2016

GLOBAL HUNGER INDEX

GETTING TO ZERO HUNGER

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2016

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GETTING TO ZERO HUNGER

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Ten-year-old Adeu, from the village of Khaysone in southern Laos, shows off his catch. Laos continues to face serious challenges in undernutrition and hunger.

FOREWORD

Only one year ago the world united and made history: in September 2015, global leaders pledged themselves to the 2030 Agenda for Sustainable Development, a political manifesto that commits us all to ending poverty and hunger forever. This new Agenda is *universal*: addressing issues of sustainable development for all countries, while recognizing that each nation will adapt and prioritize the goals in accordance with its own needs and policies. It is *transformative*: proposing action to end poverty and hunger once and for all, while safeguarding the planet. It is *integrated* and *indivisible*: requiring policy coherence and cooperation at all levels of government and across sectors, recognizing that all the goals must be addressed in an integrated manner to achieve the transformation we seek. At its heart, and reverberating throughout this Agenda, is the premise that freedom and fundamental rights belong equally to all humanity. Hence, the promise to leave no one behind. But promises don't feed hungry people. Action is needed—action that is determined, focused, and evidence-based—to end finally the scourge of global hunger in the 21st century.

The *2016 Global Hunger Index* report, jointly published by the International Food Policy Research Institute (IFPRI), Concern Worldwide, and Welthungerhilfe (WHH), shows that the level of hunger in the developing world has declined by 29 percent since 2000. Despite this progress, the level of hunger globally remains distressingly high, with 795 million people still facing hunger, roughly one in four children affected by stunting, and 8 percent of children affected by wasting.

This is the eleventh year that IFPRI has calculated the Global Hunger Index and analyzed this multidimensional measure of global hunger. The series of reports tracks the state of hunger worldwide and country by country, and spotlights those regions and countries where action to address hunger is most urgently needed.

This year's essay, authored by David Nabarro, Special Adviser to the United Nations Secretary-General on the 2030 Agenda for Sustainable Development and Climate Change, presents the 2030 Agenda for Sustainable Development. It is a plan of action for the next 14 years that sets a clear objective to transform our world to ensure that the most deprived on our planet overcome poverty and hunger, by reaching the most vulnerable first, by prioritizing human rights and empowering women, and by tackling the adverse impacts of climate change.

At the heart of the Sustainable Development Goals (SDGs) is a renewed commitment to end hunger and global poverty by 2030. Through Goal 2, which is a call "to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture," and in the other 16 SDGs, the Agenda shows how actions can contribute to social justice, an end to rural poverty, and improvements in people's health and well-being—to reach those who have so far been left behind. Governments must now follow through with political will and commitment to action that is both strong and sustained. Recognizing that the root causes of hunger are complex and inextricably linked with poverty, inequality, violence, conflict, disease, and climate change, the Agenda's vision of development is a holistic one that calls for multisectoral and multilevel collaboration. The Agenda sets out new approaches to agriculture and food systems; addresses violent conflict, natural disasters, and the impact of climate change on food security; urges action against the underlying structural causes of poverty and hunger; and puts a much needed focus on gender equality and the empowerment of women and girls, at both national and international levels. Finally, the Agenda underscores the role of national governments in achieving these goals by building required capabilities for implementation, and also by being accountable to citizens through reliable data collection and open and comprehensive follow-up and review processes.

Despite progress, we still, and too often, face dire situations of hunger and undernutrition. Massive disruptions to food systems caused by climate-related disasters and the destruction and displacement of armed conflict take a severe toll, but so too do the poverty and hunger of every day, persisting as a way of life generation after generation, beyond the world's interest or attention. For these reasons alone, we must embrace the 2030 Agenda and its ambitions to reach Zero Hunger, leave no one behind, make progress sustainable, and ensure environmental rights and responsibilities are shared by all. This is the way forward; we must act.

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CONTENTS

CHAPTER 01   CHAPTER 02   CHAPTER 03   CHAPTER 04

SUMMARY

The developing world has made substantial progress in reducing hunger since 2000. The 2016 Global Hunger Index (GHI) shows that the level of hunger in developing countries as a group has fallen by 29 percent. Yet this progress has been uneven, and great disparities in hunger continue to exist at the regional, national, and subnational levels. To achieve Sustainable Development Goal 2 (SDG2) of getting to Zero Hunger while leaving no one behind, it is essential to identify the regions, countries, and populations that are most vulnerable to hunger and undernutrition so progress can be accelerated there.

Across regions and countries, GHI scores vary considerably. Regionally, the highest GHI scores, and therefore the highest hunger levels, are still found in Africa south of the Sahara and South Asia. Although GHI scores for these two regions have declined over time, the current levels are still on the upper end of the serious category, closer to the alarming category than to the moderate. Further, although Africa south of the Sahara has achieved the largest absolute improvement since 2000 and South Asia has also seen a sizable reduction, the decline in hunger must accelerate in these regions if the world is to achieve Zero Hunger by 2030.

Levels of hunger are serious or alarming in 50 countries. Most of the seven countries with alarming GHI scores are in Africa south of the Sahara. While no countries are classified in the extremely alarming category this year, this high level of hunger quite possibly could still exist. Due to insufficient data, 2016 GHI scores could not be calculated for 13 countries; however, based on available data, as well as the available information from international organizations that specialize in hunger and malnutrition, and the existing literature, 10 of these countries are identified as cause for significant concern: Burundi, the Comoros, the Democratic Republic of Congo, Eritrea, Libya, Papua New Guinea, Somalia, South Sudan, Sudan, and the Syrian Arab Republic. In the absence of GHI scores, it is critical to analyze the available food security and nutrition data to understand the situation in these countries to the greatest extent possible, particularly given that levels of child undernutrition and child mortality in some of these countries are among the highest in the world.

From the 2000 GHI to the 2016 GHI, 22 countries reduced their scores by 50 percent or more. The three that achieved the biggest percentage reductions in hunger of all the countries in the serious and alarming categories are Myanmar, Rwanda, and Cambodia, with 2016 GHI scores for each country down by just over 50 percent relative to the 2000 scores. Each of these countries has experienced civil war and political instability in recent decades, and the improvements in part may reflect increased stability.

The countries with the highest 2016 GHI scores, and therefore the highest hunger levels, as well as relatively low percentage reductions in hunger, are the Central African Republic and Chad. The examples of these countries underscore that despite significant progress in reducing hunger globally, violent conflict, poor governance, and climate-related impacts on agriculture ensure that hunger continues to plague our planet and requires a transformative plan of action.

Examination of individual GHI indicators at the subnational or state levels reveals disparities within countries, both in terms of absolute values and changes over time. Variations in GHI indicator values can exist within countries at all levels of the GHI Severity Scale. For countries that have low hunger and undernutrition levels nationally, examination of data at the subnational level can help identify areas of the country that lag behind, such as in Mexico and Jordan where stunting rates are shown to vary substantially between states. On the other end of the GHI Severity Scale, subnational data for the alarming countries can reveal areas that are in crisis. For example, in Zambia and Sierra Leone, GHI indicators vary widely within each country. In Cambodia, which has seen impressive reduction in its GHI score since 2000, improvements have been uneven between provinces. Such examples of subnational disparities serve as a springboard for further research into the specific causes, circumstances, and challenges of hunger at the subnational level.

In this year's essay, David Nabarro, Special Adviser to the United Nations Secretary-General on the 2030 Agenda for Sustainable Development and Climate Change, presents a new plan for transformative development. The 2030 Agenda for Sustainable Development, through its 17 Sustainable Development Goals, addresses the interconnected root causes of the most persistent ills we face today and sets an ambitious target of ending hunger and malnutrition for all by 2030. It recognizes that a lasting end to hunger and undernutrition cannot be achieved in isolation, but that underlying structural causes as well as the impacts of climate change, particularly on the poorest, must too be addressed.

Delivering on the 2030 Agenda offers the best and surest way of getting to Zero Hunger faster. The *2016 Global Hunger Index* report presents recommendations that emphasize the means to accelerate toward Zero Hunger within the context of the 2030 Agenda. These recommendations focus on four areas: whole-of-government commitment to Zero Hunger, transformation of food systems, inclusion and participation of all members of society, and rigorous monitoring to hold international organizations and national governments to account. Reaching Zero Hunger is a tough challenge that requires an ambitious approach. Together—in will and in action—we can create the momentum to meet this challenge and see this vision transform into reality.

01

A woman measures a drought-resistant sorghum plant in a test plot at a farmer field school in Tsholotso District, Zimbabwe, where women implement new farming methods to survive drought and also to prosper in better times.

THE CONCEPT OF THE GLOBAL HUNGER INDEX

The Global Hunger Index (GHI) is a tool designed to comprehensively measure and track hunger at the global, regional, and country levels.[1] The International Food Policy Research Institute (IFPRI) calculates GHI scores each year to assess progress, or the lack thereof, in combating hunger. The GHI is designed to raise awareness and understanding of the struggle against hunger. By calling attention to the issue, we hope that this report will help to increase the commitment and resources dedicated to ending hunger worldwide. All 17 Sustainable Development Goals (SDGs)—including Goal 2, ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture—should be achieved by 2030. Other global initiatives, like Compact2025, have set the goal of ending hunger worldwide by 2025. Yet this cannot be achieved without increased effort and mobilization of resources. We believe there is truth to the adage that "what gets measured gets done"; thus, we intend to consistently and systematically measure global hunger to help ensure that it will be eradicated quickly and once and for all.

Because hunger is a complex problem, a variety of terms are used to describe the different forms it takes (Box 1.1).

To capture the multidimensional nature of hunger, GHI scores are based on the following four indicators:

1. **UNDERNOURISHMENT:** the proportion of undernourished people as a percentage of the population (reflecting the share of the population with insufficient caloric intake);

2. **CHILD WASTING:** the proportion of children under the age of five who are wasted (that is, have low weight for their height, reflecting acute undernutrition);

3. **CHILD STUNTING:** the proportion of children under the age of five who are stunted (that is, have low height for their age, reflecting chronic undernutrition); and

4. **CHILD MORTALITY:** the mortality rate of children under the age of five (partially reflecting the fatal synergy of inadequate nutrition and unhealthy environments).[2]

There are several advantages to measuring hunger using this combination of factors (Figure 1.1). This method reflects the nutrition situation not only of the population as a whole, but also of children—a particularly vulnerable subset of the population for whom a lack of dietary energy, protein, or micronutrients (essential vitamins and minerals) leads to a high risk of illness, poor physical and cognitive development, or death. The inclusion of both child wasting and

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BOX 1.1   **CONCEPTS OF HUNGER**

Hunger is usually understood to refer to the distress associated with lack of food. The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as the consumption of fewer than about 1,800 kilocalories a day—the minimum that most people require to live a healthy and productive life.*

Undernutrition goes beyond calories and signifies deficiencies in any or all of the following: energy, protein, 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 due to infections or other illnesses, or a combination of these factors. These in turn are caused by a range of 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 of deficiencies) and overnutrition (problems of unbalanced diets, such as consuming too many calories in relation to requirements with or without low intake of micronutrient-rich foods).

In this report, "hunger" refers to the index based on the four component indicators. Taken together, the component indicators reflect deficiencies in calories as well as in micronutrients. Thus, the GHI reflects both aspects of hunger.

Source: Authors.

* FAO considers the composition of a population by age and sex to calculate its average minimum energy requirement for an individual engaged in low physical activity. This requirement varies by country—from about 1,650 to more than 1,900 kilocalories per person per day for developing countries in 2014–2016 (FAO 2016c). Each country's average minimum energy requirement for low physical activity is used to estimate undernourishment (FAO, IFAD, and WFP 2015).

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child stunting allows the GHI to reflect both acute and chronic undernutrition. Also, combining multiple, independently measured indicators in the index minimizes the effects of random measurement errors.

GHI scores are calculated using the process described in Box 1.2. The current formula was introduced in 2015 and is a revision of the original formula that was used to calculate GHI scores between 2006 and 2014. The primary differences are that the indicator values are

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[1] For background information on the GHI concept, see Wiesmann (2006a).

[2] According to recent estimates, undernutrition is responsible for 45 percent of deaths among children younger than five years old (Black et al. 2013).

FIGURE 1.1 **COMPOSITION OF THE GLOBAL HUNGER INDEX**
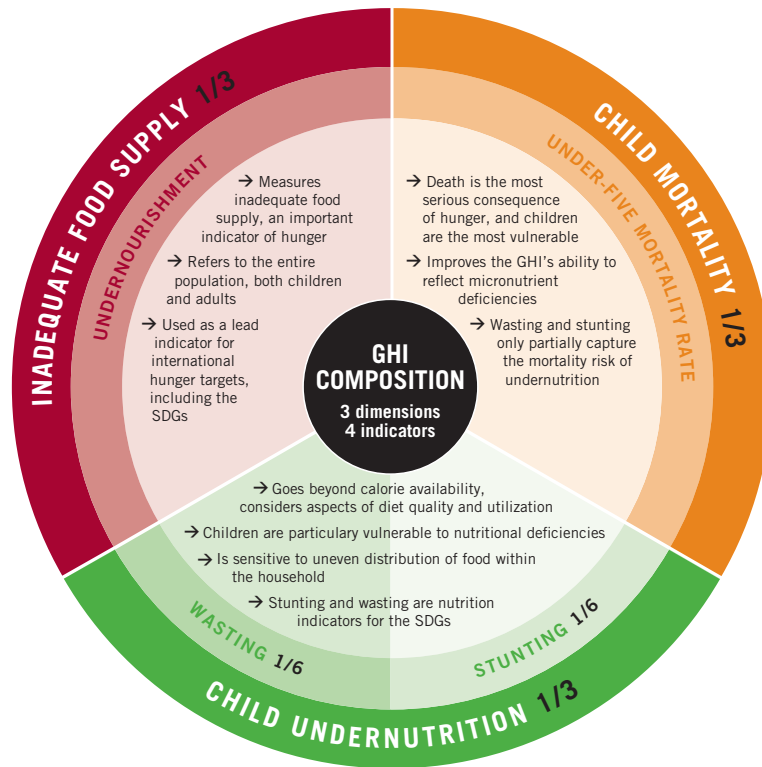
Source: Wiesmann et al. (2015).

Note: The values of each of the four component indicators are standardized. See Appendix A for the complete GHI formula. SDGs = Sustainable Development Goals. The source for undernourishment data is the Food and Agriculture Organization of the United Nations (FAO); the source for child mortality data is the United Nations Inter-agency Group for Child Mortality Estimation (UN IGME); and the primary sources for the child undernutrition data are the World Health Organization (WHO), World Bank, and UNICEF.

now standardized, and child underweight has been replaced by child stunting and child wasting (Wiesmann et al. 2015).

The 2016 GHI has been calculated for 118 countries for which data on all four component indicators are available and where measuring hunger is considered most relevant. GHI scores are not calculated for some higher-income countries where the prevalence of hunger is very low. However, even for some high-income countries, hunger is a pressing concern among a portion of the population. Unfortunately, for most high-income countries, nationally representative data are not regularly collected on the prevalence of undernourishment, child stunting, and child wasting. While data on child mortality are usually available for these countries, child mortality does not necessarily reflect undernutrition in the developed world to the same extent as in the developing world. For these reasons, GHI scores are not calculated for most high-income countries of the world.

The GHI is only as current as the data for the four component indicators. This year's GHI reflects the most recent country-level data between 2011 and 2016. The 2016 GHI scores therefore reflect hunger levels during this period rather than capturing the conditions solely for 2016.

For some countries, such as Burundi, the Comoros, the Democratic Republic of Congo, Eritrea, Papua New Guinea, South Sudan, Sudan, and Syria, GHI scores could not be calculated because of lack of data on undernourishment.[3] However, all available component indicator data for these countries are listed in Box 2.1 in Chapter 2 as well as in Appendix C. In Box 2.1, we have identified the countries with missing data where we believe the hunger situations are cause for significant concern.

GHI scores are based on source data that are continuously revised by the United Nations (UN) agencies that compile them, and each year's GHI report reflects these revisions. While these revisions result in improvements in the data, they also mean that the GHI scores from different years' reports are not directly comparable with one another. This year's report contains GHI scores for 2016 and three reference periods—1992, 2000, and 2008—all of which have been calculated with revised data. To track the progress of a country or region over time, the 1992, 2000, 2008, and 2016 scores within this report can be compared.

[3] For South Sudan, which became independent in 2011, and present-day Sudan, separate undernourishment estimates are not yet available from FAO (FAO 2016c).

OVERVIEW OF GHI CALCULATION

GHI scores are calculated using a three-step process.

First, values for each of the four component indicators are determined from the available data for each country. The four indicators are undernourishment, child wasting, child stunting, and child mortality.
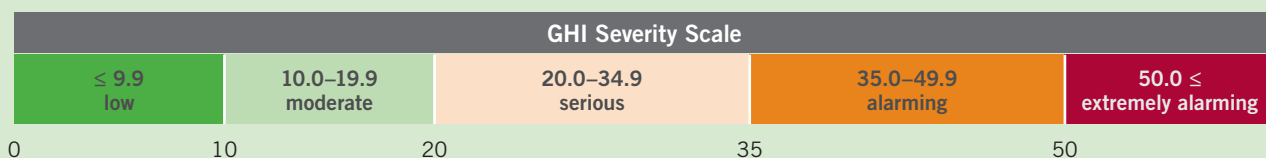
Second, each of the four component indicators is given a standardized score.

Third, standardized scores are aggregated to calculate the GHI score for each country.

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 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. A value of 100 would signify that a country's undernourishment, child wasting, child stunting, and child mortality levels were each at approximately the highest levels observed worldwide in recent decades. (Appendix A provides a detailed guide to calculating and interpreting GHI scores.)

The scale below shows the severity of hunger—from low to extremely alarming—associated with the range of possible GHI scores.

GHI Severity Scale				
≤ 9.9 low	10.0–19.9 moderate	20.0–34.9 serious	35.0–49.9 alarming	50.0 ≤ extremely alarming

0   10   20   35   50

Source: Authors.

The 1992, 2000, 2008, and 2016 GHI scores presented in this year's report reflect the latest revised data for the four component indicators of the GHI.[4] Where original source data were not available, the estimates for the GHI component indicators were based on the most recent data available. (Appendix B provides more detailed background information on the data sources for the 1992, 2000, 2008, and 2016 GHI scores.) The four component indicators used to calculate the GHI scores in this report draw upon data from the following sources:

UNDERNOURISHMENT: Data from the Food and Agriculture Organization of the United Nations (FAO) were used for the 1992, 2000, 2008, and 2016 GHI scores. Undernourishment data and projections for the 2016 GHI are for 2014–2016 (FAO 2016c; authors' estimates).

CHILD WASTING AND CHILD STUNTING: The child undernutrition indicators of the GHI—child wasting and child stunting—include data from the joint database of UNICEF, the World Health Organization (WHO), and the World Bank, and additional data from WHO's continuously updated Global Database on Child Growth and Malnutrition, the most recent Demographic and Health Survey (DHS) and Multiple Indicator Cluster Survey (MICS) reports, and statistical tables from UNICEF. For the 2016 GHI, data on child wasting and child stunting are from the latest year for which data are available in the period 2011–2015 (UNICEF/
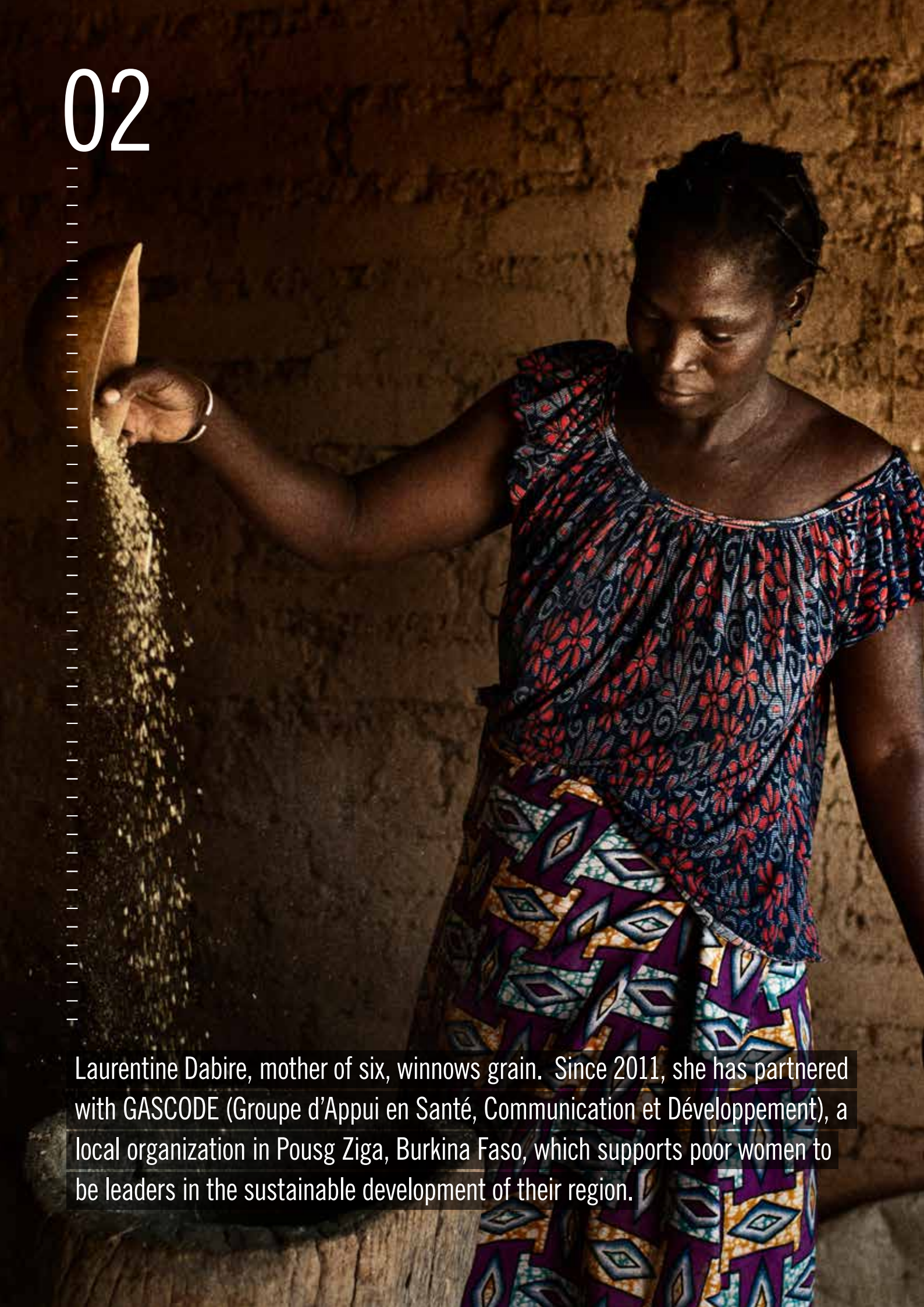
WHO/World Bank 2016; WHO 2016; UNICEF 2016a; UNICEF 2013; UNICEF 2009; MEASURE DHS 2016; authors' estimates).

CHILD MORTALITY: Updated data from the United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) were used for the 1992, 2000, 2008, and 2016 GHI scores. For the 2016 GHI, data on child mortality are from 2015 (UN IGME 2015).

The GHI incorporates the most up-to-date data that are available. Nevertheless, time lags and data gaps persist in reporting vital statistics on hunger and undernutrition. Despite the demand for these data and the existence of advanced technology to collect and assess data almost instantaneously, more reliable and extensive country data are still urgently needed. Improvements in collecting high-quality data on hunger and undernutrition will allow for a more complete and current assessment of the state of global hunger, a better understanding of the relationship between hunger and nutrition initiatives and their effects, and more effective coordination among efforts to end global hunger and malnutrition in all its forms.

[4] For previous GHI calculations, see von Grebmer et al. (2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008); IFPRI/WHH/Concern (2007); Wiesmann (2006a, 2006b); and Wiesmann, Weingärtner, and Schöninger (2006).

Laurentine Dabire, mother of six, winnows grain. Since 2011, she has partnered with GASCODE (Groupe d'Appui en Santé, Communication et Développement), a local organization in Pousg Ziga, Burkina Faso, which supports poor women to be leaders in the sustainable development of their region.

GLOBAL, REGIONAL, AND NATIONAL TRENDS

The 2016 Global Hunger Index (GHI) demonstrates substantial progress in terms of hunger reduction for the developing world. Whereas the 2000 GHI score for the developing world was 30.0, the 2016 GHI score is 21.3, showing a reduction of 29 percent (Figure 2.1).[1] Underlying this improvement are reductions since 2000 in each of the GHI indicators—the prevalence of undernourishment, child stunting (low height for age), child wasting (low weight for height), and child mortality. Yet, as this chapter reveals, there are great disparities in hunger at the regional, national, and subnational levels, and progress has been uneven. To succeed in the Sustainable Development Goal 2 (SDG2) of achieving Zero Hunger while leaving no one behind, it is essential to identify the regions, countries, and populations that are most vulnerable to hunger and undernutrition, and accelerate progress in these areas.

In terms of the indicators used in the GHI, the proportion of the population that is undernourished has declined from 18.5 percent to 13.1 percent since 2000. Among children under age five, 28.1 percent—just more than one in four—are stunted, down from the 2000 rate of 37.8 percent; and 8.4 percent suffer from wasting, slightly down from 9.9 percent in 2000. Finally, the under-five mortality rate dropped from 8.2 percent in 2000 to 4.7 percent in 2015.[2] Black et al. (2013) estimate that undernutrition causes almost half of all child deaths globally.

Large Regional Differences

In terms of the major regions of the developing world, Africa south of the Sahara and South Asia have the highest 2016 GHI scores, at 30.1 and 29.0, respectively (Figure 2.1). These scores reflect serious levels of hunger, and while the GHI scores for these regions have declined over time, the current levels are still on the upper end of the serious category, closer to the alarming category (35.0–49.9) than to the moderate (10.0–19.9). The composition of the GHI scores varies between Africa south of the Sahara and South Asia. In South Asia, child undernutrition, as measured by child stunting and child wasting, is higher than in Africa south of the Sahara. On the other hand, the prevalence of undernourishment, reflecting overall calorie deficiency for the population, and the child mortality rate are higher in Africa south of the Sahara than in South Asia.

[1] The regional and global aggregates for each component indicator are calculated as population-weighted averages, using the indicator values reported in Appendix C. For countries lacking undernourishment data, provisional estimates provided by the Food and Agriculture Organization of the United Nations (FAO) were used in the calculation of the global and regional aggregates only, but are not reported in Appendix C. The regional and global GHI scores are calculated using the regional and global aggregates for each indicator and the formula described in Appendix A.

[2] The estimates in this paragraph refer to the countries of the developing world for which GHI data were available. These estimates can vary slightly from estimates published by other organizations for the same indicators due to the inclusion of different countries.

FIGURE 2.1 **DEVELOPING WORLD AND REGIONAL 1992, 2000, 2008, AND 2016 GLOBAL HUNGER INDEX SCORES, WITH CONTRIBUTION OF COMPONENTS**
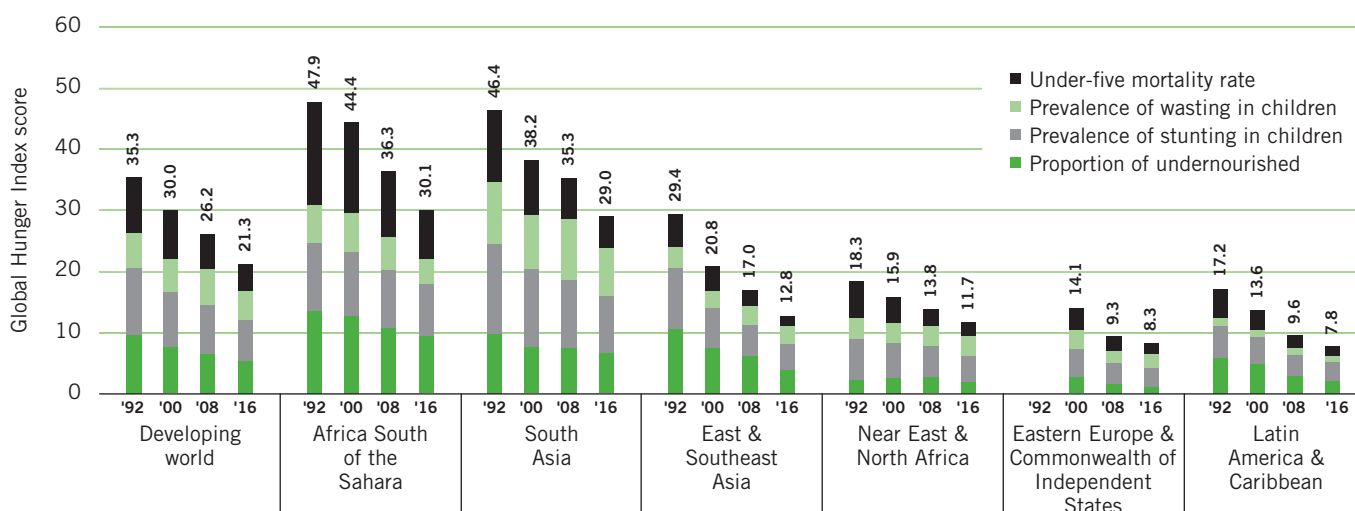
Source: Authors.

Note: See Appendix B for data sources. A 1992 regional score for Eastern Europe and the Commonwealth of Independent States was not calculated because many countries in this region did not exist in their present borders.

The GHI scores for East and Southeast Asia, Near East and North Africa, Latin America and the Caribbean, and Eastern Europe and the Commonwealth of Independent States range between 7.8 and 12.8, and represent low or moderate levels of hunger. Yet disparities within each region are important to recognize, and certainly no conclusions can be drawn about a particular country based on the overall score of its larger geographical region. For example, Haiti has a 2016 GHI score of 36.9, which places it in the alarming category, despite being in Latin America and the Caribbean—the region of the developing world with the lowest GHI score. Also, the 2016 GHI score for East and Southeast Asia is 12.8, but this is strongly influenced by highly populous China, which has a low GHI score of just 7.7. Examination of the other countries in this grouping without China shows a GHI score of 19.9—very near the threshold between the moderate and serious categories.[3]

In terms of absolute change, Africa south of the Sahara has experienced the greatest improvement from the 2000 GHI to the 2016 GHI, with a reduction of 14.3 points. South Asia and East and Southeast Asia also reduced their GHI scores by sizable amounts since 2000, with reductions of 9.2 and 8.0 points, respectively. The Near East and North Africa, Latin America and the Caribbean, and Eastern Europe and the Commonwealth of Independent States reduced their GHI scores by 4.2 to 5.8 points. In terms of the percentage change relative to the 2000 GHI, Eastern Europe and the Commonwealth of Independent States, Latin America and the Caribbean, and East and Southeast Asia experienced declines of between 39 and 43 percent. Africa south of the Sahara reduced its GHI score by 32 percent, and the Near East and North Africa and South Asia reduced their scores by 26 percent and 24 percent, respectively.

The good news is that we do not see evidence of stagnation or stalled progress in terms of hunger reduction for any region. However, in the highest hunger regions, South Asia and Africa south of the Sahara, the rates of improvement must accelerate. If these regions were to reduce their hunger levels between 2016 and 2030 at the same pace of reduction they have experienced since 2000, they would still have GHI scores of roughly 20 to 22 points—at the low end of the serious category or on the border between moderate and serious —falling far short of the goal to reach Zero Hunger by 2030.[4]

Country-Level Results

While we highlight many important findings in the following paragraphs, we invite the reader to use the facts that are contained herein to better understand the story of each country. Importantly, Appendix D shows the 1992, 2000, 2008, and 2016 GHI scores for each country, alphabetized by country name. Table 2.1 shows

the same information and also gives each country's numerical ranking; the countries are ranked from best to worst performers based on their 2016 GHI scores. Appendix C shows the values of the GHI indicators—the prevalence of undernourishment, child wasting, child stunting, and child mortality—for each country, which form the basis of each country-level GHI score.

From the 2000 GHI to the 2016 GHI, 22 countries made remarkable progress, reducing their GHI scores by 50.0 percent or more (Figure 2.2). Seventy countries saw a considerable reduction in their scores, dropping by between 25.0 percent and 49.9 percent, and 22 countries decreased their GHI scores by less than 25.0 percent. Despite this progress, 50 countries still suffer from serious or alarming levels of hunger.

Figure 2.3 includes the countries with serious or alarming hunger levels and shows both their 2016 GHI scores and the percentage reductions in their GHI scores since 2000. The Central African Republic and Chad, in the lower right-hand corner of the figure, are obvious areas of concern. These countries have the highest GHI scores in this year's report, coupled with relatively low percentage reductions in hunger since 2000. In the Central African Republic, violence and mass displacement resulting from a four-year-long civil war have taken a heavy toll on food production (FAO 2016a). Chad, which has also had a long history of civil war, has faced deteriorating food security, due in part to a recent influx of refugees and extreme weather events (FAO 2016b). The examples of these countries underscore that despite significant progress in reducing hunger globally, violent conflict, poor governance, and climate-related impacts on agriculture ensure that hunger continues to plague our planet and requires a transformative plan of action.

Namibia and Sri Lanka stand out for having the lowest percentage reductions in GHI scores since 2000. In the case of Sri Lanka, examination of its GHI indicator values reveals that while the prevalence of undernourishment, child stunting, and child mortality have declined moderately, child wasting has gone up and is the third-highest child wasting level in the report (Appendix C). The causes of child undernutrition in Sri Lanka are not well understood, but studies reveal multiple micronutrient deficiencies among children, with causes that include a combination of inadequate intake, as well as diseases that prevent proper nutrient absorption (Hettiarachchi and Liyanage 2010; Hettiarachchi and Liyanage 2012; Jayatissa et al. 2014). In the case

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[3] To better understand how each country fares relative to its neighbors, see Appendix E, where countries are ranked in order of 2016 GHI scores, relative to the other countries in each subregion.

[4] The 2016 GHI scores are based on data from 2011 through 2016, and the most up-to-date data are used for each indicator. This calculation treats the 2016 GHI scores as a reflection of the hunger level in 2015. The average annual percentage change between the 2000 GHI score and the 2016 GHI score is extended for 15 years to reach the estimate for 2030.

Rank[a]	Country	1992	2000	2008	2016	Rank[a]	Country	1992	2000	2008	2016
	Argentina	5.8	5.3	<5	<5	69	Guatemala	28.4	28.0	21.9	20.7
	Belarus	—	<5	<5	<5	70	Gambia, The	33.5	27.9	24.5	20.9
	Bosnia & Herzegovina	—	9.6	6.7	<5	71	Cambodia	45.3	44.7	26.6	21.7
	Brazil	16.1	11.8	5.4	<5	72	Nepal	43.1	36.8	29.2	21.9
	Chile	6.2	<5	<5	<5	72	Kenya	38.5	37.6	29.6	21.9
	Costa Rica	7.6	6.3	5.0	<5	72	Indonesia	35.8	25.3	28.6	21.9
	Croatia	—	6.2	<5	<5	75	Myanmar	55.8	45.3	32.0	22.0
	Cuba	8.7	6.1	<5	<5	75	Iraq	19.6	24.9	24.5	22.0
	Estonia	—	5.3	<5	<5	77	Mauritania	39.7	33.6	23.6	22.1
	Kuwait	26.0	<5	<5	<5	78	Togo	45.2	38.5	28.2	22.4
	Latvia	—	6.6	<5	<5	79	Lesotho	25.9	32.9	28.0	22.7
	Lithuania	—	5.2	<5	<5	80	Cameroon	40.4	40.3	30.5	22.9
	Montenegro	—	—	5.1	<5	81	Botswana	32.4	33.0	30.9	23.0
	Saudi Arabia	11.8	10.4	9.1	<5	82	Benin	44.6	38.1	31.8	23.2
	Turkey	14.3	10.4	5.6	<5	83	Swaziland	24.8	30.9	30.0	24.2
	Ukraine	—	13.5	<5	<5	84	Nigeria	49.5	40.9	33.6	25.5
17	Slovak Republic	—	7.7	6.0	5.3	84	Sri Lanka	31.8	27.0	24.4	25.5
18	Tunisia	13.6	9.0	6.2	5.5	86	Côte d'Ivoire	31.8	31.4	34.1	25.7
18	Romania	9.0	8.6	5.9	5.5	87	Uganda	41.3	39.4	31.2	26.4
20	Uruguay	10.0	7.6	6.7	5.6	88	Congo, Rep.	37.6	37.2	31.9	26.6
21	Jordan	12.6	9.8	5.9	5.7	89	Malawi	57.6	45.3	31.8	26.9
22	Macedonia, FYR	—	7.9	6.2	5.8	90	Bangladesh	52.4	38.5	32.4	27.1
23	Iran, Islamic Rep.	17.5	13.7	8.8	6.7	91	Rwanda	54.6	58.7	37.9	27.4
24	Russian Federation	—	10.5	6.8	6.8	91	Guinea-Bissau	45.2	43.9	31.9	27.4
25	Venezuela, RB	14.9	15.3	8.7	7.0	93	Mali	50.2	43.9	34.4	28.1
26	Lebanon	11.4	9.0	8.3	7.1	93	Lao PDR	52.2	48.8	33.9	28.1
26	Serbia	—	—	7.8	7.1	93	Guinea	46.1	44.4	33.9	28.1
28	Mexico	14.6	10.8	8.4	7.2	96	Tanzania	42.1	42.4	32.9	28.4
29	China	26.4	15.9	11.5	7.7	97	India	46.4	38.2	36.0	28.5
30	Kazakhstan	—	10.7	10.7	7.8	98	North Korea	30.9	40.4	30.1	28.6
31	Jamaica	12.4	8.6	7.4	7.9	99	Zimbabwe	36.1	41.0	35.1	28.8
32	Georgia	—	15.2	8.2	8.2	100	Tajikistan	—	40.3	32.4	30.0
33	Bulgaria	9.3	9.5	8.8	8.3	101	Liberia	49.7	47.4	38.6	30.7
34	Fiji	11.7	10.2	8.7	8.5	102	Burkina Faso	47.7	48.4	37.1	31.0
34	Trinidad & Tobago	13.9	12.3	10.5	8.5	103	Namibia	35.8	32.5	29.6	31.4
34	Colombia	15.1	11.4	9.3	8.5	104	Mozambique	65.6	49.4	38.2	31.7
37	Peru	28.4	20.8	15.8	8.6	105	Djibouti	61.1	48.5	35.9	32.7
38	Armenia	—	17.4	11.7	8.7	106	Angola	65.9	57.8	40.5	32.8
38	Algeria	16.8	14.8	10.8	8.7	107	Ethiopia	70.9	58.5	43.0	33.4
40	Kyrgyz Republic	—	19.4	13.1	9.1	107	Pakistan	43.4	37.8	35.1	33.4
41	Moldova	—	15.1	11.9	9.2	109	Niger	64.8	53.0	37.1	33.7
42	Panama	21.1	19.9	14.9	9.3	110	Timor-Leste	—	—	46.9	34.3
42	Morocco	18.3	15.6	12.0	9.3	111	Afghanistan	49.3	52.4	39.2	34.8
44	Malaysia	20.1	15.5	13.4	9.7	112	Sierra Leone	57.8	53.9	45.3	35.0
45	Azerbaijan	—	27.2	15.7	9.8	112	Yemen, Rep.	43.8	43.2	36.5	35.0
46	Suriname	17.5	16.5	11.7	10.1	114	Madagascar	44.6	44.2	37.1	35.4
47	Oman	21.1	14.2	10.7	10.4	115	Haiti	51.6	42.8	43.4	36.9
47	Paraguay	17.1	14.2	11.7	10.4	116	Zambia	47.1	50.4	45.2	39.0
49	Dominican Republic	25.0	19.4	15.6	11.1	117	Chad	62.5	51.9	50.9	44.3
50	El Salvador	19.1	16.8	12.6	11.2	118	Central African Republic	52.2	51.5	48.0	46.1
51	South Africa	18.5	18.7	16.3	11.8						
51	Thailand	26.1	18.3	11.9	11.8						
53	Albania	20.4	21.1	16.9	11.9						
54	Gabon	21.1	18.5	15.6	12.0						
55	Turkmenistan	—	22.2	16.6	12.3						
56	Uzbekistan	—	21.8	15.8	13.1						
57	Mauritius	17.5	16.2	14.8	13.2						
57	Honduras	25.8	20.3	16.8	13.2						
59	Nicaragua	36.1	25.6	17.9	13.3						
60	Egypt, Arab Rep.	19.3	15.3	16.1	13.7						
61	Mongolia	34.0	33.0	20.5	13.8						
62	Ghana	42.7	29.9	22.7	13.9						
62	Ecuador	23.6	20.2	17.5	13.9						
64	Guyana	24.1	18.8	16.9	14.5						
64	Vietnam	41.5	30.2	22.1	14.5						
66	Bolivia	36.7	30.8	23.9	15.4						
67	Senegal	37.1	37.7	24.4	16.5						
68	Philippines	30.8	26.2	20.4	19.9						

Note: The left-most cell spanning the top 16 rows reads: "2016 GHI scores less than 5, collectively ranked 1–16.[b]"
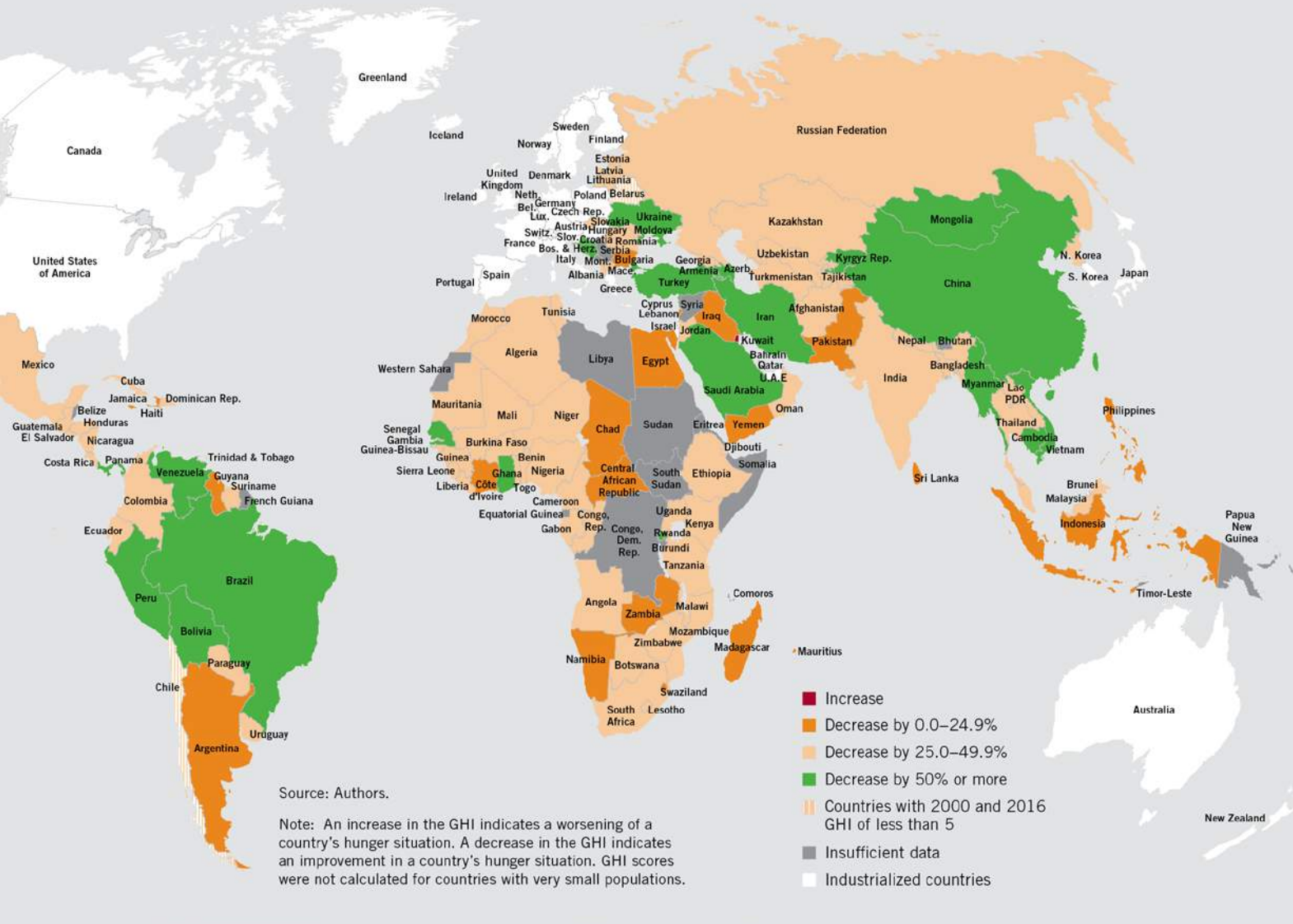
Source: Authors.

Note: — = Data are not available or not presented. Some countries, such as the post-Soviet states prior to 1991, did not exist in their present borders in the given year or reference period.

[a] Ranked according to 2016 GHI scores. Countries that have identical 2016 scores are given the same ranking (for example, Tunisia and Romania are both ranked 18th). The following countries could not be included because of lack of data: Bahrain, Bhutan, Burundi, the Comoros, the Democratic Republic of Congo, Eritrea, Libya, Papua New Guinea, Qatar, Somalia, South Sudan, Sudan, and the Syrian Arab Republic.

[b] The 16 countries with 2016 GHI scores of less than 5 are not assigned individual ranks; rather, they are collectively ranked 1–16. Differences among their scores are minimal. In previous GHI reports, these countries were not included in the ranking at all. **Because of the new system, the ranking from this year's report should not be directly compared to the ranking from previous reports.**

FIGURE 2.2 **COUNTRY PROGRESS IN REDUCING GHI SCORES**

Percentage change in 2016 GHI compared with 2000 GHI

Source: Authors.

Note: An increase in the GHI indicates a worsening of a country's hunger situation. A decrease in the GHI indicates an improvement in a country's hunger situation. GHI scores were not calculated for countries with very small populations.

Legend:
- Increase
- Decrease by 0.0–24.9%
- Decrease by 25.0–49.9%
- Decrease by 50% or more
- Countries with 2000 and 2016 GHI of less than 5
- Insufficient data
- Industrialized countries

of Namibia, child stunting, child wasting, and child mortality have fallen, but the prevalence of undernourishment has risen since 2000, dragging down its overall score. Namibia is vulnerable to erratic rainfall, including frequent droughts and flooding, and has experienced drought for the last two to three years, putting downward pressure on Namibia's cereal and livestock production. Also, poor harvests within Namibia and in neighboring countries have driven up food prices (WFP 2016b; FAO GIEWS 2016b).

Since 2000, Rwanda, Cambodia, and Myanmar, positioned at the top of Figure 2.3, have seen the largest percentage reductions

in hunger of all the countries categorized as serious or alarming, with 2016 GHI scores down by just over 50 percent relative to the 2000 scores in each country. Each of these countries has experienced civil war and political instability in recent decades, and the improvements may in part reflect increased stability. In the case of Myanmar, the improved score is driven by the falling prevalence of undernourishment, which has declined by nearly 75 percent since 2000. It will be important to ensure that comparable gains in child nutrition are also realized. In Rwanda, child mortality and child wasting saw the biggest reductions, decreasing by approximately 75 percent each;

FIGURE 2.3 **HOW COUNTRIES HAVE FARED SINCE 2000**
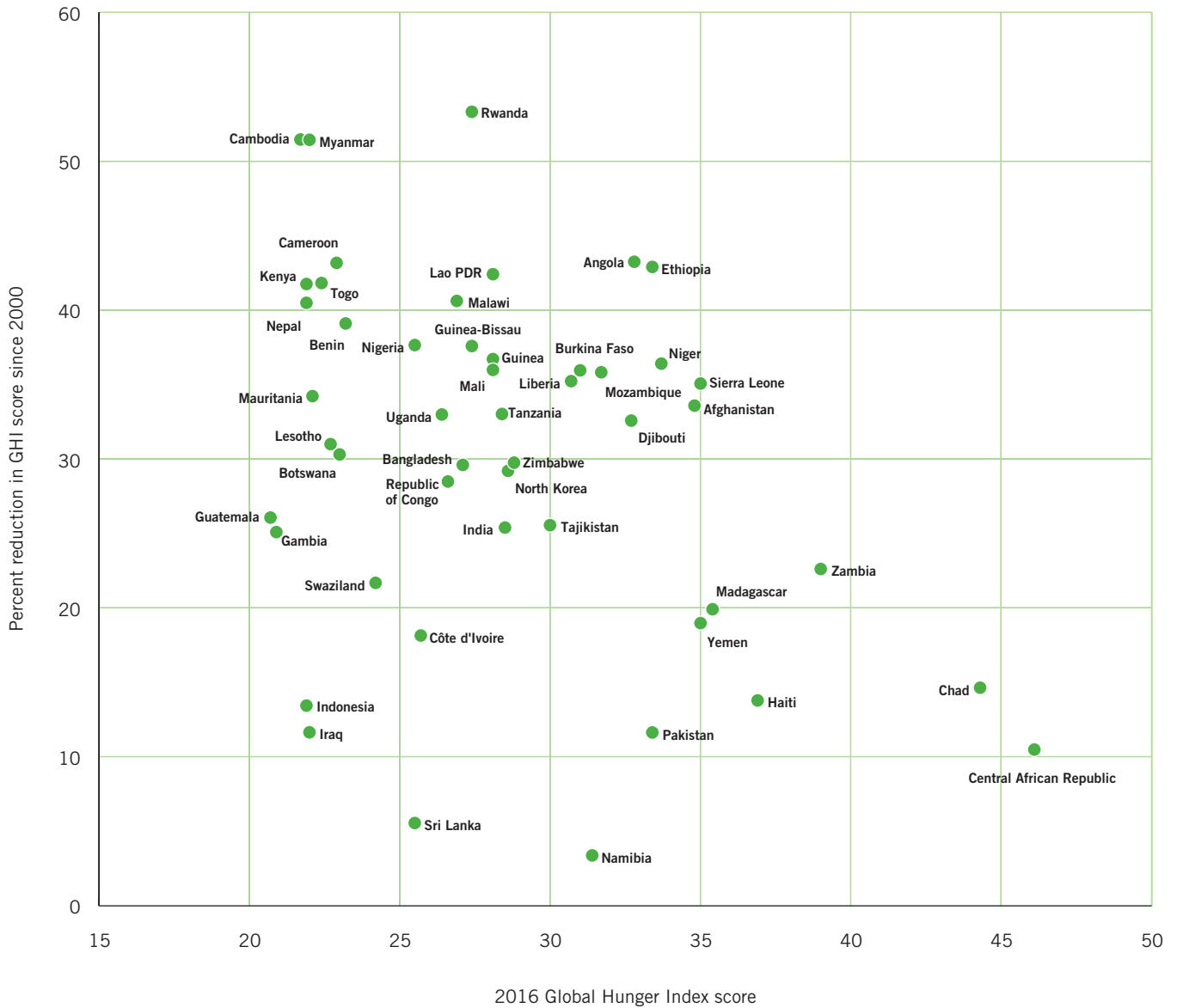
Source: Authors.

Note: The countries included are those with 2016 GHI scores equal to or greater than 20, reflecting either serious or alarming hunger levels. This figure features countries where data were available to calculate GHI scores. Some likely poor performers may not appear due to missing data.

the prevalence of undernourishment fell by nearly half; and stunting only went down by 20 percent. In Cambodia, the child mortality rate went down the most, dropping by 73 percent, while again child stunting decreased the least, falling by 34 percent, which is still a strong improvement.

Only one country—Kuwait—experienced an increase in its GHI score between 2000 and 2016. However, the increase is small in

absolute terms, and Kuwait's hunger level is still categorized as low. Most importantly, Kuwait's 2016 score of 4.9 represents a dramatic improvement compared to its 1992 score, which rose to 26.0 in the wake of the Gulf War.

Seven countries still suffer from levels of hunger that are alarming. The majority of these are in Africa south of the Sahara: the Central African Republic, Chad, Madagascar, Sierra Leone, and Zambia. The

exceptions are Haiti and the Republic of Yemen. While no countries had extremely alarming levels of hunger (GHI scores of 50 points or more) according to 2016 GHI scores, nine countries had extremely alarming hunger levels as recently as 2000: Afghanistan, Angola, the Central African Republic, Chad, Ethiopia, Niger, Rwanda, Sierra Leone, and Zambia. As in past years, GHI scores for several countries could not be included because data on undernourishment, and in some cases child stunting and child wasting, were not available. However, the hunger and/or undernutrition situations in many of these countries are cause for significant concern (Box 2.1) and in some cases could fall in the extremely alarming category.

In terms of the GHI components, Haiti, Zambia, and the Central African Republic have the highest proportion of undernourished people—between 47.7 percent and 53.4 percent of the population. Timor-Leste, Burundi, and Papua New Guinea have the highest prevalence of stunting, with approximately 50 percent or more of children under age five suffering from stunting. South Sudan, Djibouti, and Sri Lanka have the highest prevalence of wasting, with between 21.4 percent and 23.8 percent of children under age five affected. Somalia, Chad, and Angola have the highest under-five mortality rates, ranging between 13.7 percent and 15.7 percent.

Subnational Hunger and Undernutrition

The 2030 Agenda emphasizes the importance of using data disaggregated by income, gender, age, and geographic location, among other variables, to ensure that no one is left behind in the development process (UN 2015). While the GHI series provides scores at the national, regional, and global levels, examination of individual GHI indicators at the subnational or state levels reveals disparities within countries, in terms of both absolute values and changes over time. A comprehensive review of subnational differences is not within the scope of this report, nor is it possible given data constraints. Child stunting, child wasting, and child mortality estimates at the subnational level are available irregularly for the countries in this report, and subnational undernourishment estimates are rarely calculated. However, examples of subnational disparities are provided in this section to demonstrate the geographic variation that exists within countries and to serve as a springboard for further research into hunger and undernutrition—and their causes—at the subnational level.

Variations in GHI indicator values can exist within countries at all levels of the GHI Severity Scale, from low to extremely alarming.[5] For countries that have low hunger and undernutrition levels at the national level, examination of data at the subnational level can help identify areas of the country that lag behind. For example, Mexico has a low 2016 GHI score, at 7.2 points, and an overall stunting level of 13.6 percent, according to the most recent survey data. However, nearly one-third (31.4 percent) of children in the southern state of Chiapas are stunted (WHO 2013). Child undernutrition in the state has been well documented (Stahl 2014; García-Parra et al. 2016), and Martínez-Rodríguez et al. (2014) find high levels of food insecurity in Chiapas. Also, Gutierrez-Jimenez et al. (2013) show an association between child malnutrition and intestinal parasites in Chiapas. Juarez and Gonzalez (2010) note the lack of proper sanitation in the homes in Chiapas and other states in Mexico, which they suggest may decrease the bioavailability of nutrients—meaning they are not properly absorbed as a result of infection and disease.

Jordan similarly has a low 2016 GHI score at 5.7 points, and its national stunting rate is 7.8 percent, according to a 2012 survey (WHO 2014). Yet, in the southern state of Ma'an, nearly one-fifth (19.0 percent) of children under age five are estimated to be stunted (WHO 2014). In fact, Krafft and El-Kogali (2014) show that Jordan has the highest inequality of child stunting rates out of 12 countries in the Middle East and North Africa, while having the lowest national stunting level of these countries.

On the other end of the GHI Severity Scale, examination of the subnational data for the countries categorized as alarming can reveal areas that are in crisis and demonstrate extremely high levels of hunger and undernutrition. Zambia, which has a 2016 GHI score of 39.0—characterized as alarming—shows substantial differences in terms of the GHI indicators between provinces. According to a 2013–2014 survey, the under-five mortality rate was 7.5 percent for the nation, but ranged from 6.3 percent in Copperbelt Province to 11.5 percent in Eastern Province. To put this in perspective, at the national level, child mortality rates in 2015 are at or exceed 10.0 percent for only 8 out of 131 countries with data in this report. Zambia's national stunting rate is 40.1 percent, but is highest in Northern Province, at 48.5 percent, and lowest in Copperbelt, Lusaka, and Western Provinces, at 36 percent each. In terms of the wasting rate, the national average is 6.0 percent, yet Luapula's is more than twice the national average at 13.0 percent (Zambia, MOH, CSO, and ICF International 2014).

Sierra Leone, also in the GHI's alarming category, has an even wider spread in terms of stunting, whereby its Kono district has the highest stunting level, at 51.6 percent according to 2013 data, while Bombali district has a stunting level of 28.2 percent. On the other hand, Bombali has the highest wasting level in the country, at 25.5 percent, whereas Kono has the second-lowest wasting level, at 4.3 percent (SSL and ICF International 2014). To address the

[5] No country has a 2016 GHI score in the extremely alarming range, although it is possible that a country or countries that lack data for calculating scores would be in this range if data were available.

BOX 2.1   COUNTRIES WITH INSUFFICIENT DATA, YET SIGNIFICANT CONCERNS

For this report, 2016 GHI scores could not be calculated for 13 countries because data on the prevalence of undernourishment, and in some cases data or estimates on child stunting and child wasting, were not available. In the absence of GHI scores, it is critical to analyze the available food security and nutrition data to understand the situation in these countries to the greatest extent possible, particularly given that the levels of child undernutrition and child mortality in some of these countries are among the highest in the world. Furthermore, it is vitally important that up-to-date data are made available for these countries without delay.

The table below shows the data and estimates for the GHI indicators that are available for the countries without GHI scores. Based on these data, as well as the available information from international organizations that specialize in hunger and malnutrition, and the existing literature, we have identified the countries that are cause for significant concern. For each of these countries, a summary of the available information is provided in the following paragraphs.

Country-Level Summaries

BURUNDI: At 57.5 percent, according to a 2010–2011 survey, Burundi has the highest child stunting level of all the countries with data and estimates for the 2011–2015 reference period. In the 2014 GHI report, the last year for which adequate data were available to calculate full GHI scores, Burundi had the highest GHI score of all the countries in the report for which GHI scores could be computed, characterized as extremely alarming (von Grebmer et al. 2014). Burundi was embroiled in a civil war between 1993 and 2005, and the legacy of the war has contributed to the poor food security and nutrition situation of the population, along with challenging agro-ecological conditions and economic hardship (Verwimp 2012; WFPUSA 2015). The level of unrest in Burundi was increasingly problematic in early 2016, prompting UNICEF to express concern that a "major nutrition crisis" might be possible (UNICEF 2016b).

THE COMOROS: In the Comoros, 32 percent of children are stunted, 11 percent of children are wasted, and more than 7 percent of children die before their fifth birthday. The *2014 Global Hunger Index* report was the last in which GHI scores could be calculated for the Comoros, and at that point the country had the fourth-highest hunger level out of the 120 countries with GHI scores. Since its independence from France in 1975, the Comoros has experienced at least 20 coups (CSIS 2008). The World Bank reports improved political stability in recent years, yet deteriorating economic conditions continue to plague the already impoverished, natural disaster–prone nation (World Bank 2016).

THE DEMOCRATIC REPUBLIC OF CONGO (DRC): The DRC's 43 percent stunting level according to a 2013–2014 survey is very high, and has remained virtually unchanged since 2001, when survey data showed the level to be 44 percent (UNICEF/WHO/World Bank 2016). The 9.8 percent child mortality rate is one of the top 10 highest child mortality levels of the 131 countries in this report. Further, 8 percent of children suffer from wasting. According to the United States Agency for International Development (USAID), "Recurrent conflict and subsequent internal displacement of persons, lack of improved agricultural inputs and techniques, pervasive crop and livestock diseases, poor physical infrastructure, gender inequity, and a rising fertility rate are among the many factors challenging food security in DRC" (USAID 2016).

ERITREA: The last GHI report containing complete data for Eritrea was the 2014 report. At that point, Eritrea had the second-highest GHI score of all the countries in the world for which scores were calculated (von Grebmer et al. 2014). The latest estimates of child stunting and child wasting are high, at 49.1 percent and 12.5 percent, respectively. Exacerbating the situation, there is

(continued)

EXISTING GHI INDICATOR VALUES AND IDENTIFICATION OF SIGNIFICANT CONCERNS

Country	CHILD STUNTING Prevalence of stunting in children under five 2011–2015 (%)	CHILD WASTING Prevalence of wasting in children under five 2011–2015 (%)	CHILD MORTALITY Under-five mortality 2015 (%)	Significant concern?
Bahrain	9.0*	5.2*	0.6	NO
Bhutan	26.9*	4.4*	3.3	NO
Burundi	57.5	6.1	8.2	**YES**
Comoros	32.1	11.1	7.4	**YES**
Congo, Dem. Rep.	42.6	8.1	9.8	**YES**
Eritrea	49.1*	12.5*	4.7	**YES**
Libya	23.3*	6.4*	1.3	**YES**
Papua New Guinea	49.5	14.3	5.7	**YES**
Qatar	1.0*	2.0*	0.8	NO
Somalia	—	—	13.7	**YES**
South Sudan	33.7*	23.8*	9.3	**YES**
Sudan	38.2	16.3	7.0	**YES**
Syrian Arab Republic	—	—	1.3	**YES**

Source: Authors.

Note: * indicates IFPRI estimates; — = not available; undernourishment estimates, and therefore GHI scores, are not available for the countries on this list.

Box 2.1 (continued)

evidence based on satellite imagery of serious drought conditions and low vegetative cover in 2015–2016. Thus, while data are lacking, there is reason to believe that hunger and undernutrition are very serious and ongoing concerns in Eritrea.

LIBYA: Stunting and wasting levels in Libya are estimated to be 23.3 percent and 6.4 percent, respectively, and the child mortality rate for children under age five is low, at 1.3 percent. Updated data are urgently needed, particularly so that the international community can more fully understand the food security challenges facing the population in light of Libya's civil war of 2011 and the second civil war that began in 2014. Conflict and instability have diminished agricultural production in the country and compromised its food distribution infrastructure (FAO GIEWS 2016a). Out of a total population of 6.41 million, 1.28 million people in Libya are estimated to be food insecure (UN OCHA 2015).[1] While food insecurity in Libya was quite low prior to the 2011 and 2014 conflicts, the disruption to political and economic institutions has introduced new challenges and is likely to worsen if the country is not able to stabilize (WFP 2016a).

PAPUA NEW GUINEA: The 49.5 percent stunting level for children under age five in Papua New Guinea is the third highest of the 129 countries with stunting data or estimates for the 2011–2015 reference period. The country's child wasting level—at 14.3 percent—is also very high and cause for concern. Inequalities in society, poverty, and a heavy reliance on staple crops leave much of the population without access to diverse and nutritious food (Hou 2016). Moreover, drought and frosts brought on by El Niño in 2015–2016 have negatively affected food production and increased concerns about the food security of one-third of the country's population (FAO 2015).

SOMALIA: Child mortality is the only GHI indicator for which data are available for Somalia, and this, at 13.7 percent is the third highest of all the child mortality rates included in this report. Reports from UNICEF Somalia and the International Committee of the Red Cross indicate that child undernutrition is widespread (UNICEF 2015; ICRC 2015). Famine in Somalia in 2011 led to the deaths of 250,000 people (WFP 2015). Meanwhile, an El Niño–related drought that began in 2015 has again left Somalia in a critical situation. The FAO-managed Food Security and Nutrition Analysis Unit (FSNAU) and the Famine Early Warning Systems Network (FEWS NET) issued a joint statement in February 2016 stating that the proportion of severely food-insecure people remains alarmingly high, including people who are unable to meet their daily food needs (UN 2016a).

SOUTH SUDAN: Survey data from 2010 indicated that 31 percent of children under five were stunted and 23 percent of children were wasted, and the latest estimates show no sign of improvement. To put this in context, South Sudan's child wasting estimate is the highest out of 129 countries with child wasting data and estimates

for the 2011–2015 reference period. The 2015 child mortality estimate for the country is also high at 9.3 percent. In 2013, a struggle for power between opposing groups erupted in violent conflict that continues in 2016. As of April 2016, 4.3 million South Sudanese people out of a population of approximately 12.3 million were facing crisis-level food insecurity or worse, indicating significant difficulty meeting basic food needs (UN OCHA 2016b; FAO/UNICEF/ WFP 2016). Households in some parts of the country are facing "emergency" and "catastrophic" levels of food insecurity (FEWS NET 2016).

SUDAN: A 2014 survey showed worrisome levels of child undernutrition in Sudan, with stunting and wasting of children under five at 38.2 percent and 16.3 percent, respectively. Sudan's hunger and undernutrition issues are related to widespread poverty; challenging agro-ecological conditions, including the 2015–2016 El Niño–driven drought; and violent conflict and political instability in the country. There has been an influx of refugees from South Sudan and massive internal displacement of people resulting from conflict within Sudan itself, exacerbating the hunger and undernutrition situation. The most severely affected regions in terms of food insecurity are the conflict-affected states of Blue Nile, Darfur, West Kordofan, and South Kordofan (FEWS NET 2015; UN OCHA 2016a).

SYRIAN ARAB REPUBLIC: Given the continuing devastation wreaked by Syria's civil war, now in its sixth year, current data and statistics are extremely limited. Up-to-date data and estimates on the prevalence of undernourishment, child stunting, and child wasting are not available for this year's report. A current estimate is available for child mortality. While this estimate, at 1.5 percent, is not high, given the challenges of collecting data from the conflict-ridden, inaccessible regions of Syria (Save the Children 2014), its reliability is questionable. However, on-the-ground reports suggest that substantial portions of the population in this war-torn country face food shortages. The World Food Programme reports that food production in Syria has dropped by 40 percent relative to precrisis levels (WFP 2016c). In early 2016, UN Secretary-General Ban Ki-moon accused all sides in the war of violating international humanitarian law, including using starvation as a weapon of war (UN 2016b).

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[1] In the 2015 UN OCHA report, the number of people facing food insecurity is derived from the proportion of households reporting difficulties in accessing food due to lack of resources.

particular needs of these populations, it is critical to consider the specific circumstances and challenges facing each area.

Cambodia has seen one of the most impressive reductions in hunger between the 2000 and 2016 scores among the countries classified as serious or alarming, dropping by 51 percent from 44.7 points to 21.7 points. Nationally, the stunting rate fell from 49.2 percent to 32.4 percent according to surveys from 2000 and 2014—a drop of 34 percent. Yet, some provinces experienced far more impressive reductions in stunting than others. For example, Kandal province saw stunting decline by nearly 50 percent, dropping from 55.2 percent to 28.1 percent in this period. However, in Kampong Speu province, stunting declined by only 18 percent between 2000 and 2014, going from 49.5 percent to 40.5 percent (Cambodia, NIS, DGH, and ICF International 2015; WHO 2012). Similarly, comparing the child mortality estimates from the same surveys, Cambodia's national under-five child mortality estimate fell substantially in the same period, going from 12.4 percent to 3.5 percent—a fall of 72 percent.[6] While several provinces saw their under-five child mortality levels decrease by more than 70 percent, Kampong Thom's rate fell by only 39 percent, from 9.9 percent to 6.0 percent, which was one of the highest provincial under-five mortality levels in the country (Cambodia, NIS, DGH, and ICF International 2015; Cambodia, NIS, DGH, and ORC Macro 2001). Jimenez-Soto, Durham, 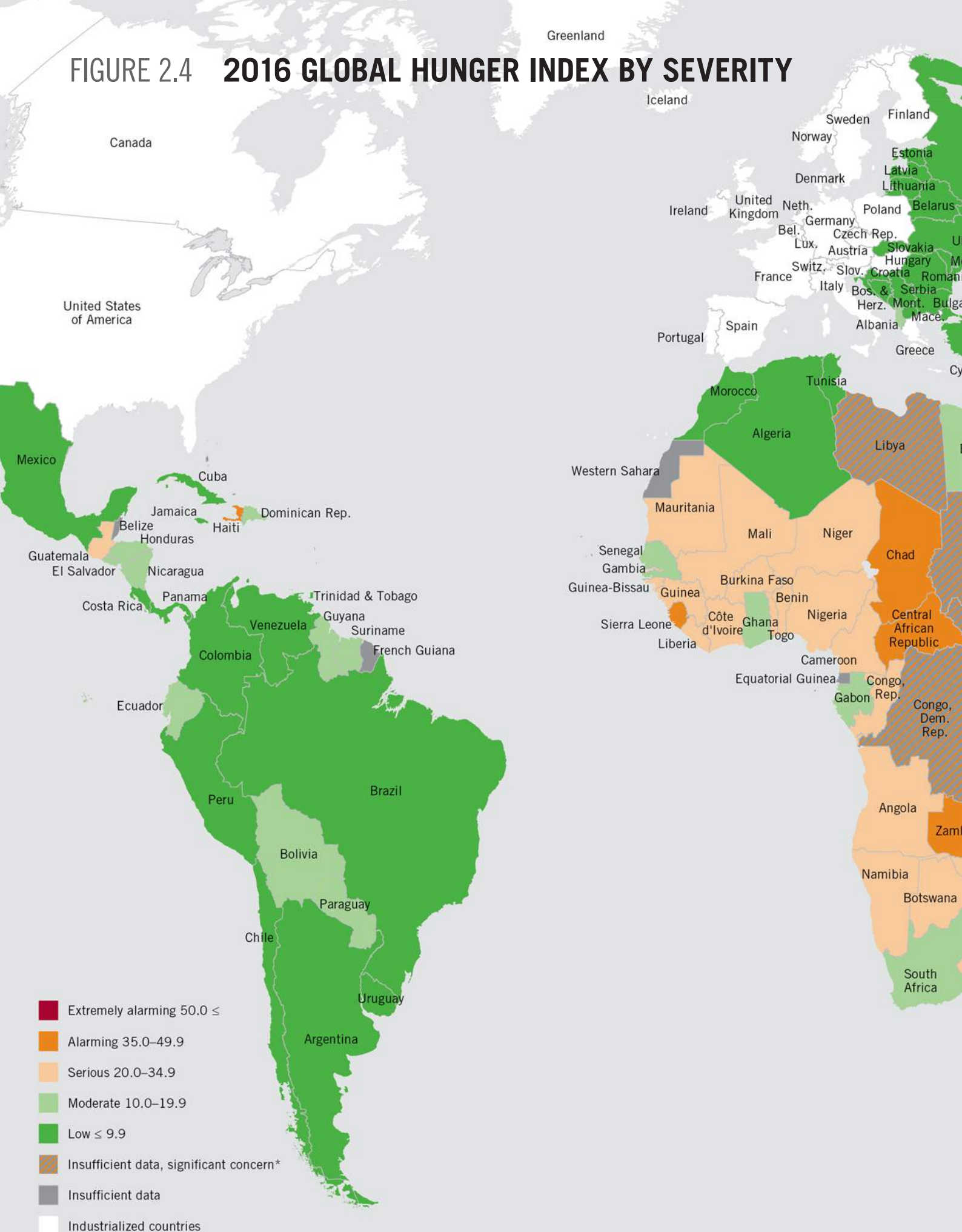and Hodge (2014) examine the 2000, 2005, and 2010 under-five child mortality rates for Cambodia and find persistent, and in some cases increasing, inequality of child mortality in terms of geography.
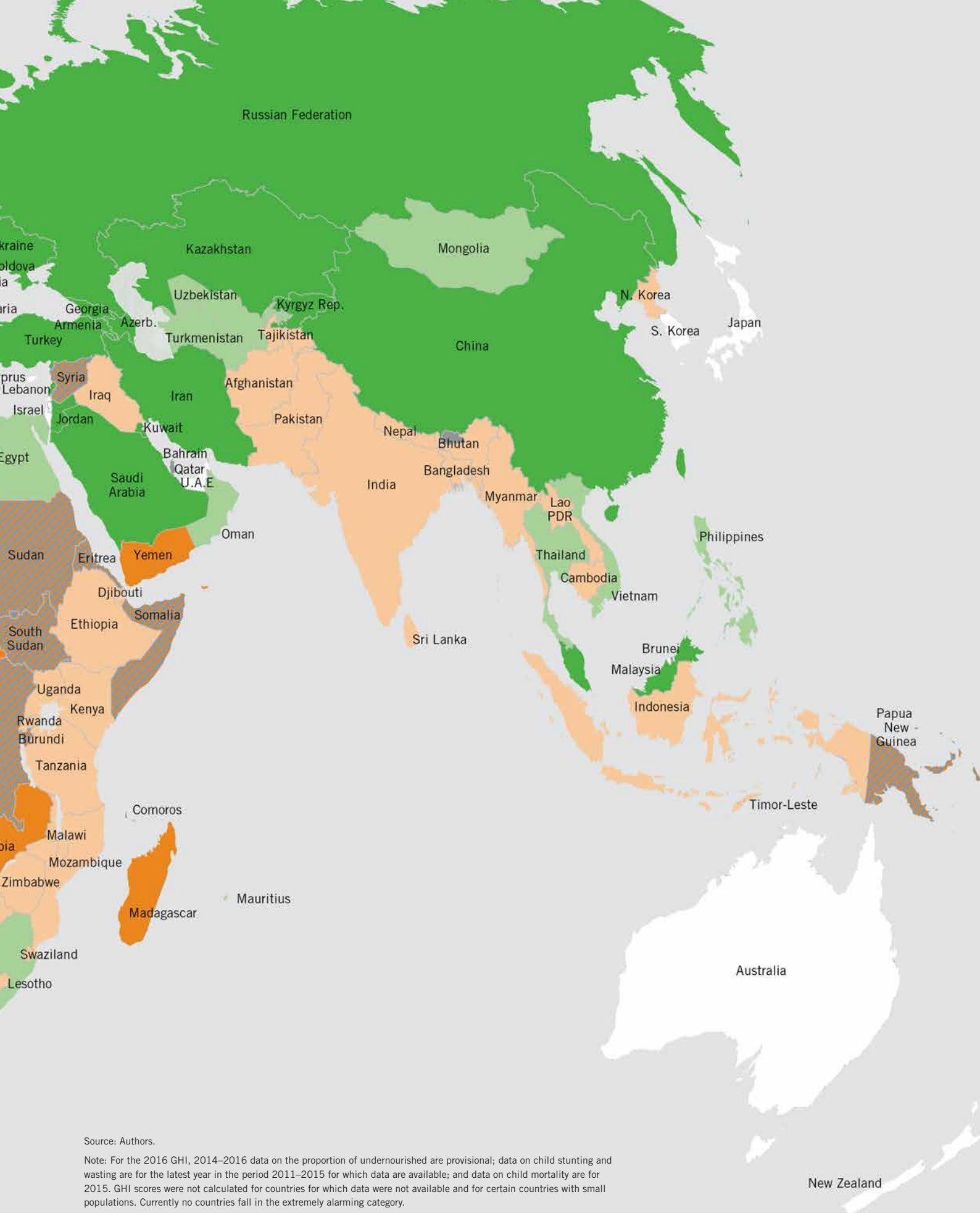
Conclusion

This year's GHI results demonstrate that the developing world has made great progress in the fight against hunger and undernutrition. At the same time, this report identifies various areas of vulnerability that must be recognized, and data gaps, including at the subnational level, that must be addressed, to ensure that no one is left behind on the path to meeting the goal of Zero Hunger by 2030. In every instance of a region that lags behind the rest of the world, a country that does not keep pace with its neighbors, a country in crisis for which data are inadequate, or a population that is severely disadvantaged within a single country, it is essential that we identify these areas of need and ensure they have the proper support to reach Zero Hunger by 2030.

[6] The DHS under-five child mortality estimates differ somewhat from the estimates from the United Nations Inter-agency Group for Child Mortality Estimation (UN IGME), which are used for calculating GHI scores. UN IGME reports the under-five child mortality rates for 2000 and 2014 to be 10.8 percent and 3.1 percent, respectively. However, the percentage change between the 2000 and 2014 values calculated using the DHS and UN IGME estimates is virtually the same, at 71.8 percent and 71.3 percent, respectively.

FIGURE 2.4   2016 GLOBAL HUNGER INDEX BY SEVERITY

Greenland

Iceland

Sweden

Norway

Finland

Estonia

Latvia

Lithuania

Denmark

Ireland

United Kingdom

Neth.

Germany

Poland

Belarus

Bel.

Lux.

Czech Rep.

Austria

Slovakia

Hungary

France

Switz.

Slov.

Croatia

Romani

Italy

Bos. &

Herz.

Mont.

Serbia

Bulga

Albania

Mace.

Portugal

Spain

Greece

Canada

United States of America

Mexico

Cuba

Jamaica

Belize

Honduras

Haiti

Dominican Rep.

Guatemala

El Salvador

Nicaragua

Costa Rica

Panama

Trinidad & Tobago

Venezuela

Guyana

Suriname

French Guiana

Colombia

Ecuador

Peru

Brazil

Bolivia

Paraguay

Chile

Uruguay

Argentina

Morocco

Tunisia

Algeria

Libya

Western Sahara

Mauritania

Mali

Niger

Chad

Senegal

Gambia

Burkina Faso

Benin

Central African Republic

Guinea-Bissau

Guinea

Côte d'Ivoire

Ghana

Nigeria

Sierra Leone

Togo

Liberia

Cameroon

Equatorial Guinea

Gabon

Congo, Rep.

Congo, Dem. Rep.

Angola

Zamb

Namibia

Botswana

South Africa

- ■ Extremely alarming 50.0 ≤
- ■ Alarming 35.0–49.9
- ■ Serious 20.0–34.9
- ■ Moderate 10.0–19.9
- ■ Low ≤ 9.9
- ▨ Insufficient data, significant concern*
- ■ Insufficient data
- □ Industrialized countries

*See Box 2.1 for details

03

Thirteen-year-old Elma and her friends learn to grow vegetables as part of a school garden project in Bovaname, Mozambique.

TRANSFORMING OUR WORLD: HOW THE SUSTAINABLE DEVELOPMENT GOALS WILL HELP US ACHIEVE ZERO HUNGER

David Nabarro

As a young doctor beginning my career in Nepal, India, and Bangladesh, I saw first-hand the crushing effects of hunger and malnutrition on the lives of the poorest and most vulnerable. Hunger and malnutrition undermined people's health, often leading to the needless grief of a child's preventable death or the catastrophic loss of a mother in childbirth. The communities I worked with carried forward the burden of undernutrition from generation to generation, as stunting compromised the ability of individuals and communities to reach their full potential. Why then did responding to undernutrition not receive the attention it deserved?

By listening to the women and their families, those of us working with these communities began to understand the complex interlinkages between the challenges they faced and how these contributed to malnutrition. Optimum infant and young child feeding takes time and is a luxury for most poor people; breastfeeding requires space and privacy, which are often not available; and good feeding means access to nutritious foodstuffs and is often undermined by illness. It became clear that people do not live in compartments, but rather in complicated spaces where the challenges—in food, in health, in sanitation, and in livelihoods—all come together. It was also clear that in responding there must be more integrated approaches—a new way of doing business that puts the individual at the center.

The year 2015 heralded a major shift in the dimensions of international development. In an unprecedented, inclusive, transparent, and open process, the 193 member states of the United Nations adopted, by consensus, the 2030 Agenda for Sustainable Development. This contains the 17 Sustainable Development Goals (SDGs) and the 169 targets that relate to them. Together with the Sendai Framework for Disaster Risk Reduction, the Addis Ababa Action Accord, and the Paris Climate Agreement, the 2030 Agenda constitutes a truly transformative plan for people, planet, prosperity, partnership, and peace.

The 2030 Agenda represents a political manifesto for the world over the next 14 years. It sets a clear objective for all people, nations, institutions, organizations, and enterprises: Transform our world to ensure that people and our planet thrive by ending poverty and hunger, reaching the most vulnerable first; by prioritizing human rights, addressing injustice and empowering women; and by building resilience and tackling the impacts of adverse climate events. It addresses the interconnected root causes of poverty, hunger, pandemics, inequalities, environmental degradation, climate change, forced migration, violence, and extremism. The 17 SDGs

oblige developed and developing countries alike. They are truly a blueprint for action across all three pillars of the United Nations' work—peace and security, development, and human rights—integrating the social, economic, and environmental dimensions of sustainable development.

Moreover, at a time when conflicts rage and divisions are pronounced, the series of agreements reached in 2015 demonstrate that inclusive multilateralism can work. Inclusivity has been at the heart of the process to develop the 2030 Agenda. The SDGs were agreed on through negotiations among all member states with an unprecedented level of engagement from civil society, the business community, and other stakeholders. This was the most open and participatory multilateral process in history, with direct engagement of more than 7 million people from all over the world. They represented a wide range of interests, each bringing his or her unique perspective and contribution to solving the challenges facing humanity.

How Does the 2030 Agenda Differ from What Came Before?

The 2030 Agenda is grounded in a number of principles that set it apart from what came before. The Agenda is *universal*—it applies to all countries, regardless of their level of development and irrespective of their political or socioeconomic status. This sets it apart from the Millennium Development Goals (MDGs), which principally applied to developing countries. The 2030 Agenda sees every country as a developing country, in that every country needs to change the way it operates, considering the wider impact of its policies and actions beyond its own national borders, to contribute toward a sustainable future for the world.

The Agenda is *transformative,* seeking to end poverty and hunger once and for all, while safeguarding the planet. In its determination to leave no one behind, the Agenda is people-centered, putting human rights and social justice at its core. It emphasizes that the needs of people who are missed out because they are hard to reach or displaced or because they cannot easily participate in development activities must be specifically targeted. The persistence of armed conflict and its impact on the fight against hunger, and on those who flee and those who are left behind were brought into sharp relief in the *2015 Global Hunger Index* (GHI) report, which asserted that the needs and rights of both visible and invisible victims of violent conflict must be addressed.

By realizing the rights that underpin the 2030 Agenda, we can ensure peace and prosperity for individuals, communities, countries, and the world.

The Agenda is also *integrated* and indivisible, as it recognizes that people do not live in discrete silos or sectors but in a continuum of interrelated communities and ecosystems. It therefore demands a complete revolution in the way we organize ourselves and in the way we work. It is not acceptable that one or other of the SDGs is treated in isolation. Without addressing all of the goals in an integrated manner, we will not be able to achieve the transformation foreseen by the member states.

From Ambition to Action: Implementation of the Agenda

The 2030 Agenda will only have meaning for our world and its people if it is fully implemented by all. The level of ambition agreed upon by national leaders and reflected internationally needs to be matched by a level of investment sufficient to deliver this agenda—a scale-up in finances that has been described as a move "from billions to trillions." The ambition also needs to be nurtured in local communities so that it takes root everywhere. Just as in the development of the Agenda, member states will take the lead in its implementation by making it relevant to their national contexts, making sure that this Agenda really is the center of all thinking, and trying to build in the capability necessary for whole-of-society support for development action. They will do this by putting in place ambitious, locally owned national development plans that are aligned with the Agenda and support implementation at all levels. This work is already happening: 22 countries presented updates of their progress in implementing the 2030 Agenda during the High-Level Political Forum on Sustainable Development in July 2016.

Tackling climate change and delivering on the 2030 Agenda are two sides of the same coin. The actions needed to reduce emissions and build climate resilience are the very same actions that are needed to set the world on a sustainable footing for generations to come. These agendas must be linked in national planning processes.

The interconnected nature of the SDGs requires new thinking when it comes to implementation. Long-term planning for sustainable development that forgoes short-term political gain is the basis of the new political consensus reflected in the 2030 Agenda. Policy coherence will be an essential requirement in planning at all levels and for all countries. This will sometimes be uncomfortable, as institutions and individuals are challenged to work beyond their silos, to share information and pool or share funds. It may

even call for new arrangements at the cabinet level in countries. However, success will lie in having the courage and vision to do things differently.

Adjusting to the new agenda will also have implications for the way the United Nations system works. The 2030 Agenda has increased the demand from member states for the United Nations to provide integrated and coordinated policy support. This support must be brought closer to countries and communities, providing tailored responses and policy coherence across the United Nations' work on peace and security, human rights, and development. Those working in humanitarian contexts must also recognize the relevance of the Agenda, particularly its focus on human rights, resilience, and leaving no one behind. The United Nations' ability to work at the interfaces between sectors and disciplines is critical—the 2030 Agenda demands it.

The 2030 Agenda will have to be owned by citizens, communities, local and national governments, civil society organizations at all levels, and enterprises of all sizes. Experience with the MDGs shows that strong proactive leadership is needed across all strata to ensure that the goals form a key component of national strategies and budgets.

The Global Hunger Index initiative can support these efforts and help ensure that hunger remains part of the discussion. This project acts as an effective interface between researchers and nongovernmental organizations (NGOs), and produces an evidence-based measurement of hunger to inform sound policymaking. The GHI reports can focus media attention on the effects of hunger on the individual and society, driving both public and political debate.

Hunger in the 2030 Agenda

With the 2030 Agenda, member states have shown their commitment to a comprehensive, integrated, and universal transformation that includes ending hunger and malnutrition. This ambition is captured in Sustainable Development Goal 2 (SDG2), which includes the achievement of food security, improved nutrition, and sustainable agriculture as part of a comprehensive set of interwoven actions that will contribute to social justice, an end to rural poverty, and improvements in people's health and well-being.

The MDG target of halving the percentage of the population experiencing chronic hunger was met by 73 of 129 countries, and the number of the chronically hungry has fallen by 210 million. However, almost 800 million people still do not have enough food to eat to lead healthy and fulfilling lives. The 2030 Agenda for Sustainable Development provides the pathways to reach those who have so far been left behind. Through its goal of "Zero Hunger," the Agenda commits to ending hunger and malnutrition for all by 2030.

While this target is ambitious, it is also essential for delivering on the vision of the 2030 Agenda. The cost of hunger is measured not only in lost lives but also in unrealized potential for individuals. It affects the ability of communities, countries, and regions to meet their own social development goals, and it stunts their economic prosperity. How we choose to grow, process, distribute, and consume the food we eat will have a profound effect on people, planet, prosperity, and peace.

Delivering on the promise of the 2030 Agenda, therefore, will not be possible without rapid progress toward ending hunger and malnutrition; at the same time, a lasting end to hunger and undernutrition cannot be achieved in isolation. Without ending rural poverty and empowering women, without transforming agriculture (including smallholder farmers, fishers, pastoralists, forest collectors, and traditional and indigenous communities) and food systems in a way that makes them inclusive, resilient, and sustainable, and without preserving ecosystems and natural resources, we cannot achieve Zero Hunger. This also means addressing the underlying structural maintainers of poverty and hunger.

The Paris Climate Change Agreement underlines the links between safeguarding food security and ending hunger and the impacts of climate change. Poor nations and poor people across all nations will suffer first—and suffer most—from adverse changes in climate. The rural population, particularly women, children, small-scale producers, and laborers, are the worst affected. It is imperative that we factor the impact of climate into our thinking and actions as we work to implement the 2030 Agenda and deliver Zero Hunger. New approaches to agriculture and food systems that are people-centered, economically viable, and sustainable will be essential. Innovative approaches that make farming part of the solution to climate change, through adaptation and mitigation, can increase smallholder productivity and income while helping to meet countries' climate commitments.

Many of those suffering from hunger and malnutrition are trapped in protracted crises, caught up in recurrent natural disasters or conflicts. With almost 130 million hungry people living in countries affected by protracted crises, it is clear that when it comes to Zero Hunger, the promise to "leave no one behind" cannot be realized if the needs of these people are not met. The 2030 Agenda commits to addressing the needs of the most vulnerable first. The Sendai Framework for Disaster Risk Reduction underlines that disasters, many of which are exacerbated by climate change and increasing in frequency and intensity, significantly impede progress toward sustainable development. Building resilience among individuals (particularly women) and communities will give them the capabilities needed to respond to shocks and stresses in a way that does not undermine their longer-term development and ecosystem sustainability. However, people cannot be resilient if they are hungry and malnourished.

Innovative Approaches

Former UN Secretary-General Dag Hammarskjöld said, "I cannot do everything—but everybody can do something." The interconnected and transformative nature of the 2030 Agenda is ambitious and also achievable; however, it will not be realized by individual actors working alone. The full potential of the Agenda can only be borne out if the capacities of all segments of society are marshalled through new and innovative approaches that bring multiple actors together to align behind the common goal of ending poverty and hunger for all, and for good. This challenge is most acute in the hardest-to-reach populations and the most difficult contexts, but here too the resolve of all stakeholders must be harnessed. The United Nations system, governments, civil society, and the business community will have to cross traditional institutional boundaries, establish new partnerships, and pioneer new ways of working.

To engage actors at all levels, it is crucial to communicate the potential of the 2030 Agenda to transform the lives of individuals in both developing and developed countries, ensuring that all people understand what their governments have committed to, and allowing them to hold their leaders accountable. Individuals must be the drivers of the Agenda and not its passive subjects.

The experience of those working on food security, nutrition, and sustainable agriculture can provide examples of the type of innovative approaches needed to deliver on the 2030 Agenda. The last decade has witnessed the rise of different platforms, partnerships, and movements aimed at ending hunger and malnutrition in all its forms, from calorie deficiency and undernutrition to obesity, and at creating sustainable, resilient, and inclusive food systems. These experiments in partnership, collective impact, and multistakeholder stewardship provide lessons for our broader work in implementing the 2030 Agenda.

Zero Hunger Challenge

UN Secretary-General Ban Ki-moon's Zero Hunger Challenge was launched in 2012 at the United Nations Conference on Sustainable Development (Rio+20). Since then, it has galvanized a growing movement of multiple actors committed to making the vision of Zero Hunger and zero malnutrition a reality. The mission of the Zero Hunger Challenge is (1) to bring together all stakeholders to communicate the importance of food security; nutrition; and inclusive, sustainable, and resilient agriculture in fulfilling the promise of the 2030 Agenda; and (2) to encourage, engage, accelerate, and amplify collective action

to create food systems that deliver for all people. The Zero Hunger Challenge has inspired action at the country level and has ensured that food and nutrition security and sustainable agriculture remain high on the global development agenda.

Mirroring the nature of the 2030 Agenda, the Zero Hunger Challenge promotes integrated approaches that respond to the multiple, interconnected causes of hunger and malnutrition. The comprehensiveness of the approach reflects the reality of the challenges people face everywhere as they seek better agriculture and food systems that bring about improved nutrition and sustainable and resilient rural communities. It appreciates the role of food systems in safeguarding ecosystems and biodiversity and in minimizing negative impacts on climate. Grounded in the right of everyone to have access to adequate, safe, and nutritious food, the Zero Hunger vision can significantly contribute to the massive transformations needed to achieve this ambitious Agenda.

The Zero Hunger Challenge provides a principle-based platform for all actors—cities; governments; NGOs; businesses; the UN agencies, funds, and programs; research institutions; faith communities; philanthropies; chefs; students; and others—to align behind the common vision of ending hunger and poverty. Those supporting the Zero Hunger Challenge are encouraged to work to become Champions for Zero Hunger: to adopt innovative and visionary approaches at an institutional level to effect the transformative change envisaged.

The Zero Hunger Challenge also seeks to engage citizens in a Global Movement for Zero Hunger—harnessing the power of individuals to drive change and hold their leaders to account for their commitments. The Zero Hunger Challenge, with all its components, illustrates the kind of shift in thinking needed to end hunger and malnutrition and to achieve the transformations at the heart of the 2030 Agenda.

Compact2025

Another platform that exemplifies this shift in thinking is Compact2025, led by the International Food Policy Research Institute (IFPRI). Compact2025 underlines the importance of research and knowledge to deliver and accelerate development gains. It includes a global knowledge and innovation hub to experiment, learn, and share evidence for pragmatic, action-oriented strategies. The focus is on stimulating innovation, communicating research on what works, synthesizing lessons, collecting data, and monitoring progress. In doing so, the initiative provides a multisectoral and multistakeholder space that complements and leverages existing initiatives and networks.

Compact2025 can assist countries to refine and implement effective roadmaps for action by creating a network of researchers and policymakers who identify evidence and gaps, with a focus on implementation at the national and subnational levels. Success stories provide a strong base from which to learn. For example, expanding effective social protection programs and nutrition interventions has led to a dramatic drop in poverty, hunger, and undernutrition in Brazil. In China, helping smallholder farmers produce and purchase nutritious foods has boosted the income of the rural population. Such experiences of social protection–led strategies in Brazil or smallholder agriculture–led strategies in China shorten the learning curve and provide us with models that can be adapted and replicated for other countries. Complementing Compact2025, other IFPRI projects, such as *Nourishing Millions: Stories of Change in Nutrition* and the *Global Nutrition Report,* showcase success stories in nutrition, encouraging cross-border learning between countries and regions.

This type of knowledge-sharing provides far-reaching insight and value for the achievement of Zero Hunger and the 2030 Agenda. These projects highlight the potential of innovative approaches that bring together multiple actors in support of country-led action.

These are just two examples, however; many others exist, including the Committee on World Food Security (CFS), with its innovative multistakeholder mechanism, which allows all stakeholders to work together to develop and endorse policy recommendations and guidance on a wide range of food security and nutrition topics with a view to ensuring food security and nutrition for all. Additionally, the Scaling Up Nutrition (SUN) Movement brings together 57 countries, whose leaders are prioritizing efforts to address malnutrition. Since its inception in 2010, the SUN Movement has helped create a space for interaction between SUN countries and an increasingly diverse set of stakeholders, reflecting the multiplicity of tactics needed to fight malnutrition. Strong national movements have emerged that are taking their own country-led approaches and putting the systems in place that will effectively address their own unique challenges.

Role of Data

The UN Secretary-General believes that technology underpins the success of sustainable development and is urging the technology industry to help close the digital divide. Accessible, reliable data and information are essential for both decision-making and accountability. The SDGs demand a data revolution that delivers new technologies and innovations in data and data collection, which can complement traditional statistics. Ensuring no one is left behind will require data that are fully disaggregated by, among other things, age, gender, and income group. The Global Partnership for Sustainable Development Data supports data-driven decision-making by initiating more open, new, and usable data to help end extreme poverty, combat climate change, and ensure a healthy life for all.

Mobile technology has already transformed societies around the globe, including the poorest communities and countries. In many instances, it is empowering women, creating jobs, spurring financial independence, improving education, boosting agricultural production, and promoting better health. Mobile phones have enabled people to monitor elections, track and hold governments accountable, and even save lives in natural disasters. Now, through big data collection and analysis, the mobile industry is uniquely placed to help national governments work successfully toward achieving the SDGs.

The UN's Global Pulse initiative has demonstrated how data produced by mobile phones can help map and curb the spread of hunger and disease, inform crisis response, and understand the impact of climate change. By working with governments and the international community to expand connectivity, lower barriers to access, and ensure that tools and applications are developed with vulnerable communities in mind, the technology industry can significantly help in the implementation of the 2030 Agenda. This can happen through the responsible use of data for humanitarian and development purposes, while protecting individual privacy.

Accountability

Data and information are not only important means for implementation of the SDGs, but will also contribute to accountability. Aggregating high-quality, timely, and reliable data at all levels will be crucial for monitoring progress over the next 14 years. The Inter-Agency and Expert Group on Sustainable Development Goal Indicators has agreed on a set of indicators that will enable progress to be monitored across all SDGs, including Zero Hunger. National plans for their implementation need to include indicators relevant to national contexts.

The relationship between citizens and their leaders sits at the heart of SDG accountability. National follow-up and review processes should be comprehensive, participatory, open, and transparent. Civil society will have a central role in supporting citizens to hold governments to account.

For SDG2 and the other goals and targets that fall within its mandate, the Committee on World Food Security, structured to facilitate inclusive multistakeholder dialogue, can play an important role in global follow-up and review of the 2030 Agenda. The CFS is well placed to feed into the High-Level Political Forum on Sustainable Development in reviewing global progress, identifying lessons learned, providing recommendations and guidance, and identifying emerging issues and trends.

Conclusion

It is time to reinvent cooperation for development that builds on the important role of development assistance, while also engaging the whole of society in development work, to make sure that this Agenda really is at the center of all thinking and has the support of citizens that is so necessary for its implementation. Achieving the goal of Zero Hunger will require action that makes human dignity central to the 2030 Agenda. It will require sustainable and resilient climate-compatible agriculture and food systems that deliver for people and planet. It will require a renewed focus on how to respond to crises, while all the time building capabilities and resilience within individuals and communities. The comprehensive and universal nature of the Zero Hunger vision, grounded in the right of everyone to have access to safe and nutritious food, can significantly contribute to the massive transformations needed to realize this ambitious Agenda.

Given the complex and interconnected nature of the root causes of poverty and of hunger, delivering on the 2030 Agenda provides the best and surest way of getting to Zero Hunger faster. With collaboration at all levels and by utilizing advances in technology, employing innovative approaches, and ensuring that honesty, fairness, and justice are the underpinning principles of all our actions, we can transform our world and eradicate poverty and hunger for all, and for good. The goals are ambitious but by no means impossible. Together we can see this vision transform into reality.

04

Ses Soeun, 43, works in her rice field in Takeo Province, Cambodia, where local NGO, Centre d'Etude et de Développement Agricole Cambodgien (CEDAC), supports farmers' self-help initiatives for sharing affordable technologies for sustainable farming.

POLICY RECOMMENDATIONS

The 17 Sustainable Development Goals (SDGs) in the 2030 Agenda are inextricably linked with one another. To reach Goal 2: *End hunger, achieve food security and improved nutrition, and promote sustainable agriculture*, there must also be progress on the 16 other SDGs. With that in mind, the following recommendations emphasize the ways we can accelerate toward Zero Hunger in the context of the 2030 Agenda.

Make a Whole-of-Government Commitment to Zero Hunger

→ Integrate actions to deliver Zero Hunger into national development plans, with targets and indicators for hunger, food security, nutrition, and sustainable agriculture that are ambitious, appropriate to national contexts, and adequately financed.

→ Work with finance and planning ministries to estimate national budget requirements for investments to deliver Zero Hunger, and provide long-term funding pipelines to ensure that the investment plans can be sustainably delivered.

→ Prioritize policy coherence for sustainable development at national and international levels, so the intended impacts on reducing poverty and malnutrition are achieved.

→ Coordinate across key sectors and programs, including agriculture, nutrition, health, social protection, education, and water, sanitation and hygiene (WASH), to realize Zero Hunger.

→ Focus on poverty eradication and food and nutrition security within the national agricultural policies of countries affected by hunger.

→ Promote healthy, diversified, and sustainable diets through agricultural, environmental, and social policies that influence what food is produced and consumed.

Transform Our Food Systems to Transform Our World

→ Promote innovative approaches that are people-centered, economically viable, and sustainable to make farming part of the solution to climate change.

→ Improve infrastructure, technology, transportation, and distribution systems to minimize food loss, and develop effective policies to reduce food waste and conserve natural resources.

→ Prioritize agricultural production for food and nutrition security over the production of biomass for energy and material use in all agricultural policies.

→ Significantly reformulate agricultural policies in the Global North so they do not hinder the development of agricultural markets in the Global South.

→ Sustainably increase the agricultural productivity of smallholder farmers by securing access to land, markets, knowledge, and financial services.

Leave No One Behind

→ Address the structural inequalities that exist within international trade and financial systems.

→ Ensure national and international policies and programs are designed to improve the food and nutrition security of the most excluded population groups.

→ Strengthen the political, economic, and social participation of women and other excluded groups. Governments must abolish any discriminatory laws, policies, and practices leading to inequalities in access to education, health services, productive resources, and decision-making processes.

Measure, Monitor, and Hold to Account

→ International organizations and national governments must support the collection of independent, open, reliable, and timely data that are fully disaggregated by age, gender, income, race, ethnicity, migratory status, disability, and geographic location to enable inequalities to be tracked and addressed for disadvantaged populations.

→ In industrialized countries, indicators need to be developed to assess the impact of their policies at a global level, particularly in the Global South.

→ International organizations and civil society must hold governments to account by holding participatory and transparent national follow-up and review processes. This requires a free and enabling environment for civil society that is supported by all governments.

APPENDIXES

FORMULA FOR CALCULATION OF GLOBAL HUNGER INDEX SCORES

GHI scores are calculated using a three-step process:

First, values for the four component indicators are determined from the available data for each country. The indicators are

→ the percentage of the population that is undernourished,

→ the percentage of children under five years old who suffer from wasting (low weight for height),

→ the percentage of children under five years old who suffer from stunting (low height for age), and

→ the percentage of children who die before the age of five (child mortality).

STEP 1 Determine values for each of the component indicators:

PUN: proportion of the population that is undernourished (in %)

CWA: prevalence of wasting in children under five years old (in %)

CST: prevalence of stunting in children under five years old (in %)

CM: proportion of children dying before the age of five (in %)

Second, 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 between 1988 and 2013.[1] For example, the highest value for undernourishment estimated in this period is 76.5 percent, so the threshold for standardization was set a bit higher, at 80 percent.[2] 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 levels.

STEP 2 Standardize component indicators:

$$\text{Standardized PUN} = \frac{\text{PUN}}{80} \times 100$$

$$\text{Standardized CWA} = \frac{\text{CWA}}{30} \times 100$$

$$\text{Standardized CST} = \frac{\text{CST}}{70} \times 100$$

$$\text{Standardized CM} = \frac{\text{CM}}{35} \times 100$$

Third, 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 the child undernutrition indicators—child wasting and child stunting—each contribute one-sixth of the score.

STEP 3 Aggregate component indicators:

$$\frac{1}{3} \times \text{Standardized PUN}$$

$$+ \quad \frac{1}{6} \times \text{Standardized CWA}$$

$$+ \quad \frac{1}{6} \times \text{Standardized CST}$$

$$+ \quad \frac{1}{3} \times \text{Standardized CM}$$

$$= \quad \text{GHI score}$$

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.

[1] 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.

[2] 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.

DATA SOURCES FOR THE GLOBAL HUNGER INDEX COMPONENTS, 1992, 2000, 2008, AND 2016

GHI	Number of countries with GHI	Indicators	Reference years	Data sources
1992	96	Percentage of undernourished in the population[a]	1991–93[b]	FAO 2016c and authors' estimates
		Percentage of wasting in children under five	1990–94[c]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Percentage of stunting in children under five	1990–94[c]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Under-five mortality	1992	UN IGME 2015
2000	115	Percentage of undernourished in the population[a]	1999–01[b]	FAO 2016c and authors' estimates
		Percentage of wasting in children under five	1998–02[e]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Percentage of stunting in children under five	1998–02[e]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Under-five mortality	2000	UN IGME 2015
2008	118	Percentage of undernourished in the population[a]	2007–09[b]	FAO 2016c and authors' estimates
		Percentage of wasting in children under five	2006–10[f]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Percentage of stunting in children under five	2006–10[f]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Under-five mortality	2008	UN IGME 2015
2016	118	Percentage of undernourished in the population[a]	2014–16[b]	FAO 2016c and authors' estimates
		Percentage of wasting in children under five	2011–15[g]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Percentage of stunting in children under five	2011–15[g]	UNICEF/WHO/World Bank 2016; WHO 2016;[d] and authors' estimates
		Under-five mortality	2015	UN IGME 2015

[a] Proportion of the population with chronic calorie deficiency.

[b] Average over a three-year period. Data for 2014–2016 are provisional estimates.

[c] Data collected from the years closest to 1992; where data from 1990 and 1994 or 1991 and 1993 were available, an average was used.

[d] UNICEF/WHO/World Bank 2016 data are the primary data sources; and WHO 2016; UNICEF 2016a, 2013, and 2009; and MEASURE DHS 2016 are complementary data sources.

[e] Data collected from the years closest to 2000; where data from 1998 and 2002 or 1999 and 2001 were available, an average was used.

[f] Data collected from the years closest to 2008; where data from 2006 and 2010 or 2007 and 2009 were available, an average was used.

[g] The latest data gathered in this period.

DATA UNDERLYING THE CALCULATION OF THE 1992, 2000, 2008, AND 2016 GLOBAL HUNGER INDEX SCORES

Country	Proportion of undernourished in the population (%)				Prevalence of wasting in children under five years (%)				Prevalence of stunting in children under five years (%)				Under-five mortality rate (%)			
	'91–'93	'99–'01	'07–'09	'14–'16	'90–'94	'98–'02	'06–'10	'11–'15	'90–'94	'98–'02	'06–'10	'11–'15	1992	2000	2008	2015
Afghanistan	35.6	45.2	27.7	26.8	11.4*	13.5*	8.9*	9.5	51.1*	54.7*	51.3*	40.9	16.8	13.7	11.0	9.1
Albania	6.6*	6.1*	10.6*	8.5*	9.3*	12.2	9.4	6.0*	37.5*	39.2	23.1	15.7*	3.7	2.6	1.8	1.4
Algeria	7.4	8.7	6.1	2.9*	7.1	3.1	4.2*	4.1	22.9	23.6	13.2*	11.7	4.5	4.0	2.9	2.6
Angola	64.5	51.1	25.8	14.2	8.8*	8.6*	8.2	7.2*	52.8*	46.6*	29.2	33.5*	22.6	21.7	19.2	15.7
Argentina	1.7*	0.9*	1.5*	0.2*	1.6	1.7*	1.2	1.6*	7.1	8.7*	8.2	8.1*	2.6	2.0	1.5	1.3
Armenia	—	21.4	6.1	5.8	4.6*	2.5	4.2	3.3*	24.0*	17.7	20.8	12.9*	4.5	3.0	2.0	1.4
Azerbaijan	—	22.5	3.5*	1.7*	5.8*	9.0	6.8	3.1	29.1*	24.1	26.8	18.0	9.5	7.4	4.3	3.2
Bahrain	—	—	—	—	7.0*	6.7*	5.3*	5.2*	15.3*	13.7*	9.2*	9.0*	2.2	1.3	0.9	0.6
Bangladesh	33.2	23.1	17.0	16.4	16.1	13.8	17.5	14.3	71.5	54.0	43.2	36.4	13.2	8.8	5.6	3.8
Belarus	—	2.2*	1.5*	0.8*	2.9*	2.3*	2.1*	2.2*	6.7*	5.4*	3.9*	3.7*	1.7	1.4	0.7	0.5
Benin	27.7	23.9	13.0	7.5	11.5*	9.0	8.4	4.5	43.9*	39.1	44.7	34.0	17.0	14.5	11.6	10.0
Bhutan	—	—	—	—	5.9*	2.5	4.7	4.4*	60.3*	47.7	34.9	26.9*	12.2	8.0	4.8	3.3
Bolivia	35.9	34.6	28.0	15.9	3.6	1.6	1.4	1.6	37.1	33.1	27.2	18.1	11.5	8.0	5.2	3.8
Bosnia & Herzegovina	—	4.1*	2.2*	0.9*	5.9*	7.4	4.0	2.3	18.4*	12.1	11.8	8.9	—	0.9	0.8	0.5
Botswana	26.7	35.6	32.5	24.1	12.2*	6.0	7.2	5.8*	37.3*	29.1	31.4	23.2*	5.9	8.3	6.2	4.4
Brazil	14.3	12.3	2.6*	1.6*	2.7*	2.2*	1.6	1.6*	14.2*	10.1*	7.1	6.1*	5.5	3.2	1.8	1.6
Bulgaria	5.3*	7.7*	8.8*	9.0*	3.8*	3.4*	3.3*	3.2*	11.7*	9.9*	8.1*	7.5*	2.3	2.1	1.4	1.0
Burkina Faso	24.5	26.6	24.2	20.7	15.5	15.7	11.3	10.9	40.7	45.5	35.1	32.9	20.2	18.6	13.0	8.9
Burundi	—	—	—	—	7.2*	8.2	7.3*	6.1	59.1*	63.1	58.0*	57.5	17.4	15.2	10.9	8.2
Cambodia	29.7	32.0	17.5	14.2	13.9*	16.9	8.9	9.6	58.6*	49.2	39.5	32.4	11.8	10.8	5.2	2.9
Cameroon	37.5	32.3	16.9	9.9	4.5	6.2	7.3	5.2	36.3	38.2	36.4	31.7	14.3	15.0	11.3	8.8
Central African Republic	47.6	44.1	37.1	47.7	9.8*	10.5	12.2	7.4	42.8*	44.6	45.1	40.7	17.6	17.5	15.8	13.0
Chad	56.4	40.1	40.8	34.4	15.2*	13.9	15.7	13.0	44.6*	39.3	38.7	39.9	20.9	19.0	16.8	13.9
Chile	8.1	4.7*	4.0*	2.5*	0.5	0.5	0.3	0.3	4.2	2.9	2.0	1.8	1.6	1.1	0.9	0.8
China	24.5	16.2	14.1	9.3	3.9	2.5	2.6	2.1*	38.0	17.8	9.8	6.8*	5.2	3.7	1.9	1.1
Colombia	13.8	9.9	9.2	8.8	1.6*	1.1	0.9	1.0*	22.4*	18.1	12.7	11.5*	3.3	2.5	2.0	1.6
Comoros	—	—	—	—	5.3	13.3	9.2*	11.1	38.5	46.9	39.8*	32.1	11.7	10.1	9.1	7.4
Congo, Dem. Rep.	—	—	—	—	11.4*	20.9	14.0	8.1	44.1*	44.4	45.8	42.6	18.2	16.1	12.5	9.8
Congo, Rep.	43.3	35.9	33.3	30.5	6.5*	6.9*	7.3*	8.2	28.2*	28.7*	29.5*	21.2	9.7	12.2	7.3	4.5
Costa Rica	5.4	5.2	5.2	3.8*	2.1*	1.7*	1.0	1.1*	11.3*	8.0*	5.6	3.5*	1.6	1.3	1.0	1.0
Côte d'Ivoire	10.8	14.9	14.1	13.3	8.3	6.9	14.0	7.6	34.2	31.5	39.0	29.6	15.3	14.6	11.7	9.3
Croatia	—	10.5*	1.8*	2.5*	1.6	1.3*	1.2*	1.2*	1.3	1.4*	1.0*	1.1*	1.1	0.8	0.6	0.4
Cuba	9.0	5.6	2.2*	0.8*	3.3*	2.4	2.4*	2.1*	8.3*	7.0	6.0*	4.9*	1.2	0.8	0.6	0.6
Djibouti	76.8	52.4	26.2	15.9	18.1*	19.4	17.0	21.5	34.1*	26.5	33.0	33.5	11.5	10.1	8.1	6.5
Dominican Republic	32.1	30.7	20.5	12.3	2.2	1.5	2.3	2.4	21.2	8.0	10.1	7.1	5.6	4.1	3.5	3.1
Ecuador	19.4	17.8	17.1	10.9	3.0*	3.2	2.5*	2.3	37.3*	32.5	27.1*	25.2	5.2	3.4	2.7	2.2
Egypt, Arab Rep.	3.9*	2.7*	3.5*	1.9*	4.3	6.9	7.9	9.5	33.1	24.6	30.7	22.3	7.8	4.7	3.1	2.4
El Salvador	15.1	12.5	11.2	12.4	1.4	1.5	1.6	2.0	29.5	32.3	20.6	14.0	5.3	3.2	2.2	1.7
Eritrea	—	—	—	—	11.8	14.9	15.3	12.5*	69.6	43.7	50.3	49.1*	—	8.9	6.0	4.7
Estonia	—	4.2*	2.7*	2.0*	4.9*	2.7*	2.5*	2.6*	9.3*	4.3*	3.6*	3.2*	1.9	1.1	0.6	0.3
Ethiopia	75.2	57.9	41.1	32.0	9.2	12.4	10.7*	8.7	66.9	57.4	48.8*	40.4	19.5	14.5	8.7	5.9
Fiji	6.1	4.7*	4.5*	4.5*	9.8	8.0*	6.5*	6.6*	4.3	5.8*	4.1*	3.7*	2.8	2.5	2.4	2.2
Gabon	9.5	4.3*	4.2*	2.7*	3.9*	4.3	3.9*	3.4	26.7*	26.3	21.6*	17.5	9.1	8.5	6.9	5.1
Gambia, The	13.5	14.1	13.1	5.3	9.4*	8.9	8.4	11.1	31.5*	24.1	25.5	25.0	15.9	11.9	8.7	6.9
Georgia	—	14.8	6.8	7.4	3.6*	3.1	1.6	2.4*	22.6*	16.1	11.3	10.9*	4.7	3.6	1.9	1.2
Ghana	36.9	17.5	8.3	2.3*	10.9	9.9	8.7	4.7	41.2	31.3	28.6	18.7	12.0	10.1	8.0	6.2
Guatemala	15.4	22.1	15.1	15.6	2.2*	3.7	1.1	0.7	58.2*	50.0	48.0	46.5	7.3	5.1	3.7	2.9
Guinea	22.8	27.2	19.8	16.4	10.1*	10.3	8.3	7.8	39.9*	46.9	40.0	33.5	22.6	17.0	12.1	9.4
Guinea-Bissau	21.8	28.4	25.1	20.7	9.0*	11.8	4.8	6.0	42.6*	36.1	27.7	27.6	22.0	17.8	12.8	9.3
Guyana	22.0	10.4	11.2	10.6	9.2*	12.1	6.8	6.4	18.4*	13.8	18.9	12.0	5.7	4.7	4.2	3.9
Haiti	61.5	55.2	54.4	53.4	5.9	5.6	10.3	5.2	40.1	28.3	29.7	21.9	13.8	10.5	8.3	6.9
Honduras	22.7	19.0	15.3	12.2	2.1	1.2	1.4	1.4	42.5	34.5	29.9	22.7	5.3	3.7	2.7	2.0
India	22.2	17.0	17.2	15.2	20.0	17.1	20.0	15.1	61.9	54.2	47.9	38.7	11.9	9.1	6.6	4.8
Indonesia	19.0	17.2	17.7	7.6	14.1*	5.5	14.8	13.5	53.3*	42.4	40.1	36.4	7.7	5.2	3.6	2.7
Iran, Islamic Rep.	4.2*	5.2	6.6	3.2*	9.2*	6.1	4.0*	4.0	23.9*	20.4	7.8*	6.8	5.2	3.5	2.1	1.6
Iraq	13.5	24.6	26.6	22.8	4.4	6.6	5.8	7.4	27.6	28.3	27.5	22.6	5.2	4.5	3.8	3.2
Jamaica	10.5	7.8	7.6	8.1	3.2	3.0	2.1	3.0	14.7	6.6	5.2	5.7	2.9	2.2	1.9	1.6
Jordan	5.8	7.0	2.2*	1.8*	3.8	2.5	1.6	2.4	20.5	12.0	8.3	7.8	3.4	2.8	2.2	1.8
Kazakhstan	—	4.4*	3.2*	2.5*	4.9*	2.5	4.9	4.1	20.7*	13.9	17.5	13.1	5.3	4.4	2.6	1.4
Kenya	35.3	32.3	25.7	21.2	7.1	7.4	7.0	4.0	40.2	41.0	35.2	26.0	10.8	10.8	7.0	4.9
Kuwait	43.6	1.9*	1.7*	3.1*	5.1*	2.2	2.2	2.4	14.5*	4.0	5.1	5.8	1.6	1.3	1.1	0.9
Kyrgyz Republic	—	15.2	9.1	6.0	8.5	3.5*	1.3	2.8	27.4*	27.1*	22.6	12.9	6.5	4.9	3.4	2.1
Lao PDR	43.6	39.2	24.7	18.5	11.8	17.5	7.3	6.4	53.6	48.2	47.6	43.8	15.4	11.8	8.6	6.7
Latvia	—	5.4*	1.3*	1.4*	5.4*	2.8*	2.5*	2.4*	7.1*	5.0*	3.5*	3.2*	2.3	1.7	1.1	0.8
Lebanon	2.1*	1.8*	3.7*	3.0*	5.1*	4.6*	4.3*	4.0*	20.1*	15.8*	13.8*	12.0*	3.0	2.0	1.1	0.8
Lesotho	15.2	13.0	11.2	11.2	3.2	6.7	3.9	2.8	39.2	53.0	42.0	33.2	8.9	11.7	11.7	9.0
Liberia	27.6	36.5	36.6	31.9	6.7*	7.4	7.8	5.6	42.7*	45.3	39.4	32.1	25.5	18.2	10.1	7.0

DATA UNDERLYING THE CALCULATION OF THE 1992, 2000, 2008, AND 2016 GLOBAL HUNGER INDEX SCORES

Country	Proportion of undernourished in the population (%)				Prevalence of wasting in children under five years (%)				Prevalence of stunting in children under five years (%)				Under-five mortality rate (%)			
	'91–'93	'99–'01	'07–'09	'14–'16	'90–'94	'98–'02	'06–'10	'11–'15	'90–'94	'98–'02	'06–'10	'11–'15	1992	2000	2008	2015
Libya	—	—	—	—	—	7.4*	6.5	6.4*	—	26.2*	21.0	23.3*	3.8	2.8	1.9	1.3
Lithuania	—	3.2*	2.1*	1.4*	5.8*	2.7*	2.5*	2.4*	9.3*	5.2*	3.6*	3.1*	2.0	1.2	0.8	0.5
Macedonia, FYR	—	8.4*	3.7*	2.4*	3.9*	1.7	2.8*	4.3	12.0*	8.0	8.2*	7.7	3.4	1.6	1.2	0.6
Madagascar	29.1	34.8	31.9	33.0	6.4	10.9*	10.3*	9.5*	60.9	55.6*	49.2	48.6*	15.1	10.9	6.7	5.0
Malawi	45.7	28.6	23.1	20.7	6.6	6.8	1.8	3.8	55.8	54.6	48.8	42.4	22.7	17.4	10.0	6.4
Malaysia	4.1*	2.6*	3.9*	2.0*	18.2*	15.3	12.4*	10.2*	28.7*	20.7	17.2	10.8*	1.5	1.0	0.8	0.7
Mali	17.3	13.9	6.3	4.1*	15.1*	12.6	15.3	11.6*	46.4*	42.7	38.5	37.7*	24.7	22.0	14.8	11.5
Mauritania	14.4	11.5	9.2	5.6	17.4	15.3	8.1	11.6	54.8	39.5	23.0	22.0	11.5	11.4	10.3	8.5
Mauritius	8.0	7.1	5.2	4.9*	15.8*	15.0*	14.9*	13.3*	14.1*	12.9*	11.8*	10.2*	2.1	1.9	1.6	1.4
Mexico	6.8	4.4*	4.6*	4.3*	3.4*	2.3	2.0	1.6	24.5*	21.7	15.5	13.6	4.2	2.6	1.8	1.3
Moldova	—	17.0*	15.2*	12.2*	5.2*	3.9*	3.3*	1.9	13.6*	12.3*	8.4*	6.4	3.4	3.1	1.8	1.6
Mongolia	37.1	38.2	30.1	20.5	2.4	7.1	1.7	1.0	33.1	29.8	15.5	10.8	9.8	6.3	3.5	2.2
Montenegro	—	—	0.2*	0.3*	—	—	4.2	2.8	—	—	7.9	9.4	—	—	0.8	0.5
Morocco	6.7	6.5	5.4	4.4*	2.6	4.2*	3.5*	2.3	29.9	24.3*	18.3*	14.9	7.3	5.0	3.6	2.8
Mozambique	58.8	42.0	35.0	25.3	10.5*	6.8	4.2	6.1	55.3*	49.6	43.7	43.1	23.2	17.1	11.4	7.9
Myanmar	62.7	52.4	26.4	14.2	12.7	10.7	7.9	7.1*	53.6	40.8	35.1	31.0*	10.4	8.2	8.7	5.0
Namibia	36.7	30.4	30.5	42.3	9.6	10.0	7.5	7.1	35.7	29.5	29.6	23.1	7.0	7.6	6.0	4.5
Nepal	23.4	22.2	13.3	7.8	11.9*	11.3	12.7	11.3	61.6*	57.1	49.3	37.4	12.7	8.1	5.1	3.6
Nicaragua	52.7	34.8	21.5	16.6	2.4	2.3	1.5	1.1*	29.6	25.2	23.0	15.5*	6.1	4.0	2.8	2.2
Niger	31.0	22.8	12.8	9.5	18.9	16.2	12.9	18.7	48.3	54.2	47.0	43.0	31.4	22.7	14.1	9.6
Nigeria	17.9	9.2	5.9	7.0	20.6	17.6	14.4	7.9	43.8	39.7	41.0	32.9	21.2	18.7	14.1	10.9
North Korea	24.7	37.9	39.5	41.6	9.1*	12.2	5.2	4.0	43.5*	51.0	32.4	27.9	5.5	6.0	3.2	2.5
Oman	19.0	13.2	7.9	4.1*	7.8	7.3	7.1	7.5	24.2	12.9	9.8	14.1	3.2	1.7	1.2	1.2
Pakistan	25.7	22.4	22.2	22.0	12.5	14.2	12.6*	10.5	54.5	41.5	40.6*	45.0	13.4	11.2	9.6	8.1
Panama	25.9	27.4	18.4	9.5	1.6*	1.3*	1.2	0.9*	28.0*	22.3*	19.1	13.6*	2.9	2.6	2.1	1.7
Papua New Guinea	—	—	—	—	8.6*	8.3*	8.1*	14.3	50.1*	48.0*	47.2*	49.5	8.7	7.9	7.0	5.7
Paraguay	19.9	13.3	11.9	10.4	0.6	2.2*	1.7*	2.6	18.3	17.7*	14.1*	10.9	4.3	3.4	2.6	2.1
Peru	28.1	21.6	15.4	7.5	1.9	1.1	0.8	0.6	37.3	31.3	28.2	14.6	7.1	3.9	2.3	1.7
Philippines	27.0	21.3	13.8	13.5	8.8	8.0	6.9	7.9	40.9	38.3	32.3	30.3	5.2	4.0	3.3	2.8
Qatar	—	—	—	—	—	2.7*	2.0*	2.0*	—	3.1*	1.1*	1.0*	1.8	1.2	1.0	0.8
Romania	2.9*	1.4*	0.6*	0.8*	3.3	4.3	3.3*	3.3*	11.2	12.8	9.8*	9.5*	3.5	2.7	1.6	1.1
Russian Federation	—	4.9*	1.3*	0.7*	5.6*	4.4*	3.8*	4.5*	17.8*	15.9*	12.0*	12.8*	2.6	2.3	1.4	1.0
Rwanda	53.9	60.6	42.8	31.6	5.0	8.3	4.3*	2.2	56.8	47.5	43.0*	37.9	16.6	18.4	7.8	4.2
Saudi Arabia	3.8*	1.2*	2.9*	1.2*	2.9	7.3*	6.1*	3.6*	21.4	15.5*	11.9*	3.4*	3.7	2.3	1.8	1.5
Senegal	25.5	29.4	16.6	10.0	9.0	10.0	8.3*	5.8	34.4	29.5	23.8*	19.4	13.9	13.5	7.6	4.7
Serbia	—	—	7.4*	6.9*	—	—	4.0	3.9	—	—	7.4	6.0	—	—	0.8	0.7
Sierra Leone	41.7	38.0	32.4	22.3	10.2	11.6	10.5	9.4	40.9	38.4	37.4	37.9	26.3	23.6	17.9	12.0
Slovak Republic	—	5.4*	5.1*	4.8*	5.3*	3.9*	3.2*	2.9*	10.1*	9.0*	5.2*	4.2*	—	1.2	0.9	0.7
Somalia	—	—	—	—	—	19.3	14.9	—	—	29.2	25.9	—	17.5	17.4	16.9	13.7
South Africa	5.3*	4.6*	3.7*	1.7*	5.9*	4.5	4.7	3.4*	31.5	30.1	23.9	22.2*	5.8	7.5	6.8	4.1
South Sudan	—	—	—	—	—	—	—	23.8*	—	—	—	33.7*	—	—	—	9.3
Sri Lanka	31.3	29.9	27.6	22.0	17.5	15.5	13.3	21.4	29.7	18.4	18.3	14.7	2.1	1.6	1.2	1.0
Sudan	—	—	—	—	—	—	—	16.3	—	—	—	38.2	—	—	—	7.0
Suriname	14.5	14.1	10.1	8.0	7.0*	7.0	4.9	4.9*	14.0*	14.5	9.8	8.6*	4.5	3.4	2.6	2.1
Swaziland	16.6	21.7	21.3	26.8	2.2*	1.7	1.1	2.0	38.2*	36.6	40.4	25.5	7.9	12.8	11.4	6.1
Syrian Arab Republic	—	—	—	—	10.0	4.9	11.5	—	32.9	24.3	27.5	—	3.4	2.3	1.7	1.3
Tajikistan	—	38.8	38.2	33.2	11.0*	9.4	5.5	9.9	41.1*	42.1	34.0	26.8	11.6	9.3	5.6	4.5
Tanzania	24.8	36.8	33.8	32.1	7.9	5.6	2.7	3.8	49.7	48.3	43.0	34.7	16.3	13.1	7.4	4.9
Thailand	33.2	19.0	9.7	7.4	7.3	6.4*	4.7	6.7	21.1	19.5*	15.7	16.3	3.3	2.3	1.6	1.2
Timor-Leste	—	—	33.1	26.9	—	13.7	24.5	11.0	—	55.7	53.9	50.2	—	—	7.0	5.3
Togo	41.3	29.2	22.3	11.4	11.6*	12.4	6.0	6.7	33.8*	33.2	26.9	27.5	14.2	12.1	9.6	7.8
Trinidad & Tobago	13.2	13.0	10.7	7.4	6.6*	5.2	4.9*	4.7*	8.0*	5.3	3.9*	3.6*	3.0	2.9	2.5	2.0
Tunisia	1.0*	0.8*	0.9*	0.4*	5.3*	2.9	3.4	2.8	21.7*	16.8	9.0	10.1	5.3	3.2	1.9	1.4
Turkey	0.5*	0.8*	0.3*	0.2*	3.8	3.0	0.8	1.7	24.1	19.1	12.3	9.5	6.6	4.0	2.2	1.4
Turkmenistan	—	9.0	4.9*	3.2*	8.4*	7.1	7.2	5.5*	28.8*	28.1	18.9	12.9*	9.0	8.2	6.4	5.1
Uganda	24.4	28.4	24.8	25.5	6.0*	5.0	6.3	4.3	44.7*	44.8	38.7	34.2	18.0	14.8	8.6	5.5
Ukraine	—	4.1*	1.3*	1.2*	2.0*	8.2	1.5*	1.6*	9.8*	22.9	7.5*	7.6*	2.0	1.9	1.3	0.9
Uruguay	6.4	4.0*	3.7*	3.3*	2.7*	2.3	2.5	1.3	15.7*	12.8	10.8	10.7	2.2	1.7	1.3	1.0
Uzbekistan	—	11.5	9.4	4.2*	7.6*	8.9	4.5	5.8*	29.8*	25.3	19.6	18.7*	7.1	6.3	4.9	3.9
Venezuela, RB	13.2	16.6	2.6*	1.3*	4.3	3.9	4.5	3.5*	18.3	17.4	14.6	12.8*	2.8	2.2	1.7	1.5
Vietnam	44.8	28.1	16.8	11.0	6.7	9.0	9.7	5.7	61.4	43.0	30.5	19.4	4.7	3.4	2.6	2.2
Yemen, Rep.	28.6	29.6	27.7	26.1	14.3	15.8*	14.4*	16.2	52.4	54.6*	47.0*	46.8	12.0	9.5	6.1	4.2
Zambia	34.9	42.9	53.5	47.8	6.3	5.7	5.6	6.3	46.4	57.9	45.8	40.0	18.9	16.3	9.3	6.4
Zimbabwe	44.4	43.7	37.3	33.4	5.3	8.5	3.8	3.2	28.5	33.7	35.1	26.8	8.3	10.6	9.5	7.1

Note: Undernourishment data for 2014–2016 are provisional estimates; — = data not available or not presented. Some countries, such as the post-Soviet states prior to 1991, did not exist in the present borders in the given year or reference period.
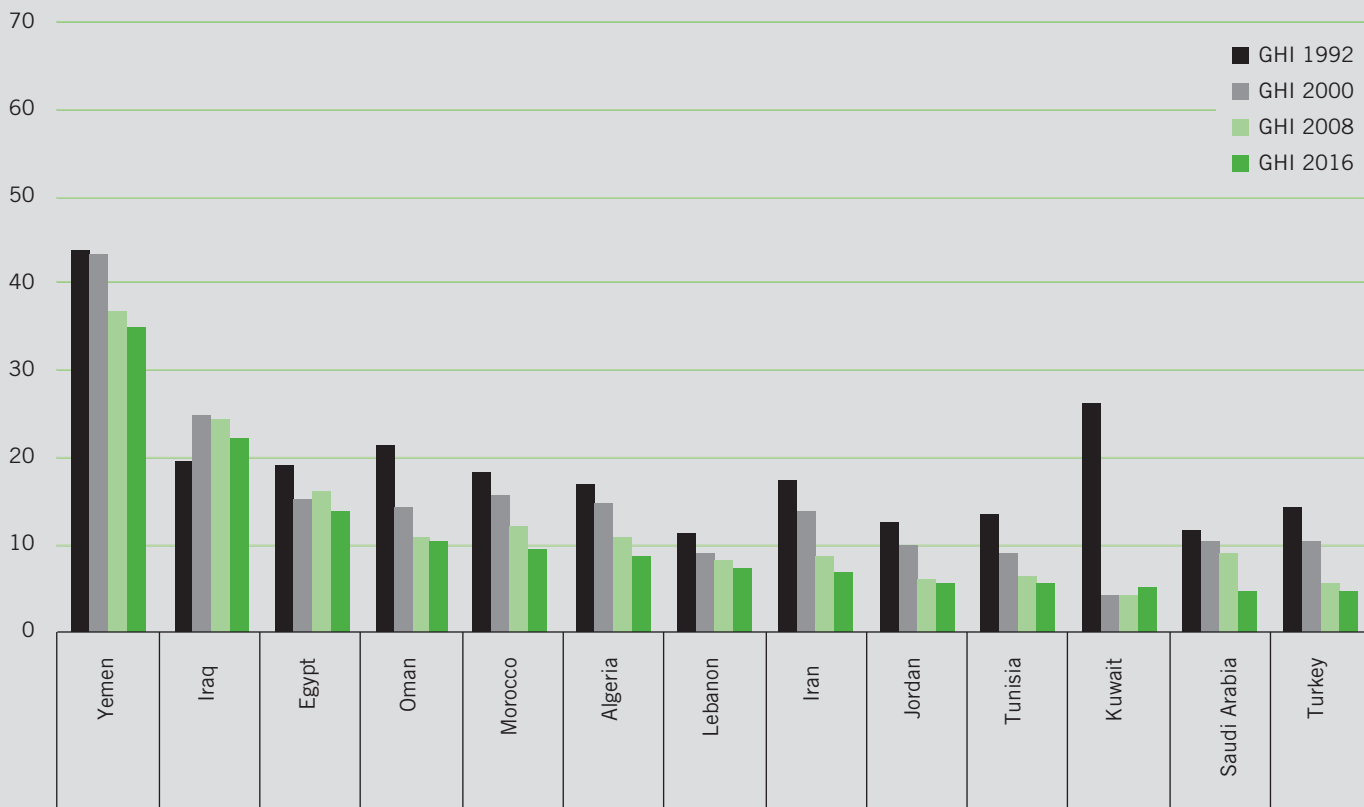
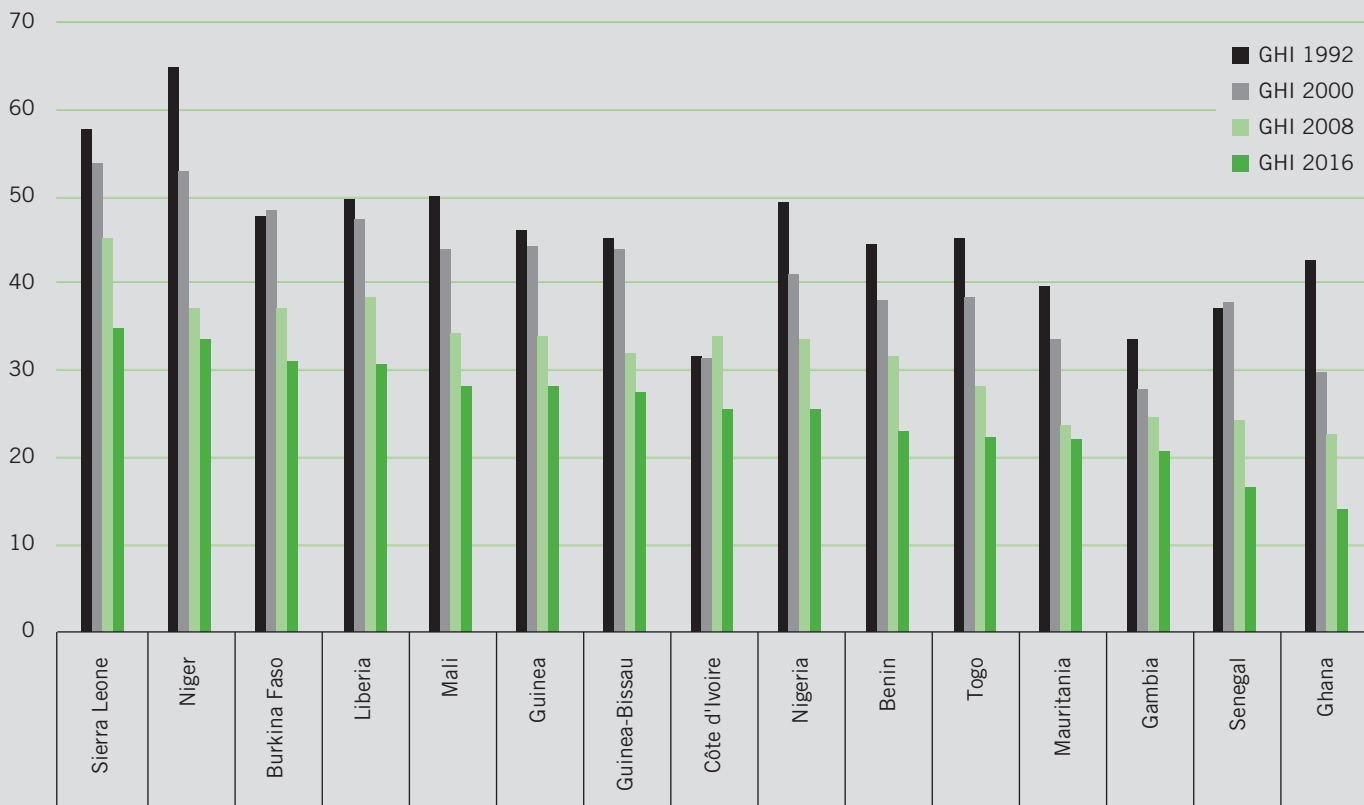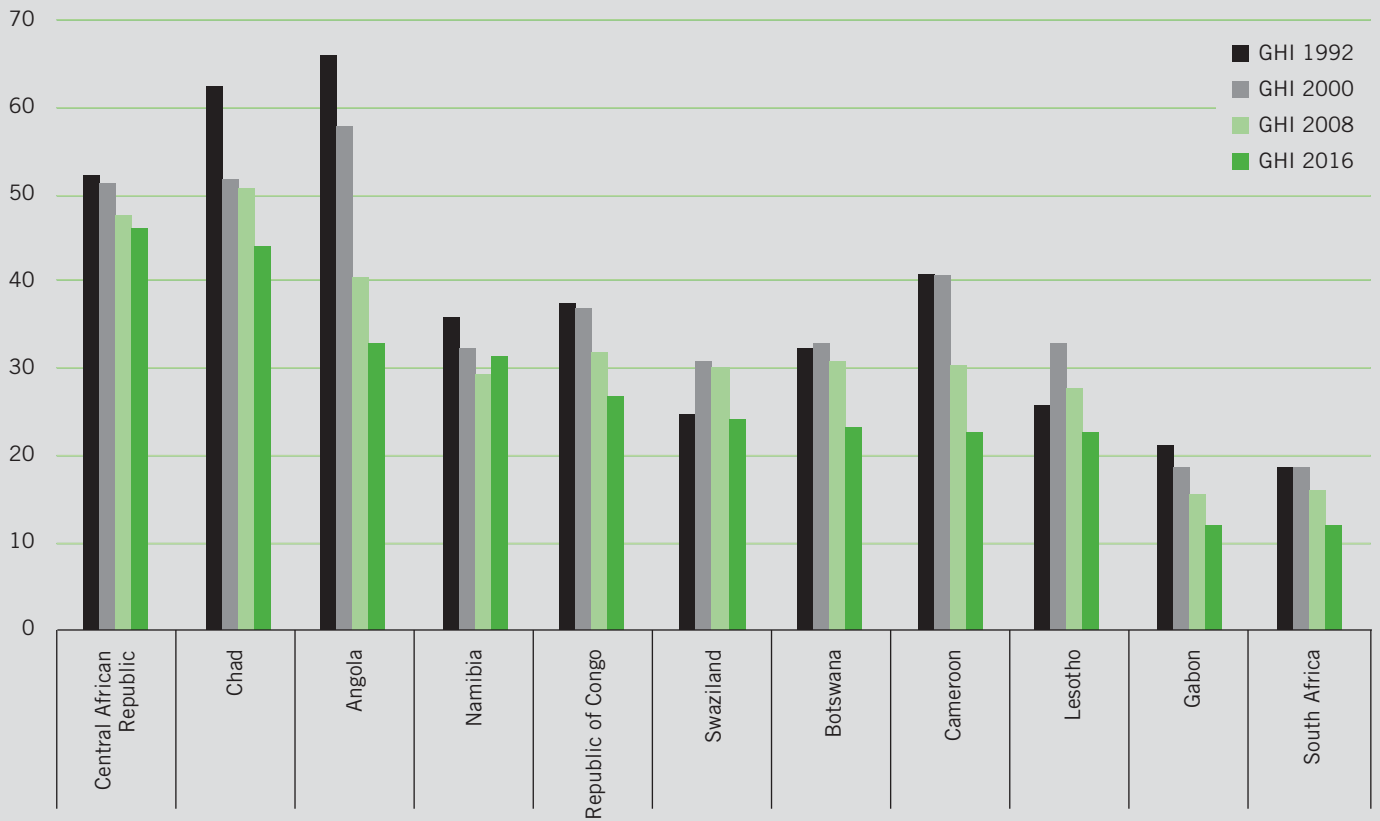* IFPRI estimates.

2016 GLOBAL HUNGER INDEX SCORES

Country with data from	1992 '90–'94	2000 '98–'02	2008 '06–'10	2016 '11–'16	Country with data from	1992 '90–'94	2000 '98–'02	2008 '06–'10	2016 '11–'16
Afghanistan	49.3	52.4	39.2	34.8	Liberia	49.7	47.4	38.6	30.7
Albania	20.4	21.1	16.9	11.9	Libya	—	—	—	—
Algeria	16.8	14.8	10.8	8.7	Lithuania	—	5.2	<5	<5
Angola	65.9	57.8	40.5	32.8	Macedonia, FYR	—	7.9	6.2	5.8
Argentina	5.8	5.3	<5	<5	Madagascar	44.6	44.2	37.1	35.4
Armenia	—	17.4	11.7	8.7	Malawi	57.6	45.3	31.8	26.9
Azerbaijan	—	27.2	15.7	9.8	Malaysia	20.1	15.5	13.4	9.7
Bahrain	—	—	—	—	Mali	50.2	43.9	34.4	28.1
Bangladesh	52.4	38.5	32.4	27.1	Mauritania	39.7	33.6	23.6	22.1
Belarus	—	<5	<5	<5	Mauritius	17.5	16.2	14.8	13.2
Benin	44.6	38.1	31.8	23.2	Mexico	14.6	10.8	8.4	7.2
Bhutan	—	—	—	—	Moldova	—	15.1	11.9	9.2
Bolivia	36.7	30.8	23.9	15.4	Mongolia	34.0	33.0	20.5	13.8
Bosnia & Herzegovina	—	9.6	6.7	<5	Montenegro	—	—	5.1	<5
Botswana	32.4	33.0	30.9	23.0	Morocco	18.3	15.6	12.0	9.3
Brazil	16.1	11.8	5.4	<5	Mozambique	65.6	49.4	38.2	31.7
Bulgaria	9.3	9.5	8.8	8.3	Myanmar	55.8	45.3	32.0	22.0
Burkina Faso	47.7	48.4	37.1	31.0	Namibia	35.8	32.5	29.6	31.4
Burundi	—	—	—	—	Nepal	43.1	36.8	29.2	21.9
Cambodia	45.3	44.7	26.6	21.7	Nicaragua	36.1	25.6	17.9	13.3
Cameroon	40.4	40.3	30.5	22.9	Niger	64.8	53.0	37.1	33.7
Central African Republic	52.2	51.5	48.0	46.1	Nigeria	49.5	40.9	33.6	25.5
Chad	62.5	51.9	50.9	44.3	North Korea	30.9	40.4	30.1	28.6
Chile	6.2	<5	<5	<5	Oman	21.1	14.2	10.7	10.4
China	26.4	15.9	11.5	7.7	Pakistan	43.4	37.8	35.1	33.4
Colombia	15.1	11.4	9.3	8.5	Panama	21.1	19.9	14.9	9.3
Comoros	—	—	—	—	Papua New Guinea	—	—	—	—
Congo, Dem. Rep.	—	—	—	—	Paraguay	17.1	14.2	11.7	10.4
Congo, Rep.	37.6	37.2	31.9	26.6	Peru	28.4	20.8	15.8	8.6
Costa Rica	7.6	6.3	5.0	<5	Philippines	30.8	26.2	20.4	19.9
Côte d'Ivoire	31.8	31.4	34.1	25.7	Qatar	—	—	—	—
Croatia	—	6.2	<5	<5	Romania	9.0	8.6	5.9	5.5
Cuba	8.7	6.1	<5	<5	Russian Federation	—	10.5	6.8	6.8
Djibouti	61.1	48.5	35.9	32.7	Rwanda	54.6	58.7	37.9	27.4
Dominican Republic	25.0	19.4	15.6	11.1	Saudi Arabia	11.8	10.4	9.1	<5
Ecuador	23.6	20.2	17.5	13.9	Senegal	37.1	37.7	24.4	16.5
Egypt, Arab Rep.	19.3	15.3	16.1	13.7	Serbia	—	—	7.8	7.1
El Salvador	19.1	16.8	12.6	11.2	Sierra Leone	57.8	53.9	45.3	35.0
Eritrea	—	—	—	—	Slovak Republic	—	7.7	6.0	5.3
Estonia	—	5.3	<5	<5	Somalia	—	—	—	—
Ethiopia	70.9	58.5	43.0	33.4	South Africa	18.5	18.7	16.3	11.8
Fiji	11.7	10.2	8.7	8.5	South Sudan	—	—	—	—
Gabon	21.1	18.5	15.6	12.0	Sri Lanka	31.8	27.0	24.4	25.5
Gambia, The	33.5	27.9	24.5	20.9	Sudan	—	—	—	—
Georgia	—	15.2	8.2	8.2	Suriname	17.5	16.5	11.7	10.1
Ghana	42.7	29.9	22.7	13.9	Swaziland	24.8	30.9	30.0	24.2
Guatemala	28.4	28.0	21.9	20.7	Syrian Arab Republic	—	—	—	—
Guinea	46.1	44.4	33.9	28.1	Tajikistan	—	40.3	32.4	30.0
Guinea-Bissau	45.2	43.9	31.9	27.4	Tanzania	42.1	42.4	32.9	28.4
Guyana	24.1	18.8	16.9	14.5	Thailand	26.1	18.3	11.9	11.8
Haiti	51.6	42.8	43.4	36.9	Timor-Leste	—	—	46.9	34.3
Honduras	25.8	20.3	16.8	13.2	Togo	45.2	38.5	28.2	22.4
India	46.4	38.2	36.0	28.5	Trinidad & Tobago	13.9	12.3	10.5	8.5
Indonesia	35.8	25.3	28.6	21.9	Tunisia	13.6	9.0	6.2	5.5
Iran, Islamic Rep.	17.5	13.7	8.8	6.7	Turkey	14.3	10.4	5.6	<5
Iraq	19.6	24.9	24.5	22.0	Turkmenistan	—	22.2	16.6	12.3
Jamaica	12.4	8.6	7.4	7.9	Uganda	41.3	39.4	31.2	26.4
Jordan	12.6	9.8	5.9	5.7	Ukraine	—	13.5	<5	<5
Kazakhstan	—	10.7	10.7	7.8	Uruguay	10.0	7.6	6.7	5.6
Kenya	38.5	37.6	29.6	21.9	Uzbekistan	—	21.8	15.8	13.1
Kuwait	26.0	<5	<5	<5	Venezuela, RB	14.9	15.3	8.7	7.0
Kyrgyz Republic	—	19.4	13.1	9.1	Vietnam	41.5	30.2	22.1	14.5
Lao PDR	52.2	48.8	33.9	28.1	Yemen, Rep.	43.8	43.2	36.5	35.0
Latvia	—	6.6	<5	<5	Zambia	47.1	50.4	45.2	39.0
Lebanon	11.4	9.0	8.3	7.1	Zimbabwe	36.1	41.0	35.1	28.8
Lesotho	25.9	32.9	28.0	22.7					

Note: — = Data are not available or not presented. Some countries, such as the post-Soviet states prior to 1991, did not exist in their present borders in the given year or reference period.
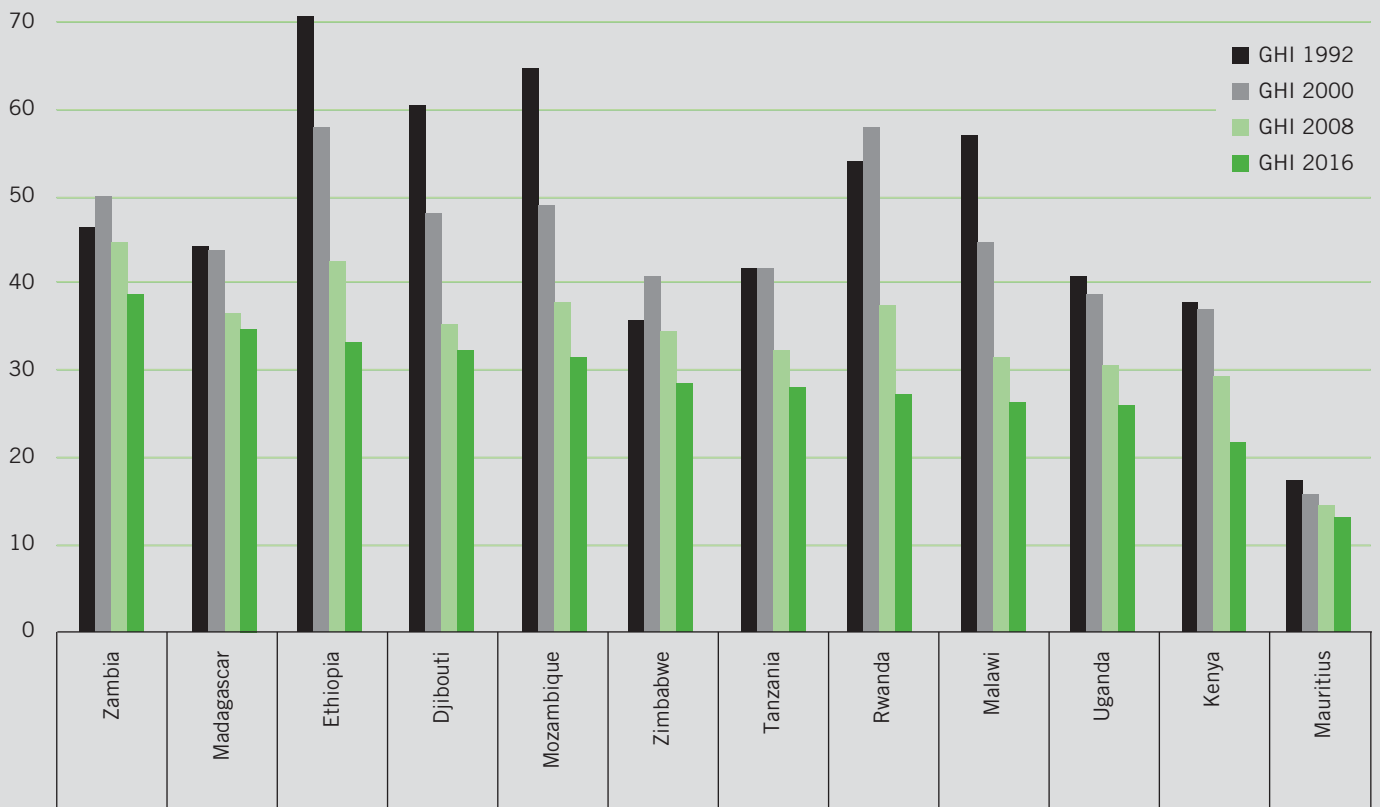
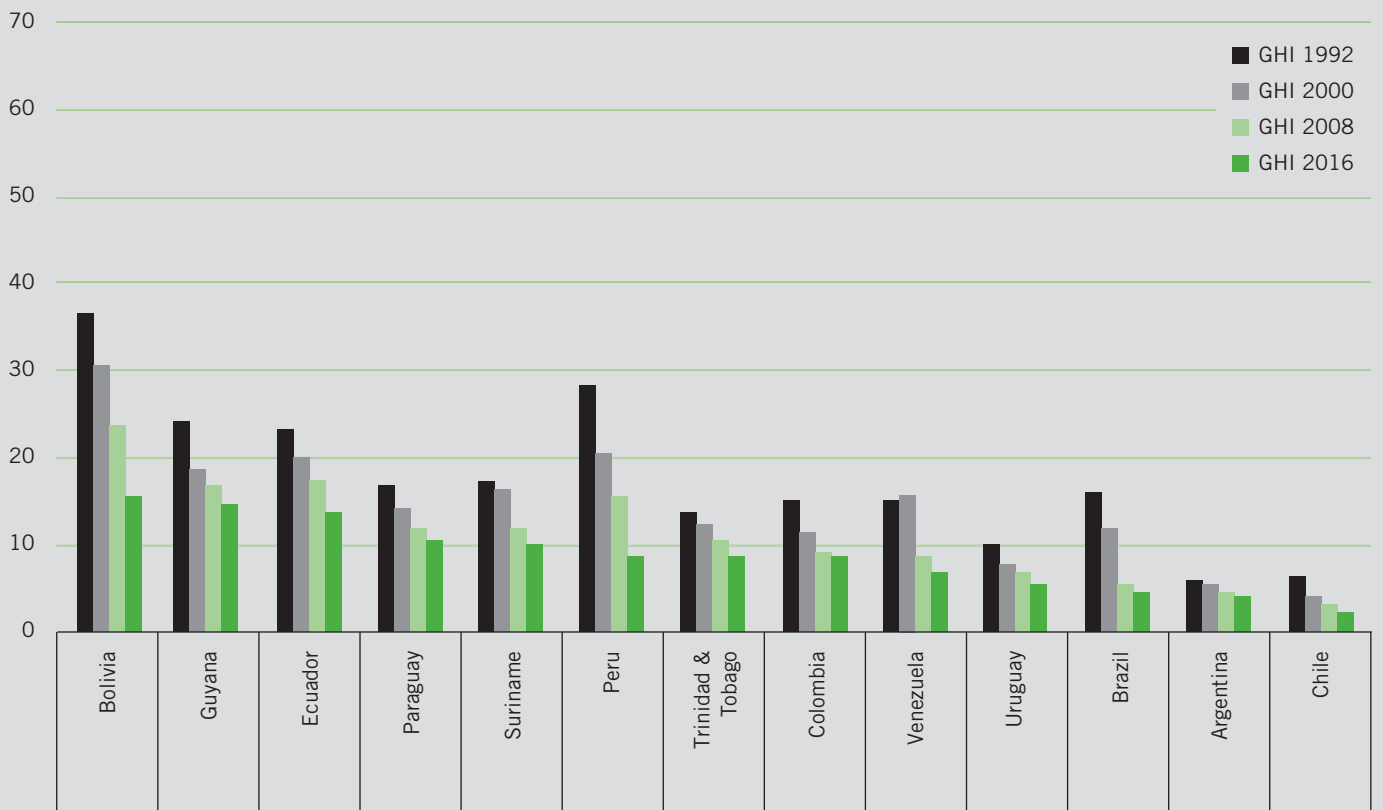## NEAR EAST AND NORTH AFRICA
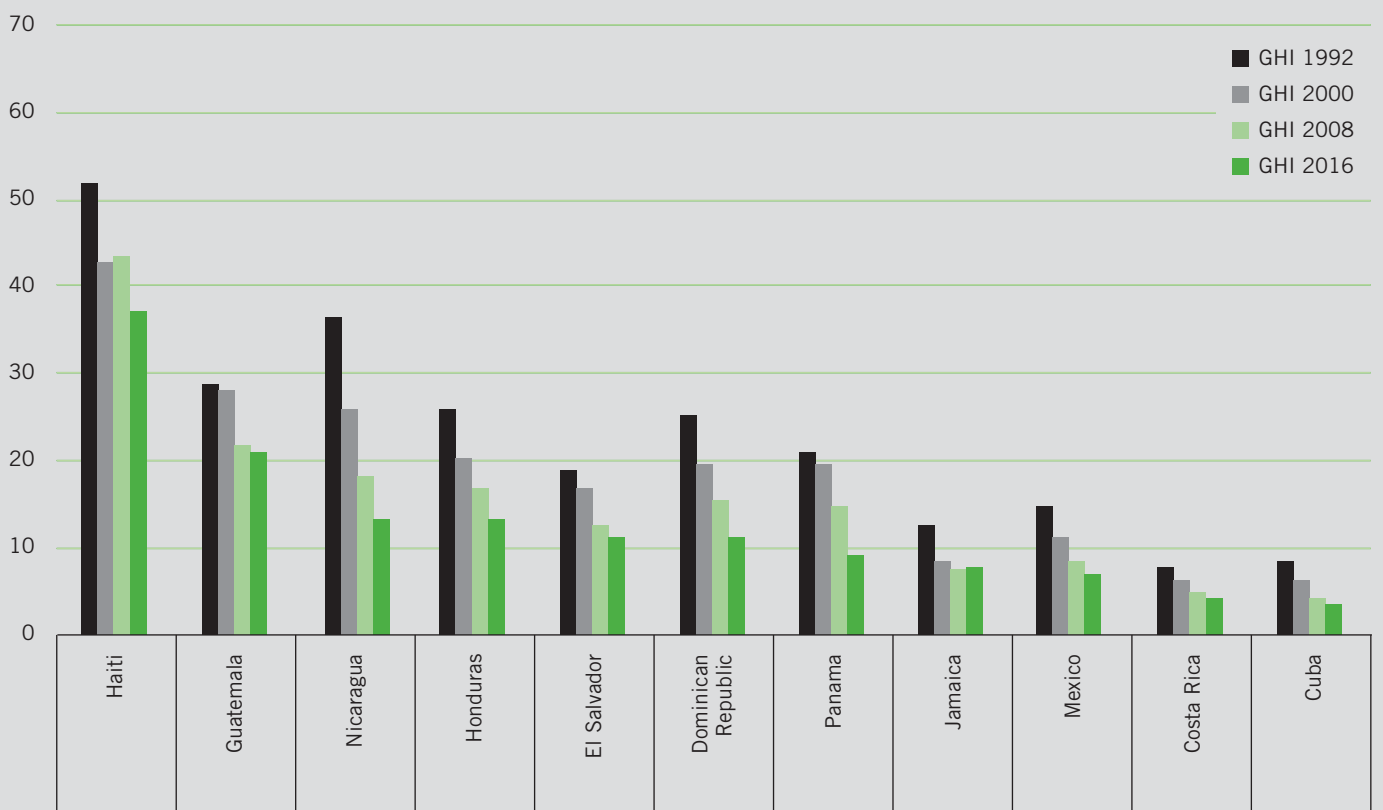

WEST AFRICA

CENTRAL AND SOUTHERN AFRICA

70

60

50

40

30

20

10

0

- ■ GHI 1992
- ■ GHI 2000
- ■ GHI 2008
- ■ GHI 2016

Central African Republic

Chad

Angola

Namibia

Republic of Congo

Swaziland

Botswana

Cameroon

Lesotho

Gabon

South Africa

EAST AFRICA

70

60

50

40

30

20

10

0

- ■ GHI 1992
- ■ GHI 2000
- ■ GHI 2008
- ■ GHI 2016

Zambia

Madagascar

Ethiopia

Djibouti

Mozambique

Zimbabwe

Tanzania

Rwanda

Malawi

Uganda

Kenya

Mauritius

Country Trends for the 1992, 2000, 2008 and 2016 GHI Scores l Appendix E l 2016 Global Hunger Index

SOUTH AMERICA

Legend: GHI 1992, GHI 2000, GHI 2008, GHI 2016

Countries: Bolivia, Guyana, Ecuador, Paraguay, Suriname, Peru, Trinidad & Tobago, Colombia, Venezuela, Uruguay, Brazil, Argentina, Chile

CENTRAL AMERICA AND THE CARIBBEAN

Legend: GHI 1992, GHI 2000, GHI 2008, GHI 2016

Countries: Haiti, Guatemala, Nicaragua, Honduras, El Salvador, Dominican Republic, Panama, Jamaica, Mexico, Costa Rica, Cuba

SOUTH, EAST, AND SOUTHEAST ASIA

Legend: GHI 1992, GHI 2000, GHI 2008, GHI 2016

EASTERN EUROPE AND THE COMMONWEALTH OF INDEPENDENT STATES

Legend: GHI 1992, GHI 2000, GHI 2008, GHI 2016
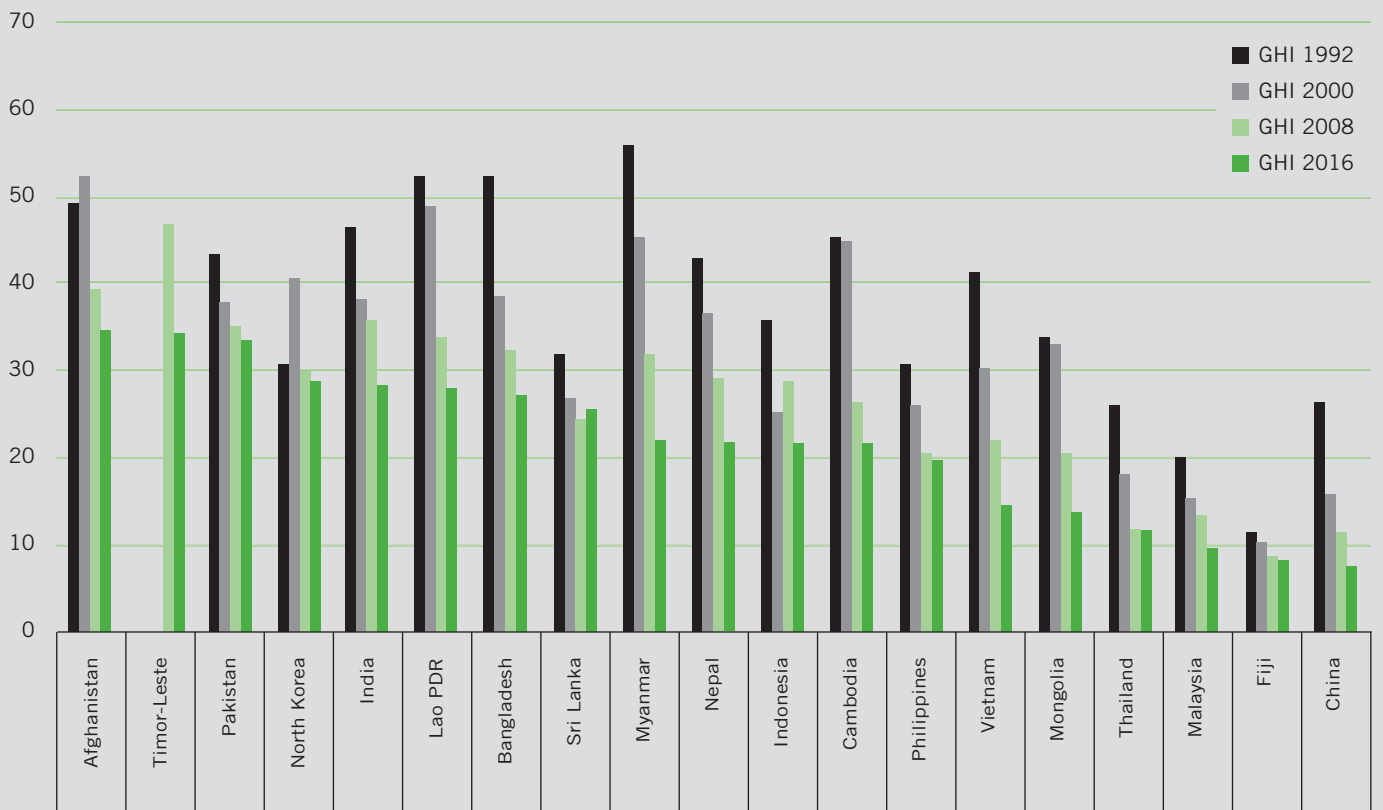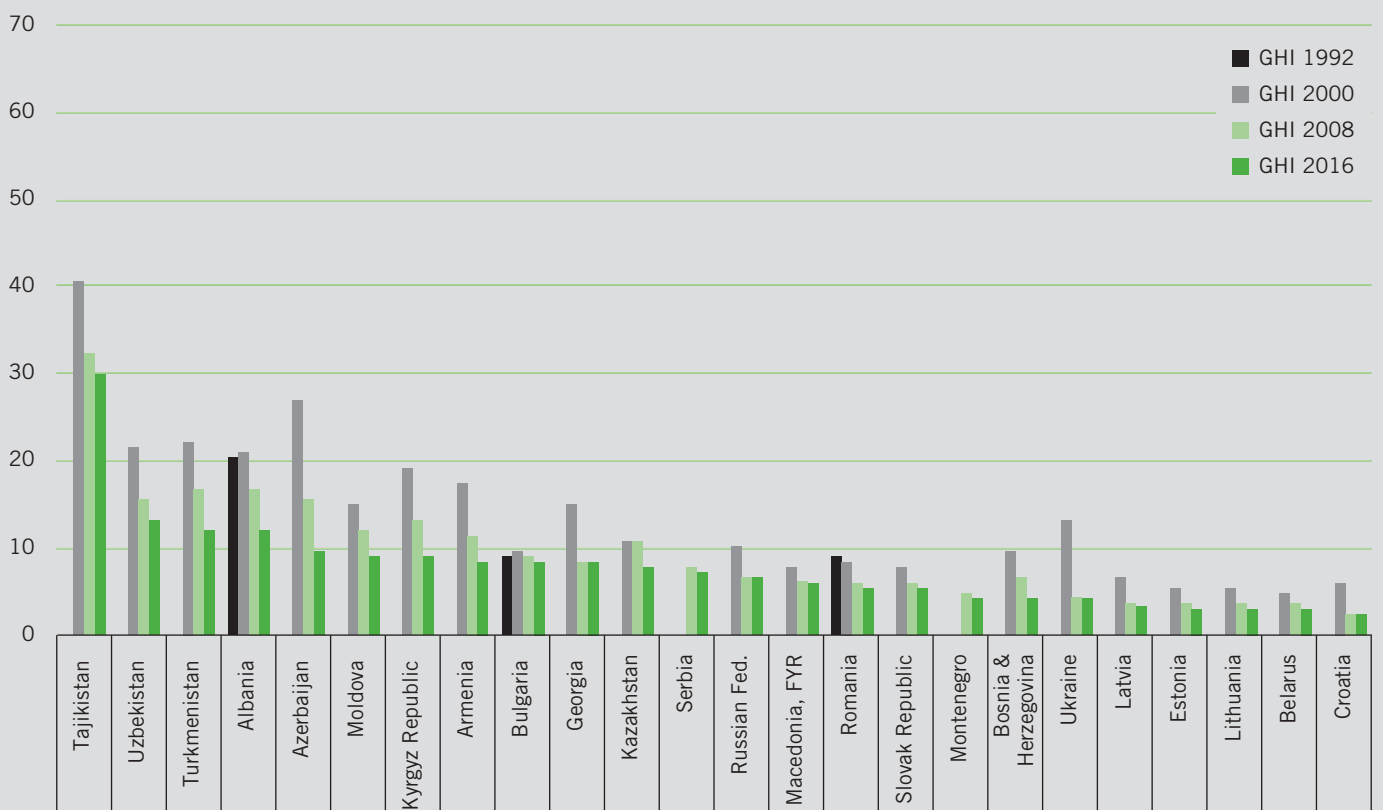
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PARTNERS

Who we are

The International Food Policy Research Institute (IFPRI) identifies and analyzes alternative strategies and policies for meeting the food needs of the developing world, with particular emphasis on low-income countries and on providing evidence for policy solutions that sustainably reduce poverty and end hunger and malnutrition.

What we do

Our research focuses on six strategic areas: ensuring sustainable food production, promoting healthy food systems, improving markets and trade, transforming agriculture, building resilience, and strengthening institutions and governance. The role of gender is a crosscutting theme, embedded in the research of all six areas.

Our vision

A world free of hunger and malnutrition.

Who we are

Founded in Ireland in 1968, Concern Worldwide is a nongovernmental, international humanitarian organization dedicated to reducing suffering and working toward the ultimate elimination of extreme poverty. We work in 28 of the world's poorest countries, with offices in Ireland, the United Kingdom, the United States of America, and the Republic of Korea, and more than 3,500 committed and talented staff.

What we do

Our mission is to help people living in extreme poverty achieve major improvements that last and spread without ongoing support from Concern Worldwide. To this end, Concern Worldwide will work with the poor themselves, and with local and international partners who share our vision, to create just and peaceful societies where the poor can exercise their fundamental rights. To achieve this mission, we engage in long-term development work, respond to emergency situations, and seek to address the root causes of poverty through our development education and advocacy work.

Our vision

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 is one of the largest nongovernmental aid agencies in Germany. It was founded in 1962 under the umbrella of the Food and Agriculture Organization of the United Nations (FAO). At that time, it was the German section of the Freedom from Hunger Campaign, one of the first global initiatives to fight hunger.

What we do

We fight hunger and poverty. Our goal is to make ourselves redundant. We provide integrated aid, from rapid disaster aid to long-term development cooperation projects. We supported people in 40 countries through 387 overseas projects in 2015.

How we work

Help to self-help is our basic principle; it allows us to strengthen structures from the bottom up together with local partner organizations and ensures the long-term success of project work. In addition, we inform the public and take an advisory role with regard to national and international policy. This is how we fight to change the conditions that lead to hunger and poverty.

Our vision

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

11 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
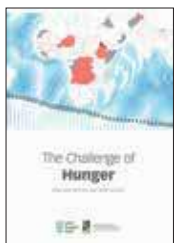
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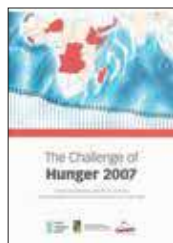
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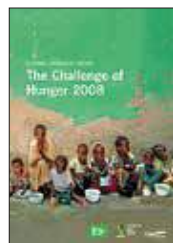
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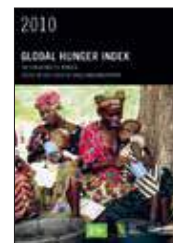
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Taming Price Spikes and Excessive Food Price Volatility
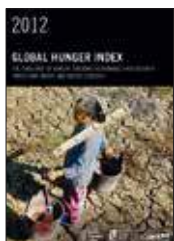
Ensuring Sustainable Food Security Under Land, Water, and Energy Stresses

Building Resilience to Achieve Food and Nutrition Security

The Challenge of Hidden Hunger

Armed Conflict and the Challenge of Hunger

Getting to Zero Hunger

For more information about the 2016 Global Hunger Index, visit www.ifpri.org/ghi/2016

GHI resources for researchers and developers include:
→ Interactive maps
→ Dataverse data files
→ Global Hunger Index Linked Open Data (LOD) available in both Resource Description Format (RDF) and Web Ontology Language (OWL) for reuse in new applications and analyses
→ Global Hunger Index SPARQL Endpoint

Global Hunger Index for Mobile Devices

You can download the report from Google Books, Google Play, Amazon, and iTunes.

IMPRINT

RELATED PUBLICATIONS AND CASE STUDIES

2016 Global Nutrition Report

The only independent and comprehensive annual review of the state of the world's nutrition, the *Global Nutrition Report* is a multipartner initiative that holds a mirror up to our successes and failures at meeting intergovernmental nutrition targets. It documents progress on commitments made on the global stage, and it recommends actions to accelerate that progress. The *Global Nutrition Report* aims to be a beacon, providing examples of change and identifying opportunities for action.

This year's report focuses on the theme of making—and measuring—SMART commitments to nutrition and identifying what it will take to end malnutrition in all its forms by 2030.

Available at http://globalnutritionreport.org

2016 Global Food Policy Report

IFPRI's *Global Food Policy Report*—one of IFPRI's well-established flagship reports—assesses the major food and nutrition policies, developments, and decisions around the globe in a given year. It is the only publication where distinguished researchers, policymakers, and practitioners review what happened globally and regionally in food policy in the current year, why it happened, and what to expect in the coming year, along with data on key food policy indicators. Each yearly report also provides an in-depth look at a critical issue in food policy.

The 2016 report highlights the urgency of reshaping the current food system to deliver multiple Sustainable Development Goals (SDGs). We will only be able to meet the new goals if we work to transform our food system to be more inclusive, climate-smart, sustainable, efficient, nutrition- and health-driven, and business-friendly.

Available at http://www.ifpri.org/publication/2016-global-food-policy-report
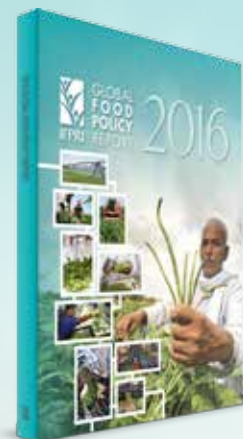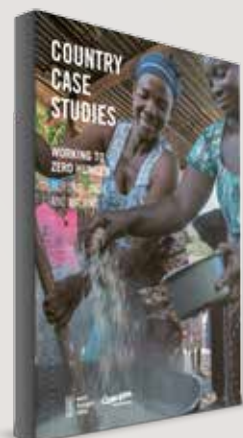
Country Case Studies

Concern Worldwide and Welthungerhilfe's *Country Case Studies* supplements the annual *Global Hunger Index* report. These case studies bring to life the reality of hunger across the globe, the perspectives of the communities in which we work, and the learning from our programs in some of the poorest and most challenging contexts. They offer solutions to improving people's food and nutrition security and ending hunger for everyone—forever.

The most recent report, *Working to Zero Hunger,* presents case studies from Burundi, India, and Malawi, which highlight several steps that are being taken toward achieving Zero Hunger in three very different countries.

Available at www.concern.net/ghi2016 and www.welthungerhilfe.de/globalhungerindex