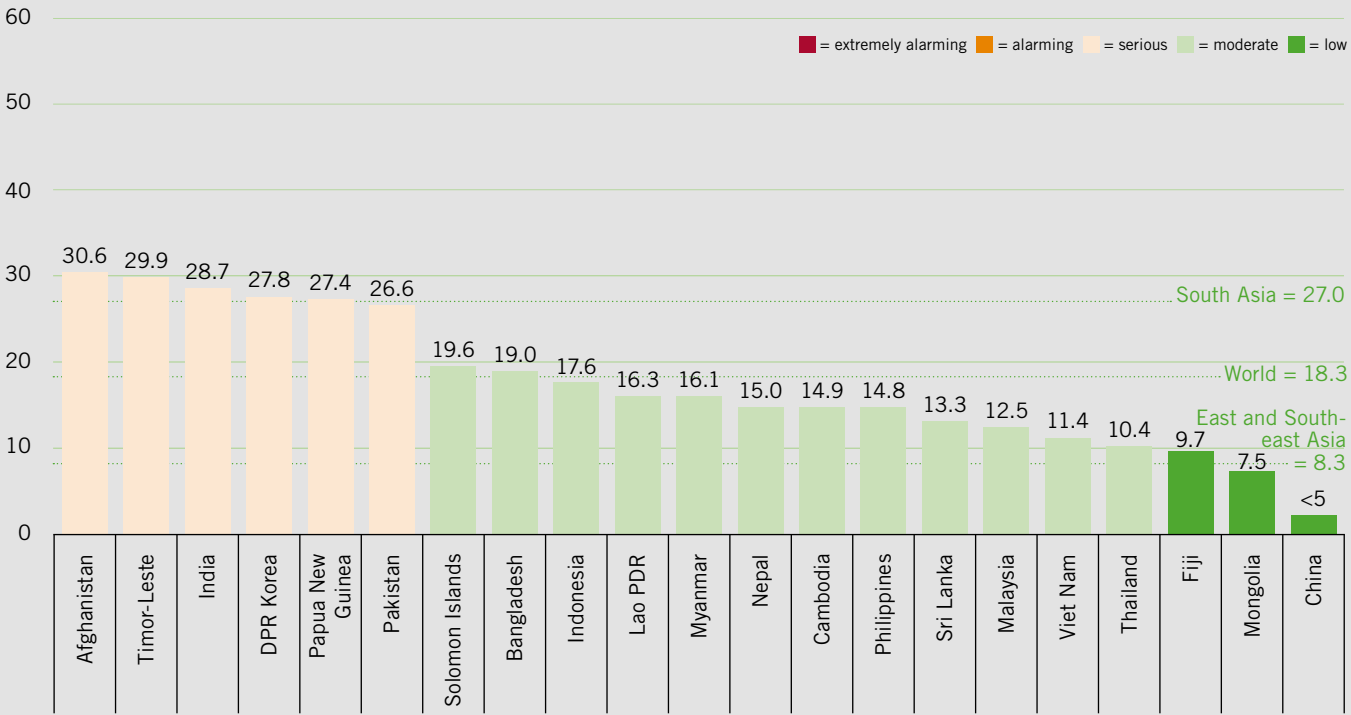


Note: Countries with GHI scores less than 5 are presented in alphabetical order.

## CENTRAL AMERICA AND THE CARIBBEAN

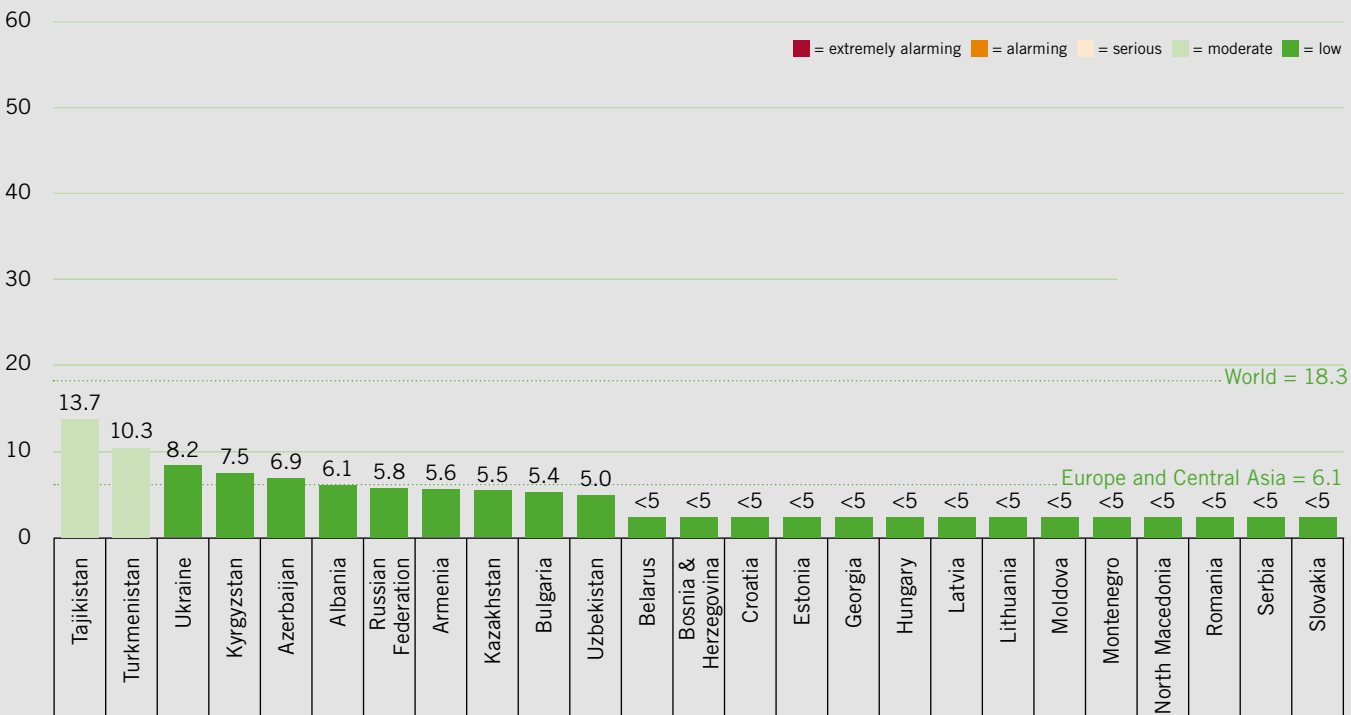


### SOUTH, EAST, AND SOUTHEAST ASIA



Note: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka are in South Asia for the purposes of Figure 1.3, whereas the remaining countries are in East and South-east Asia. Bhutan and Maldives are not shown, owing to insufficient data for the calculation of GHI scores. Existing data and provisional indicator values for these countries were included in the calculation of regional and global GHI scores. See Table A.3 regarding provisional designations of hunger severity for countries with incomplete data.

### EUROPE AND CENTRAL ASIA



Note: Countries with GHI scores less than 5 are presented in alphabetical order.

# BIBLIOGRAPHY

## A

Action Against Hunger. 2021. *Recognizing, Reducing and Redistributing Unpaid Care Work through Universal Social Protection*. Policy Brief. New York. <https://www.actioncontrelafaim.org/en/publication/recognizing-reducing-and-redistributing-unpaid-care-work-through-universal-social-protection/>.

ActuNiger. 2023. "Plaidoyer du Groupe de Travail Humanitaire (GTH-OIREN): Appel d'urgence pour faire face à la soudure précoce et la flambée des prix des denrées au Niger." June 12. <https://www.actuniger.com/societe/19281-plaidoyer-du-groupe-de-travail-humanitaire-gth-oiren-appel-d-urgence-pour-faire-face-a-la-soudure-precoce-et-la-flambee-des-prix-des-denrees-au-niger.html>.

Adaptation Fund. N.d. Building Resilience in the Greater uMngeni Catchment, South Africa. <https://www.adaptation-fund.org/project/building-resilience-in-the-greater-umngeni-catchment/>.

Adeyanju, D., J. Mburu, W. Gituro, C. Chumo, D. Mignouna, A. Ogunniyi, J. K. Akomolafe, and J. Ejima. 2023. "Assessing Food Security among Young Farmers in Africa: Evidence from Kenya, Nigeria, and Uganda." *Agricultural and Food Economics* 11 (1): 4.

Akinola, R., L. M. Pereira, T. Mabhaudhi, F. M. De Bruin, and L. Rusch. 2020. "A Review of African Indigenous Food Crops and the Implications for More Sustainable and Healthy Food Systems." *Sustainability* 12 (8): 3493.

American Society of Hematology. 2023. "Anemia and Pregnancy." <https://www.hematology.org/education/patients/anemia/pregnancy#:~:text=When%20your%20body%20needs%20more,for%20anemia%20later%20in%20infancy>.

## B

Baker, A. 2021. "Climate, Not Conflict. Madagascar's Famine Is the First in Modern History to Be Solely Caused by Global Warming." *Time*, July 20. <https://time.com/6081919/famine-climate-change-madagascar/>.

Banerjee, A., S. Sen, J. Khan, M. Pal, and P. Bharati. 2022. "Decadal Change in the Association between the Status of Young Mother's Body Mass Index and Anaemia with Child Low Birth Weight in India." *BMC Pregnancy and Childbirth* 22 (1): 147.

Belhaj, F., and A. Soliman. 2021. "MENA Has a Food Security Problem but There Are Ways to Address It." World Bank, Opinion, September 25. <https://www.worldbank.org/en/news/opinion/2021/09/24/mena-has-a-food-security-problem-but-there-are-ways-to-address-it>.

Bella, A. L. 2022. "An Innovative Step in the Fight against Malnutrition." Press release, October 19. UNICEF. <https://reliefweb.int/report/burundi/innovative-step-fight-against-malnutrition#:~:text=Women%20and%20children%20are%20disproportionately,exceeding%20World%20Health%20Organization%20thresholds>.

Bjornlund, V., H. Bjornlund, and A. van Rooyen. 2022. "Why Food Insecurity Persists in Sub-Saharan Africa: A Review of Existing Evidence." *Food Security* 14 (4): 845–864.

Black, R. E., C. G. Victora, S. P. Walker, Z. A. Bhutta, P. Christian, M. de Onis, M. Ezzati, et al. 2013. "Maternal and Child Undernutrition and Overweight in Low-Income and Middle-Income Countries." *Lancet* 832 (9890): 427–451.

Blue Bird Jernigan, V., T. L. Maudrie, C. J. Nikolaus, T. Benally, S. Johnson, T. Teague, M. Mayes, T. Jacob, and T. Taniguchi. 2021. "Food Sovereignty Indicators for Indigenous Community Capacity Building and Health." *Frontiers in Sustainable Food Systems* 5: 704750.

Bonnell, C. 2023. "Russia Suspends Black Sea Grain Deal in Blow to Global Food Security." Associated Press, July 17. <https://globalnews.ca/news/9836371/black-sea-grain-deal-halted-russia-ukraine/>.

Botreau, H., and M. J. Cohen. 2020. "Gender Inequality and Food Insecurity: A Dozen Years after the Food Price Crisis, Rural Women Still Bear the Brunt of Poverty and Hunger." *Advances in Food Security and Sustainability* 5: 53–117.

## C

Chipfupa, U., and A. Tagwi. 2021. "Youth's Participation in Agriculture: A Fallacy or Achievable Possibility? Evidence from Rural South Africa." *South African Journal of Economic and Management Sciences* 24 (1): 1–12.

Christiaensen, L., Z. Rutledge, and J. E. Taylor. 2021. "Viewpoint: The Future of Work in Agri-food." *Food Policy* 99: 101963. <https://doi.org/https://doi.org/10.1016/j.foodpol.2020.101963>.

Christiansen, C., M. Utas, and H. E. Vigh. 2006. "Introduction." In *Navigating Youth, Generating Adulthood: Social Becoming in an African Context*, edited by C. Christiansen, M. Utas, and H. E. Vigh. Uppsala, Sweden: Nordic Africa Institute.

Commonwealth Secretariat. 2021. *Global Youth Development Index and Report 2020*. London. <https://youth-development-index.thecommonwealth.org/assets/pdf/global-youth-development-report-2020.pdf>.

## D

Declaration of Nyéléni. 2007. Declaration made on February 27 in Nyéléni Village, Sélingué, Mali. <https://nyeleni.org/IMG/pdf/DeclNyeleni-en.pdf>.

Dena, H. 2022. "Punitive Seed Laws Protect Big Corporations over Kenya's Farmers." Press release, May 31. Greenpeace. <https://www.greenpeace.org/africa/en/press/51419/punitive-seed-laws-protect-big-corporations-over-kenyas-farmers>.

de Onis, M., E. Borghi, M. Arimond, P. Webb, T. Croft, K. Saha, et al. 2019. "Prevalence Thresholds for Wasting, Overweight and Stunting in Children under 5 Years." *Public Health Nutrition* 22 (1): 175–179.

Dolislager, M., T. Reardon, A. Arslan, L. Fox, S. Liverpool-Tasie, C. Sauer, and D. L. Tschirley. 2020. "Youth and Adult Agrifood System Employment in Developing Regions: Rural (Peri-urban to Hinterland) vs. Urban." *Journal of Development Studies* 57 (4): 571–593. <https://doi.org/10.1080/00220388.2020.1808198>.

## F

FAO (Food and Agriculture Organization of the United Nations). 2015. FAO Hunger Map 2015. <http://www.fao.org/3/a-i4674e.pdf>.

FAO. 2022. *Improving Social Protection for Rural Populations in Europe and Central Asia: Priorities for FAO*. Budapest. <https://doi.org/10.4060/cc1925en>.

FAO. 2023. "Data: Suite of Food Security Indicators." Accessed July 12, 2023. [www.fao.org/faostat/en/#data/FS](http://www.fao.org/faostat/en/#data/FS).

FAO, IFAD (International Fund for Agricultural Development), UNICEF (United Nations Children's Fund), WFP (World Food Programme), and WHO (World Health Organization). 2017. *The State of Food Security and Nutrition in the World 2017: Building Resilience for Peace and Food Security*. Rome: FAO. <http://www.fao.org/3/a-i7695e.pdf>.

FAO, IFAD, UNICEF, WFP, and WHO. 2022. *The State of Food Security and Nutrition in the World 2022: Repurposing Food and Agricultural Policies to Make Healthy Diets More Affordable*. Rome: FAO. <https://doi.org/10.4060/cc0639en>.

FAO, IFAD, UNICEF, WFP, and WHO. 2023a. *The State of Food Security and Nutrition in the World 2023: Urbanization, Agrifood Systems Transformation and Healthy Diets across the Rural–Urban Continuum*. Rome: FAO. <https://doi.org/10.4060/cc3017en>.

FAO, IFAD, PAHO (Pan American Health Organization), UNICEF, and WFP. 2023b. *Regional Overview of Food Security and Nutrition in Latin America and the Caribbean 2022: Towards Improving Affordability of Healthy Diets*. Santiago, Chile. <https://doi.org/10.4060/cc3859en>.

Filmer, D., and L. Fox. 2014. *Youth Employment in Sub-Saharan Africa*. Washington, DC: World Bank.

Fleming, C. A. K., K. Hockey, V. Schmied, A. Third, J. Diniz De Oliveira, G. Lala, and G. Theakstone. 2020. *Food and Me: How Adolescents Experience Nutrition across the World*. A Companion Report to The State of the World's Children 2019. Sydney: Western Sydney University and UNICEF. <https://www.unicef.org/media/94021/file/Food-and-me-adolescents-SOWC2019-companion-report.pdf>.

Fox, L., and D. Gandhi. 2021. *Youth Employment in Sub-Saharan Africa: Progress and Prospects*. Africa Growth Initiative Working Paper #28. Washington, DC: Brookings Institution.

Fram, M. S., H. T. Nguyen, and E. A. Frongillo. 2022. "Food Insecurity among Adolescent Students from 95 Countries Is Associated with Diet, Behavior, and Health, and Associations Differ by Student Age and Sex." *Current Developments in Nutrition* 6 (3): nzac024.

FSIN (Food Security Information Network) and GNAFC (Global Network against Food Crises). 2021. *Global Report on Food Crises 2021: Joint Analysis for Better Decisions*. <https://www.wfp.org/publications/global-report-food-crises-2021>

FSIN and GNAFC. 2022. *Global Report on Food Crises 2022: Joint Analysis for Better Decisions*. <https://www.wfp.org/publications/global-report-food-crises-2022>.

FSIN and GNAFC. 2023. *Global Report on Food Crises 2023: Joint Analysis for Better Decisions*. Rome. <https://www.wfp.org/publications/global-report-food-crises-2023>.

## G

Geza, W., M. Ngidi, T. Ojo, A. A. Adetoro, R. Slotow, and T. Mabhaudhi. 2021. "Youth Participation in Agriculture: A Scoping Review." *Sustainability* 13 (16): 9120. <https://doi.org/10.3390/su13169120>.

GFFA (Global Forum for Food and Agriculture). 2023. "Statement of Young Farmers at the 2023 Global Forum for Food and Agriculture." <https://gffa-berlin.de/wp-content/uploads/2015/10/GFFA-Young-Farmer-Statement-2023.pdf>.

Girdziute, L., E. Besuspariene, A. Nausedienė, A. Novikova, J. Leppala, and M. Jakob. 2022. "Youth's (Un)Willingness to Work in Agriculture Sector." *Frontiers in Public Health* 10.

Glauber, J., B. McNamara, and E. Olivetti. 2023. "Increased Tensions in Ukraine Again Threaten the Black Sea Grain Initiative." *IFPRI Blog* (International Food Policy Research Institute), June 13. <https://www.ifpri.org/blog/increased-tensions-ukraine-again-threaten-black-sea-grain-initiative>.

Glover, D., and J. Sumberg. 2020. "Youth and Food Systems Transformation." *Frontiers in Sustainable Food Systems* 4: 101.

GRAIN and La Via Campesina. 2015. "Seed Laws That Criminalize Farmers: Resistance and Fight Back." April 8. <https://grain.org/article/entries/5142-seed-laws-that-criminalise-farmers-resistance-and-fightback>.

Gunaratne, M. S., R. B. Radin Firdaus, and S. I. Rathnasooriya. 2021. "Climate Change and Food Security in Sri Lanka: Towards Food Sovereignty." *Humanities and Social Sciences Communications* 8: art. 229.

## H

Heinz, W. R. 2009. "Youth Transitions in an Age of Uncertainty." In *Handbook of Youth and Young Adulthood*, edited by A. Furlong. London: Routledge.

HLPE (High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security). 2021. *Promoting Youth Engagement and Employment in Agriculture and Food Systems*. Rome. <https://www.fao.org/3/cb5464en/cb5464en.pdf>.

## I

ICF. 2023. "The DHS Program STATcompiler." Accessed July 5, 2023. <http://www.statcompiler.com>.

Idris, F., Z. Hassan, A. Ya'acob, S. K. Gill, and N. A. M. Awal. 2012. "The Role of Education in Shaping Youth's National Identity." *Procedia—Social and Behavioral Sciences* 59: 443–450.

IFAD (International Fund for Agricultural Development). 2019. *2019 Rural Development Report: Creating Opportunities for Rural Youth*. Rome. <https://www.ifad.org/en/web/knowledge/-/publication/2019-rural-development-report>.

IFPRI (International Food Policy Research Institute). 2023. *2023 Global Food Policy Report: Rethinking Food Crisis Responses*. Washington, DC. <https://doi.org/10.2499/9780896294417>

IFPRI, WHH (Welthungerhilfe), and Concern Worldwide. 2007. *The Challenge of Hunger 2007: Global Hunger Index: Facts, Determinants, and Trends*. Washington, DC, Bonn, and Dublin.

ILO (International Labour Organization). 2020. *Global Employment Trends for Youth 2020: Technology and the Future of Jobs*. Geneva. [https://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/---dcomm/-/publ/documents/publication/wcms\\_737648.pdf](https://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/---dcomm/-/publ/documents/publication/wcms_737648.pdf).

ILO. 2022. *Global Employment Trends for Youth 2022: Investing in Transforming Futures for Young People*. Geneva. [https://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/---dcomm/-/publ/documents/publication/wcms\\_853321.pdf](https://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/---dcomm/-/publ/documents/publication/wcms_853321.pdf).

IPU (Inter-Parliamentary Union) Parline. 2023. "Data on Age: Global and Regional Averages" (averages as of July 2023). Accessed July 13, 2023. <https://data.ipu.org/age-brackets-aggregate/>.

IRC (International Rescue Committee). 2023. "In Their Own Words: Displaced by Drought in Somalia." May 9. <https://www.rescue.org/en/article/their-own-words-displaced-drought-somalia>.

## J

Jungbluth, F., and S. Zorya. 2023. "Ensuring Food Security in Europe and Central Asia, Now and in the Future." *World Bank Blogs*, February 3. <https://blogs.worldbank.org/europeandcentralasia/ensuring-food-security-europe-and-central-asia-now-and-future>.

## K

Kemoe, L., P. Mitra, C. Okou, and D. F. Unsal. 2022. "How Africa Can Escape Chronic Food Insecurity Amid Climate Change." *IMF Blog* (International Monetary Fund), September 14. <https://www.imf.org/en/Blogs/Articles/2022/09/14/how-africa-can-escape-chronic-food-insecurity-amid-climate-change>.

Kupka, R., K. Siekmans, and T. Beal. 2020. "The Diets of Children: Overview of Available Data for Children and Adolescents." *Global Food Security* 27: 100442.

## L

La Via Campesina. 2021. "LVC 30 Years." <https://viacampesina.org/en/tag/lvc30years/>.

Lefebvre, L., D. Laborde, and V. Piñeiro. 2023. "Bringing Back Neglected Crops: A Food and Climate Solution for Africa." *IFPRI Blog* (International Food Policy Research Institute), June 5. <https://www.ifpri.org/blog/bringing-back-neglected-crops-food-and-climate-solution-africa>.

Le Mouél, C., A. Forslund, P. Marty, S. Manceron, E. Marajo-Petitson, M. A. Caillaud, P. Dumas, and B. Schmitt. 2023. "Can the Middle East-North Africa Region Mitigate the Rise of Its Food Import Dependency under Climate Change?" *Regional Environmental Change* 23 (2): 52. <https://link.springer.com/article/10.1007/s10113-023-02045-y>.



## M

Mabhaudhi, T., T. P. Chibarabada, V. G. P. Chimonyo, V. G. Murugani, L. M. Pereira, N. Sobratee, L. Govender, R. Slotow, and A. T. Modi. 2018. "Mainstreaming Underutilized Indigenous and Traditional Crops into Food Systems: A South African Perspective." *Sustainability* 11 (1): 172.

Mabhaudhi, T., V. G. P. Chimonyo, S. Hlahla, F. Massawe, S. Mayes, L. Nhamo, and A. T. Modi. 2019. "Prospects of Orphan Crops in Climate Change." *Planta* 250 (3): 695–708.

Macauley, T., H. B. Rolker, M. Scherer, J. Brock, N. Savona, A. Helleve, and C. Knai. 2022. "Youth Participation in Policy-making Processes in the United Kingdom: A Scoping Review of the Literature." *Journal of Community Practice* 30 (2): 203–224. <https://doi.org/10.1080/10705422.2022.2073308>.

Maïga, W. H., M. Porgo, P. Zohonogo, C. J. Amegnaglo, D. A. Coulibaly, J. Flynn, et al. 2020. "A Systematic Review of Employment Outcomes from Youth Skills Training Programmes in Agriculture in Low- and Middle-Income Countries." *Nature Food* 1 (10): 605–619. <https://doi.org/10.1038/s43016-020-00172-x>.

Mamun, A., and J. Glauber. 2023. "Rice Markets in South and Southeast Asia Face Stresses from El Niño, Export Restrictions." *IFPRI Blog* (International Food Policy Research Institute), May 15. <https://www.ifpri.org/blog/rice-markets-south-and-southeast-asia-face-stresses-el-ni%C3%B1o-export-restrictions>.

Martin-Shields, C. P., and W. Stojetz. 2019. "Food Security and Conflict: Empirical Challenges and Future Opportunities for Research and Policy Making on Food Security and Conflict." *World Development* 119 (July): 150–164.

MEASURE DHS. 2023. "Demographic and Health Surveys." Calverton, MD, USA. Accessed June 1, 2023. <http://www.dhsprogram.com>.

Molgat, M. 2007. "Do Transitions and Social Structures Matter? How 'Emerging Adults' Define Themselves as Adults." *Journal of Youth Studies* 10 (5): 495–516.

Mudau, F. N., V. G. P. Chimonyo, A. T. Modi, and T. Mabhaudhi. 2022. "Neglected and Underutilised Crops: A Systematic Review of Their Potential as Food and Herbal Medicinal Crops in South Africa." *Frontiers in Pharmacology* 12: 4054.

## N

Nguyen, H. 2018. *Sustainable Food Systems: Concept and Framework*. Rome: Food and Agriculture Organization of the United Nations.

Norris, S. A., E. A. Frongillo, M. M. Black, Y. Dong, C. Fall, M. Lampl, A. D. Liese, et al. 2022. "Nutrition in Adolescent Growth and Development." *Lancet* 399 (10320): 172–184.

## O

Orsini, A. J., and Y. H. Kang. 2023. "European Leadership and European Youth in the Climate Change Regime Complex." *Politics and Governance* 11 (2): 13. <https://doi.org/10.17645/pag.v11i2.6500>.

## P

Peng, W., and E. M. Berry. 2018. "Global Nutrition 1990–2015: A Shrinking Hungry and Expanding Fat World." *PLOS One* 13 (3): e0194821.

## R

Reuters. 2023. "UN Agencies Warn of Impact If Black Sea Grain Deal Ends." June 26. <https://www.reuters.com/world/europe/un-agencies-warn-impact-if-black-sea-grain-deal-ends-2023-06-26/>.

Rice, S. 2022. "Madagascar's Famine Is More Than Climate Change." *Georgetown Journal of International Affairs*, January 24. <https://gija.georgetown.edu/2022/01/24/madagascars-famine-is-more-than-climate-change/>.

Ritchie, H., and M. Roser. 2022. "Age Structure." Our World in Data. <https://ourworldindata.org/age-structure>.

## S

Sampson, D., M. Cely-Santos, B. Gemmill-Herren, N. Babin, A. Bernhart, R. Bezner Kerr, et al. 2021. "Food Sovereignty and Rights-Based Approaches Strengthen Food Security and Nutrition across the Globe: A Systematic Review." *Frontiers in Sustainable Food Systems* 5: 686492.

Sathi, N. J., B. Ahammed, K. Alam, R. Hashmi, K. Y. Lee, and S. A. Keramat. 2022. "Socioeconomic Inequalities in Low Birth Weight in South Asia: A Comparative Analysis Using Demographic and Health Surveys." *SSM–Population Health* 20 (October 11): 101248.

Schipper, S., S. Crowley, and K. Firshan. 2022. "Millions Are Going Hungry in Post-Pandemic Asia: Here's How to Respond." *Asian Development Blog* (Asian Development Bank), June 29. <https://blogs.adb.org/blog/millions-are-going-hungry-in-post-pandemic-asia-here-s-how-to-respond>.

Shilomboleni, H. 2017. "The African Green Revolution and the Food Sovereignty Movement: Contributions to Food Security and Sustainability: A Case Study of Mozambique." Ph.D. thesis, University of Waterloo, Ontario, Canada.

Sidibé, A., G. Meldrum, H. Coulibaly, S. Padulosi, I. Traore, G. Diawara, A. R. Sangaré, and C. Mbosso. 2020. "Revitalizing Cultivation and Strengthening the Seed Systems of Fonio and Bambara Groundnut in Mali through a Community Biodiversity Management Approach." *Plant Genetic Resources* 18 (2): 31–48.

SPRING and Save the Children. 2018. *Engaging Adolescents to Accelerate Progress on the First 1,000 Days*. Arlington, VA: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project.

Stockemer, D., and A. Sundström. 2022. "Introducing the Worldwide Age Representation in Parliaments (WARP) Data Set." *Social Science Quarterly* 103 (7): 1765–1774. <https://doi.org/10.1111/ssqu.13221>.

## T

Torlesse, H., and M. Tram Le. 2020. "South Asia and Child Wasting: Unravelling the Conundrum." *Field Exchange* 63 (October): 7. [www.enonline.net/fex/63/southasiachildwasting](http://www.enonline.net/fex/63/southasiachildwasting).

## U

UN DESA (United Nations Department of Economic and Social Affairs, Population Division). 2022. *World Population Prospects 2022*. <https://population.un.org/wpp/>.

UNFPA (United Nations Population Fund). 2019. *Youth Leadership, Participation, and Accountability 2.0: Part 1: The Recommendations*. Sunninghill, South Africa: UNFPA East and Southern Africa Regional Office. <https://esaro.unfpa.org/sites/default/files/pub-pdf/Youth%20Leadership%20Participation%20and%20Accountability%20-%20The%20Recommendations%201.pdf>.

UNFPA. 2022. *Motherhood in Childhood: The Untold Story*. New York. [https://www.unfpa.org/sites/default/files/pub-pdf/MotherhoodInChildhood\\_report.pdf](https://www.unfpa.org/sites/default/files/pub-pdf/MotherhoodInChildhood_report.pdf).

UNHCR (UN Refugee Agency). 2023a. "As the Horn of Africa Drought Enters a Sixth Failed Rainy Season, UNHCR Calls for Urgent Assistance." Briefing Note, February 28. <https://www.unhcr.org/news/horn-africa-drought-enters-sixth-failed-rainy-season-unhcr-calls-urgent-assistance>.

UNHCR (UN Refugee Agency). 2023b. "Democratic Republic of the Congo: Refugee Crisis Explained." Updated June 23, 2023. <https://www.unrefugees.org/news/democratic-republic-of-the-congo-refugee-crisis-explained/>.

UNICEF (United Nations Children's Fund). 2009. "Childinfo: Nutritional Status." Updated November 2009. Accessed June 14, 2015. <http://data.unicef.org/nutrition/malnutrition>.

UNICEF. 2013. "Childinfo: Nutritional Status." Updated February 2013. Accessed March 26, 2014. [www.childinfo.org/malnutrition\\_nutritional\\_status.php](http://www.childinfo.org/malnutrition_nutritional_status.php).

UNICEF. 2023a. "Childinfo: Multiple Indicator Cluster Surveys (MICS)." Accessed June 1, 2023. <https://mics.unicef.org/surveys>.

UNICEF. 2023b. *Undernourished and Overlooked: A Global Nutrition Crisis in Adolescent Girls and Women*. New York.

UNICEF. 2023c. "Yemen Crisis." Updated May 22. <https://www.unicef.org/emergencies/yemen-crisis>.

UNICEF. 2023d. "Children in Mali." <https://www.unicef.org/mali/en/children-mali>.

UNICEF and MHA (Ministry of Humanitarian Action and Disaster Management). 2022. *Child Risk and Impact Analysis: Niger*. Niamey, Niger. [https://www.unicef.org/niger/media/6646/file/CHILD%20RISK%20AND%20IMPACT%20ANALYSIS%20\(CRIA\)%20NIGER.pdf](https://www.unicef.org/niger/media/6646/file/CHILD%20RISK%20AND%20IMPACT%20ANALYSIS%20(CRIA)%20NIGER.pdf)

UNICEF, WHO, and World Bank. 2023a. Joint Child Malnutrition Estimates. Accessed April 27, 2023. <https://data.unicef.org/resources/dataset/malnutrition-data/>.

UNICEF, WHO, and World Bank. 2023b. *Levels and Trends in Child Malnutrition: UNICEF/WHO/World Bank Group Joint Child Malnutrition Estimates: Key Findings of the 2023 Edition*. New York: UNICEF and WHO. <https://www.who.int/publications/i/item/9789240073791>.

UN IGME (United Nations Inter-agency Group for Child Mortality Estimation). 2023a. "Child Mortality Estimates Info, Under-five Mortality Estimates." Accessed April 27, 2023. [www.childmortality.org](http://www.childmortality.org).

UN IGME. 2023b. *Levels and Trends in Child Mortality: Report 2022*. New York: UNICEF.

United Nations. 2022. "UN Needs \$68.4 Million to Help Central African Republic Where 2.2 Million Are Acutely Food Insecure." Press release, July 5. <https://news.un.org/en/story/2022/07/1121952>.

UN News. 2021. "In Madagascar, Pockets of Famine As Risks Grow for Children, Warns WFP." November 2. <https://news.un.org/en/story/2021/11/1104652>.

UN OCHA (United Nations Office for the Coordination of Humanitarian Affairs). 2023a. *Somalia Humanitarian Response Plan*. <https://reliefweb.int/report/somalia/somalia-humanitarian-response-plan-february-2023>.

UN OCHA. 2023b. "Central African Republic: Situation Report." Updated July 10, 2023. <https://reports.unocha.org/en/country/car/>.

UN OHCHR (United Nations Office of the High Commissioner for Human Rights). 2023. "Haiti: Rise in Extreme Gang Violence Makes for 'Living Nightmare'—Türk." Press release, February 10.

von Grebmer, K., H. Fritschel, B. Nestorova, T. Olofinbiyi, R. Pandya-Lorch, and Y. Yohannes. 2008. *Global Hunger Index: The Challenge of Hunger 2008*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., B. Nestorova, A. Quisumbing, R. Fertziger, H. Fritschel, R. Pandya-Lorch, and Y. Yohannes. 2009. *2009 Global Hunger Index: The Challenge of Hunger: Focus on Financial Crisis and Gender Inequality*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., M. T. Ruel, P. Menon, B. Nestorova, T. Olofinbiyi, H. Fritschel, Y. Yohannes et al. 2010. *2010 Global Hunger Index: The Challenge of Hunger: Focus on the Crisis of Child Undernutrition*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., M. Torero, T. Olofinbiyi, H. Fritschel, D. Wiesmann, Y. Yohannes, L. Schofield, and C. von Oppeln. 2011. *2011 Global Hunger Index: The Challenge of Hunger: Taming Price Spikes and Excessive Food Price Volatility*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., C. Ringler, M. W. Rosegrant, T. Olofinbiyi, D. Wiesmann, H. Fritschel, O. Badiane et al. 2012. *2012 Global Hunger Index: The Challenge of Hunger: Ensuring Sustainable Food Security under Land, Water, and Energy Stresses*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., D. Headey, C. Béné, L. Haddad, T. Olofinbiyi, D. Wiesmann, H. Fritschel et al. 2013. *2013 Global Hunger Index: The Challenge of Hunger: Building Resilience to Achieve Food and Nutrition Security*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., A. Saltzman, E. Birol, D. Wiesmann, N. Prasai, S. Yin, Y. Yohannes et al. 2014. *2014 Global Hunger Index: The Challenge of Hidden Hunger*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

Von Grebmer, K., J. Bernstein, A. de Waal, N. Prasai, S. Yin, and Y. Yohannes. 2015. *2015 Global Hunger Index: Armed Conflict and the Challenge of Hunger*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., J. Bernstein, D. Nabarro, N. Prasai, S. Amin, Y. Yohannes, A. Sonntag et al. 2016. *2016 Global Hunger Index: Getting to Zero Hunger*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., J. Bernstein, N. Hossain, T. Brown, N. Prasai, Y. Yohannes, F. Patterson et al. 2017. *2017 Global Hunger Index: The Inequalities of Hunger*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.

von Grebmer, K., J. Bernstein, L. Hammond, F. Patterson, A. Sonntag, L. Klaus, J. Fahlbusch et al. 2018. *2018 Global Hunger Index: Forced Migration and Hunger*. Bonn: Welthungerhilfe; Dublin: Concern Worldwide.

von Grebmer, K. J. Bernstein, R. Mukerji, F. Patterson, M. Wiemers, R. Ni Chéilleachair, C. Foley et al. 2019. *2019 Global Hunger Index: The Challenge of Hunger and Climate Change*. Bonn: Welthungerhilfe; Dublin: Concern Worldwide.

von Grebmer, K., J. Bernstein, R. Alders, O. Dar, R. Kock, F. Rampa, M. Wiemers et al. 2020. *2020 Global Hunger Index: One Decade to Zero Hunger: Linking Health and Sustainable Food Systems*. Bonn: Welthungerhilfe; Dublin: Concern Worldwide.

von Grebmer, K., J. Bernstein, C. Delgado, D. Smith, M. Wiemers, T. Schiffer, A. Hanano, O. Towey, R. Ni Chéilleachair, C. Foley, S. Gitter, K. Ekstrom, and H. Fritschel. 2021. *2021 Global Hunger Index: Hunger and Food Systems in Conflict Settings*. Bonn: Welthungerhilfe; Dublin: Concern Worldwide.

von Grebmer, K., J. Bernstein, D. Resnick, M. Wiemers, L. Reiner, M. Bachmeier, A. Hanano, O. Towey, R. Ní Chéilleachair, C. Foley, S. Gitter, G. Larocque, and H. Fritschel. 2022. *2022 Global Hunger Index: Food Systems Transformation and Local Governance*. Bonn: Welthungerhilfe; Dublin: Concern Worldwide.

## W

Wahl R. 1999. "Nutrition in the Adolescent." *Pediatric Annals* 28 (2): 107–111. <https://pubmed.ncbi.nlm.nih.gov/10036686/>.

Wehrey, F., and N. Fawal. 2022. "Cascading Climate Effects in the Middle East and North Africa: Adapting through Inclusive Governance." Carnegie Endowment for International Peace, February 24. <https://carnegieendowment.org/2022/02/24/cascading-climate-effects-in-middle-east-and-north-africa-adapting-through-inclusive-governance-pub-86510>.

Weiler, A. M., C. Hergesheimer, B. Brisbois, H. Wittman, A. Yassi, and J. M. Spiegel. 2015. "Food Sovereignty, Food Security and Health Equity: A Meta-Narrative Mapping Exercise." *Health Policy and Planning* 30 (8): 1078–1092.

WFP (World Food Programme). 2023a. "Burundi." <https://www.wfp.org/countries/burundi>.

WFP. 2023b. "Lesotho." <https://www.wfp.org/countries/lesotho>.

WFP. 2023c. "Gender Inequality." <https://www.wfpusa.org/drivers-of-hunger/gender-inequality/>.

WFP and FAO (Food and Agriculture Organization of the United Nations). 2023. *Hunger Hotspots: FAO WFP Early Warnings on Acute Food Insecurity, June 2023 to November 2023 Outlook*. Rome. <https://doi.org/10.4060/cc6206en>.

WFP, ICASEES (Institut Centrafricain des Statistiques, des Etudes Economiques et Sociales), and République Centrafricaine, Cluster Sécurité Alimentaire. 2022. *Résultats Préliminaires: ENSA 2021 (Enquête Nationale sur la Sécurité Alimentaire)*. <https://reliefweb.int/report/central-african-republic/r-sultats-pr-liminaires-ensa-2021-enqu-te-nationale-de-s-curit>.

WHO (World Health Organization). 2020. *The Double Burden of Malnutrition: Priority Actions on Ending Childhood Obesity*. New Delhi: WHO Regional Office for South-East Asia.

WHO. 2023. Global Database on Child Growth and Malnutrition. Accessed April 27, 2023. <https://platform.who.int/nutrition/malnutrition-database>.

Wiesmann, D. 2006. *A Global Hunger Index: Measurement Concept, Ranking of Countries, and Trends*. Food Consumption and Nutrition Division Discussion Paper 212. Washington, DC: International Food Policy Research Institute.

Wiesmann, D., L. Weingärtner, and I. Schöninger. 2006. *The Challenge of Hunger: Global Hunger Index: Facts, Determinants, and Trends*. Bonn and Washington, DC: Welthungerhilfe and International Food Policy Research Institute.

Wiesmann, D., H. K. Biesalski, K. von Grebmer, and J. Bernstein. 2015. *Methodological Review and Revision of the Global Hunger Index*. ZEF Working Paper Series No. 139. Bonn: University of Bonn, Center for Development Research (ZEF).

Wiesmann, D., J. von Braun, and T. Feldbrügge. 2000. *An International Nutrition Index: Successes and Failures in Addressing Hunger and Malnutrition*. ZEF Discussion Papers on Development Policy No. 26. Bonn: Center for Development Research (ZEF), University of Bonn.

Wijerathna-Yapa, A., and R. Pathirana. 2022. "Sustainable Agro-Food Systems for Addressing Climate Change and Food Security." *Agriculture* 12 (10): 1554.

Woodhill, J., A. Kishore, J. Njuki, K. Jones, and S. Hasnain. 2022. "Food Systems and Rural Wellbeing: Challenges and Opportunities." *Food Security* 14 (5): 1099–1121.

World Bank. 2023a. "Food Security Update: World Bank Response to Rising Food Insecurity." Updated July 5. <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update>.

World Bank. 2023b. "Global Hunger: Responding to the Present Crisis with the Future in Mind." Feature story, April 19. <https://www.worldbank.org/en/news/feature/2023/04/19/global-hunger-responding-to-the-present-crisis-with-the-future-in-mind>.

World Bank. 2023c. "Unemployment, Youth Total (% of Total Labor Force Ages 15–24) (Modeled ILO Estimate)." DataBank. <https://data.worldbank.org/indicator/SL.UEM.1524.ZS>.

## Y

Yunita, S. A. W., E. Soraya, and A. Maryudi. 2018. "We Are Just Cheerleaders": Youth's Views on Their Participation in International Forest-related Decision-making Fora." *Forest Policy and Economics* 88: 52–58. <https://doi.org/https://doi.org/10.1016/j.forpol.2017.12.012>.

# RESOURCES FOR UNDERSTANDING HUNGER AND MALNUTRITION



The Global Hunger Index (GHI) is a tool for assessing hunger at global, regional, and national levels. Among its strengths are the following:

- **Measuring and tracking long-term trends.** Because of the nature and availability of its underlying data, the GHI is best suited for measuring hunger and tracking progress over recent years and decades. The 2023 GHI scores are based on the most up-to-date data available for the underlying indicators for each country. This GHI report also includes GHI scores for 2000, 2008, and 2015 to show trends in hunger over time.
- **Reflecting both the quantity and quality of food and diets.** The four indicators underlying GHI scores—undernourishment, child stunting, child wasting, and child mortality—reflect deficiencies in calories (quantity) as well as in important micronutrients (quality).
- **Complementing other reports and resources.** The countries where GHI scores are high—indicating that calories are chronically insufficient and/or children’s growth and well-being have been hampered by undernutrition—are particularly vulnerable to food crises and stresses, which are reported by other sources.

**Other resources offer additional important perspectives on hunger and malnutrition. The following is a selection and brief description of those resources.**



## Resources on Food Crises and Early Warning Systems

### → Famine Early Warning Systems Network (FEWS NET)

FEWS NET, the Famine Early Warning Systems Network, provides real-time assessments and short-term projections of acute food insecurity around the world. It issues monthly reports and maps detailing current and projected food insecurity as well as alerts on emerging or likely crises. FEWS NET is funded and managed by the Bureau for Humanitarian Assistance of the U.S. Agency for International Development (USAID).

<https://fews.net/>

### → Global Information and Early Warning System (GIEWS)

The Global Information and Early Warning System on Food and Agriculture (GIEWS) continuously monitors food supply and demand and other key indicators for assessing the overall food security situation in all countries of the world. An initiative of the Food and Agriculture Organization of the United Nations (FAO), it issues regular reports on prevailing conditions and provides early warnings of impending food crises at the country or regional level.

<https://www.fao.org/giews/en/>

### → Integrated Food Security Phase Classification (IPC)

The Integrated Food Security Phase Classification (IPC) is an initiative led by 15 international development agencies to improve analysis and decision-making on food security and nutrition. It provides a common scale for classifying the severity and magnitude of food insecurity and acute malnutrition. The IPC acute food insecurity scale has five classifications: minimal/none, stressed, crisis, emergency, and catastrophe/famine. There are also IPC scales for acute malnutrition and chronic food insecurity.

<https://www.ipcinfo.org/>

### → Global Report on Food Crises (GRFC)

This annual report produced by the Global Network against Food Crises—an international alliance working to address the root causes of extreme hunger—gives an overview and country-by-country update on acute, crisis-level food insecurity. Based on the Integrated Food Security Phase Classification (IPC) assessments, it triangulates recent available food security assessments, even if they are partial and from different sources.

<https://www.fsinplatform.org/global-report-food-crises-2023>





## Resources on Food and Nutrition Security

### → The State of Food Security and Nutrition in the World (SOFI)

This flagship annual report is jointly prepared by FAO, the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP), and the World Health Organization (WHO). It is designed to chart progress toward ending hunger, achieving food security, and improving nutrition and to provide an in-depth analysis of key challenges for achieving this goal in the context of the 2030 Agenda for Sustainable Development.

<https://www.fao.org/publications/sofi>

### → Global Nutrition Report (GNR)

The *Global Nutrition Report*—published annually by a multistakeholder initiative—reports on countries' progress toward meeting global nutrition targets, evaluates the impact of poor diets on human health and the planet, assesses the nutrition financing landscape, and provides a comprehensive overview of reporting on past Nutrition for Growth (N4G) commitments.

<https://globalnutritionreport.org>

### → Voices of the Hungry Project

This project of FAO uses the Food Insecurity Experience Scale (FIES), an experience-based measure of household or individual food security. The FIES relies on eight survey questions included in the Gallup World Poll, which covers 90% of the world's population. The project provides up-to-date, internationally comparable information about food insecurity that is policy-relevant and actionable. A suite of resources and research based on the FIES is available.

<https://www.fao.org/in-action/voices-of-the-hungry/resources/research/en/>

### → Global Food Security Index (GFSI)

The annual Global Food Security Index (GFSI) is based on a model constructed from 58 indicators that measure drivers of food security across 113 low-, middle-, and high-income countries. The indicators fall into four categories: food affordability, food availability, food quality and safety, and natural resources and resilience. The index was designed and constructed by Economist Impact, part of the Economist Group.

<https://impact.economist.com/sustainability/project/food-security-index/>



## Resources on the Right to Food

### → State of the Right to Food and Nutrition Report

This annual report—produced by the Global Network for the Right to Food and Nutrition—provides a yearly snapshot of developments concerning the right to food and nutrition at the country and international levels. It is designed to complement FAO's *State of Food Security and Nutrition in the World* (SOFI) report by taking a human rights perspective and shedding light on the structural causes of hunger and malnutrition.

<https://www.righttofoodandnutrition.org/state-right-food-and-nutrition-report-2022>

# PARTNERS



## Who we are

Concern Worldwide is a nongovernmental, international, humanitarian organization dedicated to the reduction of

suffering and working towards the ultimate elimination of extreme poverty in the world's poorest countries.

## What we do

Our mission is to help people living in extreme poverty achieve major improvements in their lives which last and spread without ongoing support from Concern.

## How we work

To achieve our mission, we engage in long-term development work, build resilience, respond to emergency situations, and seek to address the root causes of poverty through our development education and advocacy work.

## Our vision

We believe in a world where no one lives in poverty, fear, or oppression; where all have access to a decent standard of living and the opportunities and choices essential to a long, healthy, and creative life; and where everyone is treated with dignity and respect.



## Who we are

Welthungerhilfe (WHH) is one of the largest nongovernmental development and humanitarian aid organizations in Germany. It was founded in 1962 as

the German section of the Freedom from Hunger Campaign, one of the first global initiatives to fight hunger, initiated by the Food and Agriculture Organization of the United Nations (FAO).

## What we do

We implement measures ranging from rapid emergency relief to rehabilitation to long-term development cooperation projects with national and international partner organizations. As part of an active civil society, we advocate for the political change needed to achieve zero hunger. We address inequalities and foster sustainable development.

## How we work

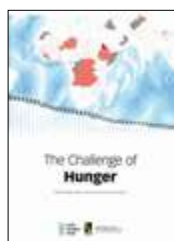
Because our goal is to sustainably improve livelihoods in the long run, our work focuses on capacity building. We aim to strengthen structures from the bottom up and work together with local partner organizations to ensure the long-term success of our work. In addition, we raise public awareness and advocate with national and international policymakers. We thereby strive to address the root causes of hunger and poverty. In a shared mission with many other organizations, our goal is to make ourselves redundant.

## Our vision

A world in which all people can exercise their right to lead a self-determined life in dignity and justice, free from hunger and poverty.

# 18 YEARS OF TRACKING WORLD HUNGER

Since 2006, the Global Hunger Index has been reporting on the state of hunger globally, by region, and by country.



Case Studies in the Post-Conflict Countries of Afghanistan and Sierra Leone



Measures Being Taken to Reduce Acute Undernourishment and Chronic Hunger



The Vicious Circle of Hunger and Poverty



Financial Crisis and Gender Inequality



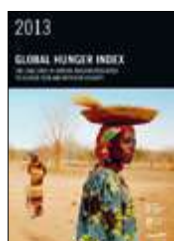
The Crisis of Child Undernutrition



Taming Price Spikes and Excessive Food Price Volatility



Ensuring Sustainable Food Security Under Land, Water, and Energy Stresses



Building Resilience to Achieve Food and Nutrition Security



The Challenge of Hidden Hunger



Armed Conflict and the Challenge of Hunger



Getting to Zero Hunger



The Inequalities of Hunger



Forced Migration and Hunger



The Challenge of Hunger and Climate Change



One Decade to Zero Hunger: Linking Health and Sustainable Food Systems



Hunger and Food Systems in Conflict Settings



Food Systems Transformation and Local Governance



The Power of Youth in Shaping Food Systems

Visit [www.globalhungerindex.org](http://www.globalhungerindex.org) to find:

- more information about the 2023 Global Hunger Index
- interactive map
- synopsis
- country profiles
- translations
- past editions

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Melanie (age 18) works in a plant that processes pepper and ginger in Farafangana, Madagascar. Many of the plant employees are single mothers, and this employment provides them with a stable income to feed their children. Laura Thiesbrummel/Welthungerhilfe, 2018.

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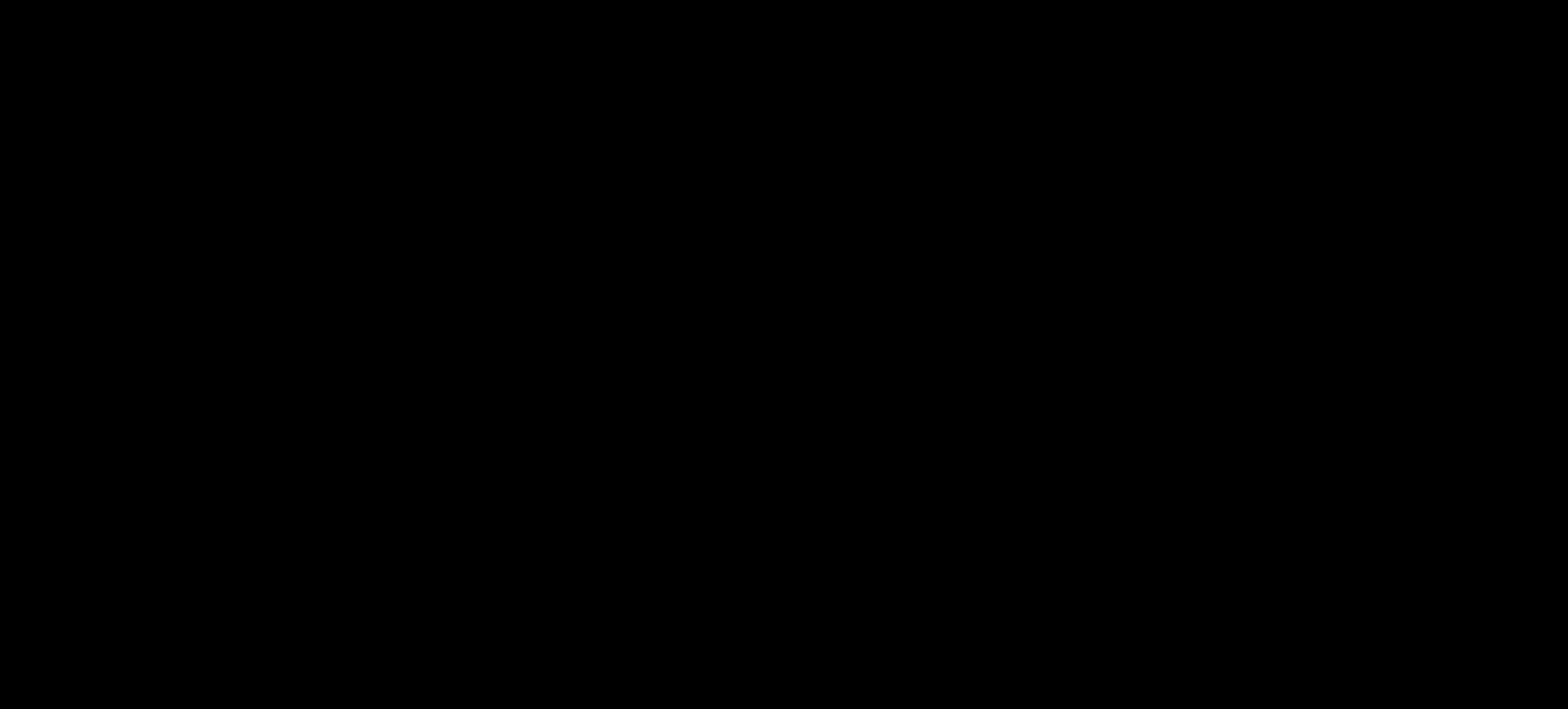
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