



UNEQUAL PORTIONS



Save the Children

Ending malnutrition for every last child

Every child has the right to a future. Save the Children works in the UK and around the world to give children a healthy start in life, the chance to learn and be safe. We do whatever it takes to get children the things they need – every day and in times of crisis.

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Cover: Rebecca, 11, queues to receive food in South Sudan. Her family fled their home when conflict broke out in 2013. (Photo: Jonathan Hyams/Save the Children)

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Executive summary

Good nutrition – a healthy, balanced, adequate diet – is a matter of life or death. And the difference between surviving or thriving.

It is essential for a healthy immune system, to protect against disease throughout life. And it's crucial for a country's inclusive and sustainable development.

But progress in tackling malnutrition is far too slow. Millions of children are missing out on adequate nutrition because of who they are and where they live. They are discriminated against because of their ethnicity or disability; they are excluded because of their parents' lack of income or after being forced from their homes.

This report tells the story of these forgotten children. And it sets out what is required to ensure every last child gets the nutrition they need. If we are serious about creating a world where no child is malnourished, we must tackle the discrimination and exclusion they face.

Save the Children has launched a new campaign to help ensure that every last child survives and thrives. We will work directly with excluded children, coming up with innovative solutions and delivering world class programmes. We will advocate for increased resources for nutrition. We will challenge the laws, norms and policies that have allowed malnutrition and discrimination to persist. And we will campaign with and for the world's forgotten children.

The need for action has never been more pressing. Our new research shows that, despite a global commitment to eradicate malnutrition by 2030, on current trends there will be 129 million children under five with stunted growth worldwide by that date. And even in 100 years from now, without a dramatic change of course there will still be millions of malnourished children in the world.

MALNUTRITION – PROGRESS AND PROSPECTS

The world has made progress in addressing undernutrition. The number of children with stunted growth has fallen by more than a third since 1990.

But progress has not been fast enough. Every year, 3.1 million children die because of undernutrition. Malnutrition is a daily global emergency. In the world today, nearly a quarter of all children under five – 159 million children – are stunted.¹ A lack of food, poor health or unsanitary environments mean these children are not benefiting from the nutrients they need to develop to their full potential.

Without a dramatically different approach the world won't meet its nutrition goals. The world has pledged to reduce stunting by 40% by 2025 and eliminate all forms of malnutrition by 2030. But if we carry on as we are, that simply won't happen. Unless the world dramatically changes course, malnutrition is here to stay.

While a reduction of 30 million over 16 years in the number of malnourished children² signifies some progress, it is unacceptably slow. **By 2030 there will still be 129 million stunted children.** Low-income countries will account for more than a quarter of this global burden.

What's more, even at the turn of the next century – 70 years after the deadline to end malnutrition – we are still likely to see 24 million children with stunted growth. Without a concerted change, the world is set to live through another century of wasted potential, damaging children's education, life chances, income and productivity – and with serious consequences for the global economy.

At the same time, the number of overweight children is increasing. There are 41 million overweight under-fives in the world today – 10 million more than two decades ago.³ This is a

worrying trend, which will lead to greater morbidity and mortality, and will have significant implications for the global economy. Yet it's a trend that could and should be reversed.

HOW EQUAL HAS PROGRESS BEEN?

There are stark differences in malnutrition rates between countries. In 44 developing countries – out of a total of 115 with available data – 30% or more of children suffer from stunted growth. In three of these countries – Burundi, Eritrea and Timor-Leste – over half of children are stunted, and in 13 countries the problem has actually got worse since 2000.

Within most developing countries it is predicted that it will take much longer to eliminate malnutrition in excluded groups of children than among the best-performing groups or in the rest of the country – a continuation of the unequal progress that the world has experienced since 1990.⁴

We know progress is possible. But progress on nutrition has often failed to include all children. Ghana, Peru and the Republic of Congo have seen a significant reduction in stunting in recent years. However, with the exception of rural areas in Ghana, disadvantaged groups in these countries have lagged behind the more advantaged ones, leading to an increasing gap between the two. Peru, in particular, has growing inequalities in stunting rates between regions, between rural and urban areas and between ethnic groups.

WHY ARE SOME PEOPLE MORE VULNERABLE TO MALNUTRITION THAN OTHERS?

Discrimination and exclusion are helping to create these inequalities. Where a child lives largely determines their access to services, education and food, their cultural and social practices, their family's income – and ultimately their nutrition levels. Our data shows that, on average,

children living in rural areas are 1.37 times more likely to be stunted than children living in urban areas.⁵ In reality, these global averages mask even greater inequalities between rural and urban areas.

Family income has a significant influence over a child's nutrition. So it comes as no surprise that the poorest fifth of children have considerably higher stunting and wasting rates than the richest fifth. Across developing countries and regions, young children in the poorest 20% of families are more than twice as likely to die before their fifth birthday as children from families in the wealthiest fifth of the population.⁶

Exacerbating the problem of global malnutrition is the strongest ever recorded El Niño, bringing drought to 15 countries and affecting more than 60 million people. Violence and persecution have also fuelled the worst refugee crisis since the second world war, forcing people from their homes and making it more difficult for them to get the basic essentials they need to survive.

So while there has never been greater worldwide commitment to tackling malnutrition – with 57 countries signing up to the Scaling Up Nutrition movement⁷ and a global goal agreed to end all forms of malnutrition by 2030 – these global trends make the problem increasingly pressing.

HOW IS EXCLUSION CONTRIBUTING TO MALNUTRITION?

The drivers of malnutrition are well known. They include a child's dietary intake and health, household food security, care practices, the broader health environment in which people live, poverty, the political context and environmental factors such as climate change.

These drivers can intersect and overlap, exacerbating the exclusion of certain groups of children. For example, children living in remote areas may not have access to healthcare. Disabled children living in these areas may be even less able to get the services they need – particularly if they require specialist care.

HOW TO ACCELERATE PROGRESS FOR ALL

States have a binding obligation, enshrined in international law, to respect, protect and realise children's right to survival. The UN Convention on the Rights of the Child obliges states to do everything they can to prevent children from dying. To meet this commitment, states need to tackle malnutrition. Yet, many countries lack a legal framework that promotes child survival, and those that do often fail to implement it.⁸

Governments have signed up to numerous global nutrition targets. While welcome, these goals are often the result of political negotiations rather than calculations based on trends in nutrition and the context in which countries are operating. It is therefore not surprising that the world is not on track to meet any of the six World Health Assembly nutrition targets. If we want to see real and equitable progress, **these global goals must be translated into national targets, with adequate resources and plans that lay out how each country will reach its goals for all groups of society.**

Economic growth can contribute to improved nutrition, and in low-income countries it is seen as an essential weapon in the fight against malnutrition.⁹ However, there is a complex relationship between economic growth and nutrition, and growth alone is not sufficient to tackle malnutrition. Policies that take account of the specific country context are also essential – necessitating a national contextual analysis to understand both the immediate and underlying causes of malnutrition and how to overcome them.

Commitments to address malnutrition should begin with the moral and legal imperative for the right to food and nutrition for all. Countries that have legally recognised the right to food tend to be more likely to implement programmes tackling child nutrition.¹⁰ The values of empowerment, equity, universality and accountability should also be at the centre of efforts to reduce malnutrition.

Policies that can contribute to inclusively addressing malnutrition through a multi-sectoral approach include child-sensitive social protection; universal health coverage; improved water, sanitation and hygiene; education and building resilience; and enhancing food security and livelihoods.

A decade of action is required to end malnutrition.¹¹ The second Nutrition for Growth event marks the moment to prioritise and invest to end malnutrition for every last child.

Save the Children recommends that governments:

1. Undertake a multi-sectoral contextual analysis to understand:
 - the national drivers of and trends in malnutrition
 - which policies and practices will best address malnutrition
 - which groups of people are most marginalised and vulnerable to malnutrition and the barriers they face.
2. Set national nutrition targets, aligned to global goals, which include specific targets for all groups of society, based on national contexts and trends.
3. Put in place appropriate policies and plans to reach those targets, for all groups of society. This should form the basis of a 'leave no one behind strategy' – ensuring malnutrition is reduced across all groups of society.
4. Work with relevant sectors and stakeholders – including donors, academics, civil society and business – throughout the planning and policy process on tackling malnutrition, from contextual analysis, design of strategies and policies, to implementation, monitoring and evaluation.
5. Ensure appropriate finances are in place. Every government should invest in the nutrition of their people. In addition, donors should prioritise nutrition as both a maker and a marker of sustainable development.

The story in numbers

If we continue as we are...

there will be **129 million** stunted children in the world in 2030

there will be **24 million** stunted children in the world at the start of the next century

75 out of 114 countries will fail to reduce stunting by 40% by 2025

only **three** more countries will eradicate stunting between now and 2030

in most countries it is projected to take **much longer** for excluded groups to reach the targets than the countries as a whole or the best-performing groups.

Today there are...

159 million stunted children in the world – 24% of all children

50 million children too thin for their height (wasted)

more obese than underweight adults in the world – for the first time in human history

more than **1.9 billion** adults – nearly 30% of the global population – overweight or obese.

There has been some progress, but it has not been fast enough or equal enough...

100 out of the 115 countries for which we have data on the changes in stunting over time have reduced stunting

The prevalence of wasting has increased in far more countries than stunting. Of 113 countries, we found that in **38** it has worsened

No low-income countries feature on the list of the top 10 countries that have reduced stunting the fastest

Children living in rural areas are **1.37 times** more likely to be stunted than children living in urban areas (across 56 countries with relevant data)

The poorest 20% of children are **2.26 times** more likely to be stunted than the richest (across 56 countries with relevant data)

Ethnic groups with the worst wasting rates are **six times** more likely to be wasted than ethnic groups with the best rates.

Overview of the report

In this report we will look at how groups of children are excluded from progress on malnutrition based on their gender, ethnicity, regional differences within countries, disability, which economic group they fall into or because they are on the move.

In part 1 we introduce the approach, methodology and new research.

In part 2 we look at the problem – which countries and which groups of children are furthest behind in nutrition outcomes – and why this exclusion must be addressed.

In part 3 we explore the drivers that make some people vulnerable to malnutrition, and we look at how international commitments have attempted to promote inclusive progress to date.

In part 4 we suggest how governments can overcome the burden of malnutrition in an inclusive and sustainable way. We show that economic growth alone is not enough – the right policies need to be in place.

In part 5 we make recommendations and calls for world leaders to address the drivers of malnutrition and exclusion.

This report is part of Save the Children's Every Last Child campaign to tackle exclusion in a new era of development.

Key terms

1,000-day window

The 1,000-day period is the time between conception and a child's second birthday. The right nutrition during this critical period can have a profound impact on a child's ability to develop mentally and physically, to learn and to rise out of poverty. It can also shape a society's long-term health, stability and prosperity.¹

Hunger

Hunger is the body's way of signalling that it is running short of food and needs to eat something. Sustained hunger can lead to undernutrition, although it is only one of many causes; others include diarrhoea, malaria and HIV and AIDS.²

Malnutrition

Malnutrition is a broad term commonly used as an alternative to undernutrition, but technically it also refers to overweight and obesity. People are malnourished if their diet does not provide adequate calories and protein for growth and maintenance, or if they are unable to fully utilise the food they eat due to illness (undernutrition). They are also malnourished if they consume too many calories³ compared to how many they expend. Good nutrition is when the right balance of nutrients enter, leave and are absorbed by the body.

Undernutrition

Undernutrition is defined as the outcome of insufficient food intake and repeated infectious diseases. It includes being underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (wasted), and deficient in vitamins and minerals (micronutrient malnutrition).⁴

Overweight and obesity

The terms overweight and obesity refer to when a person is too heavy for his/her height. That person may be defined as having abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. A BMI greater than or equal to 25 is overweight. A BMI greater than or equal to 30 is obesity.⁵ This form of malnutrition results from expending too few calories for the amount consumed, and increases the risk of non-communicable disease later in life.⁶

Stunting

Stunting refers to a child who is too short for his or her age. Stunting is the failure to grow both physically and cognitively and is the result of chronic or recurrent malnutrition. The effects of stunting often last a lifetime.⁷

Wasting

Wasting refers to a child who is too thin for his or her height. Wasting is the result of sudden or acute malnutrition, where the child is not getting enough calories from food and faces an immediate risk of death.⁸



PHOTO: CI CLARK/SAVE THE CHILDREN

Selim, 12, left his home in Bangladesh when his brother beat him and now lives on the streets.

1 Introduction

The world has made progress in addressing undernutrition. The number of children who are stunted has fallen by more than a third since 1990. But progress has not been fast enough or inclusive enough.

The world is currently off track to meet its nutrition targets, including all six of those set at the 2012 World Health Assembly¹ (WHA) – which seek improvements in stunting, anaemia, wasting, low birth weight, childhood overweight and breastfeeding by 2025; and the recently agreed Sustainable Development Goals (SDGs) – which strive to end all forms of malnutrition by 2030.²

Discrimination – whether intentional or not – means that progress has not been spread equally among all children. Some groups of children are being excluded, leaving them particularly vulnerable to malnutrition and the impact this has on their lives.

WHY DOES EXCLUSION MATTER?

Exclusion is a clear violation of children's rights. Discrimination – treating a person differently because of who they are or where they are – stops millions of children getting the food, healthcare and education they need, leaving them vulnerable to malnutrition and its impacts. The impact of exclusion on children can be severe, long-lasting and wide-ranging, particularly so because of children's vulnerability and because childhood is such a critical developmental period for nutrition.³

All of the major international human rights instruments explicitly protect rights of all groups.⁴ The principle of equality and non-discrimination is at the heart of children's rights.⁵ The Convention on the Rights of the Child (CRC), for example, applies to all children, whatever their race, religion or abilities; whatever they think or say; whatever type of family they come from. It does not matter where children live; what language they speak; what their parents do; whether they are boys or girls or

self-identify in another way; what their culture is; whether they have a disability; or whether they are rich or poor. No child should be treated unfairly or discriminated against on any basis.⁶

WHY MUST WE ADDRESS MALNUTRITION?

Adequate nutrition is a case of life or death. It is a case of surviving or thriving. Adequate nutrition is essential for a healthy immune system, to help protect against disease throughout life. A well-nourished and productive population is the difference between a country's economy developing or stagnating. Understanding the drivers of malnutrition and how to ensure every child receives and is able to absorb the nutrients they need is crucial for inclusive and sustainable development everywhere.

The moral imperative for addressing malnutrition is well recognised. In fact, the very existence of malnutrition can be presumed to be a violation of the human right to food.⁷ Nutrition is a precondition for sustainable, social, economic and human development, as set out in the United Nations Charter, the Universal Declaration of Human Rights, and subsequent international human rights conventions including the CRC.⁸

Malnutrition has severe, long-term human and economic consequences. Ensuring the right nutrients are received and absorbed during those first 1,000 days of life – between conception and a child's second birthday – can help shape a child's – and wider society's – long-term health, stability and prosperity.⁹ Nutrients provide the biological building blocks for our organs, including the structural and functional development of the brain.¹⁰ 45% of deaths of children under the age of five are linked to malnutrition.¹¹ The effects of malnutrition on physical stature, cognitive development, immune systems and the ability to do physical work can lock children into poverty and entrench inequality.

Children who are poor and malnourished earn 20% less as adults than children who are well nourished.¹²

With a long-term impact on productivity, in some countries hunger and undernutrition can cost the economy 10% of gross domestic product (GDP),¹³ and costs the world up to US\$2.1 trillion in lost global GDP.¹⁴ An investment in nutrition is a smart investment – with a median return on investment of US\$16 for every US\$1.¹⁵

NEW FINDINGS AND BACKGROUND RESEARCH

Conducting a global analysis on progress in eradicating malnutrition, where that analysis aims to look beyond national averages and intends to focus on excluded groups of children, presents numerous data challenges. We have made substantial efforts to compile existing statistics and produce additional data, in order to provide a global diagnostic of exclusion and to analyse inequalities in life chances between social and economic groups.

The evidence and findings presented in this report draw on the following research inputs (please see appendix 1 for more detail):

THE GROUPS-BASED INEQUALITY DATABASE (GRID)

In this report we use available data on ethnicity, sub-national regions, urban/rural areas and economic groups from GRID, developed by Save the Children in collaboration with the Overseas Development Institute. GRID is based on direct data processing of Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), and various aggregated public sources (the UN Inter-agency Group for Child Mortality Estimation, World Health Organization (WHO), UNICEF, World Bank and the World Inequality Database on Education).

PROJECTIONS BY 2025, 2030 AND BEYOND

In collaboration with researchers from Göttingen University, we produced a series of projections at national level and for all social and economic groups inside each country. We estimate what the stunting rates will be if countries continue ‘business as usual’ by landmark moments: by 2025, to reach the World Health Assembly target of reducing malnutrition by 40%; by 2030, to reach the nutrition Sustainable Development Goal target of eliminating malnutrition; and project further into the future to estimate how long it would take for those countries that are set to miss the target to achieve it. One important innovation in our projections is to move beyond national averages. We disaggregate national projections for social and economic groups inside each country to assess which groups are at risk of being left behind by progress.

CASE STUDIES

This report also includes detail from 14 case studies developed by Save the Children to illustrate various aspects of the report. These case studies highlight practical ways to inclusively address malnutrition by drawing from programme and beneficiary experience. They highlight learnings gained through working in a number of countries with excluded groups and communities. This report includes detail from case studies from Kenya, Nigeria, Zambia, Myanmar, Indonesia, Nepal, Cambodia, Sri Lanka, Bangladesh, Vietnam, Sierra Leone, Brazil, Guatemala and Honduras.

2 Who are the malnourished children, where do they live, and why must we address exclusion to reach them?

In this chapter we present the global picture of malnutrition. We explore which countries have done well in addressing malnutrition, and which have struggled. We then look at trends in inequalities of nutrition outcomes within groups of children, and present some estimations projecting the current trends into the future.

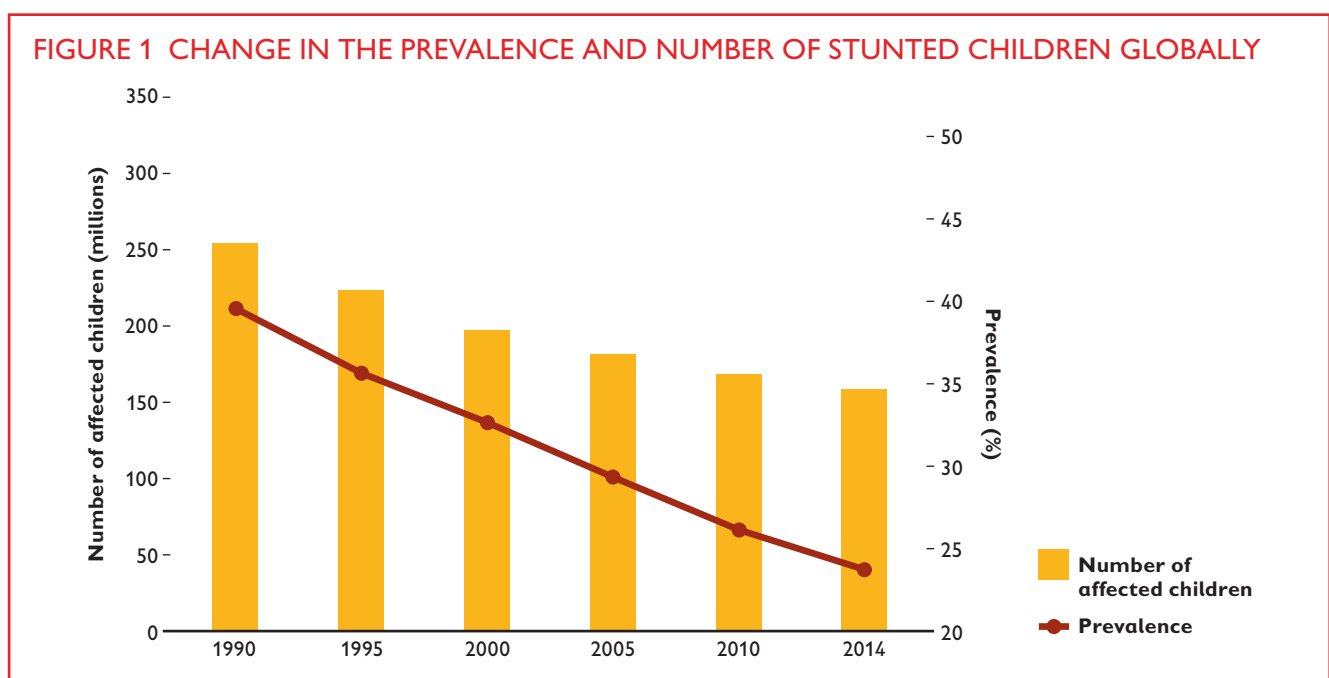
THE GLOBAL PICTURE OF MALNUTRITION: SOME PROGRESS BUT TOO SLOW AND UNEQUAL

In 1990 there were 255 million children with stunted growth in the world – representing 40% of all children. The situation has improved since then, with an estimated 159 million stunted children in the world in 2014 – 24% of all children (see Figure 1).¹

The distribution of the stunting burden across the world's regions is highly uneven. Half of the world's children aged under five live in sub-Saharan Africa and South Asia, but these children account for 80% of all stunted children in the world.²

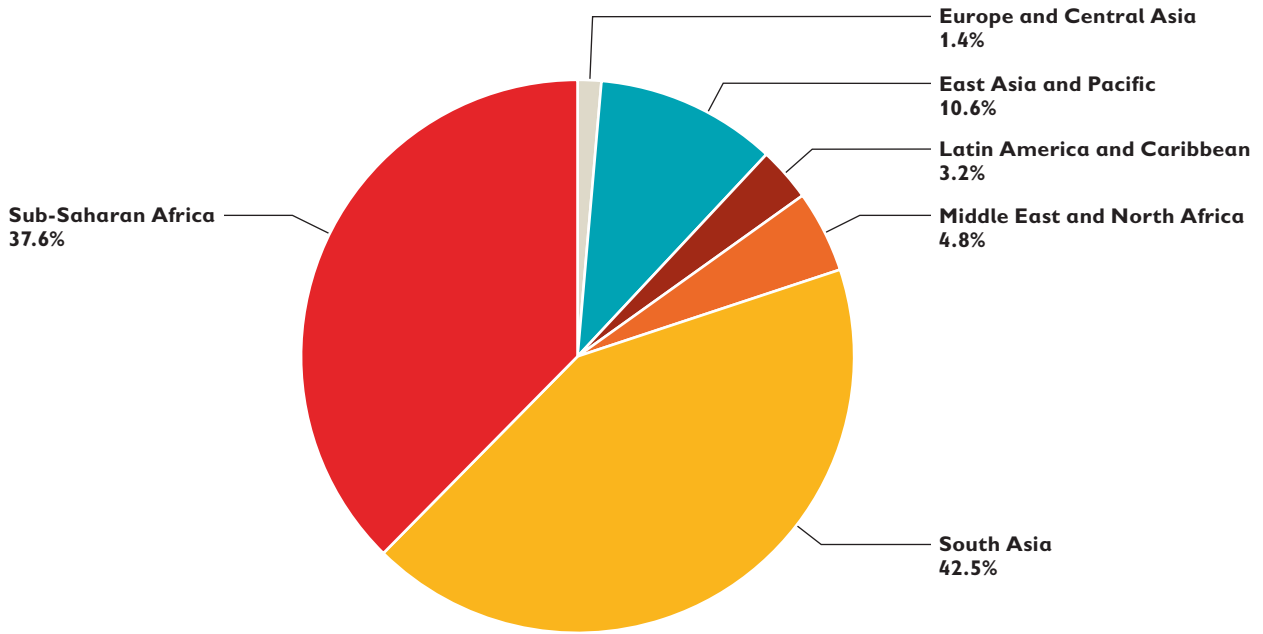
With the exception of sub-Saharan Africa, each region of the world has seen a reduction in the absolute number of stunted children since 1990. The greatest reduction happened in East Asia where the number of stunted children decreased from 80 million to 16 million (Figure 2). In sub-Saharan Africa the proportion of stunted children is reducing, but at a slower rate than population growth. As a result, the total absolute number of stunted children in sub-Saharan Africa has increased from 43.5 million to 55 million (Figure 3).

Progress shows it is possible to address malnutrition successfully. In fact, a number of countries have shown impressive progress towards their nutrition



Source: UNICEF, WHO, World Bank Group, 2015. *Levels and trends in child malnutrition*.

FIGURE 2 DISTRIBUTION OF STUNTED CHILDREN ACROSS THE WORLD REGIONS



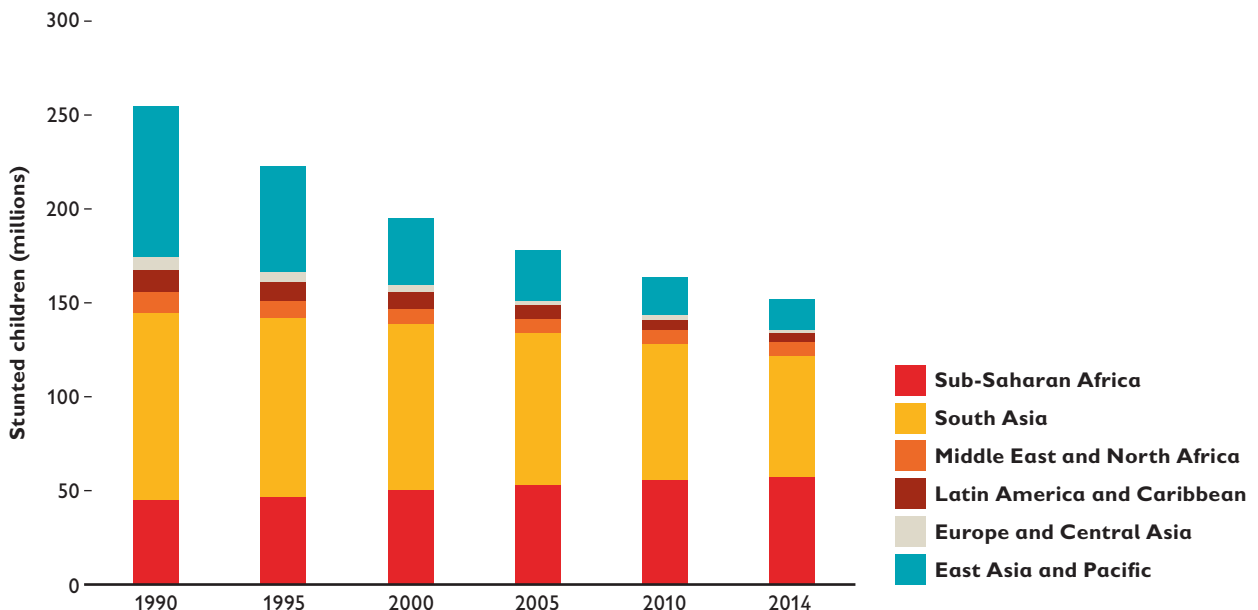
Source: UNICEF, WHO, World Bank Group, 2015. *Levels and trends in child malnutrition.*

goals, and are reaping the benefits in many areas of society. **But progress since 1990 has not been fast enough and has too often left excluded children behind.**

Globally, 7.5% of children are too thin for their height (wasted) – 50 million children – of whom

16 million are severely wasted. This is approximately one out of every 13 children in the world. But, unlike stunting, wasting is a short-term condition subject to fast changes; therefore, it is highly likely that the number of children who have experienced wasting at some point in their lives is considerably higher.³

FIGURE 3 CHANGE IN THE NUMBER OF STUNTED CHILDREN ACROSS THE WORLD REGIONS



Source: UNICEF, WHO, World Bank Group, 2015. *Levels and trends in child malnutrition.*

HOW ARE COUNTRIES PROGRESSING IN ADDRESSING MALNUTRITION?

Inequalities in nutrition outcomes are even more apparent as we turn to the country level. Only nine out of 115 countries for which we have data (Australia, Chile, Czech Republic, Germany, Republic of Korea, Saint Lucia, Singapore, Ukraine and the USA) have stunting rates below 3% and nearly all of these are high-income countries. In 44 countries, the prevalence of stunted growth in children is high – more than 30%. In three of these countries – Burundi, Eritrea and Timor-Leste – over half of the children have stunted growth.

Some of the countries with the highest rates of stunting are also home to very large numbers of children aged under five, leading to very high absolute numbers of children being stunted as a whole. These countries include India (with 124.4 million children under five of whom 48.2 million are stunted), Nigeria (30.5 million children under five of whom 10 million are stunted), Pakistan (23.7 million children under five of whom 10.7 million are stunted), Ethiopia (14.4 million

children under five of whom 5.8 million are stunted), the Democratic Republic of Congo (13.2 million children under five of whom 5.6 million are stunted) and Bangladesh (15.4 million children under five of whom 5.5 million are stunted).⁴ The greatest prevalence of wasting is found in South Sudan (22.7%), Djibouti (21.5%) and Sri Lanka (21.4%), where every fifth child is wasted. In half of our sample (57 countries), the wasting prevalence exceeds the WHO threshold of 5% for ‘public health significance’.⁵

WHICH COUNTRIES HAVE DONE WELL IN ADDRESSING MALNUTRITION?

The vast majority of countries (100 out of 115) in our sample have reduced stunting since 2000. Some of these countries have achieved exceptional progress. South Africa reduced its stunting prevalence from 33% to 24% between 2004 and 2008. Afghanistan cut stunting prevalence from 59% to 41% between 2004 and 2013. Three out of



Sara, 3, eats a tortilla with herbs. Her family can't afford enough food since a plague of coffee rust destroyed coffee crops across Guatemala.

the ten best performers are low-income countries – Afghanistan, Korea PDR and Nepal – and four are in sub-Saharan Africa – South Africa, Côte d'Ivoire, Equatorial Guinea and Ghana.

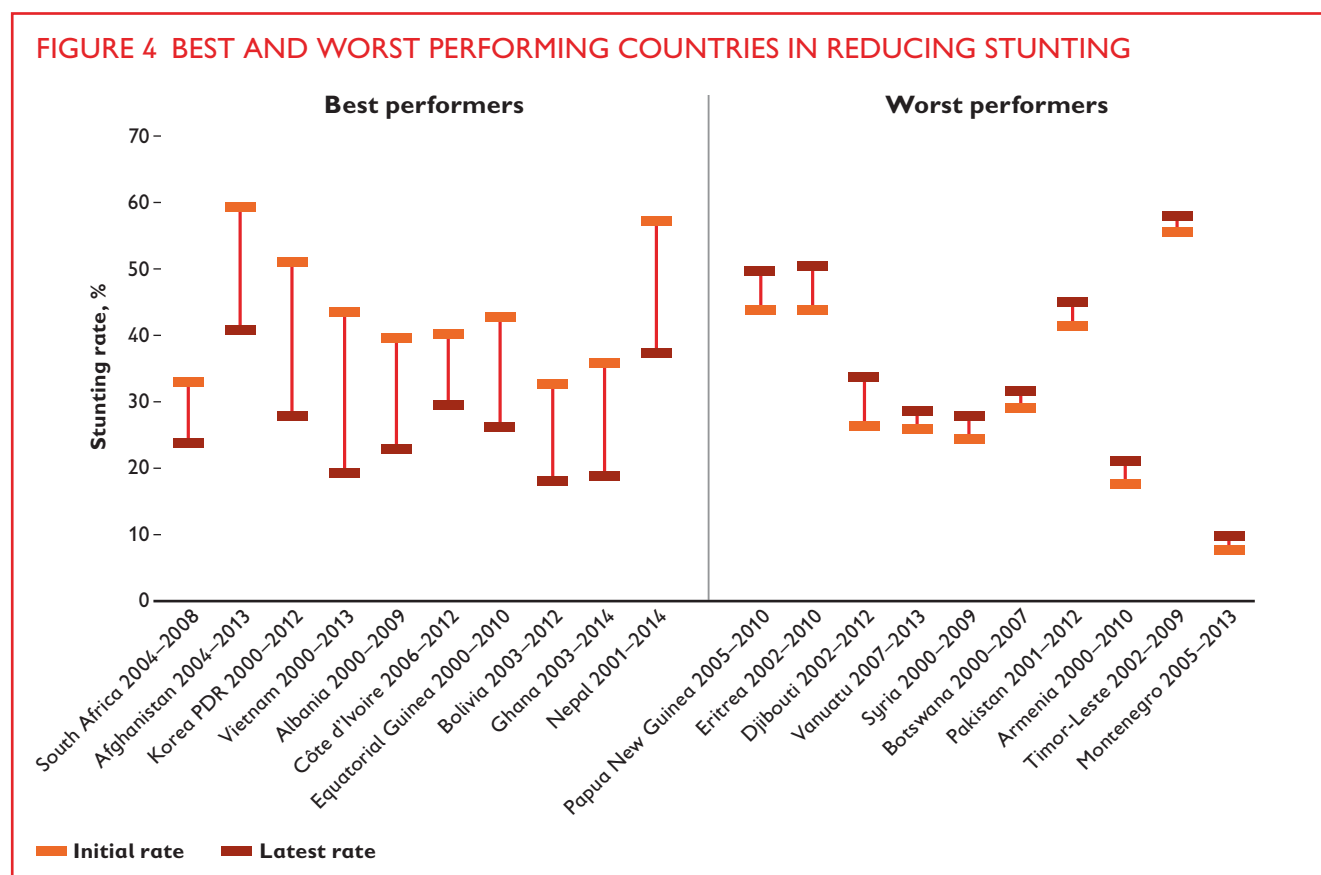
For wasting, the best performer has been Togo, which more than halved the prevalence between 2006 and 2014, though from a very high rate of 16% to 7%. Burkina Faso nearly halved wasting between 2003 and 2012, from an even higher prevalence of 21% to 11%. The list of ten best performers is dominated by low- and lower-middle income countries – not surprising given that these countries usually tend to have a higher prevalence of wasting and therefore larger scope for improvement.

WHICH COUNTRIES HAVE STRUGGLED?

While countries from all regions and income groups have made significant progress in reducing the prevalence of stunting, two countries (Romania and Republic of Korea) have seen no change, and 13 countries have actually experienced an

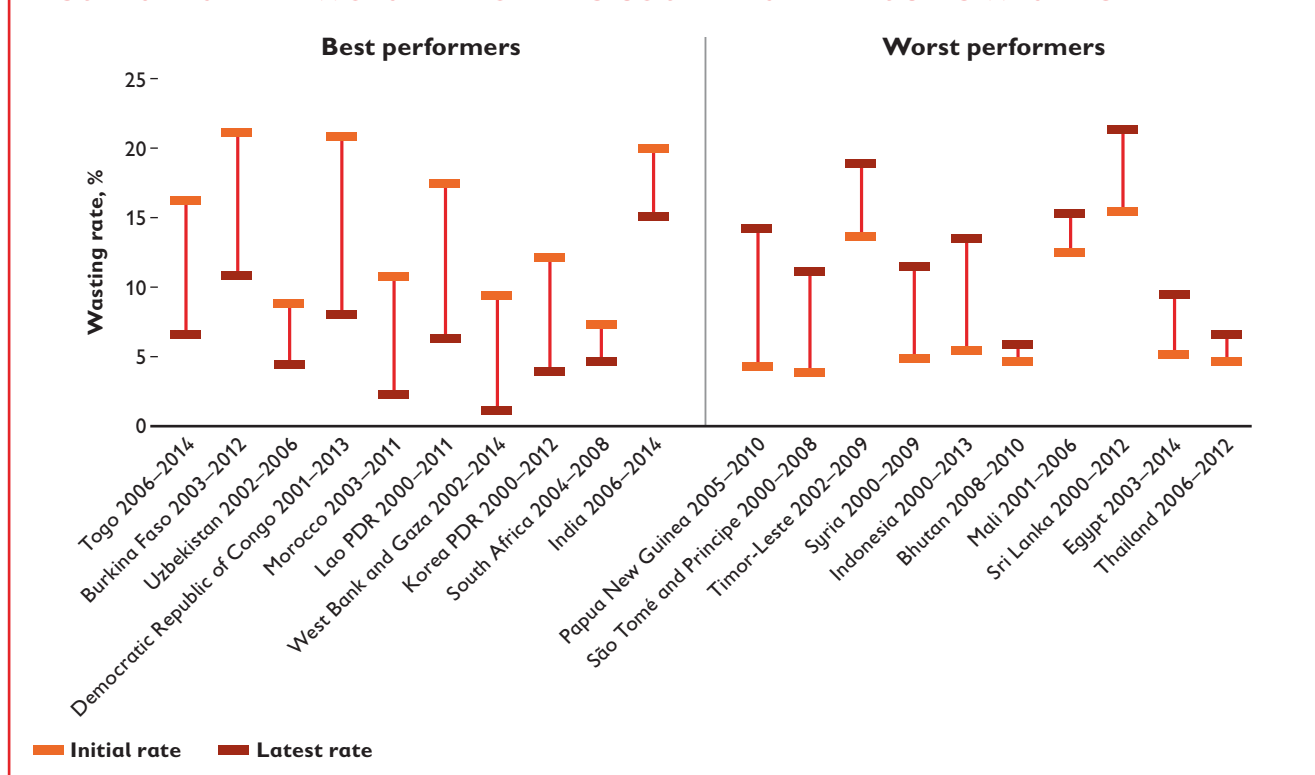
increase in stunting. The largest annual increase was observed in Papua New Guinea, where the stunting prevalence increased from 44% to 49% between 2005 and 2010. Stunting prevalence also increased considerably in Eritrea (from 44% to 50% in the period 2002–10) and in Djibouti (from 26.5% to 33.5% between 2002 and 2012). These negative trends are highly worrying, especially given that in all but three of those 13 countries (Kuwait, Montenegro, Thailand) the stunting rate is more than 20%.

Compared to stunting, wasting has increased in a much larger number of countries – 38 out of 113. The greatest increase was observed in Papua New Guinea: within the five-year period 2005 to 2010, wasting prevalence tripled from 4.4% to 14.3%. São Tomé and Príncipe also experienced a large increase as the wasting prevalence nearly tripled from 4% to 11% from 2000 to 2008. Interestingly, with the exception of low-income Mali and upper-middle income Thailand, all countries in the list of ten worst performers are lower-middle-income economies.



Source: UNICEF, WHO, World Bank Group 2015: Joint child malnutrition estimates, http://www.who.int/nutrition/publications/jointchildmalnutrition_2015_estimates/en/

FIGURE 5 BEST AND WORST PERFORMING COUNTRIES IN REDUCING WASTING



Source: UNICEF, WHO, World Bank Group 2015: Joint child malnutrition estimates, http://www.who.int/nutrition/publications/jointchildmalnutrition_2015_estimates/en/

HOW DO INEQUALITY AND EXCLUSION IMPACT MALNUTRITION?

How do we measure inequalities in nutrition between groups?

This section considers two main metrics for the analysis of inequalities between groups: the absolute gap and the relative ratio. The absolute gap simply measures absolute difference in the given indicator between disadvantaged and reference groups. The relative ratio measures how much more likely the disadvantaged group is to experience the given condition compared to the reference group.

For instance, in Tanzania, the stunting rate is 57% in Dodoma, the most affected region in the country, and 20% in Dar es Salam, the least affected region. This means that the absolute gap between the two regions is 37 percentage points. If the gap in percentage points between Dodoma and Dar es Salam increases to, say, 15% for Dar es Salam and 60% for Dodoma – a gap of 45% – then the absolute gap has increased.

The relative ratio between Dodoma and Dar es Salam is 2.85, which means that children in Dodoma are 2.85 times more likely to be stunted than children in Dar es Salam. Reduction in the ratio tells us more directly about equalisation in life chances, as the measures effectively show how more likely a child from one group is to be malnourished than a child from another group.

There are three additional factors that support our decision to use ratio as the main metric in our analysis. Any differences in nutrition outcomes between groups can be ascribed to systematic differences in life chances, and are fundamentally unjust and are a sign of systematic discrimination. This means that the ratio between the top and bottom groups is revealing of the extent of inequity in life chances. Second, the gap between the most and least advantaged groups is easy for both politicians and citizens to understand, and should therefore motivate action. Third, examining the performance of the top-performing group in society shows what level and pace of progress is possible within a given country context.

It is also worth noting that although the gap and the ratio are correlated, the absolute gap tends to be larger in countries with high malnutrition rates, whereas ratios are not affected by the level of malnutrition.

In our analysis, we use the best performing group as the reference point in almost all cases – for example, the regions and ethnicities with the lowest malnutrition rates. In the case of economic groups and urban/rural areas, we use the richest quintile and urban areas; it is worth noting that in a very few cases, these groups may not have the lowest malnutrition rate.

THE LOTTERY OF CHILDHOOD: COUNTRY REGIONS AND URBAN AND RURAL AREAS

Where a child lives within any given country remains a high determinant of that child's chances of avoiding malnutrition. Children in rural areas or remote regions may have considerably lower nutrition status. In Peru, for example, children in Huancavelica region are 16 times more likely to be stunted than children from the region of Tacna, with stunting rates of 48% and 3% respectively. These geographical inequalities are often related to differences in infrastructure or access to services.

Our analysis shows considerable geographical inequalities, whether large urban/rural gaps, or wide disparities between regions inside each country. In about a third of the countries for which data is available (19 out of 56), children living in the worst region for malnutrition are more than three times more likely to be malnourished than those living in the best region. This is the case in large countries with high stunting rates such as Nigeria, Democratic Republic of Congo, Pakistan and Egypt, and means that internal geographical inequalities in stunting are a major issue for millions of children in the world.

The gap between urban and rural areas is also important in most countries, and further highlights the exclusion that children experience when living in remote and isolated places. In our sample, children living in rural areas are 1.37 times more likely to be stunted compared with children living in urban areas. But there is huge variability between countries.⁶ It is again interesting to consider Peru, where children in

rural areas are three times more likely to be stunted than children in urban settings, with stunting rates of 33% and 11% respectively.

WHICH COUNTRIES HAVE THE HIGHEST GEOGRAPHICAL INEQUALITIES?

Countries with high geographical inequalities in stunting tend also to have similar inequalities in wasting – almost systematically. For instance, Egypt, Cameroon, Honduras and Guyana are ranked among the ten countries with the highest regional inequalities in both stunting and wasting.

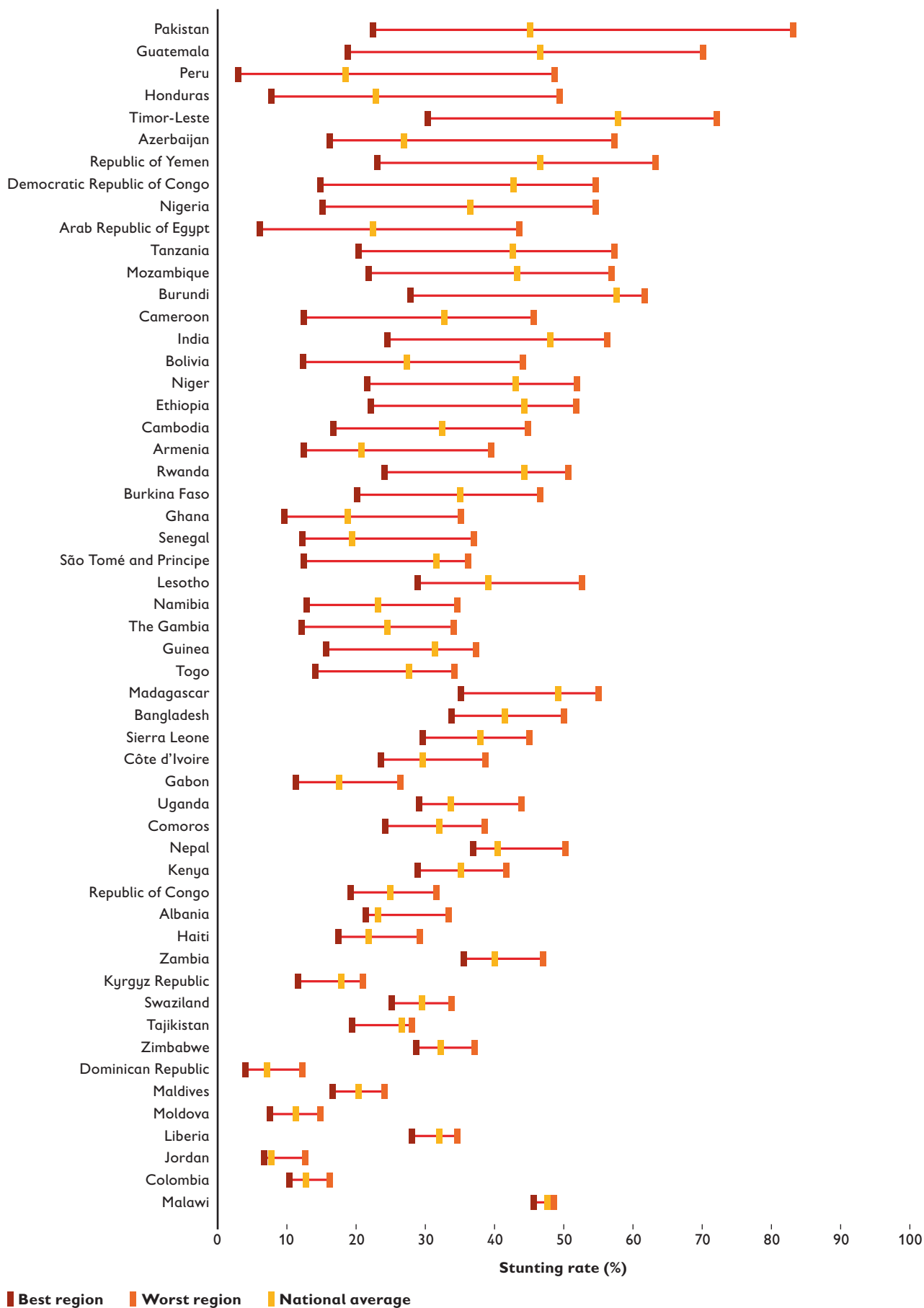
Peru, Cameroon, Bolivia, Honduras and Guyana have high geographical inequalities in multiple malnutrition indicators. These countries are particularly affected by the lottery of where a child lives in determining that child's chances of avoiding malnutrition.

BUT GEOGRAPHICAL INEQUALITIES ARE NOT INEVITABLE

The good news is that geographical inequalities are not inevitable. Countries with similar levels of malnutrition may have remarkably different levels of geographical inequality, demonstrating that it is possible to overcome these inequalities. Consider, Democratic Republic of Congo and Niger. Both countries have similar prevalence of stunting (of about 43%) but geographical inequalities are considerably larger in the Democratic Republic of Congo. Children in Sud-Kivu region in the Democratic Republic of Congo are 3.7 times more likely to be malnourished than children from Kinshasa. In Niger, children living in Diffa region are 2.4 times more likely to be malnourished in comparison with those in the capital Niamey. Cameroon and Liberia also have similar prevalence of stunting (33% and 32% respectively), but in Cameroon, rural areas have nearly twice the prevalence as urban areas, whereas in Liberia the difference between the two is minimal. Figures 6 and 7 below show the level of geographical inequality in the countries for which we have this level of data disaggregation.

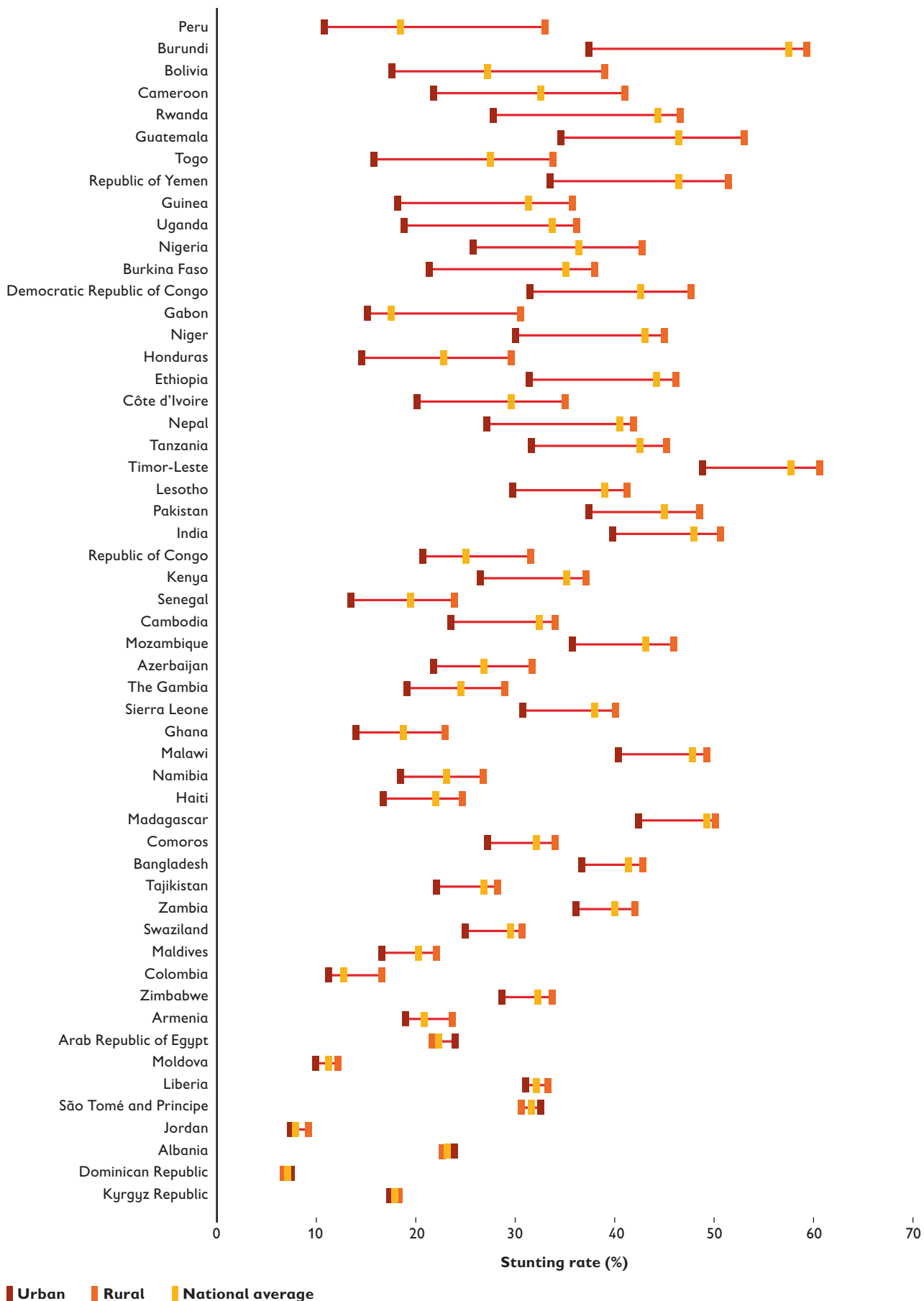
Many countries have been able to sustain lower levels of internal geographical inequalities. This shows that overcoming the exclusion that children experience because of where they live is possible. However, countries that have vast differences in geography and climate conditions will face challenges in overcoming these differences to reduce inequalities in nutrition outcomes.

FIGURE 6 DIFFERENCES IN STUNTING BETWEEN REGIONS WITHIN COUNTRIES



Source: Save the Children UK, Group and Inequalities Database

FIGURE 7 DIFFERENCES IN STUNTING BETWEEN URBAN AND RURAL AREAS



Source: Save the Children UK, Group and Inequalities Database

UNEQUAL CHANCES OF MALNUTRITION FOR THE POOR AND RICH

Family income is a strong determinant of a child's nutrition status globally, so it comes as no surprise that in many countries the poorest fifth of children have considerably higher stunting and wasting rates than the richest fifth. Our analysis shows that across our sample of 56 countries, the poorest children are 2.26 times more likely to be stunted and 1.89 more likely to be wasted than the richest children.⁷ Equally, 17% of poor children are wasted in contrast to 9% of the richest children. The high rates of undernutrition experienced even by the richest children in many of our sample countries clearly illustrate that being rich – relative to others in poor countries – does not necessarily guarantee adequate nutrition.

But, again, the story is not quite so simple. Some countries have much lower inequalities, indicating it is possible to ease the economic constraints that poor households experience.

For example, Ghana and Peru have an almost identical national prevalence of stunting at 19% and 18% respectively. This is despite Peru having three times higher gross national income per capita. However, disparities between the richest and poorest children are much more pronounced in Peru, where 40% of the poorest children are stunted; the risk of stunting is much lower for the poorest children in Ghana – 26%.

WHICH COUNTRIES ARE MOST UNEQUAL FOR THE POOREST AND THE RICHEST CHILDREN?

In Peru, inequalities in stunting among economic groups are exceptionally high, with poor children 11 times more likely to be stunted than those who are rich. This type of inequality is also very high in Jordan, Bolivia, Honduras and Gabon, where the ratio exceeds 5:1.

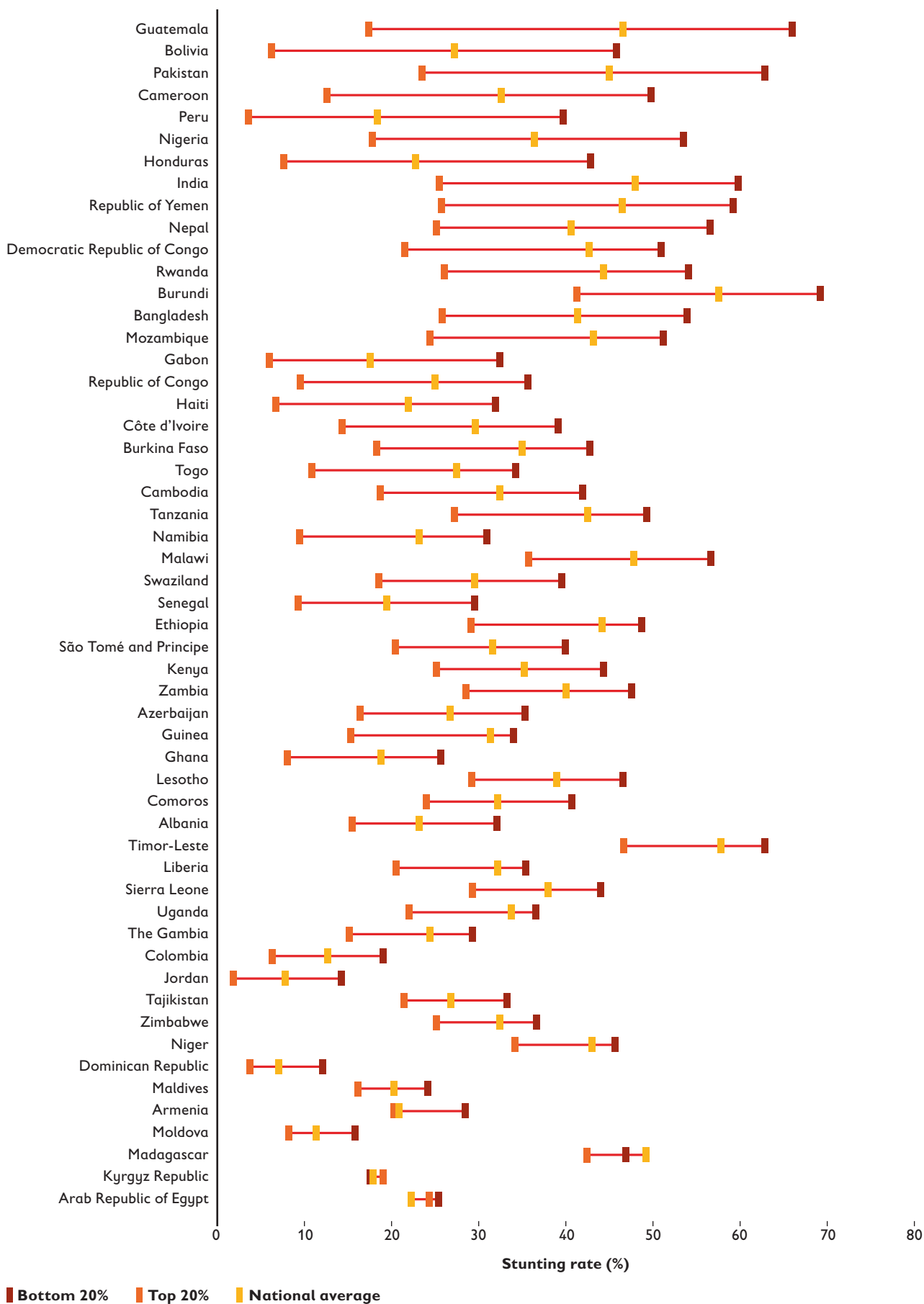
Cameroon and Armenia top the list of countries with the highest levels of inequalities in wasting, with poor children six times more likely to have low weight for height than rich children. They are followed by Kenya, Mozambique and Swaziland, each with ratios exceeding 3:1.



PHOTO: COLIN CROWLEY/SAVE THE CHILDREN

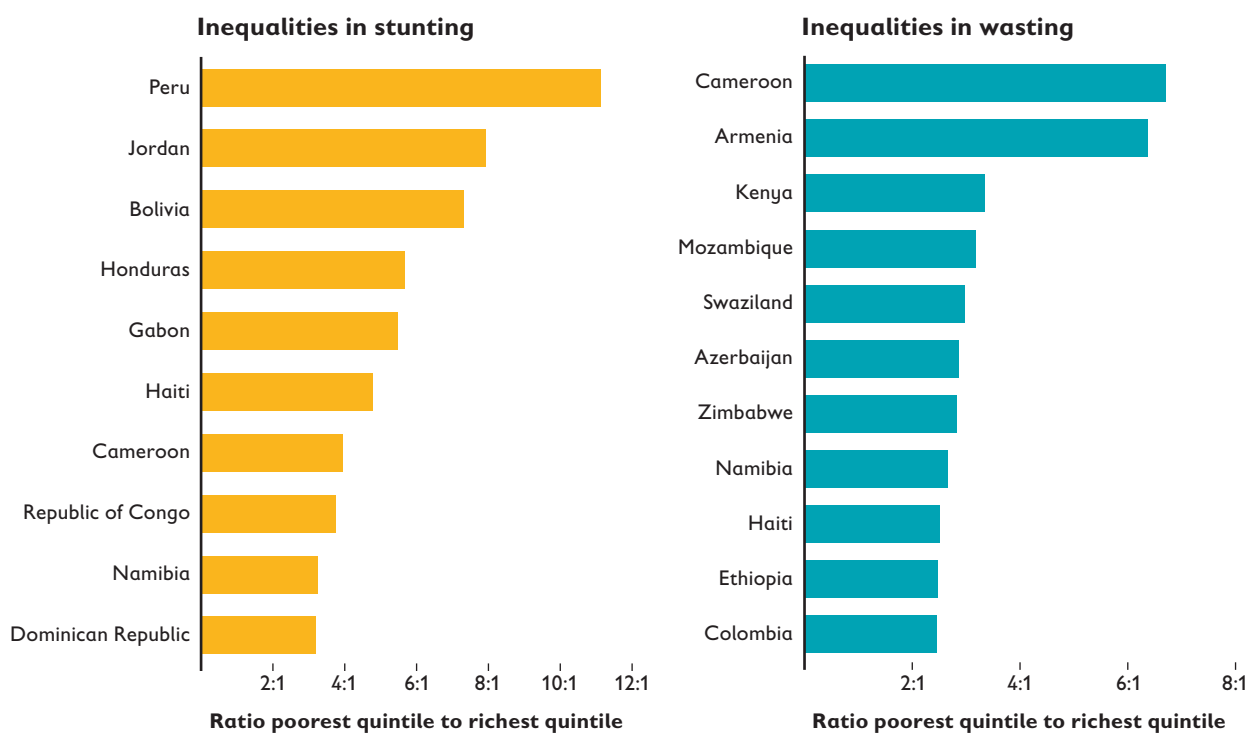
Two-year-old Melvin is being treated for malnutrition in north-western Kenya, where successive droughts have made it hard for many families to make a living.

FIGURE 8 DIFFERENCES IN STUNTING BETWEEN THE RICH AND THE POOR



Source: Save the Children UK, Group and Inequalities Database

FIGURE 9 COUNTRIES WITH THE HIGHEST INEQUALITIES IN STUNTING AND WASTING BETWEEN RICH AND POOR



Source: Save the Children UK, Group and Inequalities Database

ETHNICITY, RACE, RELIGION AND CASTE

Similar to geographical location and family's economic status, children's chances of avoiding malnutrition are highly determined by their ethnic background.

In nearly all the countries for which we have data, we found considerable disparities in malnutrition prevalence between children in different ethnic groups. Our research shows that in our sample of 48 countries with available data on ethnicity, children in the ethnic groups with the worst nutrition outcomes, on average, have 2.8 times higher rates of stunting and six times higher rates of wasting than their more advantaged peers.

But in some countries, disparities are considerably higher. For example, in Nigeria 52% of Hausa ethnicity children are stunted, compared to 14% Igbo ethnic group children. In Ghana, 33% of Gruma ethnic group children are stunted, compared to 10% of children from Ga/Adangbe ethnic group.

Inequalities in wasting are even more pronounced across ethnic groups. In Cameroon, 11% of Biu-Mandara ethnicity children are wasted, while wasting occurs in 1% of children from the Bamilike ethnic group. In Ethiopia, 24% of Nuwe ethnicity children are wasted, compared to 3% of Kefficho ethnicity children. In many cases, geographical inequalities interlink with inequality between ethnic groups.

Ethnic inequalities also appear to be increasing in many countries. Ten out of 21 countries in our sample have experienced an increase in ethnic inequalities in stunting since 2000; the average ratio of inequality increased from 1.5:1 to 1.6:1. Ethnic inequalities in wasting increased in 14 out of 20 countries and the average inequality grew from 2.2:1 to 2.8:1. Yet some countries have managed to make significant progress in reducing these inequalities. In Kenya, for example,

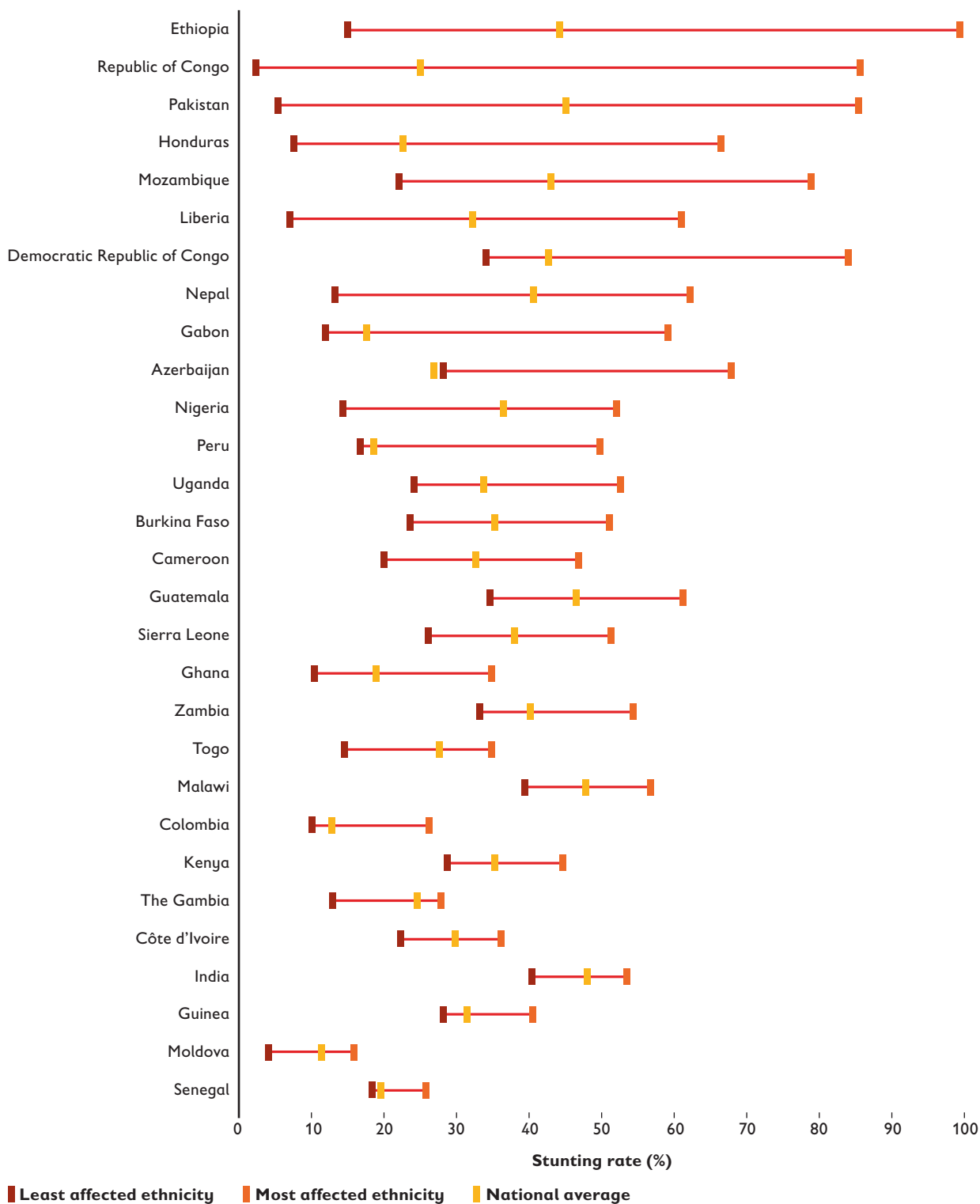
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ETHNICITY, RACE, RELIGION AND CASTE *continued*

inequality in stunting between the Mijikenda/Swahili and Kikuyu groups decreased from a ratio of 1.7:1 to 1.6:1 between 1998 and 2009. In Côte d'Ivoire, the relative difference in wasting

between the worst- and best-performing groups dropped from a ratio of 2:1 to 1.2:1 between 1999 and 2012.

FIGURE 10 DIFFERENCES IN STUNTING BY ETHNICITY



Source: Save the Children UK, Group and Inequalities Database

THE INCREASING PROBLEM OF OVERWEIGHT AND OBESITY

Overweight and obesity are also forms of malnutrition. Indeed, these types of malnutrition are increasingly recognised as one of today's most visible – yet most neglected – public health problems because of the mortality, morbidity and extraordinary healthcare costs brought by their links to diet-related non-communicable diseases. For example, 2.8 million people die each year as a result being overweight or obese (5% of all deaths worldwide),⁸ at an estimated economic cost of US\$2 trillion a year.⁹

Rates of overweight and obesity have skyrocketed over the last four decades and now, for the first time, there are more obese than underweight adults.¹⁰ More than 1.9 billion adults – nearly 30% of the global population – are overweight, and 600 million are obese.¹¹ And overweight in infants and young children (aged 0 to 5 years) is becoming increasingly prevalent, increasing from 31.2 million in 1990 to 40.7 million in 2014. Worrying, this upward trend is apparent in all regions of the world, particularly in Africa and Asia.

THE LOTTERY OF CHILDHOOD OVERWEIGHT AND OBESITY

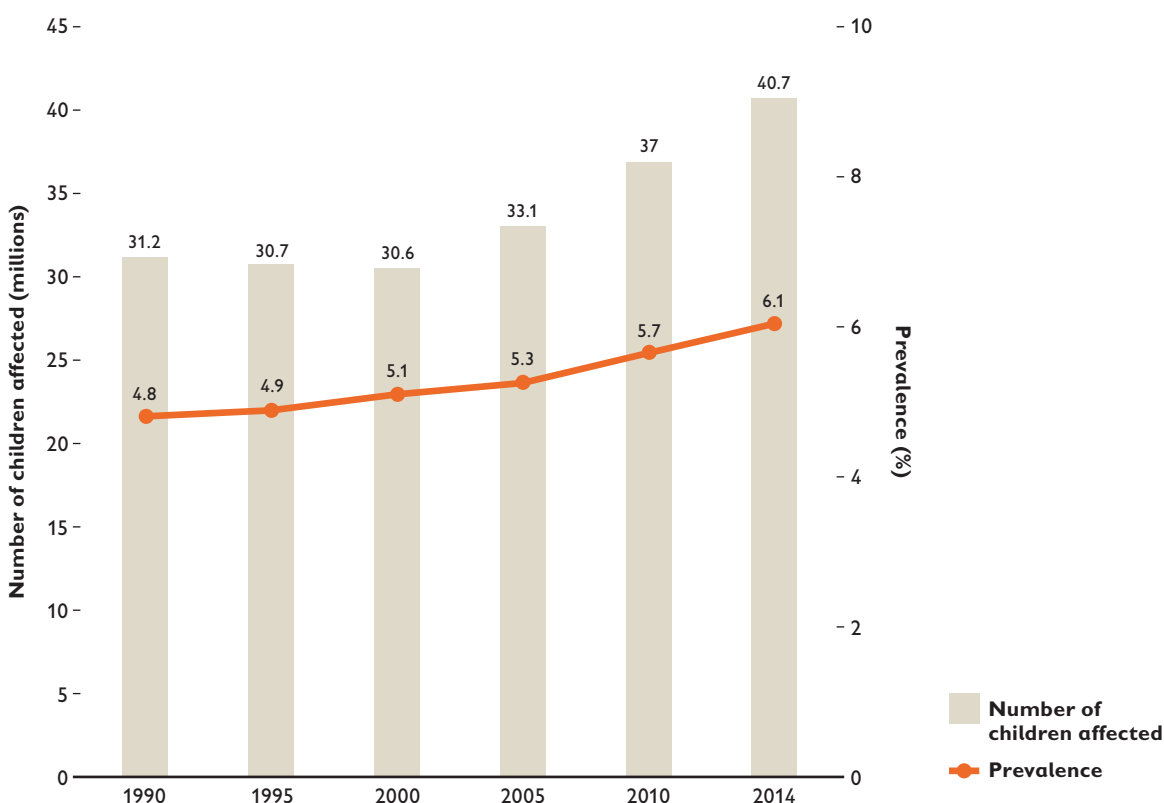
Our analysis demonstrates that overweight and obesity are related to geography, economic status and ethnicity in various ways.

Geography

The vast majority of overweight or obese children live in developing countries, where the rate of increase has been more than 30% higher than that in developed countries.¹² Geographic inequalities inside countries can be high: in Pakistan, 40% of children in the most-affected regions are overweight, whereas in the least-affected regions the prevalence is 2.5%. In Egypt, in the region with the highest prevalence, 32% of children are overweight, and less than 1% are overweight in the region with the lowest prevalence.

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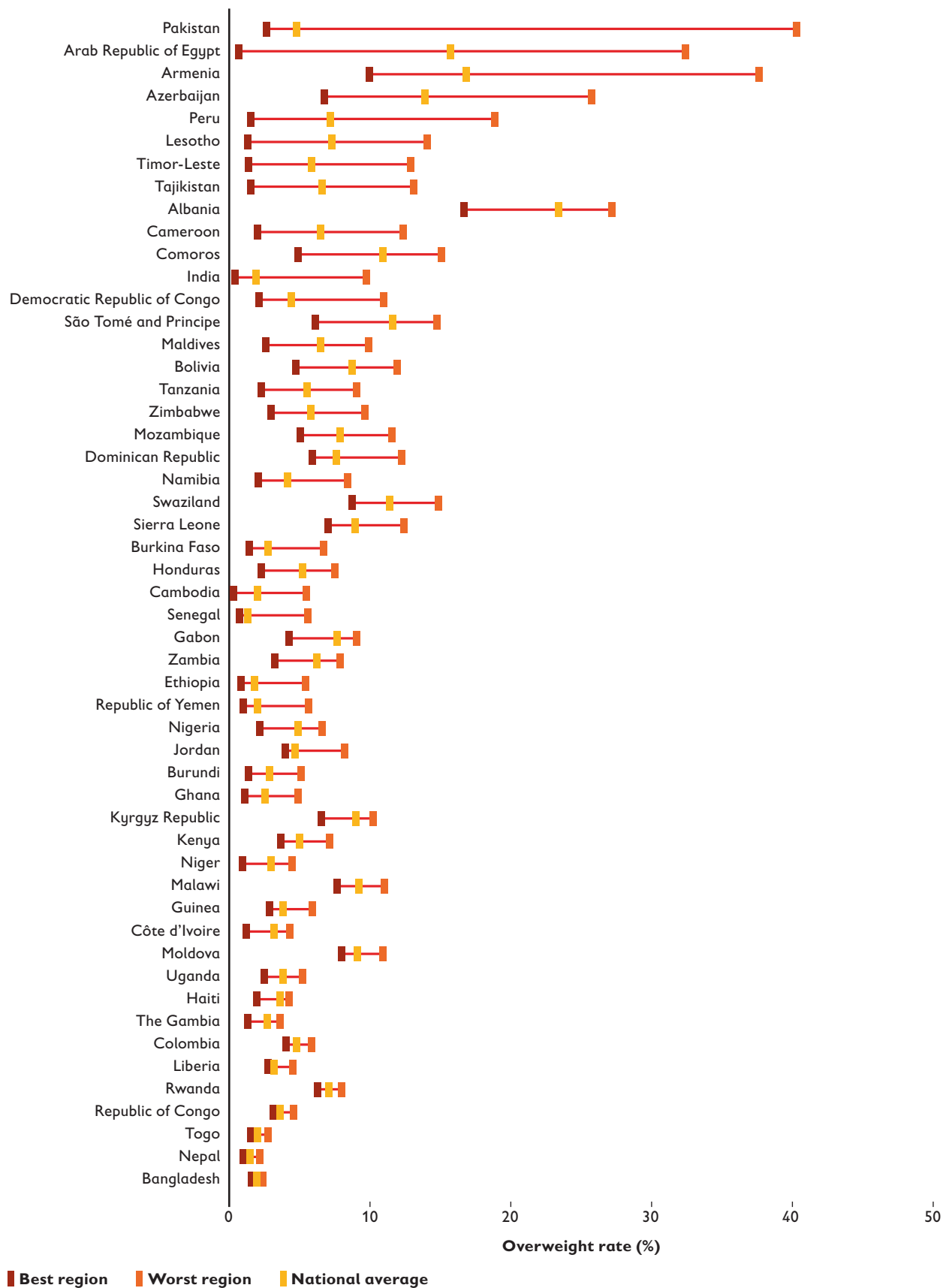
FIGURE 11 CHANGES IN OVERWEIGHT IN CHILDREN – GLOBALLY



Source: UNICEF, WHO, World Bank Group, 2015. *Levels and trends in child malnutrition*. Joint child malnutrition estimates

THE INCREASING PROBLEM OF OVERWEIGHT AND OBESITY *continued*

FIGURE 12 DIFFERENCES IN OVERWEIGHT BETWEEN REGIONS WITHIN COUNTRIES



Source: Save the Children UK, Group and Inequalities Database

THE INCREASING PROBLEM OF OVERWEIGHT AND OBESITY *continued*

Our analysis has not been able to identify why the geographic inequalities are so pronounced. Therefore, further research is necessary. Our initial results suggest that what seemingly is the most intuitive explanation for this inequality – ie, urban environments are more obesogenic than rural environments – may not be sufficient as a sole explanation. For example, urban children may well have a significantly higher risk of overweight in 43 out of 55 countries; however, this leaves 12 countries where they do not. Furthermore, globally the prevalence rate in urban areas is only one percentage point higher (4% of all urban children are overweight, compared to 3% of rural children).

Inequality between rich and poor children

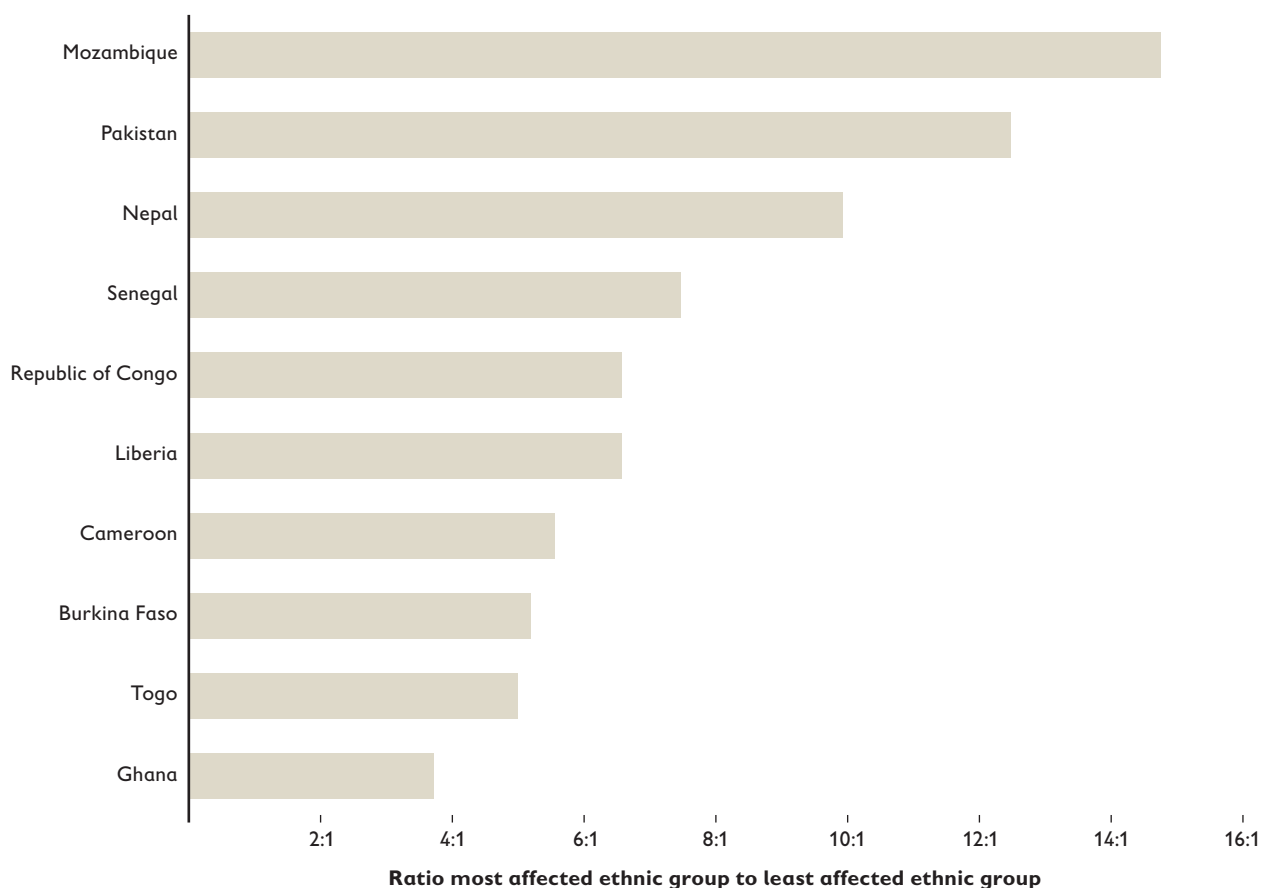
In 47 countries out of 55, we found that the richest children have the highest chance of being overweight. The countries where this trend is

most pronounced include Peru, Ghana, Côte d'Ivoire, Bangladesh and Dominican Republic – in these countries richer children are three times more likely to be overweight than poorer children.¹³ Conversely, there were eight countries in our dataset where the poorest children are more likely to be overweight than the richest, including: Albania, Armenia, Benin, Democratic Republic of Congo, The Gambia, Haiti, Mali and Nigeria.

Ethnicity, race, religion and caste

Within countries, we found ethnic origin to be one determinant of a child's likelihood of being overweight. In fact, out of all variables we explored, ethnicity yielded some of the most dramatic inequalities, with some children 15 times more likely to be overweight than their peers of another ethnicity.

FIGURE 13 COUNTRIES WITH THE HIGHEST ETHNIC INEQUALITIES IN OVERWEIGHT



Source: Save the Children UK, Group and Inequalities Database

CHILDREN FROM EXCLUDED GROUPS ARE AT RISK OF BEING LEFT BEHIND

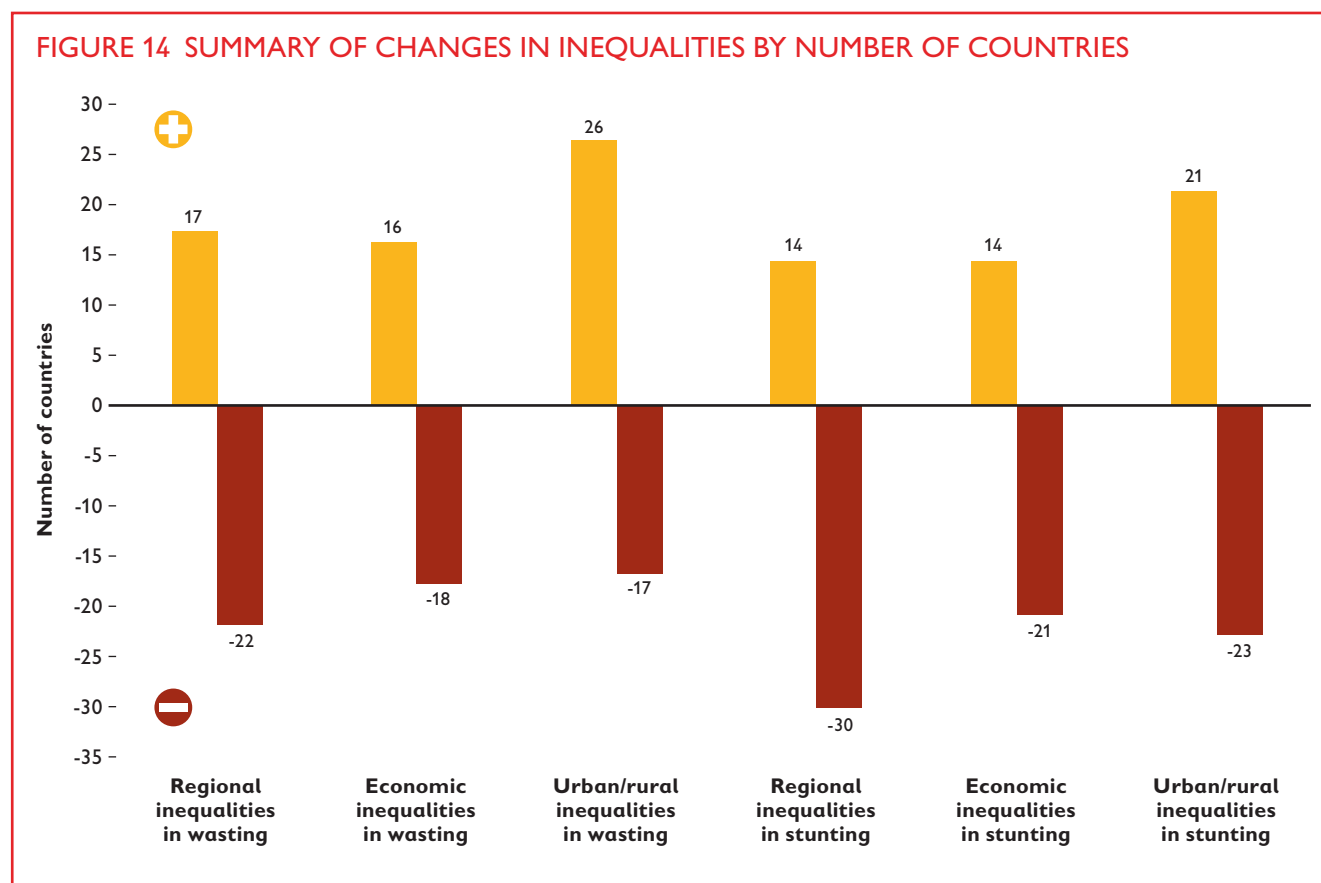
Our analysis of past progress reveals that in most countries for which disaggregated data is available, excluded groups of children are falling further behind their more fortunate peers. New estimations projecting historical trends into the future indicate that prevalence of malnutrition among excluded groups is set to remain far beyond the date agreed by global targets. Children from excluded groups are at particular risk of being left behind by progress.

We analysed progress since the 2000s for each social and economic group for which data is available. We found that inequality in stunting prevalence between regions in a country has widened in 30 out of 44 countries; between the poorest and richest children it has widened in 21 out of 35 countries; and between urban and rural areas it has widened in 23 out of 44 countries. The trends are similar in wasting with the exception of urban/rural difference, which reduced in more countries than it increased in – 26 to 17. Disparities in wasting

between the best- and worst-performing regions in a country grew in 22 out of 39 countries; and the relative gap between the poorest and richest children widened in 18 out of 34 countries.

While most countries have mixed records in terms of reducing group inequalities, there are a few countries which have performed consistently well across each of the three dimensions analysed (urban/rural, sub-national regions, economic groups). Kyrgyz Republic, Liberia, Senegal and Zimbabwe reduced all types of group inequalities in stunting, while Honduras, Kyrgyz Republic, Namibia, Pakistan and Togo decreased disparities in wasting.

On the other hand, an increase in every group inequality was observed in many more countries. Stunting inequalities grew in all groups for which data is available in Cameroon, Republic of Congo, Democratic Republic of Congo, Ethiopia, Gabon, Guinea, Madagascar, Nepal, Niger, Nigeria and Peru. Wasting disparities increased across the board in Cameroon, Democratic Republic of Congo, Ethiopia, Guinea, Liberia, Mozambique and Sierra Leone.



Source: Save the Children UK, Group and Inequalities Database

PROJECTIONS ARE A CAUSE FOR CONCERN

Using available information on past progress, we are able to estimate what the stunting rates will be if countries continue 'business as usual' by landmark moments: by 2025, to reach the WHA target of reducing stunting by 40%; by 2030, to reach the nutrition SDG target of eliminating malnutrition; and project further into the future to estimate how long it would take for countries that are set to miss the SDG target to actually achieve it.¹⁴

Our projections build on the Joint Monitoring Estimates (JME) in a number of ways, including by disaggregating national projections for social and economic groups inside each country, by contemplating a series of timeframes, and by introducing a series of methodological innovations (see box below for methodological details).

BOTH INTERIM AND FINAL TARGETS WILL BE MISSED BY LARGE MARGINS

The JME projections show that without a step change in action, **only 39 out of 114 countries with available data will meet the 2025 WHA target to reduce stunting by 40%**. However, of those 39 countries only six are low income: Afghanistan, Cambodia, Democratic People's Republic of Korea, Liberia, Nepal and Sierra Leone.

Our new projections show that in addition to the eight countries from our sample that already have stunting rates below 3%, only three more countries will manage to achieve the 2030 SDG target to eliminate stunting.

Of those three, two are upper-middle-income countries – Belarus and Macedonia, and one is a high-income country – Trinidad and Tobago.

53 out of 137 countries will tackle stunting only in the next century. The last places where stunting will be eliminated are Malawi (the year 2152), Niger (2152), Burundi (2146), Timor-Leste (2145) and Eritrea (2135).

PROJECTING THE SUSTAINABLE DEVELOPMENT GOAL MALNUTRITION TARGETS

SDG 2 sets two targets for nutrition. The ultimate target is to eliminate all forms of malnutrition by 2030, including stunting and wasting. SDG 2 also includes the interim target adopted by the World Health Assembly in 2012, which commits countries to reduce stunting by 40% between 2012 and 2025, and to reduce and maintain wasting to 5% by 2025.

The Joint Monitoring Estimates, developed by UNICEF, WHO and the World Bank, monitor country performance and assess whether countries are on track to achieving the 2025 WHA targets.¹⁵ National averages hide inequalities within countries. While, on average, a country may be on track to achieve the goals, some social and economic groups within the country may be at risk of being left behind.

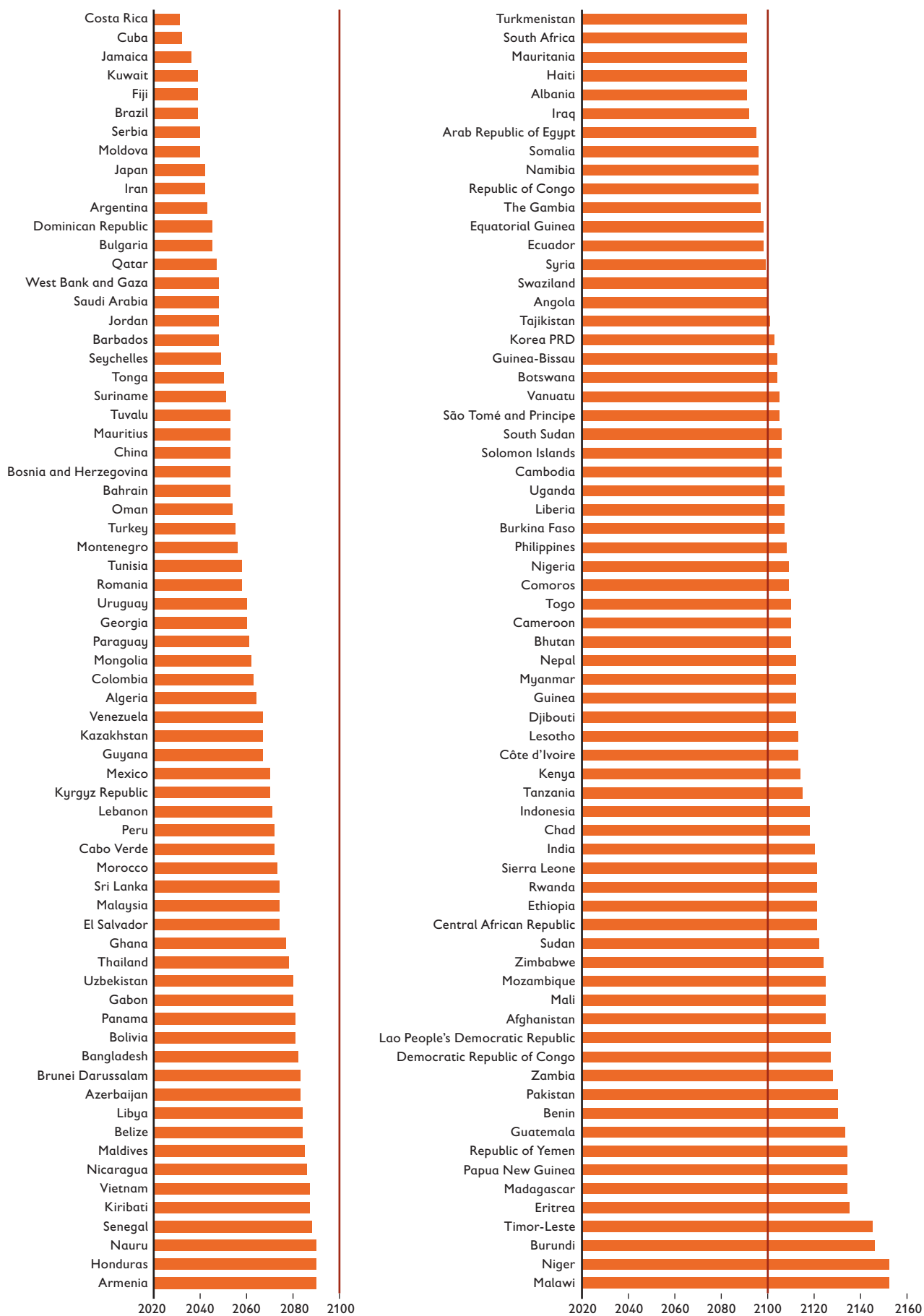
In collaboration with researchers from Göttingen University, we produced projections at national level and for all social and economic groups

inside each country. For past national stunting rates, we used those reported by the JME. Data disaggregation by social and economic groups was estimated based on data from our Group Based Inequality Database (GRID), adjusting with national-level figures from JME. As a result, our research models future rates of stunting for 137 countries, including 1,694 major socio-economic groups (in 56 countries with disaggregated data) based on trends in malnutrition since the 2000s.

In contrast to the JME model, our projections follow a sigmoid function based on the empirical Bayes method, which takes account of the fact that – similar to other child welfare indicators – progress in improving nutrition tends to decelerate over longer periods of time: the closer the countries come to the target, the more difficult it becomes to make further improvements.

See further methodological details in appendix 1.

FIGURE 15 WHEN COUNTRIES WILL ELIMINATE STUNTING



Source: Save the Children and Göttingen University, based on Group and Inequalities Database and Joint Child Malnutrition Estimates

LOW-INCOME COUNTRIES, ESPECIALLY IN SUB-SAHARAN AFRICA, ARE THE FURTHEST AWAY FROM THE TARGETS

While the projections show that at the current pace most countries are decades away from reaching the targets, **it is low-income countries, many of which are from sub-Saharan Africa, that will struggle the most to eliminate stunting.** This is due to a combination of high rates of stunting and low rates of progress so far. In our sample, a median low-income country is estimated to eliminate stunting 91 years later than agreed, in 2121, while a median lower-middle income country will manage to do this by 2101. Similarly, a median sub-Saharan African country is projected to reduce stunting by 40% only by 2110, whereas a typical country from the rest of the world will do so by 2073.

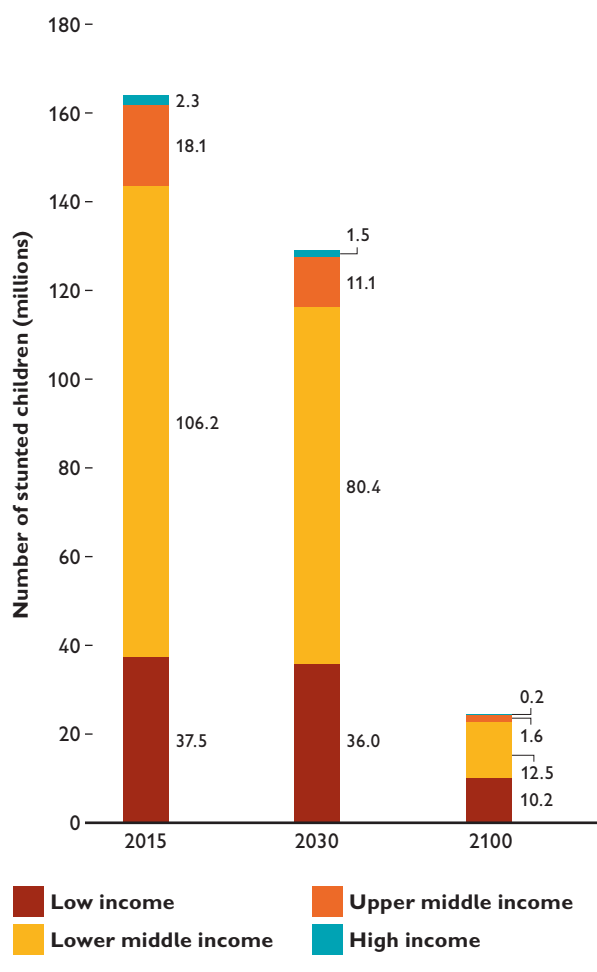
Another worrying finding is that despite not being the worst performers, **countries with the largest under-five child populations are also many decades away from eradicating stunting.** Of the five countries with the largest child populations, Bangladesh is projected to be the fastest in reaching the ultimate stunting target, but this will only happen in 2082. In the other four countries – India, Nigeria, Pakistan and the Democratic Republic of Congo – stunting will be eliminated only in the next century.

TENS OF MILLIONS OF CHILDREN WILL SUFFER FROM STUNTED GROWTH FOR DECADES TO COME

If the current national-level trends continue unchanged, our projections show that **there will still be 129 million stunted children by 2030, and even by the turn of the next century 24 million children will have stunted growth.** Of these children, a disproportionate share will be from disadvantaged and excluded groups. In our sample of countries, four out of five stunted children will live in rural areas and six out of ten stunted children will come from the poorest 40%.

Countries that are presently categorised as lower-middle income will account for most of the reduction. The number of stunted children will also decrease in presently low-income countries, but projected increases in child populations is anticipated to result in presently **low-income countries accounting for two-fifths of the global burden of stunting by 2030.**

FIGURE 16 NUMBER OF STUNTED CHILDREN BY COUNTRY INCOME CLASSIFICATION (IN MILLIONS)



Source: Save the Children and Göttingen University, based on Group and Inequalities Database and Joint Child Malnutrition Estimates

EXCLUDED GROUPS OF CHILDREN ARE AT RISK OF STUNTED GROWTH LONG AFTER THE NATIONAL TARGETS ARE MET

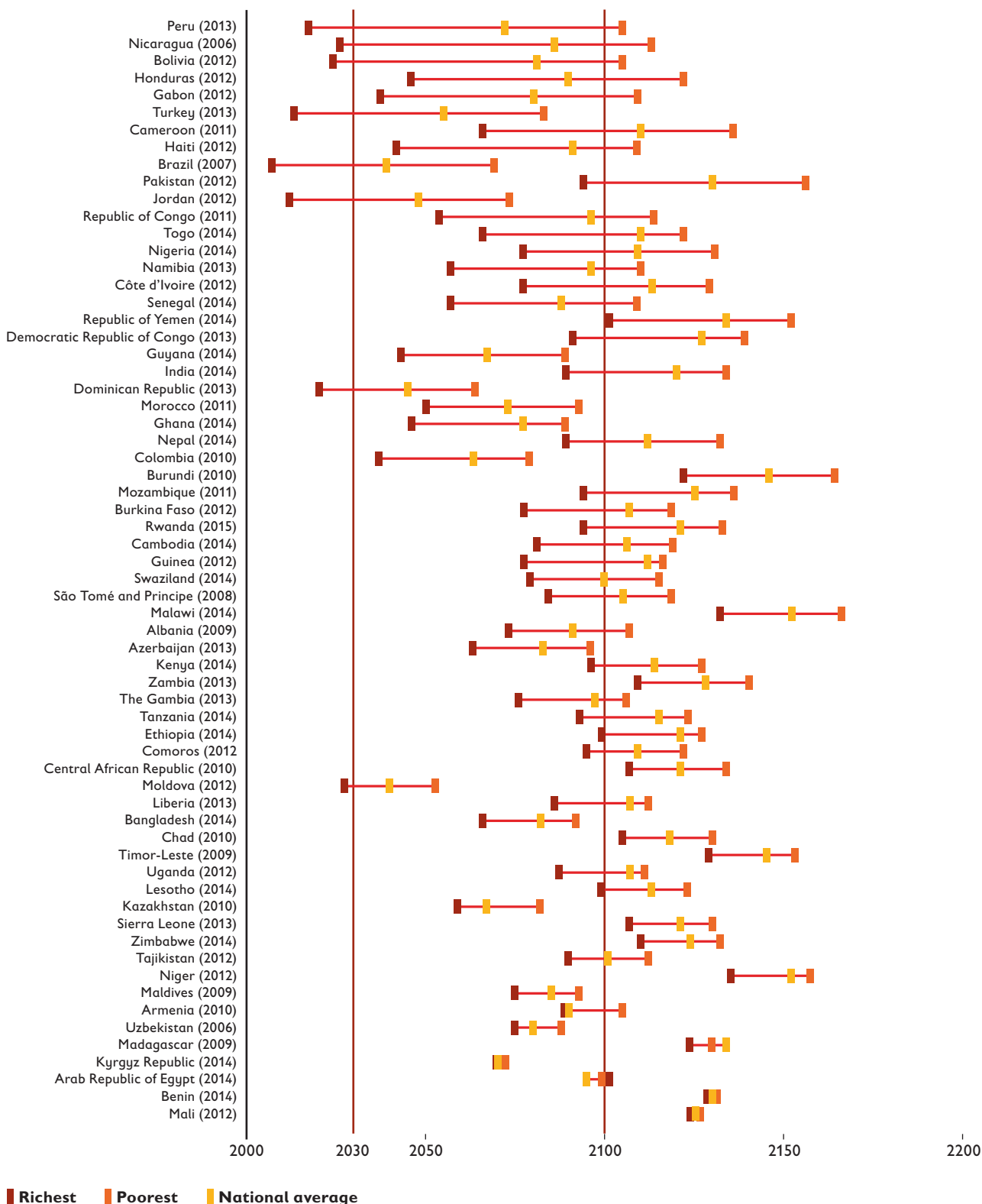
Given the existing large disparities and highly uneven past progress, excluded groups of children are at risk of being left behind by national progress. **It will take 50 years longer to eliminate stunting among the poorest children as compared to the richest children in our sample.**¹⁶ Similarly, in about half of our sample, stunting will be eliminated in the worst-performing region only a half century later than in the best-performing region.¹⁷

Projected time lapses are considerable in nearly all countries but are particularly striking in some. For example, in Bolivia and Nicaragua, the poorest children are projected to be almost a full century behind the richest children in terms of stunting

eradication. And in Peru, Tacna region eliminated stunting in 2010, while in Huancavelica the elimination of stunting will only happen 111 years later, in 2121. In Pakistan, the stunting rate will drop below 3% in

2100 in Islamabad, while Balochistan region will reach this point in 2210. In Egypt, the worst-performing Beni Suef region will eradicate stunting in 2141, compared with 2042 in New Valley region.

FIGURE 17 PROJECTIONS FOR BEST AND WORST PERFORMING REGION IN EACH COUNTRY TO ELIMINATE STUNTING (= <3%)



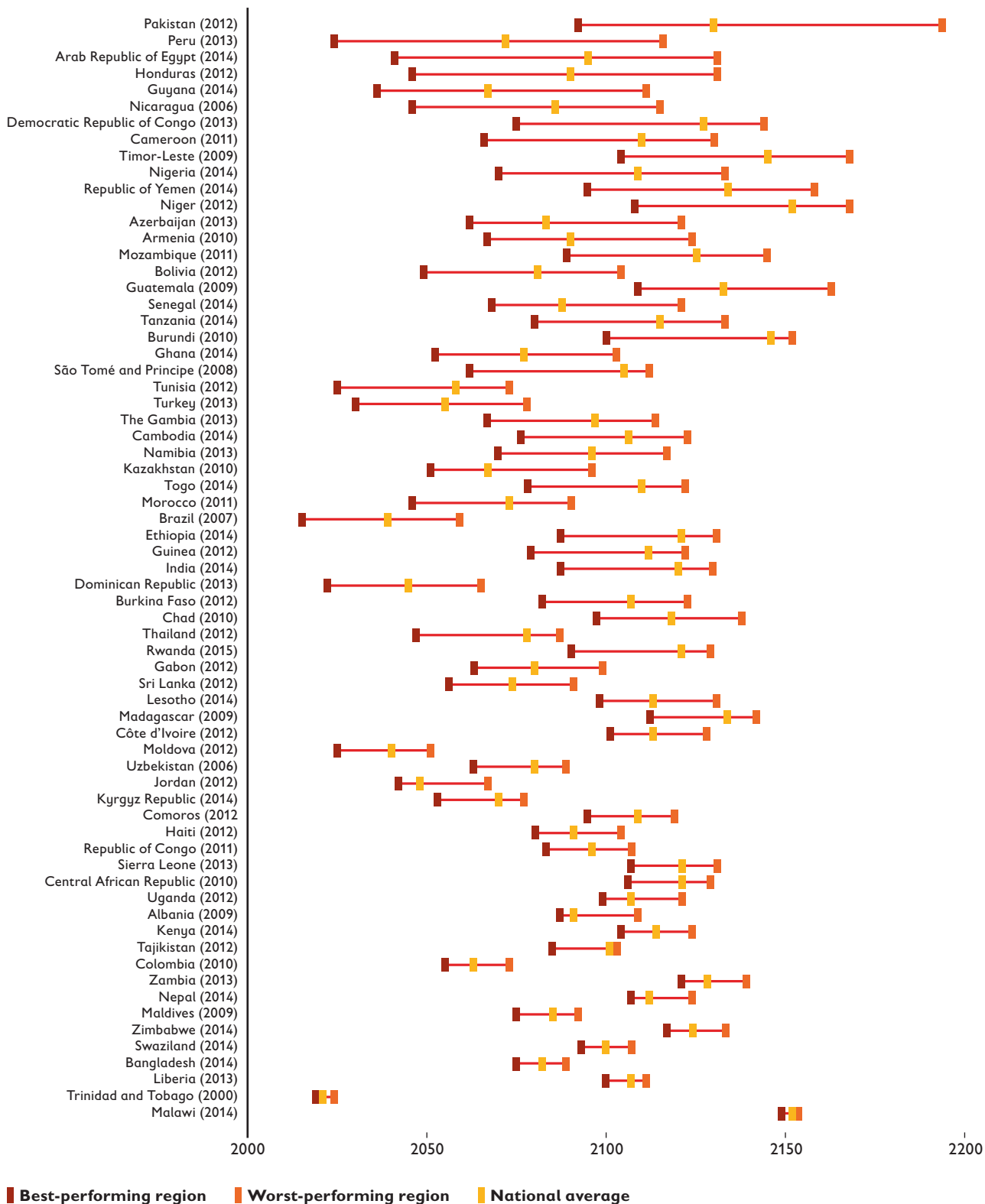
Note: Dates in brackets indicate the latest year for which data is available.

Source: Save the Children and Göttingen University, based on Group and Inequalities Database and Joint Child Malnutrition Estimates

Overall, these projections ring alarm bells: unless countries prioritise tackling malnutrition and take urgent steps to accelerate the progress – with a special focus on disadvantaged groups – the SDG

targets will be missed by large margins and the promises made to end all forms of malnutrition will remain unfulfilled for many decades to come.

FIGURE 18 PROJECTIONS FOR THE RICH AND POOR BY COUNTRY TO ELIMINATE STUNTING (= <3%)



Note: Dates in brackets indicate the latest year for which data is available.

Source: Save the Children and Göttingen University, based on Group and Inequalities Database and Joint Child Malnutrition Estimates

3 Why are children malnourished?

The world has made progress in tackling malnutrition. But the progress has been far too slow, and, as shown in Part 2, some children have been excluded, because of who they are or where they live. Inequalities between some groups are actually widening. Unless we address this group-based exclusion, children will still be malnourished until at least the end of the century, 70 years after the SDG deadline for eliminating all forms of malnutrition.

We know that people are malnourished if their diet does not provide adequate energy, protein, fats and micronutrients for growth and maintenance, or if they are unable to fully utilise the food they eat due to illness – leading to undernutrition.¹ People are also malnourished if they consume too many calories – leading to overweight and obesity.^{2, 3} But to better understand how to accelerate progress in addressing malnutrition for all, we must understand the underlying drivers.

Here in part 3 we explore the drivers of malnutrition, using a human rights framework (see Figure 19) and looking specifically at how group-based exclusion is further driving malnutrition, and how malnutrition is passed from one generation to the next. We look at the large-scale (global and national) drivers of malnutrition, and the response from policy-makers so far. We cover a wide number of issues in this section, but our analysis here is not intended to be all encompassing.

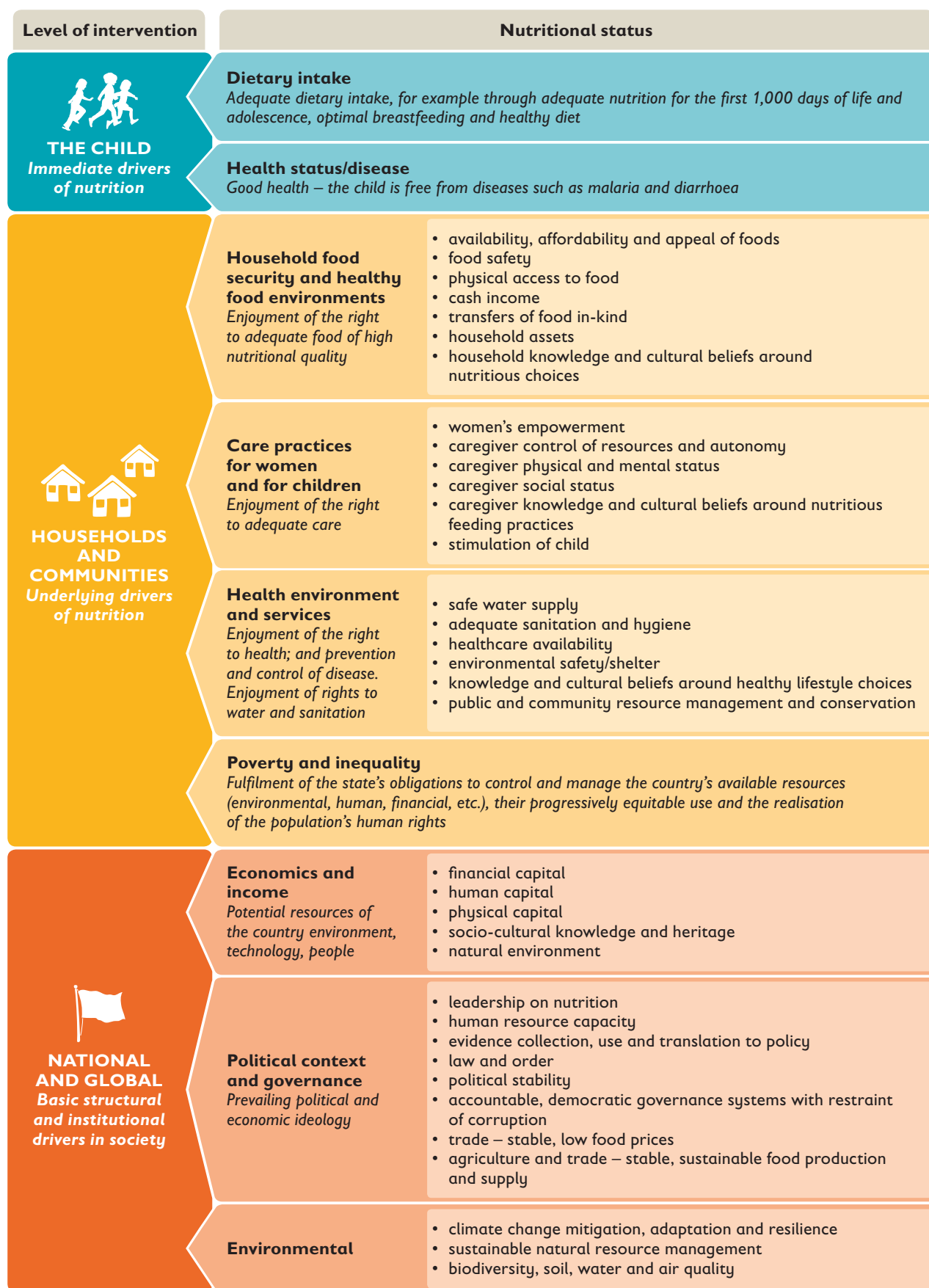
Human rights provides a powerful framework in which to understand and address malnutrition. Figure 19, which presents our analytical framework for this section, shows and implies a range of human rights – civil, cultural, economic, political, and social – that must be realised in order to ensure that one’s right to food and good nutrition are achieved in an adequate, equitable and sustainable manner.⁴



PHOTO: ANDRE MALERBA/SAVE THE CHILDREN

Tum Lang, who lives in a small village in Myanmar, knows the importance of eating nutritious foods while pregnant. But food is scarce and people don't have much choice about their diet.

FIGURE 19 A CONCEPTUAL FRAMEWORK FOR THE DRIVERS OF NUTRITION



Source: Modified by author with information from: Oshaug, A, Eide, W B and Eide, A 'Human rights: a normative basis for food and nutrition-relevant policies', *Food Policy*, 19, (6), 1994, 491–516; Smith, L and Haddad, L (2014) *Reducing Child Undernutrition: Past drivers and priorities for the post-MDG era*, IDS Working Paper 441, Institute of Development Studies; UNICEF (2013) *Improving Child Nutrition: The achievable imperative for global progress*; Black et al, 2013; Ruel and Alderman, 2013.

WHY ARE SOME PEOPLE VULNERABLE TO MALNUTRITION?

THE RIGHT TO FOOD, HEALTH AND OTHER RIGHTS

The right to food requires that, along with being available and accessible, food is adequate, as reflected in the underlying drivers pathways in the conceptual framework (see Figure 19). This has important implications for nutrition. Adequacy means that food must be sufficient in the forms of **quantity**: meeting an individual's energy requirements; and **quality**: meeting vitamin, mineral and micronutrient needs as well as in terms of taste and texture. It also means food should be **safe**: free of contaminants; and **culturally acceptable**: consistent with existing cultural food norms.⁵ Food cannot be considered adequate if it does not meet the four requirements listed above, and if people face discrimination in relation to any of these, their right to food has not been met.

The **right to food implicitly invokes a right to good nutrition**, if we understand the right to food to include the need for food that is of both sufficient quantity and quality. Quantity refers to sufficient calorific intake to meet energy needs; quality refers to the nutritional needs a person has and their right to access the means to ensure these. This is emphasised in general comment 12 of the United Nations Committee on Economic, Social and Cultural Rights,⁶ as the right to be free from hunger and malnutrition; this also indicates that the right to food cannot be reduced to calories or nutrients.⁷ The right to health also requires that children be adequately nourished; inadequate nourishment obviously has serious health implications.

A lack of the realisation of the **rights to food and good nutrition** means a diminished ability for children to access other rights, such as the rights to survival, development and health, both immediately and in the long term due to the impacts of hunger on child development. For example, it impacts children's ability to access and participate to their full potential in education, their health outcomes and their right to a livelihood and ability to fulfil their economic potential as an adult.

The availability and accessibility of nutritionally adequate, culturally appropriate and safe food are critical components of children's rights to health, and so to the rights to life, survival and development. Article 24(a) of the CRC explicitly

requires governments to 'diminish infant and child mortality' and Article 24(c) speaks specifically of addressing malnutrition in this context. General comment no. 15 of the CRC highlights the importance of good nutrition as an underlying determinant of children's health, along with the rights to life, survival and development. It articulates, in part, what combatting malnutrition under children's rights to health would require. It includes a specific mandate that the provision of nutritious food be embedded within the framework of primary healthcare.⁸ It also singles out adequate nutrition and growth monitoring as of particular importance in early childhood.⁹

Children's rights to adequate water, sanitation and hygiene are also critical in ensuring that they are adequately nourished. Furthermore, securing the economic, social and cultural rights of children, specifically in relation to food and nutrition, is essential to advance their capacity to develop and think, and to recognise their agency or autonomous decision-making ability.

States have a binding legal obligation, enshrined in the CRC, to respect, protect and fulfil children's rights to life, survival, development, health and food. Given the strong correlation between malnutrition and child survival – and the centrality of nutrition to children's health and development – states must tackle malnutrition in order to realise children's rights to survival. So, states must ensure that all of the drivers of malnutrition discussed above are addressed in an equitable manner. Many countries lack a legal framework that promotes the rights to child survival, development, health and food; and many states that do have a legal framework often fail to implement it.¹⁰

Under the right to food – specifically – every state is obligated, at a minimum, to ensure that all of their citizens have access to the minimum essential food.¹¹ One step in realising the right to food, and meeting the obligation to fulfil the right to food, is to ensure that appropriate and comprehensive legislation on the right to food, including nutrition, is in place and is adopted by relevant national institutions. Yet in many of the countries reviewed by Save the Children in 2011, the right to food was not codified in national law – making implementation and enforcement difficult.¹² For example, while many countries have begun to develop or endorse laws to regulate the marketing of breastmilk substitutes, there is still a long way to go. Very few countries were found



PHOTO: JONATHAN HYAMS/SAVE THE CHILDREN

Nadia, aged one, is screened for malnutrition at her home in a refugee settlement in Lebanon, near the Syrian border.

to have legislation dealing specifically with child nutrition; some exceptions include food safety laws in Vietnam and China, and regulations on food support to vulnerable citizens in Mozambique. Significantly, countries that had legally recognised the right to food were found to be more likely to implement programmes tackling child nutrition;

examples include free school meal programmes in India and South Africa. Most countries, however, have failed to address adequately the many causes of undernutrition, such as micronutrient deficiencies, poor infant and young child feeding practices, weak healthcare, and inadequate water, hygiene and sanitation.¹³

DRIVERS OF CHILDHOOD OVERWEIGHT AND OBESITY

When presented as a function of food consumed against calories spent, the causes of obesity can ostensibly appear individualised. However, given the significant inequalities and population-level trends demonstrated in part 2, page 17, it is very clear that the increase in overweight among children is heavily influenced by societies' structures and norms. While the causes of obesity are complex and affect people differently, we propose a simple framework to view the dietary choices made by every household around the world. This framework might go some way to explaining the inequalities highlighted.

LOCAL FOOD ENVIRONMENTS

Whether we buy our food or grow it, we eat the food that is available to us – ie, the food that is in our local environment. The processes

through which food becomes available to us – the mechanisms that produce, transform, transport and deliver our food – are called food systems, and they differ dramatically across the world. Differences in food systems explain why the price, quantity and quality of food varies so much from place-to-place. The *Global Nutrition Report (2015)* identifies five distinct types of food systems prevalent around the world: 'industrial', 'mixed', 'transitioning', 'emerging', and 'rural'. These food systems are very different but, interestingly, they all increasingly deliver packaged foods, snacks and other processed foodstuffs. This means that wherever children live in the world, their local food environments are increasingly full of foods that are highly processed, and high in trans- or saturated fats, sugars and/or salt – but low in fibre and

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DRIVERS OF CHILDHOOD OVERWEIGHT AND OBESITY *continued*

micronutrients. The overconsumption of fats, sugars and salt is unhealthy and can lead to overweight, obesity and diet-related disease. But despite the negative health consequences, these ingredients are used in excess by companies to increase the longevity, delectability and profitability of foodstuffs.

The price of food is another key feature of our local food environment and has a big impact on people's consumption decisions. In many countries, unhealthy foods are becoming cheap relative to the price of healthy food. The Food Foundation demonstrated that in the UK unhealthy food can be up to three times as cheap a source of calories than healthy food.¹⁴ The ODI's 2015 report into the rising cost of a healthy diet found that this phenomenon is not just limited to the wealthiest economies. It found evidence to suggest that in emerging economies such as Brazil, China and Mexico the price of fruit and vegetables has been rising more than for most other foods, including energy-dense processed foods.¹⁵

FOOD PREFERENCES

Why we choose to eat what we eat is complicated. Diets are determined by a complex interplay of psychosocial factors. Indeed, our food preferences are influenced at different times and in different ways by a range of issues as diffuse as region, culture, morality, age, wealth, convenience, habit, and comfort. This section highlights some of the key drivers of our food preferences.

The promotion of food via advertising is used by companies to sway consumption decisions. Advertising of unhealthy food occurs through multiple channels and is often directed at children and their families. The advertising budgets for unhealthy food and drink far exceed those for healthy products. Furthermore, many countries lack the necessary regulatory safeguards to protect children from the abuses of advertisers. Children and families everywhere are reached

by marketing messages that promote foods that are high in fat, sugar and salt. This works against efforts to create safe environments for children that actively encourage the development of their healthy food preferences.

Education and knowledge is an important determinant of our food preferences. Children and parents need to know what a healthy diet is, how to prepare it, and healthy weight-management techniques. We also need transparent information about the nutritional value of our food, including clear labelling on food packaging. Whether provided informally by parents or formally via schools and workplaces, whether communicated via the labels on food packaging or via public health campaigns, children's lifelong food preferences can be shaped for the better by giving families access to the knowledge they need.

Time scarcity, particularly as a result of care responsibilities, is also a driver of food consumption decisions. Families often find themselves time poor, especially in unequal households where women will too often find their duties stretched between the demands of remunerated employment and the unpaid care of children, the sick and the elderly. This can have a negative impact on diet because wherever you live, food places significant demands on your time. Millions of people need time to grow it; millions of others need time to work to afford it; we certainly need time to buy and prepare it; and parents require time for adequate child-feeding practices. When facing these time constraints, it may seem sensible to reduce the time one spends on food. For many families, poverty may be a key factor in their ability to do this. For example, those with disposable income can use their money to buy food that was previously grown or prepared at home. The nutritional consequence of people's prioritising of convenience is not well-established. However, it would be intuitive to assume that time scarcity is one of the key reasons for the rise in the consumption of convenient but unhealthy food.

BREASTFEEDING AND THE INTERNATIONAL CODE OF MARKETING OF BREASTMILK SUBSTITUTES AND SUBSEQUENT RESOLUTIONS (THE CODE)

Breastfeeding is an important determinant of adequate dietary intake for young children, with recent evidence showing that breastfeeding decreases the prevalence of undernutrition and overweight/obesity and diabetes later in life. Breastfeeding is a vital aspect of infant and young child feeding, and is affected by wider care practices for women and for children, (see Figure 19, page 25). Universal breastfeeding could avert the deaths of 823,000 children and 20,000 deaths due to breast cancer each year – and save US\$300 billion.¹⁶

Breastmilk provides all the energy and nutrients that infants need during the first six months of life. A woman might not breastfeed exclusively because of inadequate support from her partner or family, or because she lacks other forms of support, or because of labour burdens, or as a result of the aggressive promotion of formula as a breastmilk substitute.¹⁷ Where in the world a woman lives, her access to health services and support, and her exposure to the marketing of breastmilk substitutes (BMS) will, therefore, have an impact on her choice to breastfeed and the nutrients her child receives.

Inappropriate or aggressive marketing of BMS is a substantial global barrier to breastfeeding. The Code provides a set of standards to regulate the activities of the BMS industry, and to protect the public and healthcare providers from inappropriate marketing. However, despite many governments adopting the Code into law, either in part or in full, its implementation, monitoring and enforcement at national levels remains very weak. This goes against states' human rights obligations to protect individuals from interference or violation of their rights by third parties, such as food and pharmaceutical companies. Recent evidence highlights substantial violations of the Code by BMS manufacturing companies.¹⁸

The private sector, based on the UN Guiding Principles on Business and Human Rights, bears

a responsibility to respect and remedy human rights.¹⁹ This means that businesses should take active steps to avoid infringing rights and remedy violations where they occur. For children in particular, the Children's Rights and Business Principles, co-created by Save the Children, the UN Global Compact and UNICEF, provide additional guidance on how businesses can ensure children's rights are respected and promoted.²⁰

So, companies need to step up and adhere to the Code. Governments must also make the financial and political investments necessary to implement the Code, monitor company behaviour, and ensure accountability in cases where the Code has been breached.

CODE ADOPTION AND MONITORING IN MYANMAR²¹

Myanmar's Food and Drug Board of Authority issued the Order of Marketing of Formulated Food for Infant and Young Child. Myanmar's Order follows the international public health recommendation for a Code of Marketing of Breastmilk Substitutes. The Order ensures that mothers and families are able to make appropriate and informed decisions about infant feeding.

Save the Children in Myanmar has developed a mobile application for monitoring the Order, which was adopted by the Department of Health and the National Nutrition Centre; and globally by the International Code Monitoring Centre. This application is being widely used across the country, including in rural and remote areas, to monitor and report Order violations. It is an easy-to-use application, and it allows the user to 'spot' a violation, take a snapshot, fill in some key data, and send the data directly to the International Baby Food Action Network's International Code Documentation Centre and the National Nutrition Centre, where the violation is tracked and acted upon.

POVERTY AND INCOME

Malnutrition is closely linked to poverty,²² as the previous chapter has shown and as captured in the conceptual framework (Figure 19, page 25); poverty, alongside inequality, is a key underlying driver of nutrition. The **livelihood opportunities** for the family, and so the family's household income, are major contributors to a child's nutrition outcomes. Unfortunately, many households are still living in **extreme poverty** and do not have the livelihood opportunities or social protection support available to them to be able to provide food and other essentials for their families. According to World Bank projections, 702 million people are living in extreme poverty (living on less than US\$1.9 a day) in 2015 – that's 9.6% of the global population. This is down from an estimated 902 million people in 2012, or 12.8% of the global population.²³ Of course, in addition to this, there are many more people who are projected to be living in relative poverty – ie, on more than US\$1.9 a day but who still struggle to provide for their families.

An estimated 2 billion people globally live and work on small farms in developing countries.²⁴ They are particularly vulnerable to environmental, economic and social shocks,²⁵ as the impact of El Niño this year has shown. Most of the world's smallholder farmers are struggling to live and to feed their families on less than US\$2 a day. Many have not

been able to respond to increased demand for food because they lack access to assets and capital, and they face higher transaction costs, which makes it difficult for them to adapt and respond quickly to market developments. Two billion people are in this situation because of the decline in investment in agriculture and a lack of supportive policies.

Poor water and sanitation are associated with 1.4 million child deaths every year, due to diarrhoea, subsequent malnutrition, and their consequences. A child is 10 times more likely to die from diarrhoeal disease if he or she is affected by severe acute malnutrition.²⁶ Furthermore, 50% of malnutrition is considered to be associated with repeated diarrhoea or intestinal infections, as a result of unsafe water, inadequate sanitation or insufficient hygiene.²⁷ Poor access to clean water and adequate sanitation is closely linked to poverty, and most of this disease burden falls on children in low-income countries.²⁸ In South Asia, the poorest fifth of the population is 13 times less likely to have access to improved sanitation than the rest.²⁹ In sub-Saharan Africa, rich people are more than twice as likely as poor people to have access to safe water, and nearly five times as likely to have access to improved sanitation.³⁰ Significant spatial inequalities also exist within countries, such as those experienced by communities in remote rural areas and slum-dwellers in urban areas.³¹

POVERTY AND INCOME – COUNTRY EXAMPLES

Zambia's economic growth is recognised to have been largely unequal, as reflected in one of the highest income Gini coefficients in the world at 57.5.³² In 2010, the bottom 50% of the population according to **wealth** accounted for 9.1% of the total income, while the top 10% by wealth accounted for 52.6%.³³ These inequalities are reflected in the figures on – and children's experiences of – malnutrition. Stunting levels are especially high for the three poorest quintiles, with more than 40% stunting prevalence, rising to 47% for the poorest quintile.³⁴ Children in the poorest households are more than twice as likely to be underweight as children in the wealthiest households; despite progress since 2002, children from the poorest quintile are 1.7 times as likely to be stunted as children from the wealthiest quintile.

Although wealthier Zambians are less likely to be stunted, rates do not reduce quickly with wealth. All but the top wealth quintile in Zambia have stunting rates of 38% or above.³⁵ Zambian society is very unequal in income, and the pattern of economic growth is reinforcing this situation as time goes on. This demonstrates the importance of addressing the unequal distribution of wealth in order to address malnutrition in Zambia.

In **Indonesia**, children in the **lowest wealth quintile** are being left behind from national progress in nutrition, with 48% of children under five stunted, compared to 29% in the highest wealth quintile.³⁶ The trend is consistent for all aspects of malnutrition, except for overweight,³⁷ and indicates that poverty is a key driver of malnutrition in Indonesia.



Yasmina, four, and her brother Mugisha, two, were forced to flee unrest and violence in Burundi and now live in a camp in Tanzania.

REGIONAL DISADVANTAGE

As our research has shown (see part 2, page 8), regional disadvantage within countries significantly impacts nutrition.

Group-based exclusion is often layered on top of regional disadvantage. It also driven by many of the aspects captured in the conceptual framework (see Figure 19, page 25), including poverty, and the health environment and services pathways.

Delivering services in some regions can be challenging, whether due to remoteness, difficult terrain or regional conflict, and this may be expected to result in some variation in health, nutrition and education outcomes. Where major

gaps exist between regions within a country, systematic disadvantage may be at play. Such disadvantage indicates neglect on the part of decision-makers, whether intentional or not.

The systems that exist to improve the nutrition of children, including health, nutrition and early development interventions, are often less accessible to those most in need, such as children with disabilities and particularly those living in poverty or in remote locations. There is also often a lack of understanding by nutritionists and service providers in these systems about how to support and treat children with disabilities, and about how to raise awareness among families and caregivers about appropriate interventions.³⁸

REGIONAL DISADVANTAGE – COUNTRY EXAMPLES

Malnutrition rates in **Kenya** vary dramatically **geographically**. While the percentage of children who are wasted nationally stands at 4%, in Wajir County 17.8% of children are wasted – this puts the county into the ‘emergency’ WHO category.³⁹ Children in Wajir County recognise the negative impact malnutrition and other illnesses have on their prospects for survival. *“As you know, most of our young children die before celebrating their fifth birthday. I think this can be*

reduced to zero – if we join hands, our young children survive”, says Zahra, aged 14, from a primary school in Wajir town.

Communities’ access to basic health and nutrition services in Wajir County is limited due to sparse facilities – they are 50km apart on average – coupled with the people’s nomadic lifestyle as they travel in search of pasture and water for

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REGIONAL DISADVANTAGE – COUNTRY EXAMPLES *continued*

their livestock. A harsh climate and ongoing insecurity result in a lack of skilled health workers – the doctor/patient ratio is 1:132,000, compared to the recommended 1:5,000 and the nurse/patient ratio is 1:4,163, compared to the recommended ratio of 1:1,000.⁴⁰

Dietary diversity is also extremely poor, due to poor infrastructure impacting the availability, accessibility and affordability of nutritious food.

Only 440km of roads in Wajir County are graveled, out of a 5,280km road network.⁴¹

A mother said: *“We mostly give our children animal milk and porridge with milk...we give the child whatever is available...lack of adequate food due to drought leads to poor diets.”*⁴²

Traditional beliefs and taboos also aggravate malnutrition. Some believe that women should not eat foods rich in protein or iron in the later stages of pregnancy, as this causes the baby to ‘grow too big’, leading to obstructed labour. The saying, ‘Give liver to a child who hasn’t started talking, and they will never talk’ is often heard.

In **Bangladesh**, national stunting rates hide huge disparities across **geographical locations** – rates across divisions [provinces] vary from 28% in Khulna to 50% in Sylhet.⁴³

Sylhet also has a high prevalence of wasting, at 12%;⁴⁴ and the highest under-five mortality rate at 83 per 1,000 children.⁴⁵

The drivers of malnutrition in Sylhet Division are multifaceted. Although the overall poverty rates are in line with the national average, Sylhet Division has the highest rates of inequality in Bangladesh, with a regional Gini coefficient of 0.319,33.⁴⁶ 68% of the population live below

the international poverty line of US\$1.25 a day, and have little or no land on which to cultivate food.

This leaves people very vulnerable to climatic or economic shocks and unable to invest in their future through livelihoods, education or savings.⁴⁷

Only 18% of children aged six to 23 months in Sylhet Division receive an adequately diverse diet, compared to 32% nationally. Children experience frequent illness – fever is reported to be the most common symptom (38%) – and children receive care of variable quality.⁴⁸

Gender inequality in Sylhet undermines the nutrition status of current and future mothers, evidenced through the lowest female literacy rates, the worst school attendance rates for adolescent girls, and the highest gender inequality scores in the country.⁴⁹

In **Myanmar**, a predominantly **rural** society, approximately three-quarters of the poor reside in rural areas.⁵⁰ Stunting prevalence in children under five is significantly higher in rural than urban areas (38% and 27%, respectively). Furthermore, children living in the poorest households are more than twice as likely to be stunted (46.6%) as those living in the wealthiest households (20.7%).⁵¹ The drivers of malnutrition disproportionately affect children living in poor rural households in Myanmar. This is due to a variety of factors, which include: living in villages in remote and hard-to-reach areas that lack access to basic services (health, education, etc); few opportunities to lift children up and out of poverty; and political/ethnic conflicts that put children and their families at risk.⁵²

GENDER

Nutrition inequalities between boys and girls are very varied. At the global level and in some countries, data show no major differences in nutrition outcomes between boys and girls. Globally, 42.1% of boys and 39.5% of girls are stunted. Yet in 51 countries out of 56 for which we have data (mainly developing/low-income countries), the stunting rate is higher for girls than for boys. For wasting, the figures are 14.4% for boys and 13% for girls, and boys have a higher wasting rate in 47 countries out of 55.

In some countries disparities are apparent – and depending on the country, either boys or girls can be worse off. Girls are left behind in Bangladesh, where 42% of girls are underweight compared to 40% of boys.⁵³ But in Jordan, Gabon and the Dominican Republic, boys are being left behind. In these three countries, there are fewer than 75 girls stunted for every 100 boys.

Why is the picture so mixed? Firstly, global and national averages can mask what's actually happening. Secondly, not enough is known about the biological differences between girls and boys, especially under the age of five. These biological differences could have an impact on nutrition outcomes. And thirdly, nutrition data is only measured up to the age of five, meaning we only see part of the picture; the disparities between boys and girls over the age of five could be very different.

For detail on the importance of adolescence for malnutrition, especially considering the effects that it has on childbearing and subsequent child nutrition, please see the following section on parental factors.

The importance of gender for the underlying drivers of malnutrition is well-recognised, as captured in the care practices for women and for children pathway of the conceptual framework (see Figure 19, page 25). But the impact of gender cross-cuts the entire conceptual framework.

Gender inequality and ongoing violations of the rights of girls and boys are experienced in relation to restricted access to nutritious food and other drivers of malnutrition, including education, child marriage and pregnancy, gender-based violence (including sexual violence), denial of sexual and reproductive health and rights, opportunities in public and political life and unpaid and unrecognised domestic work. These all carry the potential to impact an individual's access to livelihood opportunities, income, food and nutrition, and healthcare.⁵⁴

Adolescents in particular are a neglected and vulnerable group. While adolescents have typically been considered a low-risk group for poor health, this ignores the fact that many health problems later in life can be improved or avoided by adopting healthy lifestyle habits in adolescence.⁵⁵ There is evidence that inadequate diet affects adolescents' ability to learn and to work at maximum productivity.⁵⁶

GENDER DISCRIMINATION – COUNTRY EXAMPLES

In **Sierra Leone**, women and children living in some **districts** in the North (Port Loko, Kambia, Bombali) and a few in the East (Pujehun, Kenema) are particularly vulnerable to malnutrition. Issues and complexities vary by district, but for Kambia, hierarchies and **gender** structures within households are considered to be key drivers, due to the impact on household decisions made in relation to nutrition.⁵⁷ Women in Kambia, for example, may know about good practices in infant and young child feeding, but they may not be the ones who make the decisions in this area. Young women are often at the bottom of the hierarchy when it comes to food distribution within the household; husbands and parents-in-law are commonly the first to receive the largest and best

meal portions.⁵⁸ Although 50% of the women earn their own income – through small-scale farming, fishing and petty trading – they are expected to hand over their earnings to their husbands with no gains in decision-making power in return.⁵⁹

Women and girls and those living in rural areas of **Cambodia** disproportionately experience poor nutritional outcomes. The contributing factors are multi-dimensional and complex. For example, women's lower social and family status relative to men's in the home and community directly influences women's diets. Women commonly eat less in times of food insecurity. This can be explained by the expectation that

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GENDER DISCRIMINATION – COUNTRY EXAMPLES *continued*

women should follow *Chbab Srey* – a moral code for women. In their aim to be ‘virtuous’, women will sacrifice their food and provide their husband with the better portion or most nutritious meal. These prescribed gender roles are instilled from a young age. When a group of girls aged between 10–14 years old were asked how they thought women should behave, they said that women should do farming, housework and care for the family; they should “*look lovely*”, always be friendly, gentle, polite and patient; they should have a good attitude, treat others well, and support the poor and weak.⁶⁰ The same girls did not want to see fathers do housework because they believe “*these tasks are only for the mother*”. A few men felt that they would not be helpful in preparing food for children “*because we [men] are not used to it...so the mother or grandmother should prepare food for children*”.⁶¹

Yet women in Cambodia often do not have decision-making power. It is considered unusual for women to participate in public as decision-makers or as people who provide ideas. Some women noted that it is common for community members to ignore women if they try to speak up.⁶²

The levels of malnutrition in **northern Nigeria** far exceed the national average, with stunting rates as high as 55% in the north-west and 42% in the north-east.⁶³ **Gender** inequality has significant implications. Women are the main caregivers, and experience low social status. They are expected to stay at home and look after the children, and their roles are considered to be undervalued.⁶⁴

In northern Nigeria, women’s autonomy and movement is restricted (through ‘*kulle*’ – seclusion), resulting in extremely low levels of access to services and assets – 80% of child deaths happen in the home with no contact with the health service.⁶⁵ Girls are also less likely to attend school than boys, and female literacy rates are between 10% and 50% of male literacy rates.

In **Pakistan**, a study⁶⁶ found that 20% of **street children** have stunted growth and 12% are wasted. Of these children, more were male (81%) than female, and while wasting was equal between sexes, more boys than girls were stunted. Poverty is a clear driver of malnutrition in these children. Most came from large families that had recently moved to the city in search of economic opportunities. Their parents had low education levels and were either unemployed or employed in unskilled occupations. The majority of the children had moved to the street to supplement family income and the majority of them worked 8–12 hours a day, with an average income of Rs. 40–60 per day (US\$1 = Rs. 60). The average age at which these children’s life on the streets began was under ten years. Parental exploitation, police harassment, abuse, and the impact of street peers in their lives are some of the important issues arising from the study. The findings in this study are considered similar to others globally, demonstrating the huge risks faced by street children as a specific vulnerable group.

MALNUTRITION FROM MOTHER TO CHILD

Vulnerability, exclusion and malnutrition can pass from one generation to the next.

In particular, the health and nutrition status of a mother is a major contributor to the health and nutrition status of her child. Undernutrition in women contributes to restricted growth in babies before they are born, which increases the risk of newborn deaths and, for survivors, of stunting before the child’s second birthday.⁶⁷ Targeting women and girls with initiatives to improve their

nutrition only when they present themselves to medical professionals (which is often several months into pregnancy) is often too late to break the intergenerational cycle of malnutrition, because this often misses the crucial first 1,000 day window. In addition, **16 million adolescent girls are giving birth each year**, and adolescent girls are more likely to die during childbirth than older women, or to be left nutritionally depleted by pregnancy. Their babies are also more likely to die or be born with nutritional deficits. The infants who survive have a greater risk of growing up to be stunted mothers or fathers.

THE IMPACT OF MATERNAL UNDERNUTRITION AND ADOLESCENT CHILDBEARING

New research by ‘Young Lives’⁶⁸ confirms that being born to a stunted mother increases the risk of the child being stunted and underweight in infancy, compared with being born to a non-stunted mother. The risk of stunting at birth, according to the research, is generally greatest where the mother is an adolescent. Children born to a stunted adolescent mother were 15 percentage points more likely to be stunted than children born to a non-stunted older mother. These effects were found to persist through early and into middle childhood.

Additionally, Young Lives’ research finds other independent factors that increase the risk of a child being stunted: being a boy, later born child, poor household, less educated parents and rural location.

Although it’s generally believed that most of what matters for adult nutritional status is determined by middle adolescence, new research by Young Lives suggests that not everything is settled by 15 years. Even after accounting for a rich set of factors, including the timing of the onset of puberty and nutritional status through to 15 years, a third of what determines nutritional status at 19 years is not explained. This indicates that it is important to ensure good nutritional status for an adolescent in order to enable good nutritional outcomes for her children, and that even at this stage there may be potential to influence the nutritional status (using height as a proxy) of an adult.

There is strong evidence that **maternal education** and levels of female autonomy are among the strongest determinants of child health and nutrition outcomes.⁶⁹ The degree to which a mother is educated could mitigate the effects of other types of exclusion. For example, in India, research found maternal literacy was more significant

than geography or level of healthcare coverage in determining infant and child mortality rates.⁷⁰ And even in regions of India where gender bias was common in intra-household food allocation, maternal education could erase the disparities in nutrition outcomes between sons and daughters.⁷¹

Sharmin, pictured with two-year-old Lisam, works for a Save the Children project in Bangladesh, visiting families to advise them on good nutrition and early education.



PHOTO: CI CLARK/SAVE THE CHILDREN

PARENTAL FACTORS – COUNTRY EXAMPLE

In **Honduras**, malnourished children – namely, those under five with stunted growth – whose sole carer is a **teenage mother** are considered particularly vulnerable to being left behind. This is a particular concern in the Honduran department of Intibucá, where 48% of under-fives are chronically malnourished and 15% are underweight. In Intibucá, 14% of babies have low birth weight, and 20% of these babies are born to teenage mothers. Poverty rates are high in Intibucá, with 72% of people living on less than US\$1 a day.

Concerns are heightened for the indigenous communities of the municipality of Yamarangüila, located in Intibucá. The drivers of malnutrition in Yamarangüila are multi-faceted. The municipality's health services have limited

capacity, particularly for recovery and rehabilitation, and severely malnourished children are mainly referred to the capital, Tegucigalpa. Families have very little money and the cost of travelling to specialist treatment centres is relatively high. Most people seek out health services only when an illness is well advanced. Religion also holds great sway and is a factor in the lack of use of family planning. Families in Yamarangüila have, on average, five children. Further education is beyond reach for the majority and most children go no further than sixth grade, although a small percentage do make it to ninth grade. Furthermore, there is considered to be an 'institutional vacuum' regarding the inclusion and care of 12- to 15-year-olds who are not studying or in work.

DISABILITY

Malnutrition and disability are closely interconnected: disability is both a driver (see Figure 19, 'A conceptual framework for the drivers of nutrition', page 25) and a consequence of malnutrition. Many types of disability can be caused by malnutrition, through lack of micronutrients or macronutrients or exposure to high concentrations of toxins found in food – such as those in poorly processed cassava, which can lead to permanent neurological damage. Disability can also lead to malnutrition due to decreased nutrient intake (perhaps due to a cleft lip or palate, or other disabilities that have an impact on a child's ability to eat), increased nutrient loss, and a need for increased nutrients, which can put children at risk of further complications.⁷²

It is estimated that 93 million children – or one in 20 children aged 14 or younger – live with a moderate or severe disability, although, due to a lack of data, the accuracy of this estimation is not known.⁷³

In some cultures, mothers of newborns with a disability may be discouraged from breastfeeding, informed by family and midwives that their child will die anyway or would not lead a productive life. These newborns would quickly starve. Stigma surrounding disability may result in children with disabilities being given less nutritious or smaller quantities of food, being treated as infants and given only liquid food, or intentionally not fed at all, with families rationalising that limited resources should be devoted to children who have a greater chance of surviving and contributing to the household.⁷⁴

Under the UN Convention on the Rights of the Child (CRC) and the UN Convention on the Rights of Persons with Disabilities (CRPD), governments around the world have accepted the responsibility of ensuring that all children, irrespective of ability or disability, enjoy their rights without discrimination of any kind. As of February 2013, 193 countries had ratified the CRC and 127 countries and the European Union had ratified the CRPD.

REFUGEES, CHILDREN ON THE MOVE AND CHILDREN IN CONFLICT

More than half of the world's 59.5 million displaced people are under the age of 18.⁷⁵

In all parts of the world, the number of refugees, internally displaced people and asylum seekers is on the rise as a result of violence and persecution,⁷⁶ and the total number is now higher than at any time since the end of the second world war. This creates a specific group of excluded children – refugees and internally displaced people (IDPs). Children who remain in conflict and war environments, or environments where extreme events such as drought are taking place, might also be excluded and vulnerable.

Children who are already being discriminated against will often have their exclusion exacerbated during conflict and crisis situations. These children face barriers to accessing healthcare, education, food and shelter.

Refugees and IDPs are protected by the Convention on the Status of Refugees, and the Guiding Principles on Internally Displaced Persons. Yet refugees and IDPs have a high burden of malnutrition and

anaemia, treatable non-communicable diseases – which are exacerbated by lack of access to regular medication – and infectious diseases, including hepatitis A and B and parasitic diseases.⁷⁷ A recent study by Save the Children on infant and young child feeding practices among refugees on Lesbos, Greece, found a serious situation with breastfeeding and complementary feeding practices being far from optimal.⁷⁸

In humanitarian situations, elements of the rights to food and good nutrition for civilians, while not explicitly mentioned, are protected through provisions contained in the Geneva Conventions and Hague regulations.⁷⁹ The relevant legal provisions aim to ensure that lack of food supply and denial of food are prevented. Food and the infrastructure required in order to maintain its production and supply must not be attacked, targeted, removed or rendered useless in order to starve a population.⁸⁰ Moreover, using starvation as a weapon of war in international conflict is a war crime.⁸¹ Despite this, many cities have been besieged in recent months – cities in Yemen,⁸² South Sudan and Syria⁸³ – with their citizens living in dire conditions and suffering from a shortage of food and other essential items.

CHILDREN ON THE MOVE – COUNTRY EXAMPLE

In **Sri Lanka**, the most vulnerable groups in relation to malnutrition are mainly concentrated in **post-conflict affected areas**, poor urban areas and in the plantation sector.

Mullaitivu district has one of the highest severe acute malnutrition rates at 6.1%, as well as having a high rate of underweight children aged 6–59 months, and 27.8% wasting for the same group. Weli Oya Division in the Mullaitivu District (Northern Province)⁸⁴ is home to many families that were resettled in 2013, following the end of the 30-year civil conflict. There are a number of causes of malnutrition in the area. For example, Weli Oya residents predominantly speak in Sinhalese, but the district's administration process is conducted in

Tamil. This means communities are often unable to communicate with the district officials about the critical issues and daily challenges they face. High agriculture dependency has made communities vulnerable to climate change. The villages receive no rain water, particularly during the months of July to September. The distance to collect water exhausts farmers and dampens the outcome of their harvest. Children are also faced with extremely difficult conditions in order to continue their education. Most children walk 6km every day to school because of the infrequent public bus service. And the travelling distance to clinics is exhausting and disinclines families from obtaining necessary healthcare in a timely manner.⁸⁵

ETHNICITY

Poor indicators of health and nutrition among disadvantaged ethnic groups are common, especially among indigenous peoples.

Commonly reported barriers include lack of sanitation coverage; inequitable income distribution; and poor access to education,⁸⁶ as seen in the cases

of Brazil and South Africa. A study across 11 African countries found that children from ethnic groups were more likely to die during infancy or before their fifth birthday, and that ethnic child mortality differences were closely linked to economic inequalities, with differential use of health services coming into play in countries in the Sahel region.⁸⁷

ETHNICITY – COUNTRY EXAMPLES

Brazil's malnutrition profile presents an unfavourable nutritional scenario for **indigenous children** in the country.⁸⁸ 25.7% of indigenous children are stunted, which approximates that of non-indigenous Brazilians four decades ago – before major health reforms were introduced.⁸⁹ Studies show stunting and underweight to be closely associated with chronic exposure to unfavourable socio-economic conditions, poor energy and nutrition intake, recurrent infectious and parasitic disease, and environmental conditions.⁹⁰ Reduced access to natural resources and land, increased participation in the market economy, and poor sanitary conditions are also identified as contributory factors to undernutrition among Brazil's indigenous populations.⁹¹

In **Nepal**, the **caste, ethnic, or religious group** to which a household identifies has a strong association with food security and nutritional status. Excluded groups are strongly associated with food insecurity and malnutrition. Groups that face discrimination and marginalisation in society and from the state have more limited access to nutritious food. Dalits (the lowest caste) living in the Hill areas, for example, have the worst food consumption scores, whereas Brahmins (the highest caste) living in the same areas have, relatively, the best.⁹² Food security indicator scores for Dalits and Janajatis (an indigenous ethnic group) are generally worse than that for any one geographical region.⁹³

Evidence also shows some variation in the uptake of breastfeeding among particular ethnic groups, with more than half of the Brahman/Chhetri, Newar, and Hill Janajati women initiating breastfeeding within an hour, while only 34% of Muslim and 31% of Terai/Madhesi women had done so.⁹⁴

Ethnic minority children in **Vietnam** are left behind in relation to nutrition progress – 52% of ethnic minority children aged five to 12 are stunted, compared to 14% of their Kinh counterparts.⁹⁵ Further disparities are evident across regions. 32%–37% of children under five living in regions dominated by ethnic minority groups (the Northern Midlands and Mountainous Areas, and the Central Highlands) are stunted, while prevalence among children in areas dominated by the Kinh majority group is between 21%–23%.⁹⁶

Poverty among ethnic minority families is one of the drivers of malnutrition for their children. In 2012, these communities accounted for about two-thirds of the country's poorest 10%.⁹⁷ Surveys show many ethnic minority families face food insufficiency for two to three months a year – between the two harvests. Other drivers include unhygienic conditions and practices and poor sanitation systems, which result in frequent diarrhoea and other digestive-related diseases among children; and limited knowledge and awareness of nutrition – particularly in relation to care for children and expectant mothers in mountainous areas.

NATIONAL AND GLOBAL DRIVERS OF MALNUTRITION

In addition to the drivers outlined above, there are some drivers of malnutrition that occur across countries, or even at the global level. These are the basic structural and institutional drivers of malnutrition, as captured in the conceptual framework (see Figure 19, page 25). These require special attention, given the scale of the impact they have on malnutrition.

COORDINATION, FUNDING AND TRADE

For many years, nutrition lacked a coordinated and functional international system that donors, the UN, civil society and the private sector could contribute to. There has been a lack of funds directed towards nutrition, and insufficient institutional capacity to tackle malnutrition. And there have been weak links to country contexts and priorities.⁹⁸

Nutrition is still woefully underfunded – both by governments who are dealing with malnutrition in their own country (almost every country in the world) and by donors.

Of the world's 29 biggest donors of official development assistance, seven spend nothing on measures to directly improve nutrition and a further six spend less than US\$1m per year.⁹⁹ The gap between what is required and what is currently being spent is huge – around US\$10 billion per year.

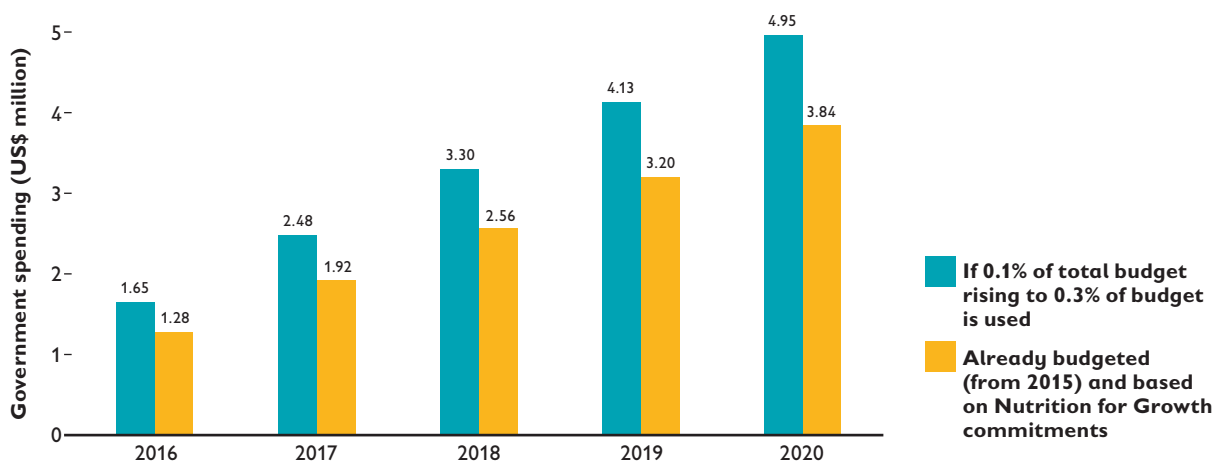
In many countries, despite public commitments from governments to tackle malnutrition, nutrition is not prioritised in government budgets. Furthermore, whether finances reach all areas and all groups of society within a country is not clear. Save the Children has analysed the budgets of several governments and found that they spend very little on nutrition, and in fact are not spending what they have publically committed to.

GOVERNMENT SPENDING – COUNTRY EXAMPLE

For example, the Government of Malawi at the 2013 Nutrition for Growth event committed that the proportion of total annual government expenditure allocated to nutrition would rise from 0.1% to 0.3% by 2020.¹⁰⁰ Based on the 2014/15 Government of Malawi budget of US\$1.6 billion, the promised allocation to nutrition works out at US\$1.65 million. An assessment of nutrition interventions and budget allocation was made across five ministries –

Health, Agriculture, Irrigation and Water Development, Gender and Child Affairs, Local Government and Rural Development. It found that the Government of Malawi is funding US\$1.279 million for nutrition, some US\$400,000 short of what was promised. There are 6.8 million children in Malawi (Source: UNICEF 2016), of whom 46% are stunted. Thus, the spend on nutrition interventions per stunted child in the 2014/15 budget was US\$0.45.

FIGURE 20 GOVERNMENT SPENDING ON NUTRITION IN MALAWI



Source: Government of Malawi, Budget Estimates of Expenditure on Recurrent and Capital Budget for the financial year 2013/2014

Globally, the financial system as it exists does not favour the poorest or most marginalised people. Wealth has remained in the global north, with many in the global south struggling to benefit from the social developments that have occurred over the last couple of hundred years.

Complex global tax standards, questionable tax incentives, and tax treaties that favour rich countries and multinational companies, all contribute to a smaller pot of money being collected by developing countries. This means that developing countries have less money to invest in public services and the nutrition of their people.

Decisions about the global tax system are often made by bodies that aren't globally representative. A recent project – BEPS (Base Erosion and Profit Shifting) – aimed at helping governments find ways to modernise international tax rules was convened by the OECD, meaning that many developing countries didn't have a seat at the table to raise their concerns, despite that fact that they would be affected by the outcome.

In addition, some of the world's poorest countries are losing millions in potential tax revenue each year as a result of illicit financial flows and the tax avoidance schemes associated with them. According to the United Nations Conference on Trade and Development, developing countries lose about US\$100 billion annually in tax revenues due to inward investments being routed through offshore financial centres.¹⁰¹ This is ten times more than the estimates of what is needed to address undernutrition globally.

Developing countries also tend to have low tax ratios (generally 10%–20% of GDP, compared with 30%–40% in rich countries).¹⁰² All this leads to fewer resources being available for governments to invest in the nutrition of their population. And at the international level, the roots of the unfair distribution of tax funds lie in decision-making infrastructure that is skewed towards the needs of high-income countries.

The **international trade system** is another area that fails to benefit the poorest and most marginalised people. Trade agreements often impact the food system and nutrition outcomes by directly and indirectly impacting food availability, accessibility, price and nutritional quality.¹⁰³ While many argue of the necessity of international trade – and, indeed, international cooperation in trade embodied by agreements – to end poverty,¹⁰⁴ in several ways it has left many behind.

Besides influencing purchasing power and consumption, the international trade system brought important changes to food systems, such as opening of domestic markets towards international food trade and foreign direct investment, and the subsequent entry of transnational food corporations and their global market expansion. Some argue that this and global food advertising are responsible, in part, for the increase in obesity registered and highlighted in this report.¹⁰⁵

These changes have affected developing countries the most, especially where the rural population mainly depends on agricultural productivity and where poverty is concentrated.¹⁰⁶ While many people have

FUNDING – COUNTRY EXAMPLE

Guatemala has taken a backwards step in its elimination of poverty, with its incidence increasing by 2.9% between 2000 and 2014, from 56.4% to 59.3%.¹⁰⁷ Chronic child malnutrition is considered to be Guatemala's greatest scourge, affecting 46.5% of children under five.¹⁰⁸

Ministerial **investments** in efforts to address malnutrition, through the national 'Zero Hunger Pact', with the exception of the Ministry of Education, were low in 2015. On average, between two and four of the nine planned Zero Hunger Pact interventions were carried out with

each household.¹⁰⁹ Furthermore, three of the five largest ministries have experienced budget cuts, including the Ministry of Public Health and Social Welfare. Many of the ministry's nutrition services were affected by this lack of resources, including vaccination, growth monitoring, micronutrient supplement and feeding programmes; ante-, neo- and post-natal care services, delivery services, and family planning services. As a result, maternal and neonatal mortality rates have remained high, at 113 and 17 per 100,000 respectively.¹¹⁰



PHOTO: CAROLINE TRUTMANN/SAVE THE CHILDREN

Ingrid and Nelson with their children in eastern Guatemala. One-year-old Abner became severely malnourished when a severe drought destroyed crops and meant there was no work for his parents.

been lifted out of poverty in the last few decades, the international trade system still lacks the means to address issues that affect the most disadvantaged.

For example, the levels of subsidy provided to farmers in developed countries highly distorts the trade system, with many developing countries forced to sell their goods at a reduced price. This is the case for many west African cotton farmers because of the subsidies given to cotton farmers in the US, EU, China and India.¹¹¹ Subsidies can stimulate excessive production, resulting in cheap exports – or they can block imports.¹¹²

The Doha round of trade negotiations began in 2001 with a stronger developing country voice than previous negotiations (developing countries make up two thirds of negotiators). However, the developing countries are having very little influence over the discussions. This is due to the lack of negotiating power many developing countries hold – because of their size and investment potential – and the lack of experienced country representatives in comparison with, say, the EU and the US.¹¹³

At a global level, the last 23 years have seen a huge increase in real GDP per head, and the number of people living on less than US\$1.25 per day has dramatically reduced. However, the number of people eating too few calories to sustain an active life has fallen relatively slowly – only half as fast as for those in poverty.¹¹⁴ Without active government

leadership and proactive intervention, the benefits of growth cannot be expected to translate into increased incomes or food budgets in the most disadvantaged households, let alone dramatic improvements in malnutrition.¹¹⁵

CLIMATE CHANGE, EXTREME WEATHER EVENTS AND NEGLECTED EMERGENCIES

It is now widely accepted that the world will contend with more frequent and severe extreme weather events linked to the impact of climate change. Climate change exacerbates the risks of hunger and undernutrition in two main ways: extreme weather events and long-term and gradual climate risks.¹¹⁶ The risks posed to livelihoods by extreme weather events such as floods, droughts, heatwaves and hurricanes are increasing, mainly because larger numbers of people and their assets are being exposed to extreme weather;¹¹⁷ but also because development approaches do not routinely include drought cycles in planning scenarios, nor substantial investment in climate-proofing interventions.

Climate change affects the frequency and severity of extreme events. Extreme events can affect people's lives and nutrition status in a variety of ways. The most obvious are immediate impacts such as loss of life, injury, loss of livelihoods and assets,¹¹⁸ and destruction of crops, critical infrastructure and community assets.¹¹⁹ Extreme events can also have

long-term, indirect impacts on lives and economies, such as declines in school attendance, nutrition, and health and productivity, and increases in inequality and unemployment.¹²⁰

Food insecurity is no longer an issue only for the poor and most marginalised people – in some countries, such as Ethiopia, events like El Niño are having an impact on the food security of the

majority of the population. For vulnerable people around the world, climate change means lower agricultural output, and therefore lower income, coupled with higher prices of major crops.¹²¹

These people would be disadvantaged and even more vulnerable to economic, environmental and social shocks.

EL NIÑO AND THE CONSEQUENCES FOR MALNUTRITION

The world is now experiencing an **El Niño** event of unprecedented strength and scale. Consequently, at least 60 million people are now exposed to a range of threats to their livelihoods and to their lives.¹²²

Over the past 12 months, El Niño has triggered major drought cycles across three continents and looks set to usher in flooding and landslides as the year unfolds. The impact of El Niño is particularly acute for children and their families who are heavily reliant on agriculture and pastoralism. According to UNICEF, as many as 1 million children will require treatment for severe acute malnutrition in Southern Africa alone.

When a drought cycle unfolds in a country, children are particularly vulnerable to its impacts and face a range of threats including heatstroke and diseases and illnesses like cholera, E. coli, malaria, dengue and diarrhoea. Children who live in households that rely primarily on agriculture and pastoralism for both income and nutrition supplementation (in the form of animal by-products and small-scale agricultural production) can, over the course of the drought cycle, lack routine access to enough nutritious food. This can result in stunting, wasting and or micronutrient deficiency.¹²³ Furthermore, children's underdeveloped immune systems put them at far greater risk of contracting diseases that are prevalent during drought cycles.¹²⁴

Globally, more severe and prolonged droughts are projected in a number of vulnerable areas, as are extreme high temperatures.¹²⁵ These will impact on agricultural production, the livelihoods of many of the poorest households, and national economic indicators.

Traditionally, the nutrition sector has focused on treatment of acute malnutrition in emergencies, rather than on measures to prevent it. Protecting infant and young child feeding practices during emergencies and events like El Niño is essential to prevent increases in mortality, disease and malnutrition. Experience from Save the Children's programmes tells us that often during an emergency or event like El Niño, breastfeeding decreases at exactly the time when it is most necessary (because of the lack of clean water, nutritious foods, and animal milk, and the increased risk of infection due to crowded living conditions). Mothers are often busy walking to fetch clean water, or mothers are not getting enough nutritious food and water themselves, or are stressed – this all has a negative impact on their breastmilk. The promotion or donation of breastmilk substitutes during emergencies can also have an impact on breastfeeding rates (*The Lancet*, 2016).

An answer to the question of how to break the cycle of chronic malnutrition for millions of children who live in countries on the frontline of climate change has never been more urgent.

El Niño is having immediate and visible impacts on livelihood and nutrition indicators in countries around the world – many of which have signed up to ambitious nutrition targets. Millions of children around the world are routinely vulnerable to shocks like this and their nutrition status is compromised on a regular basis, undoing the progress that has been made in meeting nutrition targets.

continued overleaf

EL NIÑO AND THE CONSEQUENCES FOR MALNUTRITION *continued*

Following the 2011 famine in Somalia and successive rounds of major food and nutrition crises in the Horn of Africa and the Sahel, there is a clear consensus that development efforts need to focus more concertedly on tackling the structural vulnerabilities that expose some groups to climate shocks. And they need to focus more on strengthening the resilience of vulnerable population groups to climate-induced shocks and stresses.¹²⁶ This will mean that national governments must ensure that development

frameworks include the drought cycle; and they must prioritise greater investment in tackling malnutrition as part of a wider package of investment in the health system, including promoting measures to prevent malnutrition (such as breastfeeding) rather than treating it. Further, national governments and development efforts must ensure that early warning information triggers appropriate and timely early action by governments, donors and aid agencies.

BUILDING RESILIENCE THROUGH INFANT AND YOUNG CHILD FEEDING IN NEPAL

Save the Children's Suaahara project is an integrated nutrition programme implementing at scale in 41 out of 75 districts in Nepal, with a particular emphasis on the most vulnerable areas and households. It supports the Government of Nepal in aiming to improve household levels of health and nutrition, targeting households with pregnant and lactating women and mothers of children under two (1,000-day women). The programme focuses on social and behavioural change at household level through the promotion of essential nutrition and actions and good maternal and infant and young child feeding practices. It also addresses other determinants of undernutrition, such as availability of and access to food, water, sanitation and hygiene, quality health care, and child spacing, and it considers socio-cultural factors like gender and marginalisation. Suaahara provides additional support to disadvantaged groups around nutrition.

Suaahara reaches disadvantaged groups in a number of ways, including:

- encouraging behaviour change among its target population, through female community health volunteers, mothers' groups, local community structures and its *Bhanchhin Aama* ('mother knows best') radio drama serial and call-in programmes

- prioritising home visits by field supervisors and female community health volunteers, to reinforce good health, sanitation and hygiene and nutrition behaviours
- providing support to mothers in disadvantaged group households for poultry keeping and vegetable growing, to increase their access to diversified food.
- engaging male family members in activities to build their roles in: valuing and sharing the workload of women; raising and caring for children; and facilitating women's access to health and nutrition services and control over food and nutrition resources.

A Save the Children staff member observed the impact of the Suaahara project in educating people – and women in particular – on the benefits for the child of breastfeeding during and after any adverse event. The staff member saw significantly lower levels than expected of infections and malnutrition following last year's devastating earthquake; donations of breastmilk substitutes did not appear to change practices. One local woman had been buried for 24 hours. She could not breastfeed to begin with, but she persevered, as she knew that this was the best thing for her child.

4 How to address malnutrition inclusively

In previous chapters, we have explored trends in malnutrition and how gaps are widening in nutrition outcomes between different groups of children. We have looked at the drivers of malnutrition, including how the exclusion of groups of children is playing a role. In this chapter we explore how past and current commitments have taken an inclusive approach. We then look at appropriate policy responses, given what we have learned so far.

NUTRITION COMMITMENTS – ARE THEY INCLUSIVE?

Many political commitments towards nutrition exist, especially at the global level. The challenge for many years has been lack of accountability for these commitments, and the fact that global commitments have not been translated into national targets and action. Here we consider how commitments at the global level have or have not worked to address both malnutrition and exclusion.

MILLENNIUM DEVELOPMENT GOALS (MDGS)

The Millennium Declaration was signed in 2000 by 189 of the world's leaders on behalf of the international community. It represented a promise to coordinate and accelerate efforts to 'spare no effort to free our fellow men, women and children from the abject and dehumanising conditions of extreme poverty' by 2015. At its core was a set of fundamental values that included freedom, equality, tolerance and solidarity. However, concrete measures on equality and social justice were not included and the measures that were used to monitor progress on the MDGs were couched in terms of national averages and proportions.¹ Only one indicator under MDG 1 touches on income inequality: the share of the national income that

goes to the poorest income quintile. It has been reported that this is also the measure that featured least frequently in MDG reports (ibid).

The MDG framework did target certain groups – for example (not exhaustive):

Goal 3: "Promote gender equality and empower women", Target 3A: "Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015" was reported as achieved in primary, secondary and tertiary education.²

Goal 7: "Ensure environmental sustainability", Target 7D: "Achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers."

It was reported that between 2000 and 2014, more than 320 million people living in slums gained access to improved water sources, improved sanitation facilities, or durable or less crowded housing, thereby exceeding the MDG target. However, more than 880 million people are estimated to be living in slums today, compared to 792 million in 2000 and 689 million in 1990.³

SUSTAINABLE DEVELOPMENT GOALS (SDGS)

In 2015, inequality was very much on the agenda and a new set of world leaders committed to "leave no one behind". The SDG Declaration states: "As we embark on this great collective journey, we pledge that no one will be left behind. Recognizing that the dignity of the human person is fundamental, we wish to see the Goals and targets met for all nations and peoples and for all segments of society. And we will endeavour to reach the furthest behind first."

Goal 10 of the SDGs is to "reduce inequality within and between countries". With target 10.2: "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status".

The nutrition goal and target also take a ‘leave no one behind’ approach, with targets 2.1 and 2.2, and 3.2 particularly, of relevance:

- **2.1:** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
- **2.2:** By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
- **3.2:** By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.

WORLD HEALTH ASSEMBLY NUTRITION TARGETS

Recognising that accelerated global action on malnutrition was needed, in 2012 the **World Health Assembly** (WHA) Resolution 65.6 endorsed a comprehensive implementation plan on maternal, infant and young child nutrition, which specified a set of six global nutrition targets with a deadline of 2025.

WHA targets:

- 40% reduction in the number of children under five who are stunted
- 50% reduction of anaemia in women of reproductive age
- 30% reduction in low birth weight
- no increase in childhood overweight
- increase the rate of exclusive breastfeeding in the first six months up to at least 50%
- reduce and maintain childhood wasting to less than 5%.⁴

These targets are global in nature, and while it is possible to apply global targets to national situations to set national targets, these targets will not be based on the context of the country and the current trends in the reduction of malnutrition. Reporting on these targets is done at the national level, with national prevalences used to assess

progress towards global targets. Therefore, inequalities between regions or groups within a country are not visible. The world is currently off track to meet all six WHA nutrition targets.⁵

SECOND INTERNATIONAL CONFERENCE ON NUTRITION (ICN2)

In November 2014, the Second International Conference on Nutrition (ICN2) took place in Rome – jointly organised by the United Nations Food and Agriculture Organization and the World Health Organization. Member states signed up to 60 priority recommendations – a comprehensive list of actions to address malnutrition. The accountability mechanism is not yet in place and, with so many voluntary commitments, it is difficult to see how governments will honour their commitments. The framework does not take a ‘leave no one behind’ approach – there is no mention of inequality in the framework, or of ways to ensure that progress is made for all social and economic groups in society. Of course, for a number of these recommendations – if implemented in the correct way – they could have an impact in addressing malnutrition for those most marginalised. But at the moment, there is no guarantee that that will happen.

The Scaling Up Nutrition movement

The issues highlighted above around weak coordination and leadership for nutrition in part led to the formation of the Scaling Up Nutrition (SUN) movement in 2010. The movement now consists of 56 countries and has seen success in putting nutrition on the global and national agendas and garnering political will to tackle the issue.⁶ However, challenges still remain in turning political commitment to implementation at scale. As SUN enters its second phase, the movement has agreed to give greater attention to the ‘leave no one behind’ agenda.

Realising and setting future targets

It is important to remember that global targets are usually the result of negotiation rather than being based on global trends, with countries and groups of countries negotiating based on their own situation. It is therefore vital to translate global goals into national targets, based on current trends and context.

How to take an inclusive approach

Here in part 4 we explore examples of policy responses that address both malnutrition and exclusion. We have not covered every area of the conceptual framework for the drivers of malnutrition (page 25), but do move from the level of the child, household, community, national and global level (as much as it is possible to assign these policies to one level – see sections 4.1–4.3). We then explore some design principles for an inclusive approach (section 4.4).

CONTEXTUAL ANALYSIS

In order to address malnutrition for excluded groups, all interventions should be informed by a robust contextual analysis of which children are malnourished and why, with careful consideration given to the experiences for different groups. The contextual analysis should include the drivers of malnutrition, the burden of malnutrition and political economy analysis of the country. An appropriate policy response that addresses the drivers of malnutrition at the level of the child, in the household and community, and at national and global levels should then be considered (see Figure 19, page 25).



Agness with her dry and damaged crops in southern Malawi, where drought has caused an emergency.

4.1 THE CHILD: ADDRESSING THE IMMEDIATE DRIVERS OF MALNUTRITION

DIRECT NUTRITION AND HEALTH INTERVENTIONS

Direct nutrition interventions address the immediate drivers of malnutrition. Examples include vitamin A supplementation and the promotion of exclusive breastfeeding. The health service plays a vital role in delivering these interventions. In fact, it is widely evidenced^{7,8} that it is critical to integrate nutrition services that directly impact dietary intake into reproductive, maternal, newborn and child health programmes – for example, through growth monitoring, supplementary feeding and vitamin supplementation.

The **first 1,000 days** of life are critical for a child's growth and development. So, there should be an emphasis on providing multiple micronutrient supplements to adolescent girls, and to pregnant and lactating women. These girls and women should also receive nutrition support and advice as part of antenatal and postnatal care, including support for early initiation and exclusive breastfeeding.

Universal Health Coverage is one approach in ensuring all people have access to the quality health services they need, and is explored in the next section (4.2).

4.2 THE HOUSEHOLD: ADDRESSING THE UNDERLYING DRIVERS OF MALNUTRITION

Here, we explore policy solutions that address household food security, care practices for women and children, and health, environment and services. The rights-based approach is important here – enjoyment of the right to food, the right to adequate care, the right to health; prevention and control of disease and the right to water and sanitation.

APPLYING A RIGHTS-BASED APPROACH

International human rights provisions provide a powerful framework within which to analyse, formulate and implement nutrition policies and programmes to reach everyone, including excluded groups. States have an obligation to ensure that the rights that affect children's nutrition – the rights to adequate food, health, survival and development – are realised.⁹ States that explicitly enable human rights to be realised for their populations are likely to accelerate progress towards food and nutrition security.¹⁰ Please see appendix 3 for more detail on the role of the state in international human rights.

HOW TO DEVELOP A RIGHTS-BASED APPROACH TO ADDRESS MALNUTRITION

- **Make the right commitments**

Before anything else, governments must ensure that they have agreed to all of the commitments, human rights and otherwise, necessary to address malnutrition equitably. Human rights commitments, including the Convention on the Rights of the Child, establish moral and legal imperatives designed to ensure that no child is malnourished, and they provide specific guidance on how to do so in a way that is centred on human dignity, needs, and interests, and which also has instrumental value regarding improved efficiency and outcomes.¹¹ This means specifically that states should establish these rights in their constitutions and enact rights-based legislation designed to address nutrition where it does not already exist.

- **Focus on non-discrimination and equality**

The most fundamental principle of human rights and human-rights based approaches is non-discrimination. Human rights prohibits discrimination, whether it is in design or in impact, and it is required that discrimination is addressed immediately. Discriminatory policies and practices serve to greatly limit the development outcomes of certain groups and must be addressed. Food

security and nutrition programmes may envisage affirmative or positive discrimination for the benefit of groups – mainly marginalised groups and women – that have historically experienced discrimination.¹² Addressing discrimination means not only removing explicitly discriminatory policies, but also addressing and correcting the drivers of discrimination, such as inequitable resource allocation.

- **Give special attention to vulnerable and marginalised groups**

In order to address discrimination in all of its forms, human rights requires giving special attention – with a focus on solutions – to vulnerable and marginalised groups. What this means in effect is ensuring that any development policies and programmes target the worst-off first. This requires a number of different actions, but a first concrete step that governments must take – aligned with the SDGs – is to ensure the collection of disaggregated data.

Without first collecting the right kinds of information, forms of discrimination and exclusion and which groups are affected cannot be accurately identified. For example, research has shown the significance of preferential treatment based on gender, resulting in differing feeding practices and food intake. In Kenya, a strong gender bias in intra-household food distribution was found to lead to more girls with malnutrition, stunting, wasting and infectious diseases.¹³ Taking a human rights-based approach to nutrition requires that information disaggregated by sex, income level and ethnicity is collected.¹⁴ Nutrition data must also be transparent and available to the public. Empowerment is impossible without transparency in all public affairs.¹⁵

- **Empower and promote participation**

Affected communities, particularly those who have been excluded, must be included in any policies, programme development and decision-making that affect their rights, their children and their youth.¹⁶ Development can never be truly sustainable unless the voices of affected communities are heard and included, and unless communities are given a stake in their own futures. The rights to food, health and other essential human resources require the active and

informed participation of affected communities – including children – in all decision-making processes that affect their rights.

Specifically, people who are poor and marginalised should be included in processes designed to identify their problems, to analyse ways to resolve them, and to make the necessary decisions regarding implementation. They should also actively provide information about these processes in ways that allow them to be truly involved.

DEVELOPING CHILD-SENSITIVE SOCIAL PROTECTION

Social protection is a proven intervention for alleviating poverty and malnutrition for excluded groups, and is increasingly prioritised by governments.¹⁷ It can be an effective tool for income redistribution, and can contribute to inclusive growth and fair finance.

Child-sensitive social protection addresses the specific patterns of children's poverty and vulnerability, and it recognises the long-term developmental benefits of **investing in children**. Social protection for children is underpinned by specific articles of the CRC.



Desalegn, nine, and his brother Berhanu, four. Their family is poor and often suffered from hunger.

Child-sensitive social protection maximises the impacts and minimises any harm of social protection on children; it monitors the impacts on children and takes into account the needs, views and voices of children and their caregivers in programme design and implementation.

Child-sensitive social protection policies and systems can tackle the underlying causes of malnutrition, at household and community levels, through three pathways:¹⁸

- household food security – by improving income, food access and increasing assets
- caring practices for women and children – improving infant and young child feeding and targeting nutritionally vulnerable populations through the 1,000 days approach¹⁹
- health services and environment – by promoting improvement, access to and delivery of health and sanitation services.

Social protection programmes can also help tackle both the immediate and the underlying causes of malnutrition, by reducing vulnerability, challenging discrimination and exclusion, protecting productive assets, and ensuring that basic needs can be met.

Social protection initiatives across a number of countries show strong evidence of positive impacts on child poverty, food insecurity and malnutrition. Programmes in Mexico, Malawi and Colombia have all shown reductions in the number of stunted children;^{20, 21} Malawi's Mchinji Social Cash Transfer scheme decreased stunting among child participants from 55% to 46%;²² children in South African households receiving a pension grow, on average, five centimetres taller than those in households without a pension.²³ Ghana's Livelihood Empowerment Against Poverty cash transfer programme saw reductions of 25 percentage points in perceived food insecurity for families, and of 32 percentage points for families headed by women.²⁴

Social protection programmes have delivered big dividends for excluded groups, with the cash transfers programmes in Brazil²⁵ and in Bolivia²⁶ perhaps most widely celebrated. While not always targeted specifically towards excluded groups, these programmes have disproportionately benefited excluded children because of their focus on the poorest. Such interventions also bring long-term benefits for national economic and social development.²⁷

HOW TO HARNESS SOCIAL PROTECTION TO ADDRESS MALNUTRITION FOR EXCLUDED GROUPS

Universal social protection – Anyone who needs social protection should be able to access it. This is central to ending poverty and boosting shared prosperity. Universal social protection refers to the integrated set of policies designed to ensure income security and support to all people across the life cycle – paying particular attention to the poor and the vulnerable.²⁸ Under the broad framework of universal social protection, nutrition-focused social protection should target the nutritionally vulnerable, according to age (with a focus on the first 1,000 days and on adolescent girls) as well as regional and income disparities.

Adequacy and effectiveness of cash transfers – Cash transfers should be informed by affordability of a

nutritious diet, with a focus on nutritionally vulnerable groups. In addition, programmes should be adaptive to be able to respond to shocks and crises, such as by scaling out to reach nutritionally vulnerable groups that are affected by the crisis or scaling up by adjusting the transfer amount or duration. The cash transfer delivery mechanisms should minimise any potentially negative impacts on pregnant women and childcare, especially in terms of burden of accessing cash transfers. The primary recipient of the cash transfers should be determined to maximise the potential for cash transfer spending to meet children's needs; the primary recipient will often be the mother.

Linkages and complementary activities to improve impact on nutrition – Social protection interventions or programmes can serve as delivery platforms for larger-scale, more comprehensive and more effective nutrition-specific interventions.

APPLYING A UNIVERSAL SOCIAL PROTECTION APPROACH IN MYANMAR

Inclusive approaches, particularly when coupled with universal coverage, will drastically reduce the exclusion rate for poor households. All three of Save the Children's Maternal and Child Cash Transfer (MCCT) programmes in Myanmar take a universal approach, where all pregnant mothers and their children under two years are eligible, independent of any other characteristic.

This is in contrast to poverty-based selection methodologies, such as means testing or proxy means testing, both of which include inherent inaccuracies in identification of the 'poor', and have high exclusion rates. For example, Mexico's Oportunidades excludes 70% of the poorest 20% of eligible households, due to exclusion errors. Save the Children's MCCT programmes also do not enforce conditions on recipients, to minimise the likelihood of excluding the most vulnerable women due to their inability to comply with strict conditions.

Inclusive approaches have the potential to build political support and generate high budget allocations because they are universal. Save the Children's MCCT benefits are made available across the wealth spectrum, reaching those living in poverty who are often politically weak, and those with middle to high incomes

who wield far more influence on the political decision-making apparatus.

The MCCT programmes have been designed based on a robust understanding of malnutrition. The programmes target women and their infants during the critical window of the first 1,000 days, with a cash transfer amount informed by the cost of a nutritious diet. The programmes also provide and encourage beneficiaries to attend nutrition-focused social and behavioural change communication events, as well as mother-to-mother support group meetings, antenatal check-ups and immunisation. The programmes aim to prevent stunting in children and are expected to contribute to increased food security and improved uptake of nutritious food.

However, social protection schemes are nascent in Myanmar, and a roll out of universal coverage of MCCTs, even if adequately funded, will take time to reach very remote rural communities – and especially conflict-affected or ethnically diverse areas. Further development and adaptation of delivery mechanisms to accommodate complex socio-economic environments, where access and open engagement are highly contested, will be required.

BUILDING RESILIENCE

As we have seen, an individual's or household's nutrition status can be closely linked to their vulnerability to climate-related events and risks. Breaking the cycle of malnutrition for many people will mean building resilience to climate and environmental shocks. This will require a long-term, integrated rehabilitation and prevention programme addressing nutrition, health, water, hygiene, sanitation, livelihoods and behavioural changes. A country-led programme of this type would need to be undertaken throughout the year, and reinforced by specific responses during shocks such as droughts. It would need to be carefully targeted and adapted to specific livelihood, cultural, and geographic contexts. This is a complex but necessary approach.²⁹

Disaster Risk Reduction is a systematic approach to minimising vulnerability and disaster risks to individuals and communities through a broad range of actions, which include preparedness, early warning, mitigation, and prevention.³⁰ The current negative impact of El Niño on food security highlights the necessity of increased investment in disaster-risk reduction, early warning, climate-change adaptation and resilience building.³¹

Governments should also build resilience to climate-related shocks through:

- including improved resilience and nutrition objectives that take a universal approach in agriculture and livelihood plans, rather than just focusing on increased production and economic growth; nutrition plans should include contingency for emergencies and ensure that capacity is built to deal with nutritional needs during emergencies
- as covered earlier in this report, investing in broad social protection programmes that protect the poorest households, provide opportunities for the promotion of livelihoods and include specific nutrition objectives and nutrition-sensitive approaches
- investing in and wisely managing emergency food reserves, in order to reduce food price volatility and ensure their country can quickly deal with food shortages.

LIVELIHOODS

Raising household incomes has been proven to have positive outcomes on child nutrition. However, the positive impact of improved household level livelihoods initiatives on child nutrition cannot be assumed. In recognition of this, Save the Children aims to put achieving outcomes for children at the centre of our livelihoods work through focusing on building **child-sensitive livelihoods**, which effectively raise household level incomes and improve the economic status of poorer households, and ensure that these income increases have positive outcomes for children specifically.

In order to ensure livelihood policies are delivered in a child-sensitive way that leaves no one behind, we need to:

- a) Involve girls, boys and their parents – including those with disabilities – in assessments and programme design, as well as monitoring and evaluation, to ensure that their voices are heard and taken into consideration in the design and implementation phases;
- b) Ensure that production-related programming actively promotes practices that improve the availability of nutritious food for marginalised communities;
- c) Incorporate behaviour change elements to ensure that households have improved knowledge regarding how to best invest additional income to impact positively on girls and boys – eg, child nutrition, WASH and care practices;
- d) Seek to promote the equal role of women and girls in household decision-making on the use of incomes from livelihoods to promote the use of household resources for investing in their children;
- e) Influence partners and other actors (eg, private sector, government) to be aware of the impact of livelihoods work and decisions on girls and boys and children from different groups, and to promote child-sensitive measures – eg, around working conditions, wage rates, etc;
- f) Consistently monitor and review nutrition outcomes for girls and boys and children from different groups in order to maximise positive impacts. Evidence generated should be shared openly and consistently to identify best practice and to enhance the evidence base.

Understanding people's assets, their livelihood objectives and the livelihood strategies that they adopt to achieve these objectives is key.³²

This requires a prior understanding of the nature of **local livelihoods** – what types of livelihood

MILK MATTERS: PREVENTING MALNUTRITION THROUGH LIVESTOCK INTERVENTIONS IN SOMALI REGION, ETHIOPIA

Children who live in pastoralist areas are increasingly referred to as some of the most nutritionally vulnerable in the world. In Somali Region, Ethiopia, levels of global acute malnutrition among young children are regularly reported to rise above 15%, the level defined as a nutritional emergency by WHO.

Phase I of Save the Children's Milk Matters study investigated the value and use of milk in these communities. It found that, when available, milk is prioritised for consumption by young children, and that the seasonal lack of access to animals and animal products, exacerbated during periods of drought, is widely perceived by pastoralists as the main driver behind child malnutrition.

The second phase of the Milk Matters study was designed to assess the impact of community-defined livestock interventions on the nutritional status of young children over the dry season. Where the international response to malnutrition has typically been reactive in these areas, with the provision of a food basket and establishment of selective feeding as acute malnutrition rises, this study looked into the potential cost savings, both short- and long-term, economic and social, of a more preventative approach.

In 2014 and 2015, Milk Matters supported communities to rehabilitate areas of rangeland for the creation of fodder, to be used only by milking animals that stay close to the homestead during the dry season.

FINDINGS

Milk Matters found that in supporting the milking of animals that stay close to women and children during the dry season and/or drought, milk production and consumption among children is improved, and children's nutritional status rises.

- Milk availability improved in intervention sites, with production during the dry season higher than in sites without the intervention. Milk production was also sustained longer.
- A greater proportion of young children consumed milk in the intervention sites, compared to the control sites.
- Overall, nutritional status of children receiving milk stabilised *over the dry season*.
- The direct costs of the interventions were estimated to be 45% to 75% less than those estimated for therapeutic feeding programmes (community-based management of acute malnutrition).

This was seen to be successful and further roll-out is planned in 2016.

strategies are employed by local people and what factors constrain them from achieving their objectives. Such understanding cannot be gained without socio-economic and cultural analysis, so that particular social groups and their vulnerability can be understood.³³ This goes to the heart of the 'leave no one behind' approach, by ensuring that all social groups are included in the analysis and programmes.

Since traditional livelihoods such as pastoralism or agriculture may not provide long-term food security, there is a need to place greater emphasis on promoting alternative livelihood strategies – especially for youth. Examples include vocational and technical education, life skills training, financial literacy, and entrepreneurial training, encouraging youth to be competitive in their local job markets.³⁴

UNIVERSAL HEALTH COVERAGE AND NUTRITION

WHO defines Universal Health Coverage (UHC) as ensuring that 'all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship'.³⁵

UHC is the aspiration that all people can obtain the quality health services they need without facing financial hardship. UHC promotes the realisation of the human right to health, dissociating access to services from the ability to pay.

Decisions about which healthcare services should be provided and about how resources are raised and

how they are spent rest with governments. While pathways towards UHC differ according to national contexts, Save the Children believes that governments' choices in priority setting should be guided by the fundamental principles of equity, non-discrimination, participation and accountability. This is consistent with the right to health – as well as a strong evidence base on public health need, and the cost-effectiveness of interventions.³⁶ Malnutrition affects high-, middle- and low-income countries, and often affects the poorest and most vulnerable within countries. So, addressing malnutrition in all forms must be a priority.

While contributions can be made by the health sector in preventing and treating malnutrition, national efforts must also support policies and services that address the social determinants of malnutrition: employment, education, food security and human rights protections. Ensuring UHC delivers for both the prevention and treatment of malnutrition will require a comprehensive process of improvements in health financing, information, surveillance systems and human resources.³⁷

Raising more revenue – for example, from taxes – could be an important step for some countries in delivering UHC; equally important are the choices countries make when setting priorities on how to spend additional funds. We argue below why addressing nutrition must be the priority for many countries around the world.

Why efforts towards UHC must deliver for nutrition

The health and nutrition status of women and children is inextricably linked. Despite increased recognition, there is a need for more attention on nutrition as part of efforts to promote maternal and child health, and in discussions on UHC, where nutrition is notably absent.

Choices on the pathway to UHC, in terms of the number of people covered and the way in which a health system prevents and treats malnutrition throughout the life course – ultimately delivering quality reproductive, maternal, newborn and child health care – are a critical step towards reaching zero malnutrition.

The role of the health sector in addressing the broader health environment

The health sector must work hand-in-hand with other sectors in improving nutrition and health outcomes. For example:

- Governments should support, promote and protect **exclusive breastfeeding** through the creation of flexible working schedules and enabling physical and social environment and policies such as maternity leave in both formal and informal working sectors.
- Because adolescence is such a critical period for human growth, government policies and programmes should have provisions for providing **nutrition education for adolescents**.
- **Context-specific family planning education** should specifically address the importance of contraception, birth spacing and delayed pregnancies for adolescents.
- Many kinds of interventions can be delivered to individuals in various settings to **prevent or manage unhealthy diets, obesity, and nutrition-related non-communicable diseases**. These include social marketing campaigns in community settings, nutrition education in schools, counselling in primary care for children with mild obesity, and bariatric surgery.³⁸ A number of countries passed laws that focus on improving healthy food choices for children, generally in schools – for example, Brazil, Chile, Colombia, Costa Rica, and Peru. Some countries control the advertising of food in schools, regulate food labelling, and limit advertising, especially on television.³⁹

When designing policies and programmes, it is critical to ensure that both **supply** and **demand** are considered. On the supply side, strengthening the building blocks of health systems is a prerequisite for effective service delivery. Specific emphasis should be placed on **human resources** for health and supply chain management, and in particular in remote rural areas where poor infrastructure or lack of infrastructure and lack of skilled health personnel often constitute critical barriers to health, and to adequate and equitable financing for nutrition. On the demand side, national and local governments must support and promote family and community practices that aim at ensuring child survival, development and growth. Finally, **effective governance** and country/region specific **accountability** mechanisms

are not only key to enabling progress in nutrition and the health status of populations, but are critical in terms of advancing the wider SDG agenda. Accountability mechanisms should include collection of disaggregated data, data standardisation and transparency, legal and regulatory frameworks and social participation mechanisms.

EDUCATION FOR BETTER NUTRITION

Our research has found that **maternal education** and levels of **female autonomy** are among the strongest determinants of child health and nutrition outcomes. The evidence shows that the degree to which a mother is educated could mitigate the effects of other types of exclusion. The risk of stunting is significantly lower among children with mothers with at least some primary schooling, and even lower among mothers with some secondary schooling. **Paternal education** at both the primary and secondary levels also reduced the risk of stunting, although the effect is smaller than for maternal schooling.

How is education having an impact on nutrition outcomes?

The potential beneficial consequence of schooling on nutrition is immense. On the other side of the coin, better nutrition typically results in better school performance and learning outcomes, which in turn equates to increased individual earnings and national income – both pathways to improve nutrition in the long term.⁴⁰ The evidence sustains these premises. For example, UNESCO predicts that providing all women with primary education in low and middle income countries will reduce stunting by 4%, or stunting of 1.7 million children. Giving them a secondary education would reduce stunting by 26%.⁴¹ Thus, programmes to ensure that children, especially girls, go to school, stay in school and succeed in school – including fee waivers, and cash transfers – can be expected to reduce the risk of undernutrition for generations to come.

The evidence is mixed as to what other school-based policies can be universally promoted as an evidence-based intervention for tackling undernutrition.

However, there is considerable support for at least five overlapping pathways. Schools should consider:

1. Transmitting information about health and nutrition directly;

2. Teaching numeracy and literacy, thereby assisting caregivers in acquiring information and possibly nutrition knowledge;
3. Exposing individuals to new environments, making them receptive to modern medicine;
4. Imparting self-confidence and enhancing women's roles in decision making – including their interactions with healthcare professionals;
5. Providing women with the opportunity to form social networks, which can be of particular importance in isolated rural areas.⁴²

Furthermore, there is a beneficial feedback loop between education and nutrition.⁴³ Schools can deliver lessons to enhance knowledge, attitudes and healthy food choices. At the same time, most countries in the world provide school meals, feeding at least 368 million children on a daily basis. If done well, school feeding programmes can have many beneficial effects, including incentivising school attendance amongst excluded groups – for example, across 32 sub-Saharan African countries, girls' school enrollment increased by an average of 28% shortly after school meals were introduced.⁴⁴

The links between schooling and nutrition provide us with another reason why it is so encouraging that global trends in education are positive. Data from developing countries show an average increase in years of schooling from 2.60 to 7.62 for boys and from 1.50 to 6.64 for girls between 1950 and 2010.⁴⁵

This progress, however, must not encourage complacency. Globally, of the 650 million children of primary school age, 250 million are either not in school or are in school but not learning the absolute basics of literacy and numeracy – while 40 million primary school-age children are affected by emergencies and protracted crises with possible negative impacts on their education.^{46, 47}

The children denied the beneficial consequences of education must therefore be a key priority for policy makers. Children on the move and forced from their homes, children from indigenous and ethnic minorities, street children, and children with disabilities are all disproportionately missing from formal education. This has a negative impact on many other areas of their lives and is a key driver of their exclusion and, ultimately, the nutrition status of their own children.

INTEGRATED WATER, HYGIENE AND SANITATION AND NUTRITION RESPONSE

Lack of access to safe water, adequate sanitation and good hygiene (WASH) practices has significant implications for malnutrition, given that the two immediate causes of malnutrition are lack of dietary intake and communicable diseases, such as diarrhoea, intestinal worms or tropical enteropathy.⁴⁸ Studies show that stunting is more common in places with high rates of open defecation, because faecal matter contaminates food, water and the general environment, making children frequently ill. This can permanently damage children's intestines and their ability to absorb nutrients.⁴⁹

There is growing international evidence of the impact of WASH interventions on the improved nutritional status of children.^{50,51} The 2013 Cochrane review on the impact of WASH interventions on the physical growth of children under 18 years of age found a (small) benefit conferred from improved hygiene via provision of soap, and improvement of water quality. It also noted a lack of long-term studies to assess the impact of interventions.⁵²

Research in India showed that, compared with open defecation, "household access to a toilet facility is associated with a 16%–39% reduced risk of stunting among children aged 0–23 months";⁵³ and Peruvian children at two years of age with the best conditions for water sources, water storage, and sanitation were 1.0 cm taller than children with the worst conditions.⁵⁴

Key areas for WASH and nutrition integration include:

- **An enabling environment**, with strong policies and nutrition action plans that recognise the importance of integrating WASH and nutrition. This provides a coordination framework to guide integrated equitable and accessible programming, aligning stakeholders and investments in humanitarian and development contexts. Donors, governments, and implementers should endorse and support an integrated approach.
- **Strengthened capacity** of staff in WASH and nutrition sectors, to effectively implement integrated programmes that address the needs of those who are most vulnerable and marginalised. This will ensure that key sector staff such as health, agricultural extension and education workers are within reach of every child.
- **Joint monitoring, evaluation, reporting and accountability**, including through community feedback, the use of mapping, real time data on functionality of WASH infrastructure and nutrition interventions, development of shared indicators and tracking of these disaggregated by group.
- **Continued operational research** regarding integrated WASH and nutrition programmes, to build the evidence of 'what works' for an inclusive integrated approach.
- **Shared health, education and community platforms**, to deliver both WASH and nutrition interventions, should be utilised and strengthened. For example, ensure sufficient capacity and resources for health workers to deliver multi-sectoral messaging such as integration of breastfeeding messaging into hygiene behaviour change communication, water treatment and food preparation practice, prioritising the most affected communities first.
- **Prioritisation of investments** by focusing on areas with high prevalence of undernutrition; low coverage of improved sanitation; and areas with high prevalence of water-related diseases, especially diarrhoea, or neglected tropical diseases such as soil-transmitted helminthiasis, guinea-worm disease, trachoma and schistosomiasis, which mainly affect children. This should be targeted at women and children through the 1,000 days approach.
- **Maximisation of the benefits of behaviour change interventions** by utilising each sector's experience and skills, pooling resources, using shared delivery platforms, targeting multiple behaviours to reinforce each behaviour, and identifying leaders to encourage behaviour change across communities. Messaging should be culturally appropriate, accessible to everyone and include: food hygiene; environmental hygiene (ie, safe play areas for children); safe disposal of child faeces (this is often neglected, but is very important for nutrition); and hand washing with soap at key times.
- **Adoption of a rights-based approach** to integrated WASH and nutrition, recognising that the right to clean water was only recently ratified (2010) and is therefore not yet fully embedded in human rights approaches. This includes attending to the impacts of individual and group-based inequalities that result in access constraints, including menstrual hygiene management.⁵⁵

4.3 AT NATIONAL AND GLOBAL LEVELS: BASIC STRUCTURAL AND INSTITUTIONAL DRIVERS OF MALNUTRITION

NATIONAL LAWS AND POLICIES

National laws and policies, and how policies are implemented and monitored, are important factors in states fulfilling their obligations to their citizens.

- **Legal obligations and an obligation to act**
In many cases, countries fail to translate international obligations into national law.

Given that most countries have signed and ratified international human rights treaties, such as the Convention on the Rights of the Child and the International Covenant on Economic, Social and Cultural Rights,⁵⁶ they are duty bound to respect, protect and fulfil these rights. Governments must not interfere with the realisation of these rights. They must ensure that third parties do not interfere, and they must establish environments, through national legislation, that allow these rights to be realised. Governments must take measures to provide for those who cannot provide for themselves. Many governments are failing to implement existing laws.⁵⁷ But human rights are legal

instruments that allow individuals and groups to go to court to ensure that governments meet their requirements in terms of the rights to food, health, survival and development. This has been undertaken successfully in many cases.

- **Be accountable**
As stated, human rights are laws that nearly all countries have agreed to; therefore, governments can be held accountable for the harmful things they do, and for the good things they must do, but don't.

Rights holders – individuals – must have opportunities to claim their human rights in regard to adequate food from the relevant duty holders, whether state or non-state. For nutrition, the right to food, right to health, right to development and the right to survival should be referenced in a country's constitution, and be justiciable and contained in a bill of rights or fundamental rights section. Brazil, Kenya and South Africa all provide examples of this. Only in this context can citizens hold governments to account through their courts.⁵⁸

DEVELOPING THE RIGHT TO FOOD IN SIERRA LEONE

In 2015, the Scaling Up Nutrition Civil Society Platform (SUN CSP) in Sierra Leone attempted to include the Right to Food into the National Constitution. The Right to Food agenda was recognised by the SUN CSP as an important tool for the development of equitable policies to address hunger and malnutrition for all vulnerable groups, with a particular emphasis on women and children.

The SUN CSP called for the recognition of the right to food as a human right: *“By including it in the constitution it will be legitimised and law-makers, as well as citizens, will have to abide by it.”*

The SUN CSP presented arguments for the Right to Food in Sierra Leone, including:

- Impact of malnutrition on maternal and child health – a vicious circle of malnutrition for women and children impacts on national development outcomes.

- Gender and poverty – gender discrimination has a significant impact on household, community and national nutrition, and food security, perpetuating the cycle of poverty.
- Access to land – existing land policies are not favourable to government plans to eradicate hunger and malnutrition. Small areas of land are used for subsistence farming; large areas are being acquired by multinationals with little advantage or benefit to Sierra Leoneans.
- Food quality – substantial amounts of food are being imported and are of sub-standard quality. Sierra Leone lacks the institutional capacity to test for quality and to regulate the influx of poor-quality foods.

In February 2016, the government of Sierra Leone published the revised draft constitution. It includes the Right to Food under two sections: Human Rights and Freedoms of the Individual; and the Protection of Socio-economic Rights.

Human rights accountability, however, is not limited to decisions made by courts. There are also numerous other forms of human rights accountability mechanisms. For example, national human rights commissions and similar institutions exist in many countries and serve to generate forms of accountability for government commitments.

People must have the opportunity to complain to appropriate institutions about violations of rights that are essential for their food security and nutritional well-being. The development and strengthening of accountability mechanisms to receive claims or complaints about noncompliance with the right to adequate food and nutrition is key. These mechanisms need to be accessible for all people everywhere.⁵⁹

HOW CAN ECONOMIC GROWTH DELIVER FOR NUTRITION?

The relationship between economic growth, poverty, inequality and nutrition

Economic growth has been shown to contribute to improved nutrition outcomes, and in low-income countries it is seen to be essential for any progress in reducing malnutrition. However, a complex relationship exists between economic growth and nutrition and, on its own, growth is not sufficient to tackle malnutrition.

The nature of growth and how its benefits are distributed are key determinants of the ability of economic growth to deliver on improved nutrition outcomes. Growth in the agricultural sector has been shown to have a more direct relationship to improved nutrition outcomes than growth in other sectors; investment in key social sectors from a growing economy is an essential intermediate step; and the benefits of growth must be shared among the most excluded segments of society, who are disproportionately affected by malnutrition.

It has been estimated that ‘halving stunting from a level of 30% through economic growth alone would require 3.7% real growth per capita over 25 years. This is much higher than the past growth performance of most developing countries. Cutting malnutrition to half in a country with 50% stunting requires 5.9% real per capita growth for 25 years’.⁶⁰

PARTICIPATORY BUDGETING

An often-quoted way of increasing budget transparency is to guarantee informed or participatory budgeting processes. Participatory budgeting is ‘a process by which citizens, either as individuals or through civic associations, may voluntarily and regularly contribute to decision-making over at least part of a public budget through an annual series of scheduled meetings of government authorities’. Being part of the process gives first-hand access to budget information that may otherwise not be available, and a chance to influence the budgeting process.

Several experiences of participatory budgeting have proved very successful. In the specific case of youth participation, in Argentina, for example, a municipality undertook a participatory youth budget that included around 1,000 youths annually from several different districts. This led to the identification of gaps in funding of community-led initiatives. In Brazil, youth participation in budgeting has resulted in an additional allocation of US\$760,000 to children and young people in 2005 in the Ceará region.

Budget monitoring initiatives led by civil society and others can effectively promote budget transparency by identifying and detailing ‘the distribution of actual inputs, activities and outputs’, in order to make budgets accessible and comprehensible. This entails a comprehensive budget analysis and effective measurement of budget transparency and participation.

There is, in fact, a two-way relationship between economic growth and improved nutrition outcomes. While economic growth can deliver improved nutrition outcomes, improvements in nutrition also benefit the economy. Besides avoiding direct losses in physical productivity, ‘preventing micronutrient deficiencies alone in China would be worth between US\$2.5 and US\$5 billion annually in increased GDP, which represents 0.2 to 0.4% of annual GDP in China’, and the same cost for India would be

US\$2.5 billion annually, 0.4% of its annual GDP.⁶¹ 'In Sierra Leone, lack of adequate policies and programmes to address anaemia among women will result in agricultural productivity losses among the female labour force exceeding US\$94.5 million over the next five years.'⁶²

Not only are poverty and inequalities factors by themselves, they also influence the provision of services that mediate the relationship between economic growth and nutrition. Policies related to agricultural development, girls' and women's education, and health systems – all vital mediating factors between economic growth and improvements in nutrition – can only harness the benefits from growth if these policies are inclusive and pro-poor.

Agricultural growth and nutrition

Agricultural growth has been shown to reduce malnutrition more than growth in other sectors, among those countries where agriculture plays a significant role in the economy (which includes most developing countries).⁶³ Agricultural growth can contribute to improved nutrition outcomes in two main ways: reduced food prices and increased food security from more food being supplied to the market; and rising incomes of rural households – which make up the majority of the world's poorest and malnourished people.⁶⁴

But on its own, agricultural growth does not guarantee improved nutrition outcomes through either of these means. For improvements in nutrition outcomes, agricultural growth must be driven by nutritious and diverse food production. Growth driven by low-nutrient foods may increase incomes but it does not improve the supply of nutritious foods to the market. However, it must be noted that diversifying crops will often lead to an increase in labour burden, which often falls disproportionately on women. On the other hand, agricultural growth driven by animal foods, fat and sugar – the three most significant increases in food energy consumption globally – has been linked to increasing obesity worldwide.⁶⁵

When agricultural production is targeted towards the export market, agricultural growth can have a negative effect on nutrition outcomes if it drives up the price of food. For example, the rapid increase in biofuel production in 2006/07 has been linked to the 2008 food price spike, which has been a huge setback in efforts to reduce malnutrition. Although

a complex set of factors contributed to the sudden increase in food prices in 2008 – including longer-term factors like population growth and economic growth in developing countries leading to higher demand – it has been shown that a rapid diversion of agricultural production towards supplying demands for biofuel played some role in driving up food prices.⁶⁶

Agricultural growth must be inclusive and must target investments, research and development in vulnerable areas, access to land and secure land rights. This will create market opportunities for marginalised farmers – including value-added enterprise development – and productive employment opportunities from larger-scale developments.⁶⁷

Policies that harness the benefits of growth for improved nutrition

Income, spatial and gender inequalities all play a crucial part in mediating the effects of economic growth in nutrition. Economic growth can only reduce malnutrition if it increases incomes in an equitable way; if it boosts sectors and activities that are relevant for nutrition; and if both policies and the delivery of services are inclusive and pro-poor.

Unequal provision of services has the potential to curb the positive effects of investments generated by growth, by excluding vulnerable groups. In Uganda, for instance, health funds are allocated according to population levels – although less populated remote regions are often high-need areas due to people's limited access to services.

Inclusive growth approaches to nutrition will, therefore, require targeted national approaches for excluded groups as well as equitable (re)distribution of resources into nutrition-relevant areas, such as health, education and sanitation. And inclusive growth approaches will require social protection programmes in order to maintain food security. According to a 2012 UN Food and Agriculture Organization report on the state of food insecurity, "in order for economic growth to enhance the nutrition of the neediest ... (i) Growth needs to involve and reach the poor; (ii) the poor need to use the additional income for improving the quantity and quality of their diets and for improved health services; and (iii) governments need to use additional public resources for public goods and services to benefit the poor and hungry".

EMERGING NUTRITION PARTNERSHIP MODELS: USA–BRAZILIAN TRILATERAL DEVELOPMENT COOPERATION

Key to ending malnutrition is to develop innovative partnerships. Even with the progress on nutrition and child survival in recent decades, it will likely take more than traditional bilateral and multilateral foreign assistance models to end malnutrition by 2030.

Trilateral development cooperation is one emerging innovative development model to address malnutrition in some of the world's most vulnerable nations. There is no single definition of trilateral development cooperation, but the UN defines it as, "Southern-driven partnerships between two or more developing countries supported by a developed country(ies)/or multilateral organization(s) to implement development cooperation programs and projects".⁶⁸

Ideally, trilateral aid, "Promotes a better cost-benefit relationship, complementarity and mutual exchange of know-how, which may reshape development cooperation towards a more equalitarian relationship".⁶⁹ In the nutrition context, trilateral development cooperation can add value through emerging donors disseminating their own homegrown nutrition solutions and successes to other developing nations with similar backgrounds and cultural affinities.

In terms of US foreign assistance, the earliest trilateral partnership was signed with Brazil in 2011 after the general Brazil–US agreement on trilateral aid was established in 2010.⁷⁰ Based on Brazil's own recent success in reducing hunger and malnutrition rates, this trilateral agreement emphasises nutrition and food security programmes in Latin America and Africa – specifically in Honduras, Haiti, and Mozambique.

In Mozambique – a Portuguese-speaking nation, like Brazil – USAID has worked through the Feed the Future programme with the Brazilian Cooperation Agency (ABC) to increase agricultural production and food security, and to improve family nutrition. USAID can benefit from a partnership with Brazil because of its expertise as a rising middle-income nation that has generated its own homegrown policy solutions to hunger and nutrition.⁷¹ In addition to the language and cultural commonalities, Brazil's developing nation policy solutions may be more relevant to the needs of lower-income nations like Mozambique.⁷² Furthermore, Brazil has become a global agricultural power in recent years and has soil conditions similar to those in Mozambique, which also makes its agricultural development,

food security, and nutrition work relevant to the Mozambique context.⁷³

An example of the nature of trilateral aid in Mozambique is the cooperation among institutions of higher education from all three countries in training on food security and nutrition. Among the higher education institutions working through this programme in Mozambique are: The University of Florida and Michigan State University on behalf of USAID; the Brazilian Agricultural Research Corporation (Embrapa) on behalf of ABC; and the Agricultural Research Institute of Mozambique (IIAM) on behalf of the Ministry of Agriculture of Mozambique.⁷⁴

Institutions from all three nations are cooperating to increase horticulture production and to increase the capacity of small farmers through socioeconomic research, strengthening local farmers' production, and providing post-harvest capacity and training.⁷⁵ The positioning and varied strengths of each education partner were leveraged to extend technical support, and funding was distributed among all three institutions. USAID paid for the equipment needed, while ABC paid for Brazilian agricultural experts to travel to Mozambique; IIAM paid for the time of its own researchers and technicians.⁷⁶

Embrapa's expertise on tropical agriculture is internationally known and was seen by US partners as a good fit for the Mozambique context.⁷⁷ In a further example of the dynamics of trilateral aid, Embrapa – which was created in 1972 to combat a food crisis in Brazil – received USAID institutional strengthening funding during the 1970s, and now it is providing its own agricultural and food security capacity building to developing nations like Mozambique.⁷⁸

In addition to Mozambique, USAID-ABC trilateral food security and nutrition assistance has focused on Haiti, where they are working on promoting maternal and child nutrition; and in Honduras where they have piloted school feeding and nutrition education programmes.⁷⁹

Because it is an emerging model, there is a need for impact assessments on trilateral development agreements, but these innovative partnerships have the potential to reshape international development in order for it to be more effective and equal. As one expert from the University of Florida said, "We know we can do a more effective job if we combine the best expertise in the US with the best expertise in Brazil".⁸⁰

4.4 DESIGN PRINCIPLES FOR AN INCLUSIVE APPROACH

All nutrition interventions – policies and programmes, nutrition-sensitive and nutrition-specific – should adopt an inclusive approach to leave no one behind. The following principles – drawing upon Save the Children’s programmatic

experience, the case studies included in this report and global evidence – have been put together to help actors consider the design implications for such an approach.

INTERNATIONAL DESIGN PRINCIPLES FOR INCLUSIVE NUTRITION POLICIES AND PROGRAMMING

Analysis

- Undertake a thorough contextual analysis, exploring the drivers of malnutrition-based on the conceptual framework (see page 25), looking at experiences and outcomes for different groups and the drivers for any exclusion.
- Clarify the pathways through which the programme is intended to have an impact on malnutrition for the most excluded groups, while considering progress for all.
- Include the views and opinions of those affected by malnutrition, particularly excluded groups, and also community leaders.

Design and implementation

- Ensure an integrated multi-sectoral approach that addresses malnutrition and its multiple drivers at different levels of society and facilitates cross-programmatic linkages.
- Ensure the type of programme fits the local context and takes into consideration what types of complementary services are available, making linkages to existing services.
- Promote the participation and involvement of those most affected by malnutrition, particularly excluded groups, as well as community leaders, caregivers and young people, in policy and programme design and monitoring.
- Reach the nutritionally vulnerable, with a focus on the 1,000 days (pregnant/lactating women and children under two years old) and adolescent girls.
- Consider a universal approach to targeting in areas of high prevalence of malnutrition and/or where people are unable to access what they need for a healthy life.⁸¹
- Ensure the programme focuses on achieving sustainable change at the system level by, for

example, ensuring the programme lifespan is long enough for change to occur; and that it integrates advocacy to support change objectives to leave no one behind.

- Understand and prevent general negative side effects, particularly on the causes of undernutrition and obesity.
- Consider the integration of behaviour change communication and nutrition education in programmes tackling drivers of malnutrition or strengthened linkages with health and nutrition services, with a specific focus on excluded groups.
- Ensure programmes are gender-, ethnicity-, disability- and other group-sensitive, and consider the adoption of activities to promote women’s economic empowerment, improved decision-making within households, and tenure rights, where appropriate.
- Promote, strengthen and adhere to legal and regulatory frameworks for the right to nutrition, including the rights to food, health, survival and development and the rights of the child
- Integrate a well-designed complaint and response mechanism that is accessible to all, particularly excluded groups.
- Consider utilisation of the complaint and response mechanism and/or monitoring and evaluation system to enable action to be taken when violations of the rights to food and nutrition occur.

Monitoring

- Integrate a robust monitoring and evaluation system covering a range of standard impact indicators that reflect the drivers of malnutrition, disaggregated by group, to assess success against malnutrition and to inform multi-sector development plans.⁸²

5 Conclusions and recommendations for world leaders

Our projections show that without a dramatically different approach, only 39 out of 114 countries with available data will meet the 2025 WHA target to reduce stunting by 40%. In addition to the eight countries from our sample that already have stunting rates below 3%, only three more countries will manage to achieve the 2030 SDG target to eliminate stunting. Fifty three out of 137 countries will tackle stunting only in the next century.

These projections do not have to be the reality. Malnutrition and exclusion are both political problems that can be overcome. In fact, as we have shown, some governments have done just that. Peru, Honduras, the Dominican Republic and Liberia, for example, have all seen impressive progress in reducing national stunting rates in recent years. But in some of these countries, progress has not been equal. Peru and Honduras, in particular, have large inequalities in stunting rates between the best and worst sub-national regions and between rural and urban areas. In addition, Peru and Honduras are both in the top ten countries for the greatest inequalities in stunting rates between ethnic groups, and Honduras is in the top ten for worst countries in inequalities in wasting rates between ethnic groups. These results show that while some countries have achieved great progress overall, if you look at the picture below the national level, progress has not been made for all and some groups of children are being excluded and left behind.

To speed up progress towards the globally agreed nutrition targets, for all groups of society, Save the Children is calling for action in the following areas:

1. Overcome exclusion through appropriate laws, policies and investment
2. Break the intergenerational cycle of malnutrition: focus on mothers and adolescent girls
3. Address the large-scale drivers of malnutrition
4. Take a 'leave no one behind' approach – an appropriate policy and programme response based on the national context.

Below, we set out Save the Children's recommendations for how to do this:

1. OVERCOME EXCLUSION THROUGH APPROPRIATE LAWS, POLICIES AND INVESTMENT

Discrimination and exclusion may take many forms, ranging from investment, laws and policies that explicitly or implicitly discriminate against particular groups, to social and cultural norms that result in discrimination and the social exclusion of poor and marginalised children.

Taking a human-rights based approach and using affirmative action or positive discrimination for the benefit of marginalised groups is required. Addressing discrimination means not only removing explicitly discriminatory policies, but also addressing and correcting the drivers of discrimination, such as inequitable resource allocation.

Commitments to address malnutrition for all should begin with the moral and legal imperative for the **right to food and nutrition** – drawing upon the right to food, health, development and survival. These commitments should centre on human dignity, needs, and interest, as well as the wider arguments regarding improved efficiency and outcomes.

Recommendations:

- **All governments** should incorporate international obligations relating to the right to food, health, development and survival into national law. This includes the Convention on the Rights of the Child and the Convention on Economic, Social and Cultural Rights.¹
- **All actors** (governments, civil society and donors in particular) should implement international human and child rights provisions – with principles of equality and non-discrimination at their heart – to provide a powerful framework within which to formulate and implement nutrition policies and programmes to reach everyone and address discrimination at all levels.
- **All actors** (governments, civil society and donors in particular) should develop nutrition interventions that address societal norms and behaviours that drive inequalities based on gender, ethnicity, income group, disability or where a child lives.
- **All actors** should ensure equal access for boys and girls, children on the move, children from different income groups and ethnic groups and children with disability, in skills-building opportunities (eg, vocational training) and access to decent work/livelihoods.
- **All actors** (governments, civil society and donors in particular) should consider Save the Children’s design principles for inclusive nutrition interventions (see page 59).

2. BREAK THE INTERGENERATIONAL CYCLE OF MALNUTRITION – FOCUS ON MOTHERS AND ADOLESCENT GIRLS

Malnutrition is passed from one generation to the next. Undernutrition in women contributes to restricted growth of the baby before it is born, newborn deaths and, for survivors, to stunting before the child’s second birthday.² Maternal overweight and obesity result in increased maternal morbidity and infant mortality.³ With **16 million adolescent girls giving birth each year**, urgent attention is needed to keep girls in school, delay the age of marriage and increase access to family planning. Targeting women and girls with

initiatives to improve their nutrition only when they are pregnant is often too late to break the intergenerational cycle of malnutrition, because this often misses a crucial part of the first 1,000 day window. In addition, adolescent girls are more likely to die during childbirth than older women, or to be left nutritionally depleted by pregnancy. Their babies are also more likely to die or be born with nutritional deficits. The infants who survive have a greater risk of growing up to be stunted mothers or fathers.

Maternal education and levels of female autonomy are among the strongest determinants of child health and nutrition outcomes.⁴ Providing all women with primary education in low- and middle-income countries could reduce stunting by 4%, or the stunting of 1.7 million children. Providing women with a secondary education would reduce stunting by 26%, or the stunting of 11.9 million children.⁵

Recommendations:

- **All actors** should ensure adequate nutrition during the first 1,000 days of life, including preventing low birthweight through adequate maternal nutrition, supporting, promoting and protecting breastfeeding and recommended young child care and feeding practices, preventing and treating micronutrient deficiencies and acute malnutrition, and promoting good sanitation practices.
- **Governments, donors, academics and NGOs** should invest in platforms (including but not limited to schools) to reach adolescent girls to improve their nutrition.
- **Governments** should provide boys and girls with quality education beyond primary level, and put in place appropriate measures to encourage them to continue in their education – including fee waivers and cash transfers.
- **Governments** should raise, or sustain, the age of marriage for girls to 18 and enforce it in law.
- **Governments**, through schools and working with partners such as youth organisations, should provide girls and boys with information on how to stay healthy during their reproductive years, and provide them with access to family planning, respecting and fulfilling sexual and reproductive health and rights. A particular focus on adolescence should be applied.

3. ADDRESS THE LARGE-SCALE DRIVERS OF MALNUTRITION

A number of large-scale drivers of malnutrition have been identified. The level of funding directed towards nutrition, weak accountability for nutrition commitments, and climate change and extreme weather events are explored below. Other large-scale drivers are also having an impact but are not explored in detail here.

FINANCE

Globally, the financial system, as it exists, does not favour the poorest or most marginalised people. Wealth has remained in the global north, with many in the global south struggling to benefit from the social developments that have occurred over the last couple of hundred years. In addition to this, for many years, nutrition has been neglected and underfunded. Undernutrition is the underlying cause of 45% of child deaths, yet it receives just 1% of overseas development assistance. Yet an investment in nutrition is a smart investment – for every US\$1 invested, the median return is US\$16.⁶

Recommendations:

- **Governments** around the world should put in place the **resources required** (financial and other) to meet the global nutrition goals and targets they have committed to reach – for example, SDG2, WHA nutrition targets and ICN2 commitments. In particular, southern governments should invest in the nutrition of their people and the drivers of nutrition by making a “fair share” commitment based on their own national burden of malnutrition, size of their economy and other factors. **The second ‘Nutrition for Growth’ event is the right moment to do this.**
- **Finances for nutrition** should be spent according to a ‘leave no one behind’ approach – ensuring they reach the hardest to reach, including through child-sensitive social protection and basic health services. **The second ‘Nutrition for Growth’ event is the right moment to do this.**

- Governments should reform their national tax systems to ensure they are fair, progressive and robust, in order to increase tax compliance. Tax avoidance must be tackled at an international level through tax reforms that are developed and delivered by all countries, rich and poor alike.

ACCOUNTABILITY

Accountability around nutrition and the right to food has been weak for many years. Many governments have signed up to global goals as part of political negotiations, without translating those goals into national targets, plans and budgets. Reporting against targets with national averages has hidden vast differences in nutrition outcomes between different social and economic groups of children.

In dealing with malnutrition, many governments are not transparent about how much they spend on nutrition and its drivers, or about which groups are benefiting from their nutrition budgets. Beneficiaries are not involved in programme design or decisions about budgets, making it very difficult for them to hold governments to account.

Recommendations:

- For those **governments without national nutrition targets in place**, these should be developed taking into account national trends and context and harmonising relevant frameworks (such as WHA targets, SDGs, ICN2 commitments). **The second ‘Nutrition for Growth’ summit is the right place to announce national nutrition targets.**
- **All actors** should collect, analyse and share nutrition data disaggregated by, at a minimum, income, sex, age, race, ethnicity, migration status, disability and geographic location. Sample sizes for disaggregated groups should be large enough to enable effective monitoring of outcomes, collected on a regular and systematic basis, and to make results accessible to all, while protecting the privacy and safety of people. This should be a core part of SDG accountability as part of the ‘leave no one behind’ agenda, with capacity development to ensure its realisation.

- **All actors** should transparently publish their budgets and spend on nutrition-specific and nutrition-sensitive interventions, in an accessible way, on an annual basis as per the SUN donor network methodology, with plans to disaggregated by group, so it is possible to see if resources are being allocated on an equitable basis.
- **All actors** should promote and strengthen the participation and involvement of beneficiaries, particularly children and those most affected by malnutrition and food insecurity, in the development of nutrition budgeting, policy, programming and delivery and impact monitoring among children, to improve accountability.

CLIMATE CHANGE AND EXTREME EVENTS

The frequency and impact of extreme weather events are set to rise in the future, with increasing impact on people's food and nutrition security. The current El Niño event has had – and will continue to have – a devastating impact on the lives of millions of people, with many citizens experiencing a violation of their right to food and nutrition. The response from the international community to events like El Niño has been too slow and inadequate. Some governments have not put in place the right policies to deal with malnutrition in an inclusive and sustainable way, and have been slow to declare an emergency situation and seek the support they need to ensure the nutrition of their citizens.

Recommendations:

- **National governments**, with the support of the international community, should deal with chronic malnutrition as a long-term priority within integrated humanitarian and development action that strengthens the resilience of vulnerable population groups.
- **Governments** of countries vulnerable to environmental shocks should invest in and manage well emergency food reserves, in order to reduce food price volatility and ensure their countries can quickly deal with food shortages.

4. TAKE A 'LEAVE NO ONE BEHIND' APPROACH – AN APPROPRIATE POLICY AND PROGRAMME RESPONSE BASED ON THE NATIONAL CONTEXT

As our analysis has shown, progress in addressing malnutrition has not been fast or equal enough. Certain groups do not have access to the services they need to ensure good nutrition outcomes. Whether it's because they are from an ethnic group, live in remote areas, are disabled, or are children on the move that have not been reached by services, certain children are missing out.

Economic growth, while vital in many countries, is on its own not enough to address malnutrition. The right policies also need to be in place – and they need to be pro-poor and include specific nutrition objectives. Part 4 of this report provides guidance on how this can be done.

Recommendations:

- Governments should invest in and progress policies that address malnutrition in an inclusive and sustainable way. Depending on national contexts, these policies may include:
 - **Universal child-sensitive social protection** with specific nutrition objectives and integration, with nutrition-focused activities and linkages to nutrition-relevant services.
 - **Universal health coverage** to eliminate inequalities and tackle malnutrition.
 - **Education** policies that keep girls and boys in school beyond primary education.
 - **Integrated water, sanitation and hygiene, and nutrition response.**
 - **Policies that build resilience**, promote livelihoods and address malnutrition, especially in the most marginalised areas.
 - **Innovative partnerships** that share experience and knowledge in how to address malnutrition.

SAVE THE CHILDREN'S STEPS FOR A DECADE OF ACTION ON NUTRITION – STARTING AT THE SECOND NUTRITION FOR GROWTH EVENT

- 1. Undertake a strong contextual assessment and analysis** to understand the patterns and drivers of malnutrition, current trends in malnutrition, which policies will address malnutrition and which groups of people in a country are most marginalised and vulnerable to malnutrition and the barriers they face.
- 2. Set national nutrition targets**, aligned to global goals, that include specific targets for all groups of society, based on national contexts and trends.
- 3. Lay down appropriate policies and plans to reach those targets, for all groups of society.** This could form the basis of a 'leave no one behind strategy' – ensuring all groups of society make progress in addressing malnutrition.
- 4. Work with relevant sectors and stakeholders (including donors, academics, civil society and business) throughout the process**, from contextual analysis, design of strategies and policies, implementation and monitoring and evaluation (including if interventions are reaching all groups of society).
- 5. Ensure appropriate finances are in place.** Every government should invest in the nutrition of its people. Donors should see nutrition as a maker and a marker of sustainable development.



Bishara from Kenya was treated for severe malnutrition in 2011 when drought and rising food prices left 13 million people facing extreme hunger. Thanks to skilled care from Save the Children staff, she made a full recovery.

Appendices

Appendix 1: Methodological note

GROUPS AND INEQUALITY DATABASE (GRID)

The Groups and Inequality Database (GRID) was developed by Save the Children and is designed to monitor group-based inequality across developing countries in key dimensions of children's rights and well-being, including: child mortality; malnutrition; education; immunisation; child protection; and water, sanitation and hygiene. As well as national estimates, data is disaggregated by the following groups: boys/girls; urban/rural areas; subnational regions; ethnolinguistic groups; and economic groups (quintiles based on the asset index).

Estimates are based on direct data processing of 280 Demographic and Health Surveys (DHSs) and Multiple Indicator Cluster Surveys (MICSs); on official disaggregated figures for a few countries without survey data and on aggregated public sources (the UN Inter-agency Group for Child Mortality Estimation; the Joint Child Malnutrition Estimates from UNICEF, WHO and the World Bank; and aggregated data from various UN agencies).

GRID has some advantages over data that can be obtained from online stat compilers. GRID includes data on sample sizes and standard errors in order to assess whether comparisons are statistically significant and to assess the reliability of estimates. This is particularly important for analysis at the group level, as the sample size of some groups can be particularly small. Also, GRID is computed systematically for all regions and ethnic groups available. It makes it possible to have figures for the same ethnicity or region across all the outcomes and across different periods.

NUTRITION DATA

Stunting is defined as having a height-for-age two standard deviations below the median of the reference population produced by the World Health Organization. Wasting is defined as having a weight-for-height two standard deviations below the median of the reference population produced by the World Health Organization.

The malnutrition rates for each social group were computed directly from household survey microdata for which data on child anthropometry is available (211 in total). The WHO reference population provided by DHS was used to estimate the undernourished population.¹ The population of reference corresponds to living children between birth and five years old. The estimations at national and group levels were cross-checked with those provided by the DHS stat compiler when data was available and no significant differences were noticed. In order to make the DHS/MICS disaggregated figures compatible with the Joint Child Malnutrition Estimates, we adjusted the figures in order that the national average in GRID is equal to the national level for the given year from the Joint Child Malnutrition Estimates. Groups with a small sample size (fewer than 100 children) were not included in the analysis. The standard errors were computed for all groups.

DATA COVERAGE

GRID contains nutrition data at national level for 150 countries covering 614 million children under five – or 91% of the world population of children under five. Disaggregated data across social and economic groups is provided for 69 countries covering, 381 million under-fives – or

57% of the world population of children under five. Disaggregated data is well representative of low-income and lower middle-income countries, covering 86% and 75% of children under five living in low-income and lower middle-income countries respectively.

Time series data, including projections, are available at national level for 134 countries (covering 751 data points) and at disaggregated level for 52 countries (a total of 211 national data points and 1,140 disaggregated data points).

GROUP-BASED INEQUALITY METRICS

We considered using two main metrics for the analysis: the absolute gap and the relative ratio. The former measures absolute difference in the given indicator between disadvantaged and reference groups, while the latter measures how much more likely the disadvantaged group is to experience the given condition compared with the reference group. Reduction in the gap implies conversion in the total absolute number of children experiencing child mortality. Reduction in the ratio tells more directly about equalisation in life chances, as the measures effectively show how much more likely a child from one group is to die than a child from another group. We opted for the ratio as it is more useful for making comparisons across countries/groups. As reference groups we used boys for the gender analysis, the region with the best outcome for regional inequality, and for ethnicity, the best outcome for regional ethnicity.

We used the following formula:

$$\text{Ratio} = O_d/O_a$$

Where

Ratio = Inequality in outcome

O_d = estimated outcome in disadvantaged group

O_a = estimated outcome in advantaged group

There are three additional reasons that support our decision to use ratio as the main metric in our analysis. To survive, to be protected, to be properly nourished and to have an education are basic human rights – any differences between groups can be ascribed to systematic differences in life chances and are fundamentally unjust. This means that the ratio between the top and bottom groups is revealing of the extent of inequity in life chances. Second, the ratio between the most and least advantaged groups is easy for both politicians and citizens to understand, and should therefore motivate action. Third, examining the performance of the top-performing group in society shows what level and pace of progress are possible within a given country context.

We are aware that the ratio does not provide a full account of the entire distribution. For example, while the ratio between the most/least disadvantaged groups may increase, at the same time all other groups may be catching up with the best performer. To test the validity of our findings we have carried out robustness tests where, instead of the most advantaged groups, we used national averages as a reference point to which the rates of most disadvantaged groups were compared. We have also checked our findings using the absolute gap as a measure of inequality. In the vast majority of cases, these tests yielded results similar to those presented in the report.

Appendix 2: Methodology to project SDG target 2.2 on ending all forms of malnutrition

In collaboration with researchers from the University of Göttingen, we projected stunting rates at national and disaggregated level. This note summarises the methodology; for further details see Perez and Silva (2016).²

The projections methodology closely follows the approach by Lange (2014) applied to project arrival years of universal primary and secondary school completion for the *Education For All Global Monitoring Report 2015*.³ The projections follow a non-linear sigmoid function to model the transition speed of nutritional rates over time, taking into account that progress over time crucially depends on the starting level. The projections are based on an empirical Bayes estimator that incorporates both the uniform transition speed for all countries and a country-specific transition speed based on weighted least squares regressions using disaggregated data from GRID.

We project the prevalence rates of under-five stunting for 2025 and 2030, thereby assessing whether the Sustainable Development Goals (SDGs) for child nutrition are likely to be met. Whenever that is not the case, we project the year in which the SDGs targets will be met. Projections are computed for world income groups, countries, regions within countries, genders, index quintiles, rural/urban areas, and ethnic groups.

Our projections build on the Joint Child Malnutrition Estimates in a number of ways, including by disaggregating national projections for social and economic groups inside each country, by contemplating a series of timeframes, and by introducing a series of methodological innovations as explained below.

FUNCTIONAL FORM: THE SIGMOID FUNCTION

Our model follows a sigmoid function:

$$y_t = (1 + e^{-(\alpha+\beta \cdot t)})^{-1} \quad \text{Equation 1}$$

Where y_t represents an outcome y in time t , and $\beta < 0$ implies progress towards zero – the case for stunting and wasting rates; and $\beta > 0$ implies a path towards one – the case for overweight rates.

Two main reasons justify using a sigmoid function instead of a linear function to model the transition path of nutritional outcomes over time. First, any value projected from such a function falls within lower and upper bounds, typically zero and one, which applies to prevalence rates of nutrition. Second, the sigmoid incorporates the intuitive idea that absolute progress towards a target becomes increasingly difficult as countries approach the target. For example, it is much easier for a country to reduce the percentage of stunted under-five children from 60 to 59.5% (ie, a 0.5 percentage point reduction) than to reduce it from 0.5 to 0%.⁴

ESTIMATION: STRATEGY

Following Lange (2014) projections are based on an empirical Bayes estimator that weights the mean between a *uniform transition speed*, estimated via weighted least squares (WLS), and the *country-specific speed*, with weights given by the relative precision of those estimators, as measured by their variances.

The *uniform transition speed* was estimated with WLS regression based on regional level trends data from GRID when disaggregated data was available and on national level data otherwise. The model is given by the equation:

$$-\ln\left(\frac{1 - y_{ijt}}{y_{ijt}}\right) = \alpha_{ij} + \beta \cdot t + \epsilon_{ijt} \quad \text{Equation 2}$$

For country i , region j , and error term ϵ .

The empirical Bayes estimator is given by:

$$\beta_i^{EB} = \frac{\sigma^2}{\sigma_i^2 + \sigma^2} \cdot \beta_i + \frac{\sigma_i^2}{\sigma_i^2 + \sigma^2} \cdot \beta \quad \text{Equation 3}$$

where β_i is a *country-specific transition* parameter estimated by running a WLS regression for each country separately, and β is the *uniform transition speed*. The empirical Bayes estimator is then simply the weighted mean between the uniform transition

speed and the country-specific speed, with weights given by the relative precision of those estimators, as measured by their variances. Theoretically, the empirical Bayes estimator incorporates the intuitive idea of mean reversion, ie, in the long run individual countries' performances will converge to the global mean, as exceptional events and trajectories wear out over time.

Appendix 3: International human rights and the role of the state

States have three discrete types of legal obligations under international human rights law – to respect rights, protect rights and fulfil rights.

States also have a binding obligation, enshrined in international law, to respect, protect and realise children's right to survival. The UN Convention on the Rights of the Child obliges states to do everything they can to protect children from dying. Yet many countries lack a legal framework that promotes child survival, and those that do have one often fail to implement it.⁵

RESPECT

In support of the individual's or household's own efforts, states must respect the freedom of individuals and refrain from undertaking activity that would restrict or prevent individuals from realising their right to access adequate nutrition.

PROTECT

States' obligation to protect the right to adequate nutrition means that governments must take all necessary steps to ensure that third parties, such as food companies, do not interfere with an individual's right to adequate nutrition.

While states are obligated to ensure that all people are adequately nourished, everyone has a responsibility to respect the right to adequate nutrition.

FULFIL

A state's obligation to fulfil the rights to food and good nutrition will include, where necessary, proactively engaging in activities intended to strengthen people's access to and utilisation of food, facilitating the individual's or household's efforts to improve their resources, and opportunities to feed themselves or, for those who are unable to do so, providing adequate food directly.⁶

In order for states to take a rights-based approach to nutrition, they must:

- take all necessary steps to ensure that no one suffers from hunger or severe malnutrition
- provide enough food that is safe and nutritious to those who are not able to feed themselves, by either buying food surpluses from other parts of the country or seeking international aid
- take immediate steps to end discrimination in access to food or resources for food production, such as land
- take progressive steps, to the maximum of its resources, towards ensuring that everyone can feed her or himself and his or her family in dignity.⁷

PRIVATE SECTOR

As per the UN Guiding Principles on Human Rights, the private sector has a responsibility to respect and remedy human rights violations, including those related to the right to nutrition. This means behaving responsibly and respecting international norms and government legislation in relation to food and nutrition. The Children's Rights and Business Principles, while not

explicitly referencing the right to food, include provisions that affect the behaviour of businesses concerning food and nutrition outcomes for children. For example, the need to eliminate child labour, prevent destruction of the environment and use of marketing and advertising that protect and support child rights, particularly in relation to healthy lifestyles.

Endnotes

EXECUTIVE SUMMARY

¹ UNICEF, WHO, World Bank Group, 2015. *Levels and trends in child malnutrition*. Joint child malnutrition estimates. http://www.who.int/nutgrowthdb/jme_brochure2015.pdf?ua=1

² From 159 million stunted children in 2014 to 129 million in 2030

³ UNICEF, WHO, World Bank. *Levels and trends in child malnutrition*. UNICEF-WHO-World Bank joint child malnutrition estimates. UNICEF, New York; WHO, Geneva; World Bank, Washington DC: 2015.

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1 INTRODUCTION

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2 WHO ARE THE MALNOURISHED CHILDREN, WHERE DO THEY LIVE, AND WHY MUST WE ADDRESS EXCLUSION TO REACH THEM?

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5 CONCLUSIONS AND RECOMMENDATIONS FOR WORLD LEADERS

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APPENDICES

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UNEQUAL PORTIONS

Ending malnutrition for every last child

Good nutrition: a matter of life or death.

The world has made progress in tackling malnutrition. But that progress has been far too slow.

Our research shows that the world is way off eradicating malnutrition. On current trends there will still be millions of malnourished children in the world 100 years from now.

What's more, progress has been alarmingly unequal. While many children have benefited, particular groups of children are missing out on the nutrients that are so vital to their life chances.

Unequal Portions presents the findings of new research into what makes some children more vulnerable to malnutrition than others.

It analyses data from a range of sources to show how a deadly combination of poverty and discrimination is robbing certain groups of children – girls, children from ethnic minorities, those in disadvantaged regions of their country, disabled children, and children affected by war – of the healthy, balanced diet they need to survive and thrive.

Drawing on new findings and analysis, this report identifies a series of measures to ensure no child is left behind. And it calls on world leaders to address exclusion and ensure every last child gets the nutrition they need.

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