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ASIA AND THE PACIFIC REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION

PLACING NUTRITION AT THE CENTRE OF SOCIAL PROTECTION

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LAO PEOPLE'S DEMOCRATIC REPUBLIC. Local school children eat their meals at the Ban Bor Primary School in Xay District.

2019

ASIA AND THE PACIFIC REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION

PLACING NUTRITION AT THE CENTRE OF SOCIAL PROTECTION

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INDONESIA
A girl eats food from a bowl at the local 'posyandu' (community health post) in Klaten District, Central Java Province.

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FOREWORD

This is the second annual report developed collaboratively by United Nations agencies on progress in Asia and the Pacific towards Sustainable Development Goal (SDG) 2 to eliminate hunger and malnutrition by 2030.

Its findings are a cause for concern. The SDG hunger deadline is just over a decade away, and nearly half a billion (479 million) people are still undernourished in Asia and the Pacific. To achieve SDG 2 in the region, more than 3 million people must escape hunger each month from now until December 2030.

Asia-Pacific is home to well over half of all people worldwide who do not obtain sufficient dietary energy to maintain normal, active, healthy lives. But the problem goes well beyond calories. In most countries in the region, the diets of more than half of all very young children (aged 6–23 months) fail to meet minimum standards of diversity, leading to micronutrient deficiencies that affect child development and therefore the potential of future generations. The high prevalence of stunting and wasting among children under five years of age is a result of these deficiencies. The report notes that only four countries in the region are on track to meet the global target of a 40 percent reduction in the number of stunted children between 2012 and 2025.

At the same time, the prevalence of overweight and obesity is rising steadily among children and adults, negatively affecting health and well-being. Addressing the resultant burden of diet-related non-communicable diseases places great strain on national healthcare budgets and also causes productivity losses.

In addition to analysing progress towards SDG 2, this report describes developments in the past year that could affect regional food security and nutrition in the medium to long term. Some of these developments – such as national legislation on food fortification and the implementation of fiscal policies to promote healthy diets – could prove beneficial. Continued economic growth also has the potential to improve food security and nutrition. Nevertheless, growing inequality undermines such positive developments, as do climate- and conflict-related shocks and disasters.

Social protection is an important way of reducing inequality and mitigating the impacts of disasters, and it is expanding in the region. A special section of this report discusses how to develop social protection programmes that accelerate progress in eradicating hunger and malnutrition. The focus of the section is on making social protection programmes more nutrition-sensitive and shock-responsive by describing key lessons derived from experiences worldwide. It finds that specific nutrition-sensitive principles should be applied to the design, implementation, monitoring and evaluation of social protection programmes, both in normal times and in the face of shocks.

Important factors include broad programme coverage; the size and predictability of transfers (cash and in-kind) and their tailoring to the nutritional needs of women and children; investing in nutrition education and social and behaviour change communication to increase knowledge; understanding how gender roles affect the impact of transfers; creating linkages with other sectors (for example to ensure access to health services as part of social protection programmes); and the predictability of financing.

FOREWORD

Although social protection has great potential to help in eradicating hunger and malnutrition, the report notes the need for more research into the impacts of social protection programmes on the health and nutrition of the poor, especially women and children, people with disabilities, and indigenous people.

We hope this report helps inform dialogues that lead to innovative and effective actions in member countries to improve food security and nutrition in Asia and the Pacific.

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Under the overall leadership of Kundhavi Kadiresan (FAORAP), Jean Gough (UNICEF ROSA), Karin Hulshof (UNICEF EAPRO), David Kaatrud (WFP RBB), John Aylieff (WFP RBB), Takeshi Kasai (WHO WPRO) and Poonam Khetrapal Singh (WHO SEARO), the publication's technical coordination was led by David Dawe (FAORAP) in collaboration with Jessica Blankenship and Christiane Rudert (UNICEF EAPRO), Harriet Torlesse (UNICEF ROSA), Britta Schumacher (WFP RBB), Angela de Silva (WHO SEARO) and Juliawati Untoro (WHO WPRO).

In addition to the people mentioned above, Part 3 had a core writing team comprising Jessica Owens and Hang Thi Thanh Pham (FAORAP); Ruben Villanueva Rodriguez (UNICEF EAPRO); and Ellen Kramer, Aphitchaya Nguanbanchong and Gabrielle Smith (WFP RBB). Ena Shin (FAORAP) was part of the core writing team for Part 2.

Valuable comments and inputs on the report were provided by Alice Atkins, Giovanni Carrasco Azzini, Carlo Cafiero, Marco Sánchez Cantillo, Marinella Cirillo, Cristina Coslet, Máximo Torero Cullen, Juan Feng, Cindy Holleman, Elizabeth Koechlein, Serena Pepino, Natalia Winder Rossi, Darana Souza, Federico Spano, Kostas Stamoulis, Maria Antonia Tuazon, Francesca Dalla Valle, Sara Viviani and Trudy Wijnhoven (all FAO headquarters); Aziz Elbehri, Bettina Gatt, Tomomi Ishida, Clara Park and Xiangjun Yao (FAORAP); and Noor Aboobacker, Arvind Betigeri, Nicolas Bidault and Yingci Sun (WFP RBB).

At FAORAP, Allan Dow led development of the key messages. Kanokporn Chansomritkul, Tianyi Liu and Rachel Oriente coordinated the publishing process, with the valuable support of Jessica Matthewson and other colleagues at FAO headquarters. Alastair Sarre edited the publication for clarity and to make it more reader-friendly.

Copyediting, proofreading and layout were provided by QUO Global in Bangkok.

Please contact FAO-RAP@fao.org for more information on this publication.

ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AIDS	Acquired Immune Deficiency Syndrome
ASEAN	Association of South East Asian Nations
ATM	automated teller machine
BCC	Behaviour change communication
BMI	body mass index
BPNT	Bantuan Pemerintah Non Tunai
CFPR	Challenging the Frontiers of Poverty Reduction programme
FAO	Food and Agriculture Organization of the United Nations
FANTA	Food and Nutrition Technical Assistance
GNI	gross national income
GDP	gross domestic product
HIV	Human Immunodeficiency Virus
IASC	Inter-Agency Standing Committee
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
IMF	International Monetary Fund
IPA	Innovations for Poverty Action
IRRI	International Rice Research Institute
ISPA	Inter-Agency Social Protection Assessments
MCCT	Maternal and child cash transfer
MDD	minimum dietary diversity
NCDs	non-communicable diseases
ODI	Overseas Development Institute
OECD	Organisation for Economic Development and Co-operation Development
OPM	Oxford Policy Management
PDS	Public Distribution System
PKH	Programme Keluarga Harapan
PPP	purchasing power parity
SAM	severe acute malnutrition
SBCC	social behaviour change communication
SCI	Save the Children International
SDG	Sustainable Development Goal
SLP	Sustainable Livelihood Programme
SSB	sugar-sweetened beverage
TFAs	trans-fatty acids
UN	United Nations
UNDP	United Nations Development Porgramme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNICEF	United Nations Children's Fund
USDA	United States Department of Agriculture
WFP	World Food Programme
WHA	World Health Assembly
WHO	World Health Organization
4Ps	Philippines' Pamilya Pilipino Programme

KEY MESSAGES

To achieve SDG2 – "Zero Hunger" – by the end of 2030, Asia and the Pacific must lift more than 3 million people out of hunger each and every month.

➔ **Although substantial advances have been made in Asia and the Pacific towards eliminating hunger and malnutrition, progress has slowed recently.** This is concerning because nearly half a billion people in the region are still undernourished. Many stakeholders are making serious efforts to reduce malnutrition, but the timeline for achieving Sustainable Development Goal (SDG) 2 is getting shorter. Efforts need to be scaled up to tackle persistent problems as well as emerging threats.

➔ **The prevalence of stunting and wasting in the region remains high, with stunting rates exceeding 20 percent in a majority of the region's countries.** An estimated 77.2 million children under five years of age were stunted in 2018, and 32.5 million suffered from wasting.

➔ **The fight against child undernutrition is complicated by a general and growing prevalence of other forms of malnutrition.** In many countries in the region, child undernutrition, overweight, obesity and micronutrient deficiencies are converging at the national level, in individual households, and even, in some cases, in the same person. A multi-stakeholder approach is needed to address the multiple burdens of malnutrition.

➔ **To measure progress towards food security and better nutrition, more investment in high-quality data collection is needed.** Indeed, some countries are investing more, partly because of the need to monitor progress towards the SDGs. But, in many countries, a lack of good-quality data in national surveys of nutrition status limits the ability to make informed policies to address malnutrition in children.

➔ **The prevalence of adult obesity is increasing in Asia and the Pacific.** The most effective policies for reducing this problem are those aimed at prevention, especially by ensuring healthy diets for children to prevent stunting and obesity. The rates of obesity-related diseases, including diabetes and diet-related non-communicable diseases (NCDs), have soared in many countries in the region, particularly in the Pacific Islands, straining national healthcare budgets and causing losses in productivity.

➔ **Many countries in the region have introduced taxes on sugar-sweetened beverages to combat obesity and the increase in diet-related NCDs.** A growing body of evidence suggests that such taxes can be effective public interventions.

➔ **The fortification of foods and condiments – for example with iodine, iron, folic acid, vitamin A, vitamin D, and B vitamins – is underway in several countries in the region**. Some of this involves rice, but countries are also publishing national standards and regulations for the fortification of wheat flour, milk, edible oils and other foods. Such efforts should be strengthened to combat micronutrient deficiencies.

➔ **There is scope in the region to enhance the use of social protection to achieve improved nutrition.** To make more rapid progress, the design, implementation, monitoring and evaluation of social protection systems should incorporate objectives and principles on food security and nutrition. Empowering women is central to this approach.

➔ **Social protection can also be more nutrition-sensitive by being shock-responsive, so that shocks do not lead to adverse coping mechanisms and poor nutritional outcomes.** Examples include designing flexible social protection systems that can respond to shocks and build resilience among the poor and vulnerable.

BANGLADESH
Sadia, 8-months-old, is breastfed by her mother Lovely at their home in Bhaluka.

©UNICEF/Paul

INTRODUCTION

Despite tremendous economic progress in the past few decades, many people are hungry, find food security elusive or are malnourished. This reality led to the creation of the second Sustainable Development Goal (SDG) 2, which, in full, is to "end hunger, achieve food security and improved nutrition and promote sustainable agriculture". This report, a joint effort by the regional offices of four United Nations (UN) agencies, discusses selected recent developments in Asia and the Pacific[1] relevant to attaining the hunger, food security and nutrition objectives of SDG 2.

Part 1 of this report discusses progress in meeting the food security and nutrition indicators designed to assess the achievement of components of SDG 2.[2]

Part 2 discusses selected developments in the region relevant for improved food security and nutrition.

Part 3 of this report takes a deeper look at a selected topic relevant to food security and nutrition that varies from year to year. This year, the report examines social protection and how it can be designed to better meet nutrition objectives and build resilience to shocks, whether the shocks be natural or man-made. Because even temporary shocks can have permanent effects, building resilience to shocks is important for achieving food security.

MALAYSIA
A woman selling vegetables and local food items in Kota Bharu, Kelantan at the famous Pasar Siti Khadijah

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Fiqah Anugerah Dah Besa

PART 1
MONITORING PROGRESS TOWARDS IMPROVED FOOD SECURITY AND NUTRITION IN ASIA AND THE PACIFIC

PART 1

MONITORING PROGRESS TOWARDS IMPROVED FOOD SECURITY AND NUTRITION IN ASIA AND THE PACIFIC

Like the other SDGs, SDG 2 has targets, each of which, in turn, has indicators used to measure progress. Target 2.1 of SDG 2 calls on the world to end hunger and achieve food security by 2030, and SDG target 2.2 calls for an end to "all forms of malnutrition" by 2030. Malnutrition covers a broad spectrum of conditions, from severe undernutrition to overweight and obesity. It affects people throughout their lives, from conception through childhood and into adolescence, adulthood and older age. Undernutrition can be acute – arising, for example, from a crisis in food access and availability, inadequate nutrient intake or infection – or chronic, with cumulative deleterious effects over long periods. At the other end of the spectrum, overweight and obesity can be attributed to the excessive intake of calories and limited energy expenditure, resulting in increased body weight and fat accumulation and a consequent increase in the risk of diet-related non-communicable diseases (NCDs) (such as cardiovascular disease, diabetes, chronic respiratory disease and cancer) and other health problems. The multiple burdens of malnutrition, in which undernutrition, micronutrient deficiencies and overweight coexist along with associated NCDs, are serious and growing concerns in Asia and the Pacific, with the prevalence of both undernutrition and overweight increasing in many countries and households and even in the same individuals.[3]

Nine indicators are measured consistently to track global progress on ending hunger, food insecurity and malnutrition, five of which form part of the SDG monitoring framework. There are two indicators for Target 2.1 – the prevalence of undernourishment (indicator 2.1.1) and the prevalence of food insecurity (indicator 2.1.2). There are three indicators for Target 2.2 – the prevalence of stunting (indicator 2.2.1) and the prevalence of wasting and overweight (both included as part of indicator 2.2.2) in children under five years of age. The other four of the nine indicators refer to global nutrition targets agreed by the World Health Assembly (WHA) – the prevalence of anaemia in women of reproductive age, the prevalence of low birth weight, the prevalence of exclusive breastfeeding and the prevalence of obesity in adults.[4] These indicators are described in the following sections, along with progress towards achieving targets. In addition, the report presents data on dietary diversity for children aged 6–23 months because diets are a critical factor in addressing hunger, food insecurity and malnutrition.

The data shown in this publication are the best available and can aid in understanding hunger, food insecurity and malnourishment. It should be noted, however, that, for most of the indicators in most countries, data are unavailable on an annual basis, a fact that explains the different years reported for different countries (e.g. Figure 6). This situation exists even for large middle-income countries, which tend to have better statistical systems than small or low-income countries. For example, among the ten middle-income countries in Asia with populations exceeding 50 million people, data on stunting are available only about once every three years, on average, since 2000.[5] The situation is even worse in the Pacific, where, since 2004, stunting data are available only about once every ten years and, in some instances, the most recent data are from 2004.[6] For some indicators, the data are modelled estimates (as opposed to estimates from a survey undertaken in that year). In many cases, data quality is also a concern. Thus, greater investment in data collection would help tremendously in collective efforts to achieve the SDGs.

1.1 UNDERNOURISHMENT

The prevalence of undernourishment in each country is calculated based on country-specific data, comprising national food balance sheets; estimates of the distribution of food, based on data from household surveys; and data on the age and sex structure of the population.[7] According to FAO's most recent estimates, large numbers of people in Asia and the Pacific are still undernourished. The number of undernourished people in the region was estimated at 479 million in 2018, which was 58 percent of the global total. Within the region, Southern Asia had the most undernourished people (279 million), followed by Eastern Asia (137 million), South-eastern Asia (61 million) and Oceania (3 million).[8]

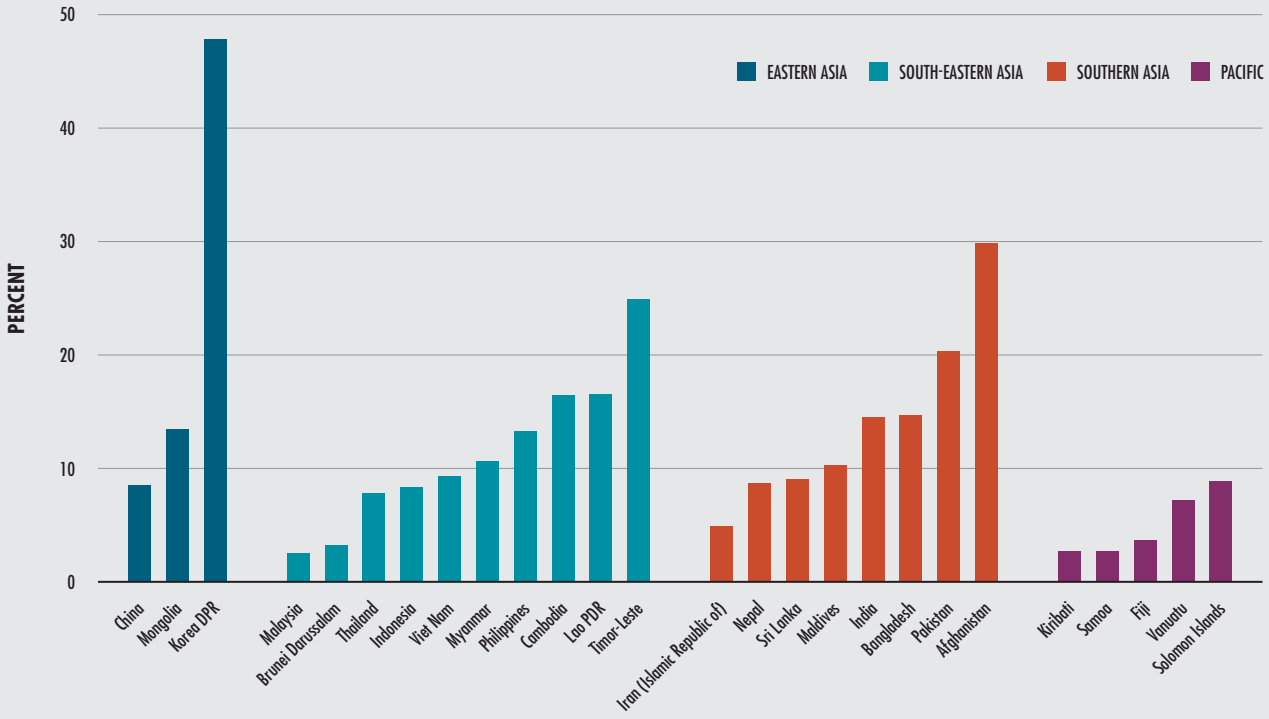
The prevalence of undernourishment in Asia and the Pacific was 11.3 percent in 2018, down from 11.8 percent in 2015 (at the start of the SDGs) and from 17.2 percent in 2000. The countries with the highest prevalence of undernourishment are scattered throughout the region (Figure 1). Of the subregions, Southern Asia has the highest prevalence, but it has also made the most progress at reducing undernourishment since the start of the SDGs in 2015, with prevalence declining by 1 percentage point to 2018 (Figure 2). The prevalence of undernourishment also declined slightly in South-eastern Asia over the period but was essentially flat in Eastern Asia and increased slightly in Oceania.

1.2 FOOD INSECURITY

The prevalence of food insecurity is based on the Food Insecurity Experience Scale, which measures the severity of lack of access to food and categorizes those who are food insecure as either severely or moderately food insecure. People experiencing severe food insecurity have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating. People experiencing moderate food insecurity face uncertainties in their ability to obtain food and, at times during the year, have been forced to reduce the quality and/or quantity of food they consume due to a lack of money or other resources. The data are based on self-reported conditions and experiences typically associated with limited access to food. Figure 3 illustrates the meaning of these different conditions, with each category shown as a proportion of the total population.[9]

It is estimated that 7.6 percent of the region's population is experiencing severe food insecurity and 22 percent is experiencing moderate or severe food insecurity.[10] At the regional level, these rates are lower than in Africa and Latin America and the Caribbean. Within Asia and the Pacific, the highest percentages of "severe" and "moderate or severe" food insecurity are in Southern Asia (Figure 4), which also has the highest rate of poverty among the four subregions. The prevalence of food insecurity in Southern Asia is also higher than in Latin America and the Caribbean. Southern Asia experienced a sharp rise in the incidence of severe food insecurity in 2018, from 10.9 percent to 14.4 percent, possibly reflecting an increase in the unemployment rate in India[11] and a slowdown in economic growth in Pakistan.[12]

FIGURE 1
PREVALENCE OF UNDERNOURISHMENT IN ASIA AND THE PACIFIC, BY COUNTRY, 2016–2018



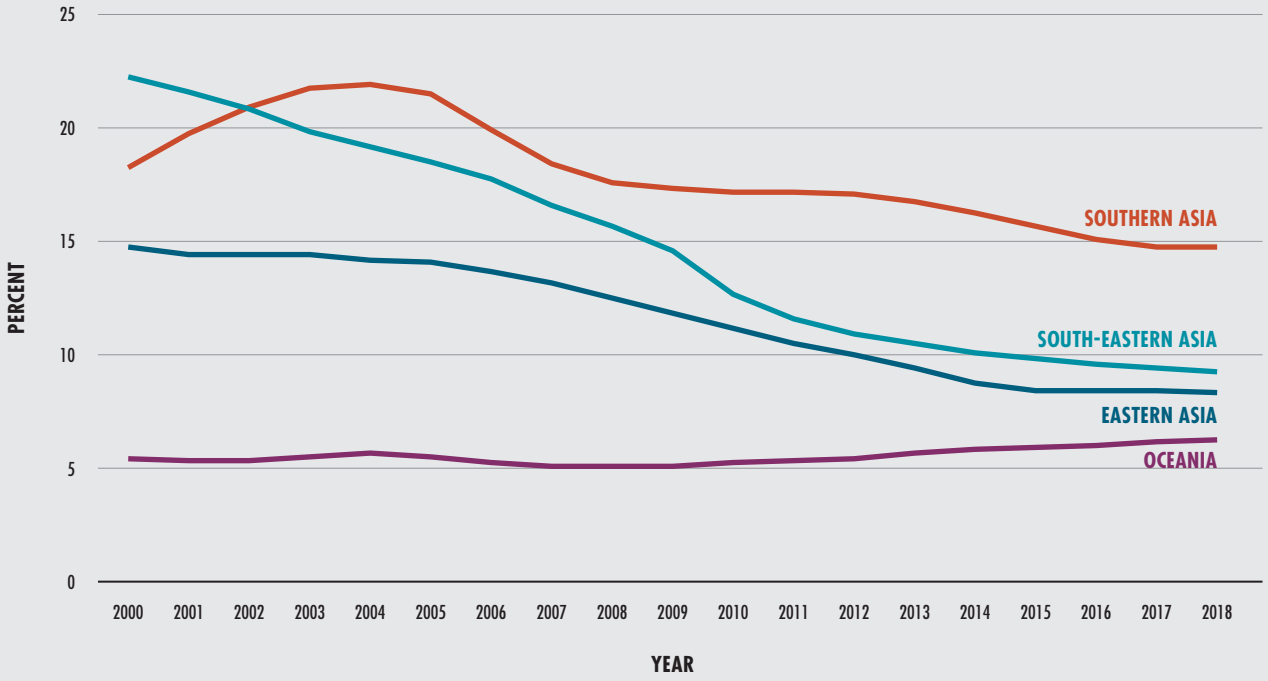
NOTE: 'Asia and the Pacific' as used in this publication excludes Western and Central Asia. While Asia and the Pacific includes Australia and New Zealand, "Pacific" alone indicates Oceania excluding Australia and New Zealand. See endnote 1. Countries are identified by the designated codes of the International Organization for Standardization; see https://www.iso.org/obp/ui/#search.

SOURCE: FAO.

An estimated 959 million people in the region are experiencing moderate or severe food insecurity, of whom 327 million people face severe food insecurity. Of the latter, the vast majority (more than 80 percent) live in Southern Asia.

Data collected for the Food Insecurity Experience Scale allow the disaggregated analysis of food insecurity by gender; such analysis shows differing patterns in the three Asian subregions. For example, the prevalence of severe food insecurity is slightly higher for males than females in Eastern and South-eastern Asia, but the reverse is true in Southern Asia (and the discrepancy between the sexes is larger in Southern Asia than in the other two subregions) (Figure 5).[13] The difference between the sexes across subregions is consistent with that found in other social indicators and seems to reflect the differing social environments for the sexes in Eastern and South-eastern Asia on the one hand and in Southern Asia on the other. For example, the UN gender inequality index is lower in Eastern and South-eastern Asia than in Southern Asia.[14] Adult literacy rates are similar for the two sexes in Eastern and South-eastern Asia, whereas there are wider gaps (in favour of males) in Southern Asia. Women are also slightly more likely than men to

FIGURE 2
TRENDS IN THE PREVALENCE OF UNDERNOURISHMENT IN ASIA AND THE PACIFIC, BY SUBREGION, 2000–2018



SOURCE: FAO

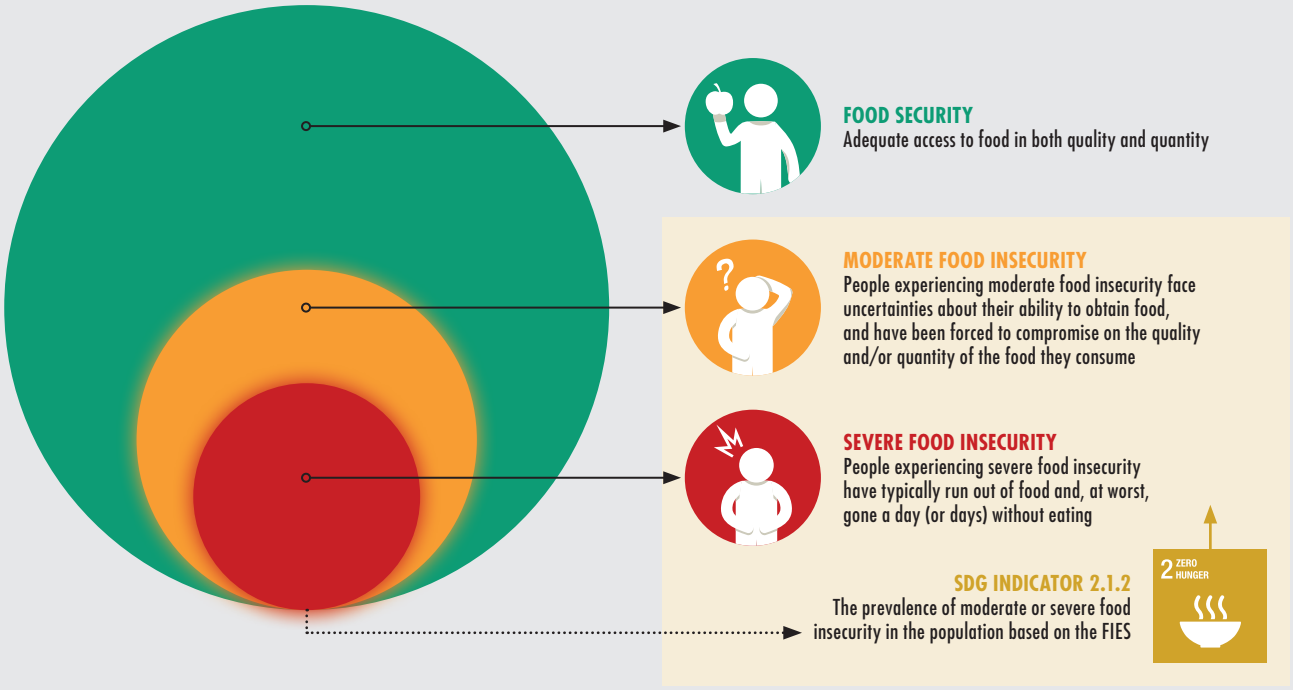
migrate from rural to urban areas in Eastern and South-eastern Asia, while in Southern Asia the reverse is true, with men much more likely to migrate than women.[15]

1.3 STUNTING AMONG CHILDREN UNDER FIVE YEARS OF AGE

Stunting is the phenomenon of children failing to achieve their genetic potential for height; stunted children, therefore, are shorter than their full potential for their age. The prevalence of stunting is measured by the proportion of children below minus two standard deviations from the median height for age in the reference population.

Stunting is the cumulative effect of the irreversible physical and cognitive damage caused by chronic undernutrition, repeated infections and inadequate childcare and feeding practices, and it can be prevented by improving nutrition for women and children in the first 1 000 days (from conception through the first two years after birth). Children who are stunted before the age of two are at risk of failing to reach their developmental potential, and they have a higher risk of disease and reduced cognitive and physical development that can affect their learning. Early stunting may also increase a child's risk of being overweight and of developing NCDs during adolescence and

FIGURE 3
EXPLANATION OF FOOD-INSECURITY SEVERITY LEVELS MEASURED BY THE FIES IN SDG INDICATOR 2.1.2



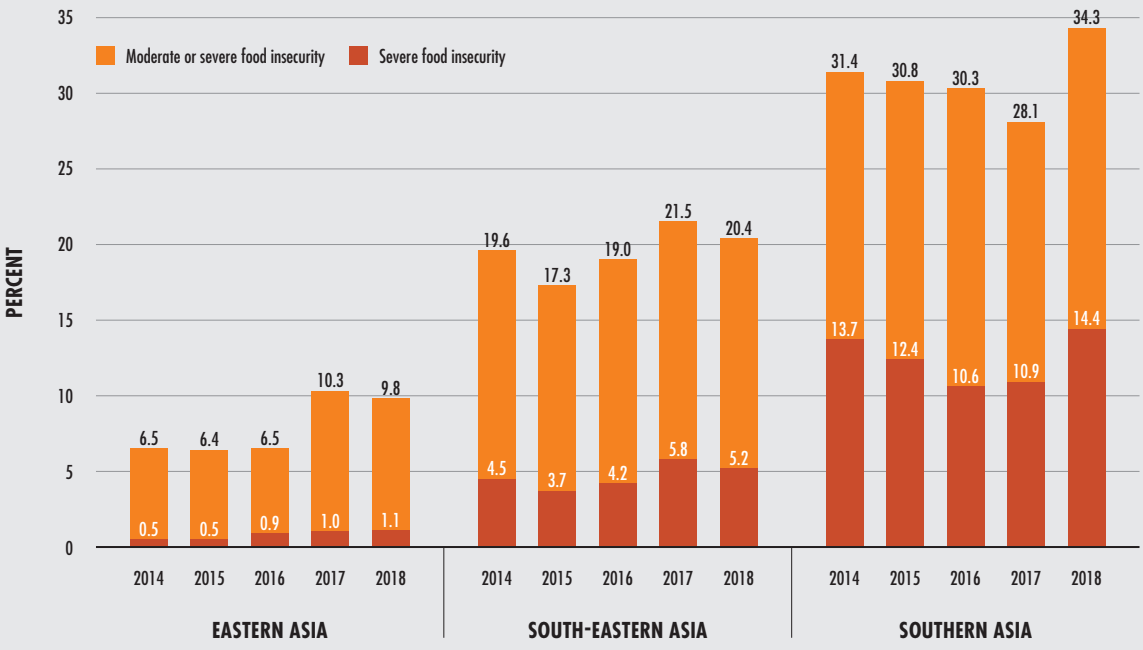
SOURCE: FAO, IFAD, UNICEF, WFP and WHO. 2019. *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns.* Rome, FAO.

adulthood.[16] These combined factors are likely to affect a child's future labour productivity, income-earning potential and social skills, with consequences beyond the individual (e.g. for communities and societies). A high prevalence of stunting, for example, can have dramatic consequences for a country's human and economic development. For every USD 1 invested in nutrition interventions that minimize stunting, an estimated USD 16 is gained in economic return.[17]

An estimated 77.2 million children under five years of age were stunted in Asia and the Pacific in 2018.[18] The prevalence of stunting is very high in the Pacific, but the largest number of stunted children is in Southern Asia – where an estimated 58 million children suffer from stunted growth. China, Fiji, Iran (Islamic Republic of), Mongolia, Samoa and Tonga have low (as defined by the World Health Organization, WHO) prevalences of stunting, but all other developing countries in the region have medium to very high prevalences (Figure 6). Countries with a low prevalence of stunting generally have relatively high (by regional standards) per capita consumption of animal source protein, which contains the complete set of essential amino acids important for growth.[19]

Although the prevalence of stunting is high, the region has made good progress in reducing it. The largest reduction has been in Eastern Asia, where prevalence declined by 74 percent between 2000 and 2018 (Figure 7).[20] Stunting declined by 31 percent in South-eastern Asia and by 35 percent in Southern Asia over the same period but increased slightly in the Pacific. Progress is variable, but only four countries – Bangladesh,

FIGURE 4
PREVALENCE OF FOOD INSECURITY IN ASIA AND THE PACIFIC, BY SUBREGION, 2014–2018



NOTE: Data not available for Oceania.
SOURCE: FAO.

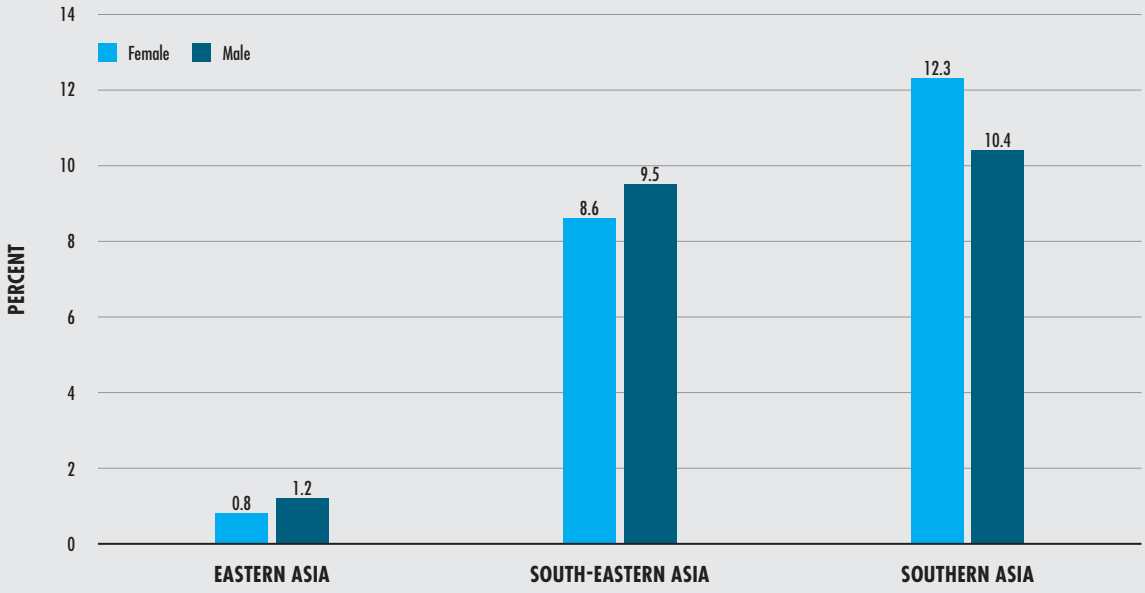
China, Mongolia and Thailand – are on track to meet the WHA's target of a 40 percent reduction by 2025 in the number of children under five years of age who are stunted (see the annex for data on recent progress on stunting, by country). Several countries, such as Cambodia, India, Indonesia, Myanmar, Nepal, Sri Lanka and Viet Nam, are making progress in reducing stunting, but the rate of improvement is insufficient to meet the target. The prevalence of stunting is almost universally higher among boys, with an (unweighted) average gap of about 2.6 percentage points (see the graph of sex-disaggregated data, by country, in the annex).

1.4 WASTING AMONG CHILDREN UNDER FIVE YEARS OF AGE

Childhood wasting is a consequence of acute malnutrition in children: wasted children are too thin for their height. The prevalence of wasting is measured as the proportion of children who are below minus two standard deviations from the median weight for height in the reference population.

Wasting occurs when children lose weight rapidly, which is often caused by illness coupled with inadequate care and feeding practices and by diets

FIGURE 5
PREVALENCE OF SEVERE FOOD INSECURITY IN THE THREE ASIAN SUBREGIONS, BY SEX (AVERAGE FOR 2016–2018)

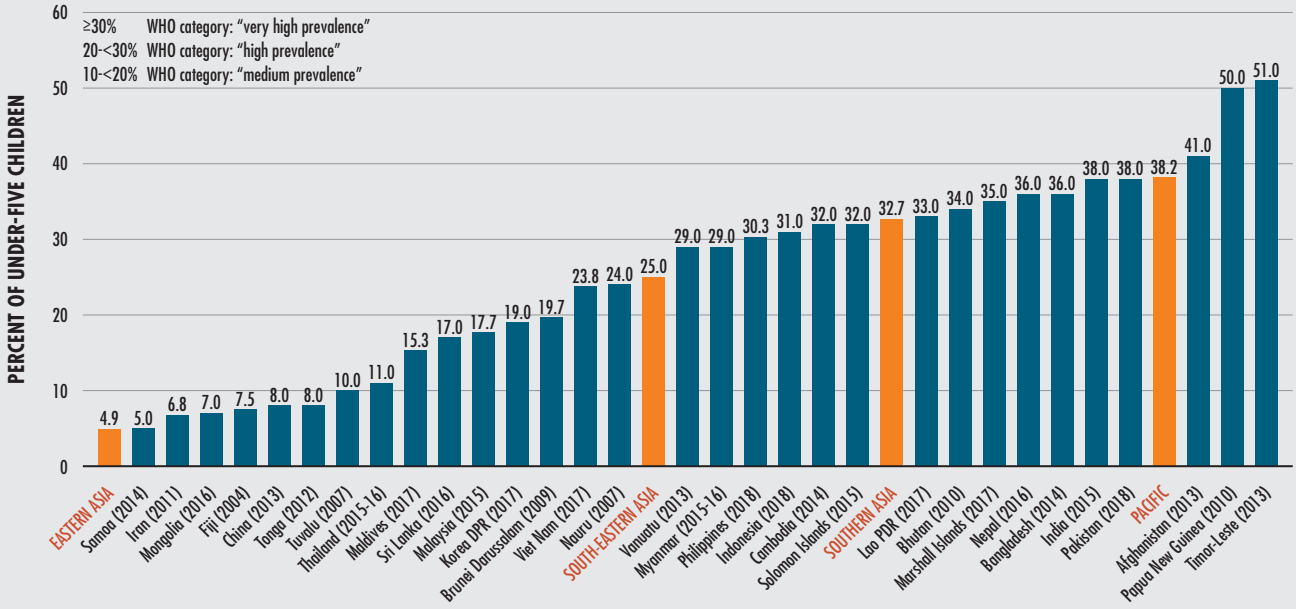


SOURCE: FAO

that do not meet the child's nutritional needs. Wasting – particularly prolonged severe wasting – is a life-threatening condition with serious adverse effects on the growth and brain development of children,[21] and there are growing calls for accelerated efforts aimed at its prevention and treatment. Global progress has been slow or absent, however, towards the WHA 2025 target (and target 2.2 of SDG 2) of reducing wasting to less than 5 per cent (and maintaining it below that level) and the WHA 2030 target of reducing wasting to less than 3 per cent.

Asia and the Pacific has the world's highest prevalence and number of wasted children, with nearly one in ten children at an increased risk of death due to wasting. The largest burden of wasting is in Southern Asia, which is home to more than half the world's children who suffer from this condition. At any given time, the estimated proportion of children under five years of age who are wasted is 14.6 percent in Southern Asia, 9.4 percent in the Pacific,[22] 8.7 percent in South-eastern Asia and 1.7 percent in Eastern Asia.[23] In total, the region is home to 66 percent (32.5 million) of all wasted children globally. The prevalence of wasting is above the threshold of public health concern (>5 percent) in 70 percent of the region's countries (Figure 8). A similar percentage was also above this threshold earlier this century (i.e. in 2004–2012). The prevalence of wasting is, on (unweighted) average, 0.74 percentage points higher for boys than girls (see the graph of sex-disaggregated data, by country, in the annex).

FIGURE 6
PREVALENCE OF STUNTING IN CHILDREN UNDER-FIVE YEARS OF AGE IN ASIA AND THE PACIFIC, BY COUNTRY, LATEST AVAILABLE YEAR



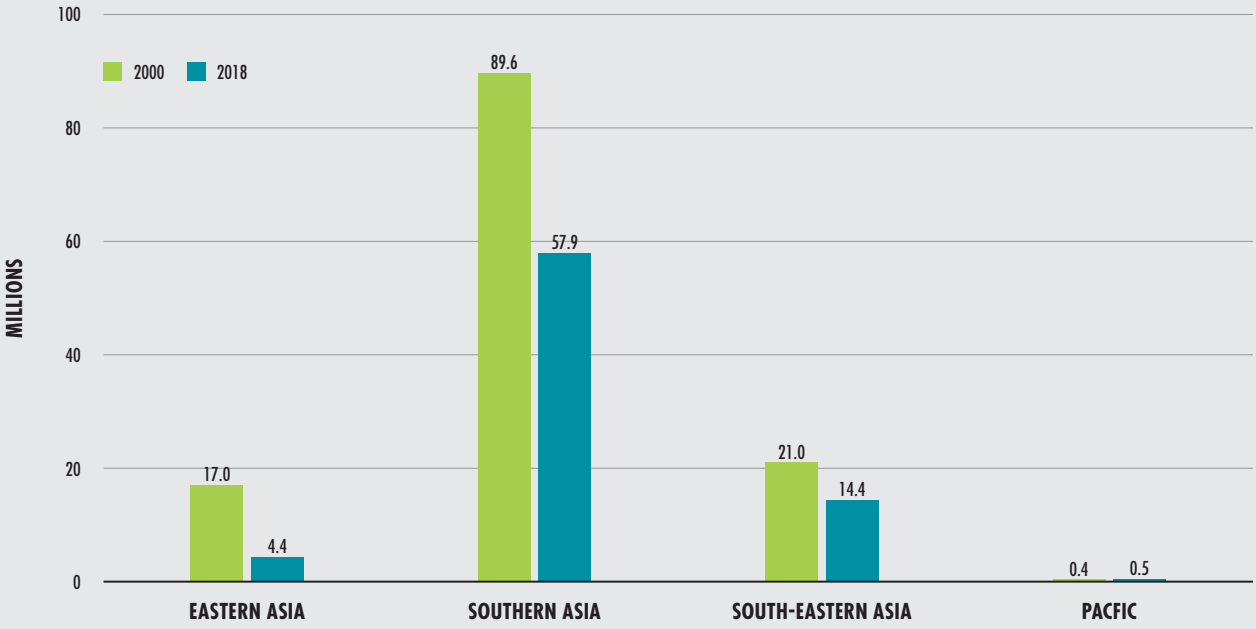
NOTE: Country estimates were updated for Indonesia (Riskesdas Survey 2018), Lao People's Democratic Republic (Lao Social Indicator Survey II 2017–18), the Philippines (Expanded National Nutrition Survey 2018) and Viet Nam (National Surveillance Survey 2017).

SOURCE: United Nations Children's Fund (UNICEF), World Health Organization (WHO) and World Bank Group. 2019. *Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates.* Geneva, Switzerland, WHO.

Severe wasting, known as severe acute malnutrition (SAM), is a disease requiring urgent treatment if sufferers are to survive and thrive. Of the 32.5 million children suffering from wasting in Asia and the Pacific, more than one-third (11.7 million) have SAM. Children with SAM have a drastically higher risk of death: SAM causes an estimated 1 million–2 million child deaths per year in the region.[24] Even if a child survives SAM, repeated cases can have serious adverse effects on growth and brain development and can contribute to childhood stunting.

SAM is curable with early detection and treatment: children aged six months or older who have an appetite and are clinically well and alert can often be treated in their own homes with ready-to-use therapeutic foods. Despite the high burden of SAM cases and the availability of well-established clinical protocols and effective treatments for SAM, however, only 1 in 20 children in Asia and the Pacific – and only 1 in 50 children in South-eastern Asia – with SAM have access to SAM treatment.

FIGURE 7
DECREASE IN THE NUMBER OF STUNTED CHILDREN UNDER-FIVE YEARS OF AGE IN ASIA AND THE PACIFIC, BY SUBREGION, 2000–2018



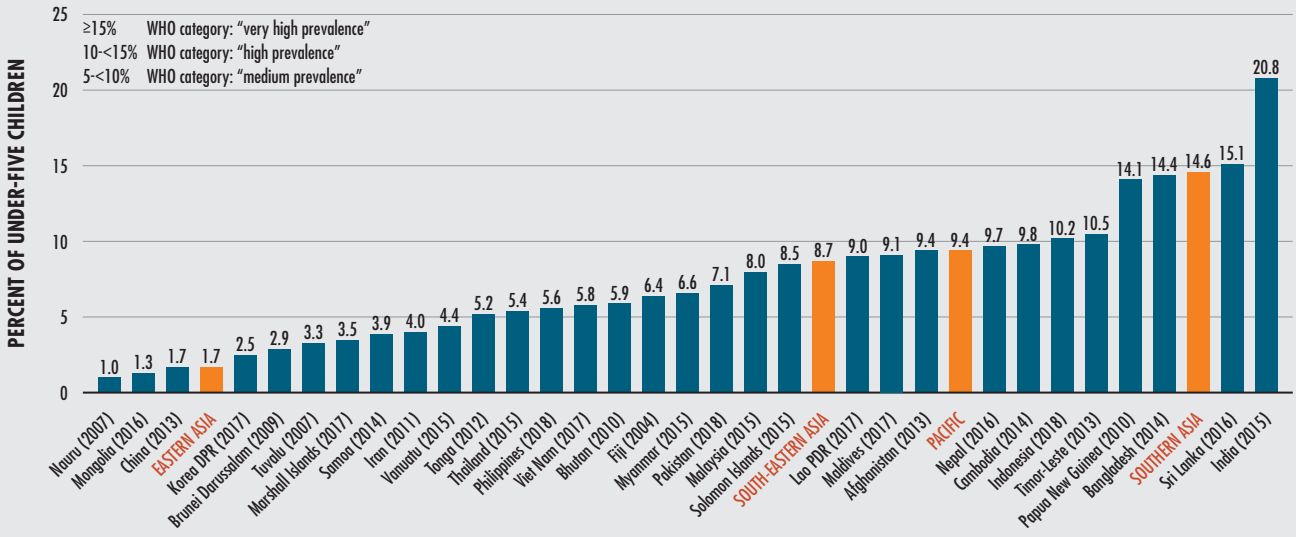
SOURCE: United Nations Children's Fund (UNICEF), World Health Organization (WHO) and World Bank Group. 2019. *Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates.* Geneva, Switzerland, WHO.

1.5 LOW BIRTH WEIGHT

WHO defines low birth weight as weight at birth of less than 2.5 kg. Low-birth-weight newborns have a higher risk of dying in the first month of life, and those who survive are more likely to suffer from stunted growth and a lower intelligence quotient. They also face an increased risk of adult-onset chronic conditions including obesity, coronary heart disease, stroke, diabetes and abdominal obesity.[25] Girls who experience poor foetal growth, especially when coupled with poor catch-up growth during infancy, are more likely to become stunted as adults and consequently more likely to give birth to low-birth-weight babies, thus perpetuating these conditions into the next generation.[26]

Recently released global estimates indicate that, in Asia and the Pacific, 12.2 million babies suffered from low birth weight in 2015, with most (9.8 million) of those in Southern Asia, which accounts for nearly half the global total of 20.5 million. There are high disparities in prevalence between countries (Figure 9). In Southern Asia, a staggering one in four babies is born with low birth weight (26.4 percent; Figure 10), with dire consequences for the development and growth of these children. Although the prevalence of low birth weight is lower in South-eastern Asia (12.3 percent) and Oceania excluding Australia and New Zealand (9.9 percent), the prevalence in those two subregions is still higher than the average for high-income countries (7.6 percent) and a major contributing factor to childhood stunting.[27]

FIGURE 8
PERCENT OF CHILDREN UNDER-FIVE YEARS OF AGE SUFFERING FROM WASTING IN ASIA AND THE PACIFIC, BY COUNTRY, LATEST AVAILABLE YEAR



NOTE: Country estimates were updated for Indonesia (Riskesdas Survey 2018), Lao People's Democratic Republic (Lao Social Indicator Survey II 2017–18), the Philippines (Expanded National Nutrition Survey 2018) and Viet Nam (National Surveillance Survey 2017).

SOURCE: United Nations Children's Fund (UNICEF), World Health Organization (WHO) and World Bank Group. 2019. *Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates.* Geneva, Switzerland, WHO.

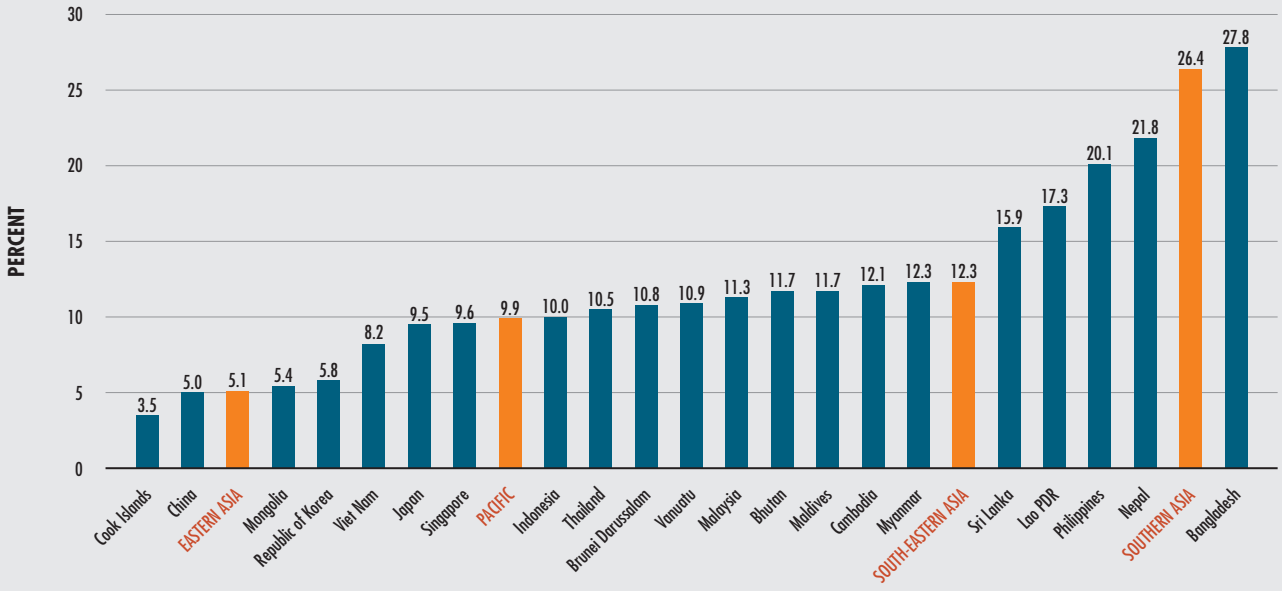
Among the subregions, the prevalence of low birth weight is relatively low (5.1 percent) only in Eastern Asia.

There has been little progress in reducing the prevalence of low birth weight in the past 15 years, and progress almost completely stalled between 2012 and 2015. If recent trends continue, the 2025 (and 2030) WHA target of a 30 percent reduction in the prevalence of low birth weight will not be met in the region. The lack of progress is concerning, both in its own right and for the longer-term impacts it will have on the achievement of other nutrition goals.

1.6 OVERWEIGHT AMONG CHILDREN UNDER FIVE YEARS OF AGE

Childhood overweight, or being too heavy for one's height, is a result of excessive weight gain. It is difficult to develop a simple index for the measurement of overweight and obesity in children and adolescents because their bodies undergo a number of physiological changes as they grow. The prevalence of overweight in children under five years of age is defined according to the WHO child growth standards, with children who are two and three standard deviations above the age- and sex-appropriate body mass index (BMI) classified as overweight and obese, respectively.

FIGURE 9
PREVALENCE OF LOW BIRTH WEIGHT IN COUNTRIES AND SUBREGIONS IN ASIA AND THE PACIFIC, BY COUNTRY, 2015

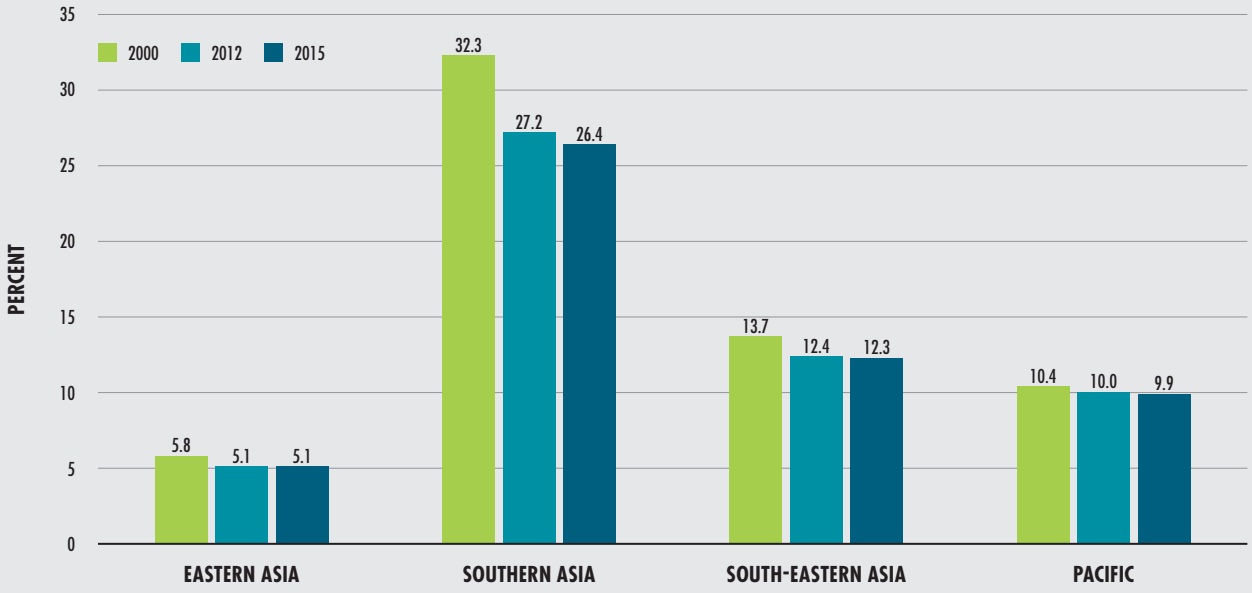


SOURCE: United Nations Children's Fund (UNICEF) and World Health Organization (WHO). 2019. *UNICEF-WHO low birthweight estimates: levels and trends 2000–2015.* Geneva, Switzerland, WHO. Available at https://www.unicef.org/reports/UNICEF-WHO-low-birthweight-estimates-2019

Overweight or obese children are at a higher risk of developing serious health problems later in life, including type 2 diabetes, high blood pressure, asthma and other respiratory problems, sleep disorders, and liver disease. Childhood overweight also increases the risk of obesity, premature death and disability in adulthood. The economic costs of rising childhood overweight and obesity are considerable in terms of both the financial strain on healthcare systems and lost productivity. Reversing overweight and obesity is a serious challenge and the emphasis, therefore, should be on prevention. Given that dietary and physical-activity habits are set early in life and early-childhood obesity and excess weight gain predict adult obesity,[28] interventions targeted at young children to prevent overweight and obesity are an essential component of obesity prevention because they can have lifelong effects.

In Asia and the Pacific, an estimated 15.7 million children under five years of age were considered overweight in 2018.[29] There is considerable variation among countries and subregions in both the current prevalence of overweight and the change in prevalence since 2000. The prevalence of overweight is highest in the Pacific,[30] where nearly 1 in 10 children under five years of age is overweight, and in South-eastern Asia, where 8 percent of children are overweight (Figure 11). Overweight increased between 2000 and 2018 in all subregions except Eastern Asia, where it declined slightly (Figure 12). The largest increases (more than 4 percentage points) in overweight were in South-eastern Asia and the Pacific. There has been recent improvement in some countries, although it remains to be seen if such progress will continue (see the annex for recent trends in childhood overweight, by country). Childhood

FIGURE 10
COMPARISON OF PREVALENCE OF LOW BIRTH WEIGHT IN 2000, 2012 AND 2015, BY SUBREGION, ASIA AND THE PACIFIC



SOURCE: United Nations Children's Fund (UNICEF) and World Health Organization (WHO). 2019. *UNICEF-WHO low birthweight estimates: levels and trends 2000–2015.* Geneva, Switzerland, WHO. Available at https://www.unicef.org/reports/UNICEF-WHO-low-birthweight-estimates-2019

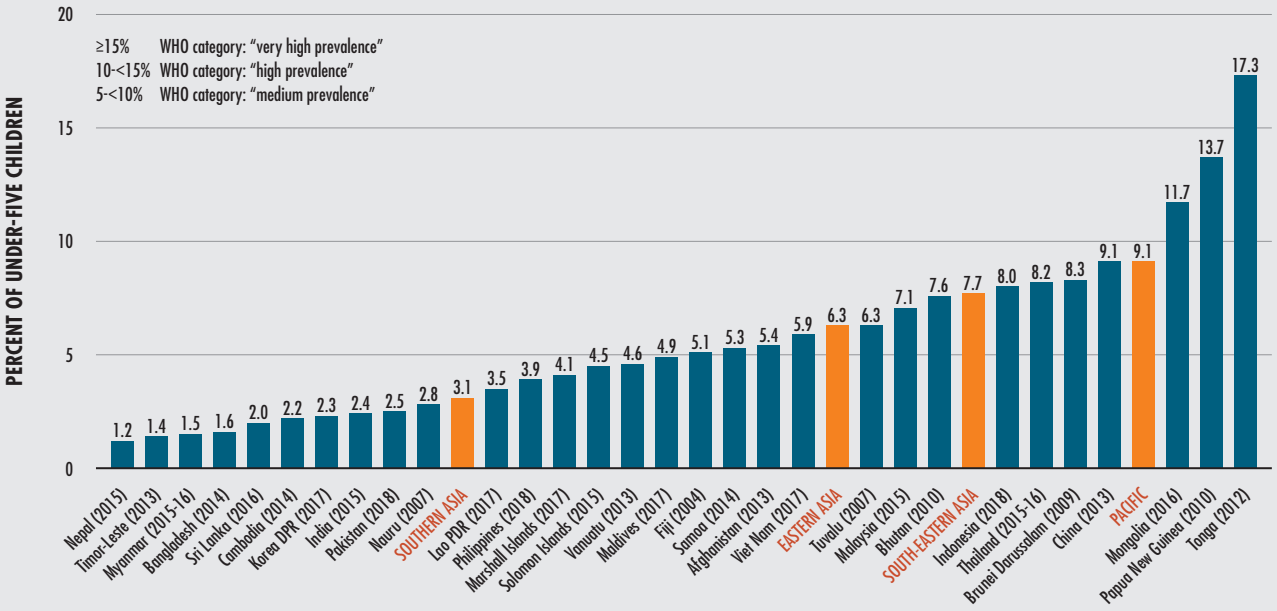
overweight is, on (unweighted) average, 0.71 percentage points more prevalent among boys than girls (see the graph of sex-disaggregated data, by country, in the annex).

1.7 ADULT OVERWEIGHT AND OBESITY

Overweight and obesity in adults are measured with reference to BMI. According to the WHO definition, people are considered overweight if their BMI is equal to or exceeds 25, and they are considered obese if their BMI is equal to or exceeds 30.[31] An increased prevalence of overweight and obesity among adults is linked to the nutrition transition, a broad historical pattern that occurs in the wake of economic development and urbanization which is characterized by less physical activity, sedentary lifestyles, changes in dietary patterns and an increased incidence of NCDs.

Overweight and obesity are major risk factors for many diseases, including NCDs, and these diseases impose a high burden on communities and economies. Regional estimates of the direct costs of obesity (i.e. of treating obesity-related illnesses) and indirect costs (i.e. losses due to reduced productivity or poor quality of life due to overweight and obesity, including disabilities and absenteeism at work) are rare. Nevertheless, the annual burden of overweight and obesity has been estimated to amount to 0.78 percent of gross domestic product (GDP) in Asia and the Pacific.[32]

FIGURE 11
PREVALENCE OF OVERWEIGHT IN CHILDREN UNDER-FIVE YEARS OF AGE IN ASIA AND THE PACIFIC, BY COUNTRY, LATEST AVAILABLE YEAR



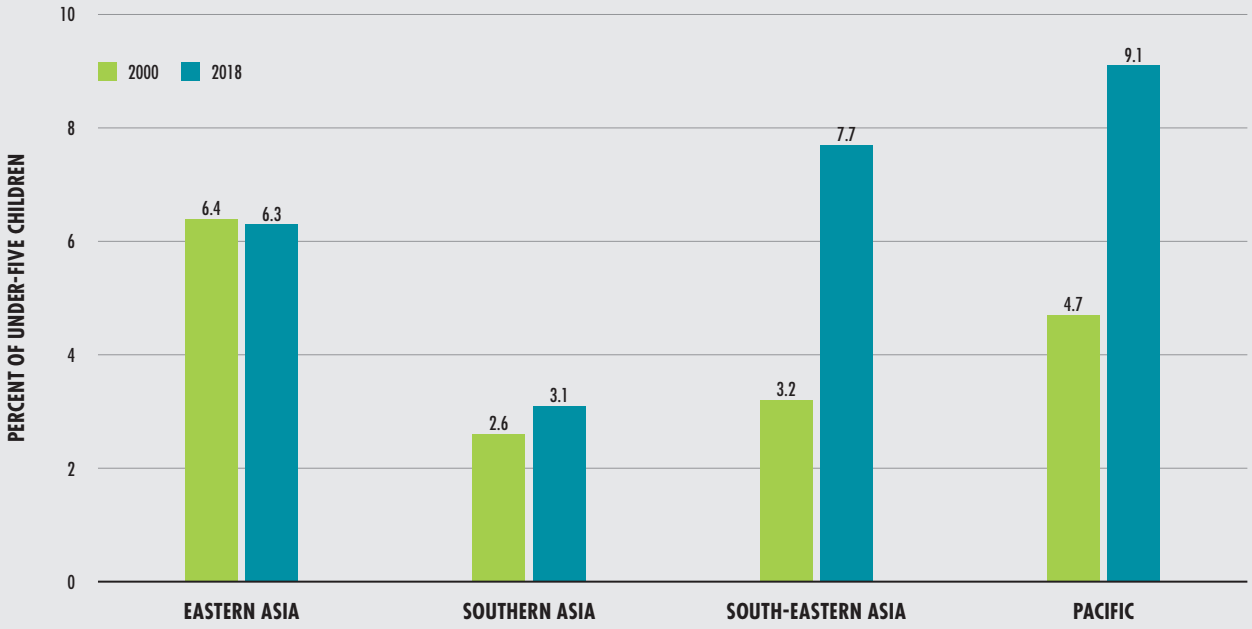
NOTE: Country estimates were updated for Indonesia (Riskesdas Survey 2018), Lao People's Democratic Republic (Lao Social Indicator Survey II 2017–18), the Philippines (Expanded National Nutrition Survey 2018) and Viet Nam (National Surveillance Survey 2017).

SOURCE: United Nations Children's Fund (UNICEF), World Health Organization (WHO) and World Bank Group. 2019. *Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates.* Geneva, Switzerland, WHO.

NCDs are the leading global cause of death, and they are responsible for a high level of premature mortality (death before the age of 70) in countries in Asia and the Pacific. Four major risk factors contribute to the majority of NCDs and, of these, unhealthy diet is a significant (and modifiable) contributor.[33] A recent study that systematically evaluated dietary consumption patterns across 195 countries suggested that improvement of diet could prevent one in every five premature deaths globally.[34] The WHA voluntary target of halting the rise in obesity and diabetes is also relevant to target 3.4 of SDG 3, which is to reduce premature mortality from NCDs by one-third through prevention and treatment and by promoting mental health and well-being.

The prevalence of adult obesity is increasing throughout Asia and the Pacific (Figure 13 and Figure 14). The most effective policies for reducing adult obesity are those aimed at prevention, especially the prevention of childhood obesity.[35] Children who are undernourished in utero and stunted during early childhood are at particular risk of overweight, obesity and NCDs later in life, especially if their adult diets are also unhealthy.[36] The WHO Global Strategy on Diet, Physical Activity and Health,[37] and recent recommendations of the Commission on Ending Childhood Obesity,[38] promote strategies aimed at improving diets and patterns of physical activity at the population level. Life-course interventions in primary-care settings include the prevention of

FIGURE 12
PREVALENCE OF OVERWEIGHT AMONG CHILDREN UNDER-FIVE YEARS OF AGE IN ASIA AND THE PACIFIC, BY SUBREGION, 2000 AND 2018



SOURCE: United Nations Children's Fund (UNICEF), World Health Organization (WHO) and World Bank Group. 2019. *Levels and trends in child malnutrition: key findings of the 2019 Edition of the Joint Child Malnutrition Estimates.* Geneva, Switzerland, WHO.

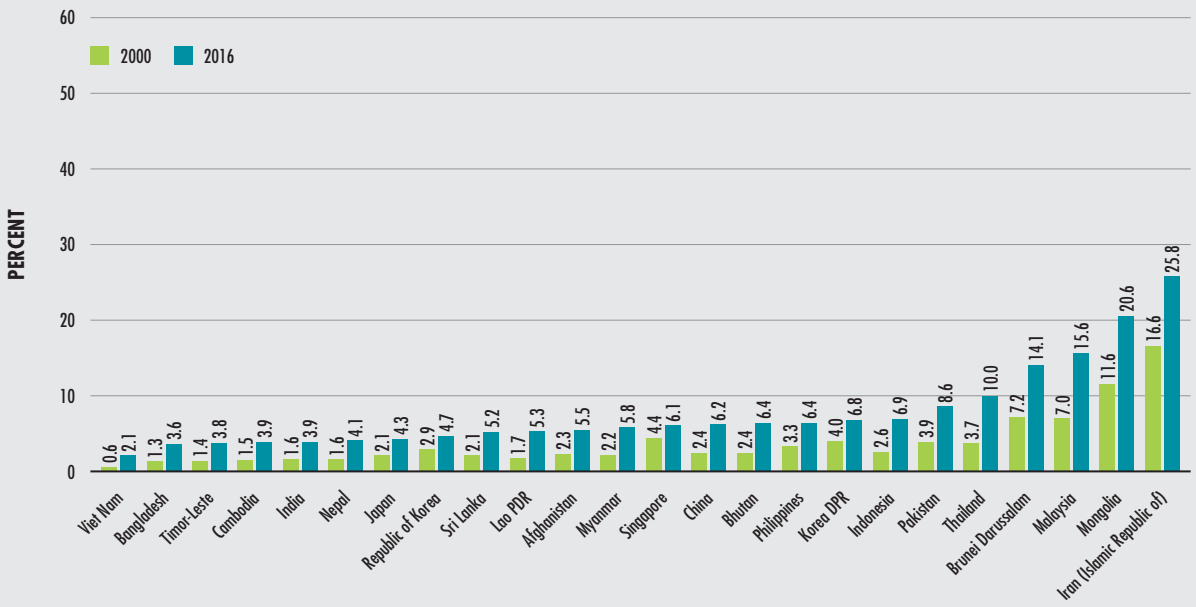
childhood obesity through breastfeeding and appropriate complementary feeding, and appropriate weight gain during pregnancy.

1.8 MINIMUM DIETARY DIVERSITY FOR CHILDREN AGED 6–23 MONTHS

Childhood stunting, wasting and overweight are direct consequences of consuming inadequate quantities and qualities of food or of inadequate childcare and feeding practices (infections also play an important role). An infant or young child is considered to have achieved minimum dietary diversity (MDD) (a measure of the dietary quality and adequate feeding practices of children) if he or she has received five of eight food groups in the previous 24 hours.[39] Dietary diversity in children is positively associated with the mean micronutrient adequacy of the diet (i.e. whether it is sufficient in nutrients for growth and development).[40]

Dietary diversity is poor among infants and young children in many countries in Asia and the Pacific, with fewer than 50 percent of children meeting the MDD in 15 of the 20 countries shown in Figure 15. The percentage of children meeting the MDD varies greatly between countries, even within subregions. In Southern Asia, for example, only 20 percent of children achieve the MDD in

FIGURE 13
TRENDS IN THE PREVALENCE OF ADULT OBESITY IN ASIA, BY COUNTRY, 2000 AND 2016



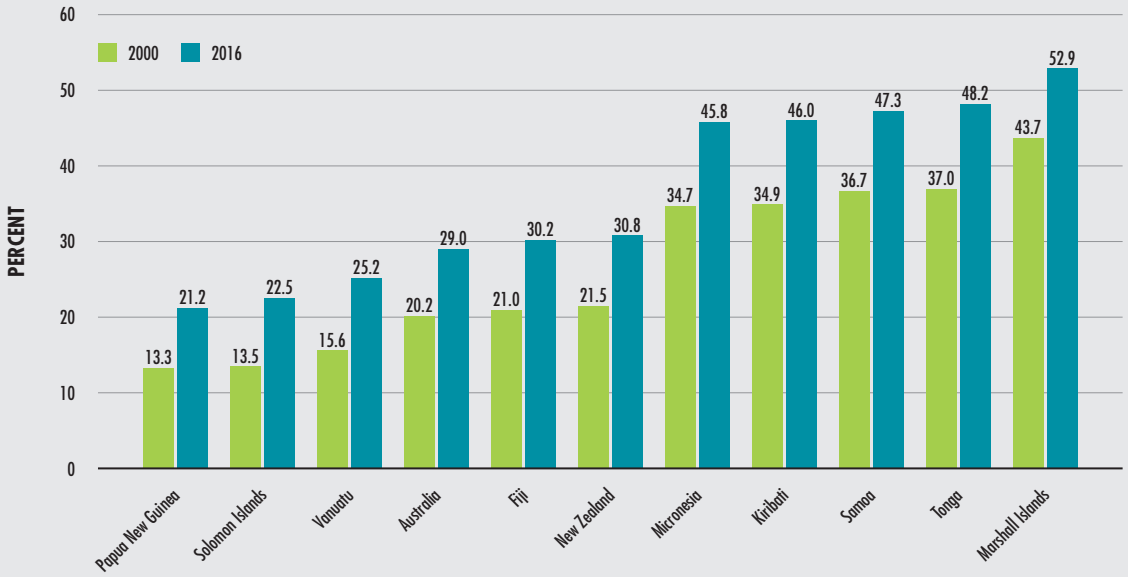
SOURCE: World Health Organization (WHO). Undated. Prevalence of overweight among adults, BMI ≥ 25, age-standardized estimates by WHO Region (online). Global Health Observatory data repository. [Cited 25 March 2018]. http://apps.who.int/gho/data/node.main.A900A?lang=en

India compared with 73 percent of children in Sri Lanka. In South-eastern Asia, 21 percent of children achieve the MDD in Myanmar compared with 82 percent in Viet Nam. More than 50 percent of children achieve the MDD in only four developing countries in the region (China, Sri Lanka, Thailand and Viet Nam). Thus, poor diet quality among young children in Asia and the Pacific is a serious concern.

1.9 EXCLUSIVE BREASTFEEDING FOR INFANTS UP TO SIX MONTHS OF AGE

Exclusive breastfeeding, in which infants receive nothing but breast milk for the first six months, has many benefits and is part of optimal breastfeeding practices. Across seven countries in South-eastern Asia, about 12 400 child and maternal deaths per year can be attributed to inadequate breastfeeding.[41] Increasing the rate of exclusive breastfeeding in the first six months up to at least 70 (50) percent by 2030 (2025) is one of the WHA's six global nutrition targets.

FIGURE 14
TRENDS IN THE PREVALENCE OF ADULT OBESITY IN THE PACIFIC, BY COUNTRY, 2000 AND 2016

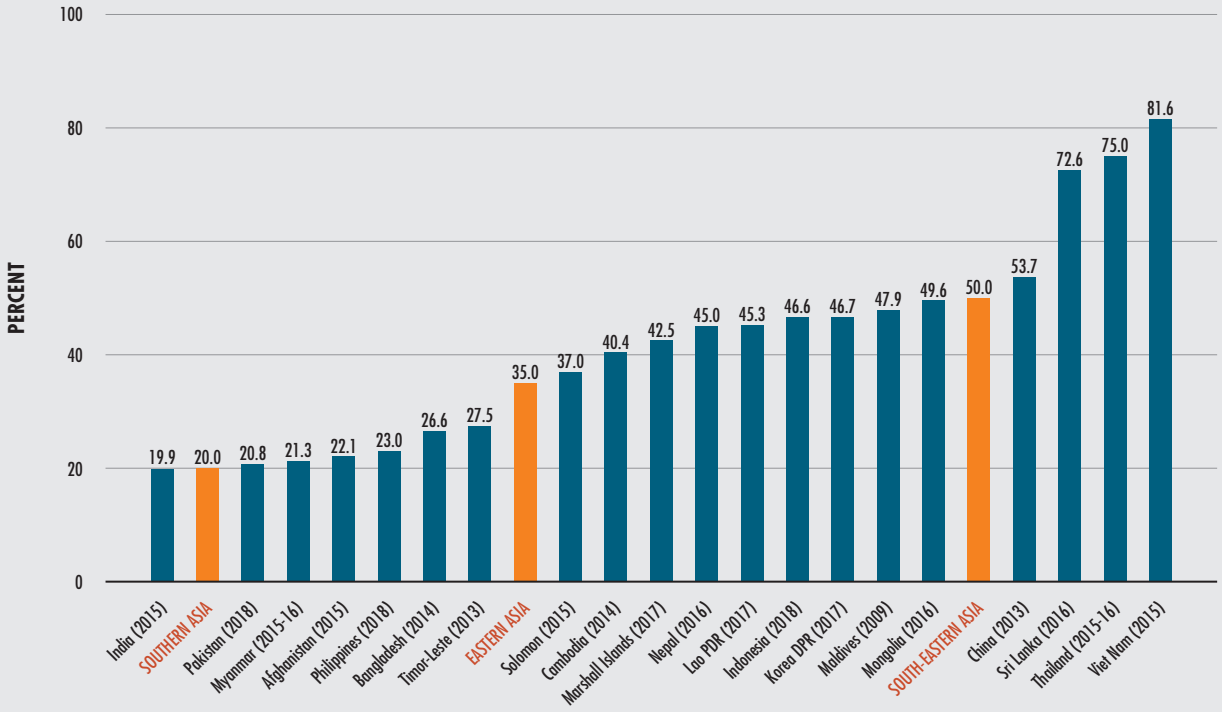


SOURCE: World Health Organization (WHO). Undated. Prevalence of overweight among adults, BMI ≥ 25, age-standardized estimates by WHO Region (online). Global Health Observatory data repository. [Cited 25 March 2018]. http://apps.who.int/gho/data/node.main.A900A?lang=en

In 2018, the proportion of infants younger than six months who were breastfed exclusively was 54 percent in Southern Asia, 20 percent in Eastern Asia and 39 percent in South-eastern Asia (Figure 16; insufficient data were available for the Pacific). Although the prevalence of exclusive breastfeeding exceeded the WHA 2025 target of 50 percent in many Southern Asian countries, recent declines in Bangladesh, India and Nepal threaten the progress made in that subregion. The practice of exclusive breastfeeding is relatively low in Eastern and South-eastern Asia; only three countries (Cambodia, Myanmar and Timor-Leste) in those subregions are above 50 percent, and only two countries below 50 percent (Thailand and Viet Nam) have made some progress towards meeting the WHA 2025 target.

Unlike most nutrition indicators, the prevalence of exclusive breastfeeding in different countries of the region is negatively correlated with GDP per capita.[42] Within the countries of the region, the prevalence of exclusive breastfeeding is nearly always lower in urban areas than in rural areas. These patterns suggest that mothers find it more difficult to breastfeed as economic development and urbanization occur, possibly because the opportunity cost of their time increases. The challenge of increasing the prevalence of exclusive breastfeeding will thus require investment in comprehensive strategies that address the multiple constraints faced by mothers.

FIGURE 15
PERCENT OF CHILDREN AGED 6–23 MONTHS MEETING MINIMUM DIETARY DIVERSITY IN ASIA AND THE PACIFIC, BY COUNTRY, LATEST AVAILABLE YEAR



NOTE: Country estimates were updated for Lao People's Democratic Republic (Lao Social Indicator Survey II 2017–18) and the Philippines (Expanded National Nutrition Survey 2018). Data not available for the Pacific.

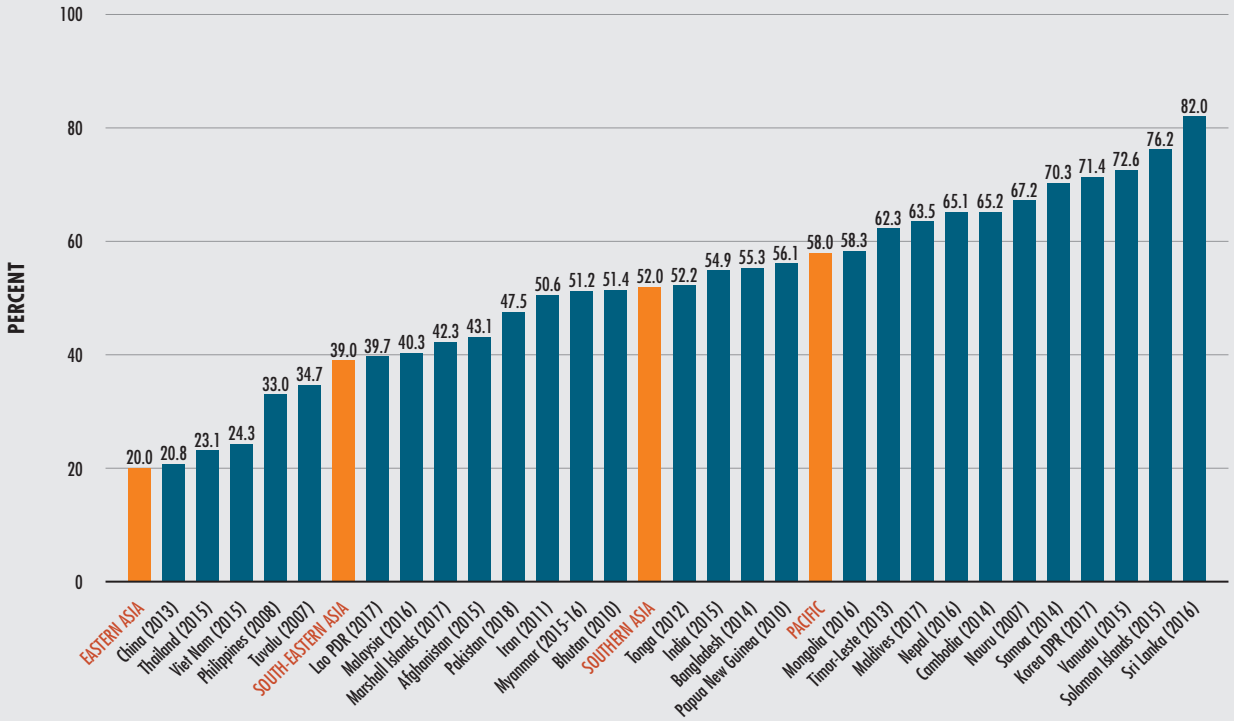
SOURCE: United Nations Children's Fund (UNICEF). Infant and young child feeding (online). Complementary feeding (6–23 months) [Cited 28 August 2019]. https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding/

1.10 ANAEMIA IN WOMEN OF REPRODUCTIVE AGE

Anaemia impairs women's health and well-being and increases the risk of adverse maternal and neonatal outcomes.[43] Anaemia affects half a billion women of reproductive age worldwide, of whom about 400 million are in Asia and the Pacific. Anaemia in women and children is a public-health problem in most countries in the region. Maternal anaemia is associated with higher risks of mortality and morbidity in expectant mothers as well as with low birth weight, prematurity and impaired physical and cognitive development in babies.

The most common cause of anaemia worldwide is iron deficiency arising from a prolonged negative iron balance. This, in turn, may be caused by inadequate dietary iron intake or absorption, an increased need for iron during pregnancy or growth periods, and increased iron losses due to menstruation or infestations of helminth (intestinal worms). An estimated 50 percent of anaemia in women worldwide is due to iron

FIGURE 16
PREVALENCE OF EXCLUSIVE BREASTFEEDING IN INFANTS YOUNGER THAN SIX MONTHS OF AGE IN ASIA AND THE PACIFIC, BY COUNTRY, LATEST AVAILABLE YEAR

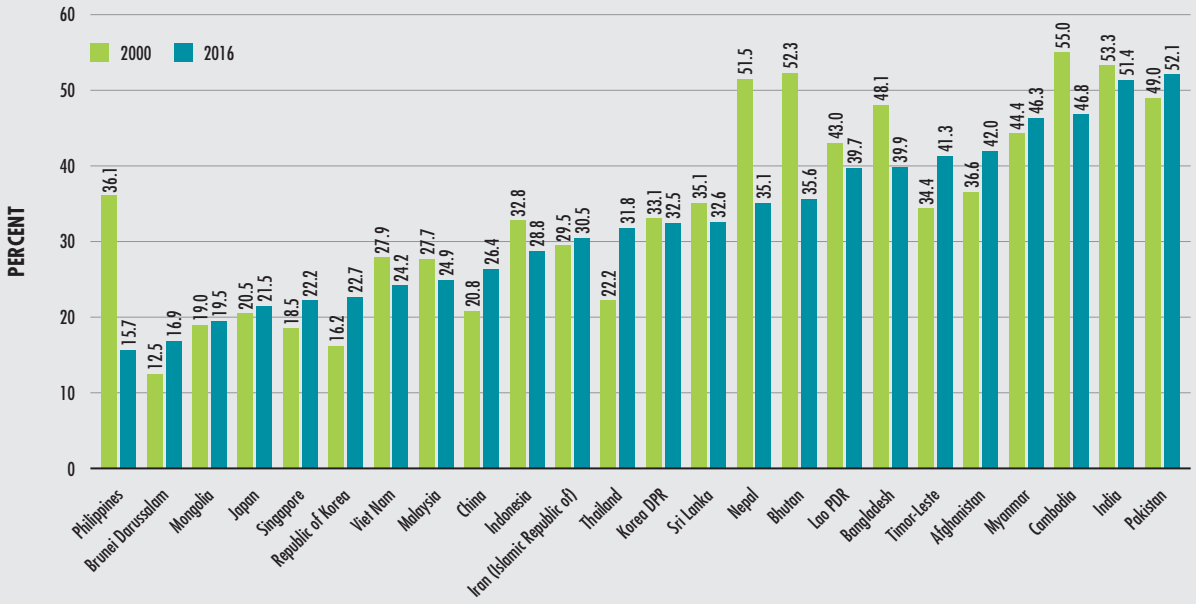


NOTE: Country estimates were updated for Lao People's Democratic Republic (Lao Social Indicator Survey II 2017–18) and Maldives (Demographic and Health Survey 2016–17). Insufficient data were available for Oceania.

SOURCE: United Nations Children's Fund (UNICEF). Infant and young child feeding (online). Exclusive breastfeeding (< 6 months) [Cited 28 August 2019]. https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding/

deficiency. Other important causes of anaemia include infections, other nutritional deficiencies (especially of folate and vitamins B12, A and C) and genetic conditions (e.g. sickle cell disease, thalassaemia – an inherited blood disorder – and chronic inflammation). Anaemia is also common in people with severe malaria, and it may be associated with secondary bacterial infections. Achieving the WHA's goal of reducing anaemia in women by 2025 requires an integrated approach that includes dietary improvements and fortification to increase the consumption of iron and other essential micronutrients; the supplementation of iron and multiple micronutrients for pregnant women; and public-health measures on the control of infections and diseases. Understanding the aetiology of anaemia is crucial for ensuring that anaemia reduction programmes address the leading causes of anaemia and target the most vulnerable populations.[44]

FIGURE 17
PREVALENCE OF ANAEMIA IN WOMEN OF REPRODUCTIVE AGE IN ASIA, BY COUNTRY, 2000 AND 2016



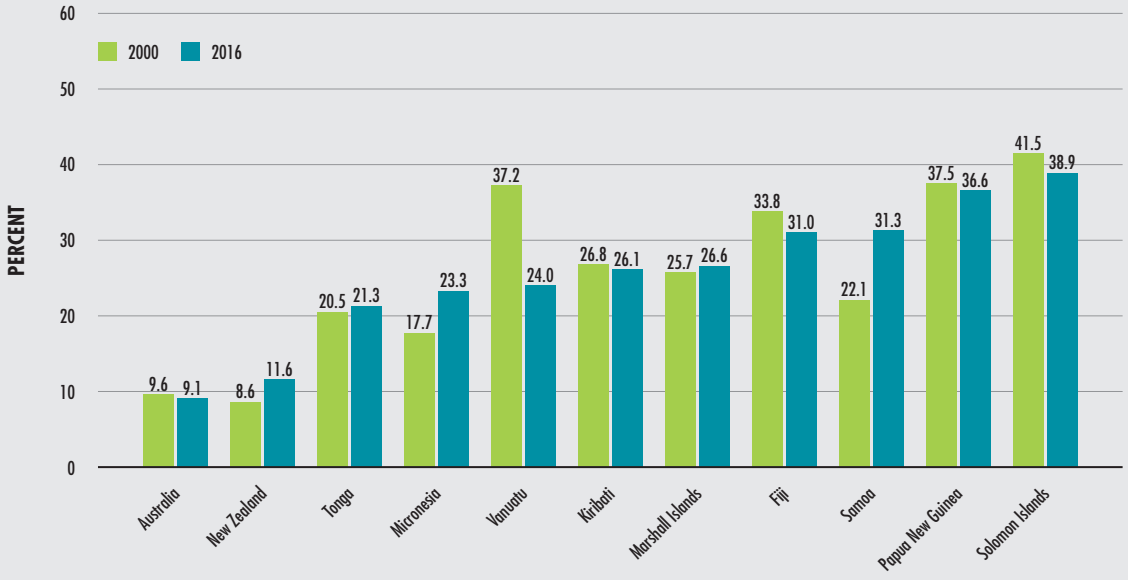
SOURCE: World Health Organization (WHO). Prevalence of anaemia in women of reproductive age: estimates by country (online). Global Health Observatory data repository. [Cited 07 October 2019]. http://apps.who.int/gho/data/node.main.ANEMIA3?lang=en

Changes in the prevalence of anaemia have been mixed in the region since the turn of the century, with about half of the countries experiencing an increase and the other half experiencing a decrease (Figure 17 and Figure 18). Overall, progress has been insufficient. Achieving a 50 percent reduction in the prevalence of anaemia among women of reproductive age by 2025 in the region will require a reduction in the prevalence in this group of more than 6 percent per year – a large reduction that will be difficult to achieve.

1.11 CONCLUSIONS

Although substantial advances have been made in Asia and the Pacific towards eliminating hunger and malnutrition, progress on reducing undernourishment has slowed recently. This is concerning because nearly half a billion people in the region are still undernourished. In most countries in the region, the diets of more than half of all very young children (aged 6–23 months) fail to meet minimum standards of diversity, leading to micronutrient deficiencies that affect child development and thereby the potential of future generations. These deficiencies account for the

FIGURE 18
PREVALENCE OF ANAEMIA IN WOMEN OF REPRODUCTIVE AGE, IN THE PACIFIC, BY COUNTRY, 2000 AND 2016



SOURCE: World Health Organization (WHO). Prevalence of anaemia in women of reproductive age: estimates by country (online). Global Health Observatory data repository. [Cited 07 October 2019]. http://apps.who.int/gho/data/node.main.ANEMIA3?lang=en

high prevalence of stunting and wasting among children under five years of age – indeed, stunting rates exceed 20 percent in a majority of the region's countries.

The fight against undernutrition is complicated by a general and growing prevalence of other forms of malnutrition – for example, the prevalence of adult obesity is increasing throughout Asia and the Pacific. The rates of obesity-related diseases, including diabetes and diet-related NCDs, have soared in many countries, particularly in the Pacific Islands, straining national healthcare budgets and causing losses in productivity.

Moreover, various forms of malnutrition are converging – in many cases within the same household and even in the same person.

Many stakeholders are making serious efforts to reduce malnutrition, but the timeline for achieving SDG 2 is getting shorter. Efforts need to be scaled up to tackle persistent problems as well as emerging threats, and more investment in high-quality data collection is needed. Given the complex nature of the problem, a multi-stakeholder approach will be necessary to address the multiple burdens of malnutrition.

THAILAND
Workers sort freshly-caught fish at Mahachai, an important fishing district on the outskirts of Thailand's capital city of Bangkok.

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PART 2
SELECTED DEVELOPMENTS IN THE REGION

PART 2

SELECTED DEVELOPMENTS IN THE REGION

This section of the report intends to provide a survey of selected recent developments in Asia and the Pacific that will affect food security and nutrition in the medium to long term. A range of factors influences food security and nutrition, and the discussion in this section is not intended to be comprehensive. However, the factors canvassed here – (i) economic growth, inequality and the income of the poor; (ii) food prices; (iii) disasters; and (iv) food-related policies that affect nutrition – all have important effects. Some of the developments reviewed here also have implications for social protection systems, which is the special topic of this year's report and is discussed in detail in Part 3.

2.1 ECONOMIC GROWTH, INEQUALITY AND THE INCOMES OF THE POOR

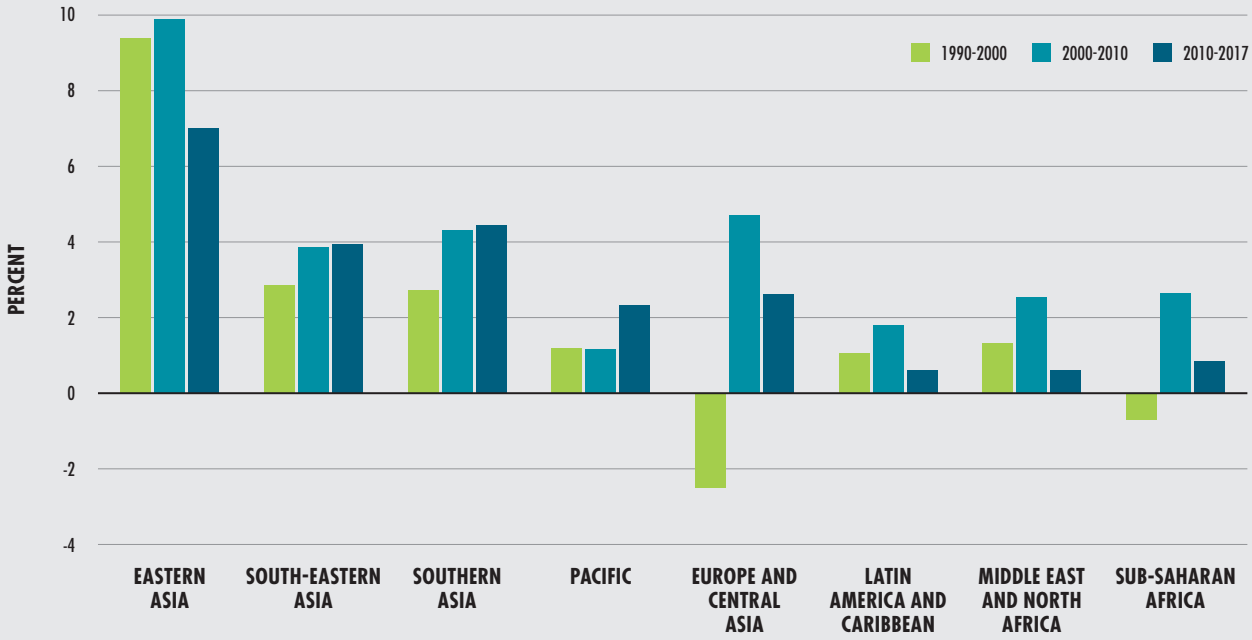
Economic growth has been more rapid in Asia than anywhere else in the world in the past few decades (Figure 19; although growth in the Pacific has been substantially slower), and this has been especially true in the current decade. The economic slowdown observed in recent years in many regions has been much less pronounced in Asia and the Pacific, where it has primarily been confined to Eastern Asia (which nevertheless has had the most rapid growth of any subregion). GDP per capita continued to grow in Asia and the Pacific in 2017, the most recent year for which data are available.

Although economic growth has generally been robust in the region in recent decades, there have been instances of significant downturns, such as the slump associated with the 1997–1998 Asian economic crisis. This crisis threatened food security in many ways – through reductions in income, decreases in social services, currency depreciations and food-price increases (Box 1).

Economic growth can provide a substantial boost to food security and nutrition – provided the poor share in that growth. The incomes of the poor are indeed increasing in many countries in the region. For example, a recent analysis found that the incomes of the bottom 40 percent of people increased in 13 Asian countries between 2008 and 2013.[1] Clearly, therefore, the region's poor have benefited from economic growth. In addition to providing the poor with opportunities for employment and higher incomes and, as a result, with access to more diverse and nutritious foods that contribute to a healthy diet, economic growth can also improve food security and nutrition by increasing government tax receipts. These can be spent on education and public health and on water, sanitation and hygiene infrastructure, all of which are important for improved nutrition.[2]

Despite continuing shared solid economic growth in recent years, however, income inequality has increased in Asia and the Pacific in the last 25 years, with the Gini coefficient (a widely used measure of income inequality) increasing in all four subregions;[3] moreover, the Gini coefficient arguably understates trends in inequality.[4] Adequate social protection is crucial in countries with growing inequality and, indeed, the percentage of the poor covered by social assistance programmes tends to increase with increasing gross national income per capita in the region (Figure 20). Improved social protection systems can also induce increases in the productivity of the poor, providing additional "fuel" for economic growth.

FIGURE 19
AVERAGE ANNUAL GROWTH (PER DECADE) OF REAL GROSS DOMESTIC PRODUCT PER CAPITA, BY REGION, 1990–2017



SOURCE: World Bank (2019). World Development Indicators (online) [Cited 18 June 2019]. https://data.worldbank.org

Social protection programmes that increase the purchasing power of the poor will increase the affordability of a healthy diet (although greater income will also increase access to foods high in fat, sugar and salt). Because the poorest 40 percent are more likely than the wealthy to have stunted children (Figure 21), increasing their access to nutritious foods can help reduce stunting rates substantially. But increased income is not a panacea, as evidenced by the fact that, in many countries, the prevalence of stunting is high (close to or above 20 percent), even for the top quintile. This speaks to the fact that there are other underlying causes of child stunting other

BOX 1
HOW DID THE ASIAN ECONOMIC CRISIS AFFECT FOOD SECURITY IN SOUTH-EASTERN ASIA?

Countries in South-eastern Asia have experienced several decades of rapid economic growth and consequently widespread poverty reduction. Nevertheless, economic downturns and shocks can derail progress in reducing poverty and malnutrition.[5] The Asian economic crisis in 1997–1998 provides an example of such disruptions.

During the crisis, which was induced by current-account deficits and exchange-rate policies the per-capita gross domestic product (GDP) of Indonesia, Malaysia and Thailand – among the hardest-hit countries – contracted by 14.3 percent, 9.6 percent and 8.7 percent, respectively, in 1998[6] and, as a consequence, unemployment increased in all three countries.[7] Falling government revenue led the Government of Thailand to impose an austerity programme in which it cut public expenditure by nearly 16 percent, including a 35 percent cut in social services.[8] In Indonesia, the government curtailed public health services and reduced the number of children provided with vitamin supplements.[9]

Local currencies also depreciated dramatically – by 80 percent in Indonesia and by more than 40 percent in both Malaysia and Thailand.[10] The consumer price index for food surged by 50 percent in Indonesia, causing food riots and civil unrest.[11] Malaysia and Thailand also experienced abrupt increases in food prices – by 9 percent and 10 percent, respectively.[12] The depreciation of the baht led to an increase in rice exports from Thailand; this benefited Thai rice producers but simultaneously raised domestic prices and decreased domestic supplies, threatening food security for consumers.[13]

In Indonesia, the increase in food prices was exacerbated by a severe El Niño event, which caused a drought and consequently a substantial decline in rice production. Although the higher rice prices curtailed access for all, there was a prominent gender effect. In rural central Java, for example, mothers in poor families responded by reducing their dietary energy intake in order to better feed their children, leading to an increase in maternal wasting.[14] There were also reductions in purchases of more nutritious foods to enable the buying of (now more expensive) rice: this led to a measurable decline in blood haemoglobin levels in young children (and their mothers), increasing the probability of developmental damage.

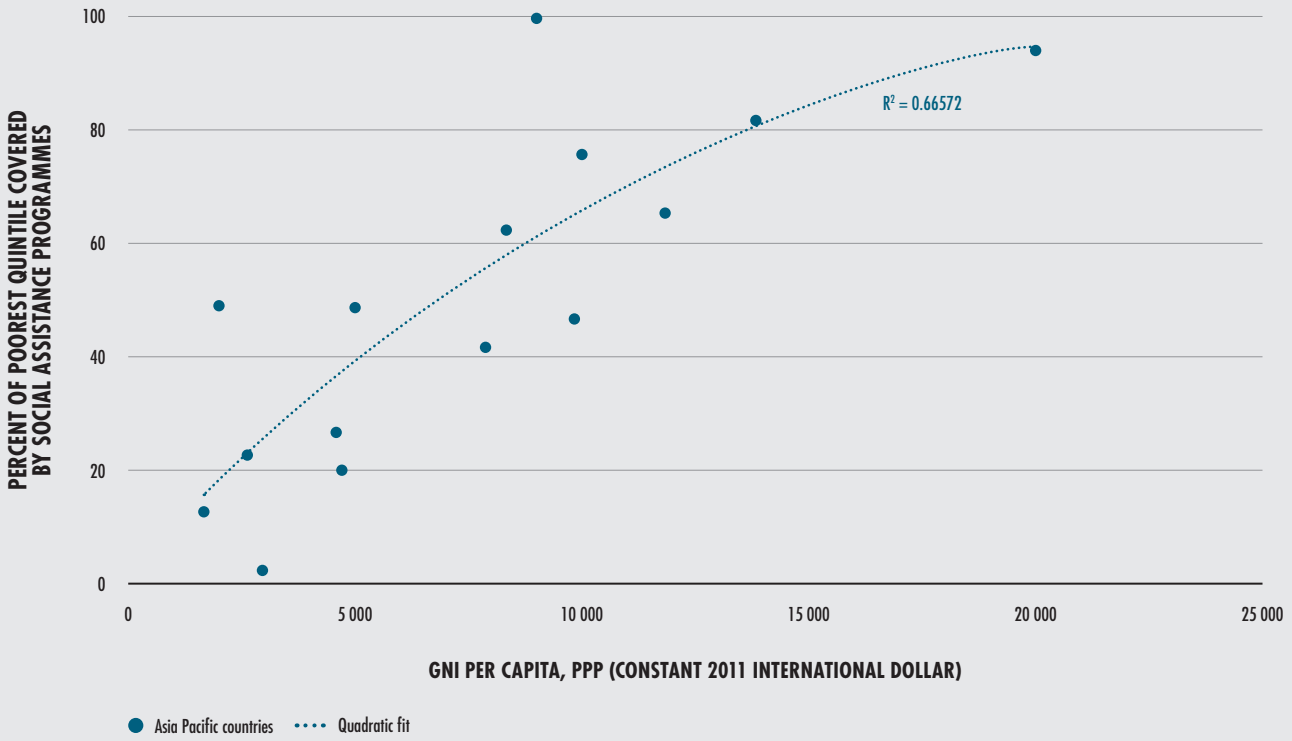
Thus, the Asian economic crisis threatened food security in many ways, including through reductions in income, decreases in social services, currency depreciations and food-price increases. Compounding these effects was a simultaneous severe weather shock that led to drought and reduced food production. The affordability of meat and other livestock products was particularly reduced because feed accounts for around 70 percent of total operating costs and feed prices were affected by currency depreciation.[15] Consequently, even though the overall supply of food fell by just 2 percent, protein supply declined by much more, reversing the previous rising trend. For example, protein supply from the available meat for consumption fell by 18 percent and 5 percent in Indonesia and Malaysia, respectively, in 1998.[16]

than access to food (e.g. disease, health care, child care practices). These other causes show the importance of other interventions – and the gains that can be made from designing social protection to be nutrition-sensitive in both normal and crisis times (see Part 3).

2.2 FOOD PRICES

Food prices are important determinants of access to food and can have implications for food security and nutrition. This is especially true for prices of staple foods, which account for a large share of the budgets of the poor and a large share of income for some farm households. In the face of increases in staple-food prices, poor net-consumer

FIGURE 20
RELATIONSHIP BETWEEN GROSS NATIONAL INCOME PER CAPITA AND COVERAGE OF SOCIAL ASSISTANCE PROGRAMMES, COUNTRIES IN ASIA AND THE PACIFIC

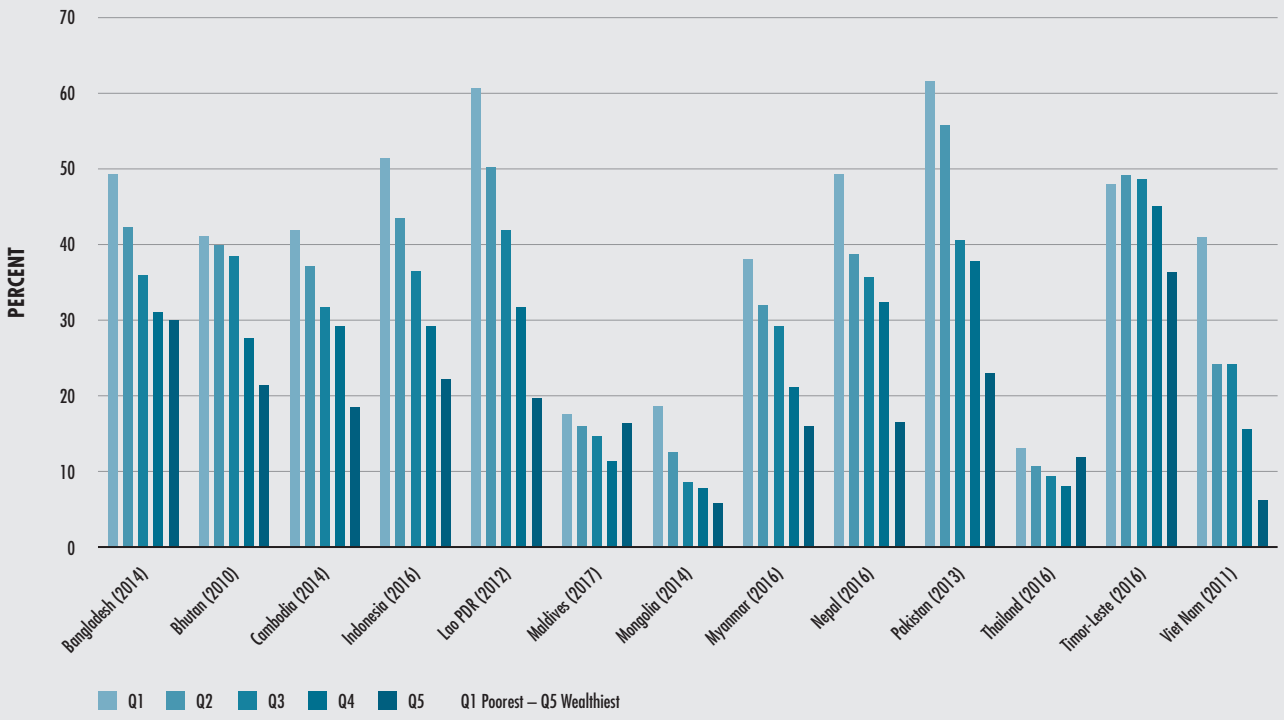


NOTES: An international dollar would buy in the cited country a comparable amount of goods and services that a United States dollar would buy in the United States of America. GNI = gross national income; PPP = purchasing power parity. Only countries with a population greater than 1 million are included in the graph.[17] The regression curve is quadratic.
SOURCE: World Bank (2019). World Development Indicators (online) [Cited 22 March 2019]. https://data.worldbank.org

households can find it difficult to reduce their consumption of staples because of the need to maintain dietary energy intake. Higher prices thus lead to higher expenditure on staple foods, which, in fixed budgets, affects the ability of consumers to purchase other nutritious foods (e.g. meats, fish, fruits and vegetables). The reduced consumption of such non-staple nutritious foods, especially in young children, can lead to adverse nutritional impacts and have permanent effects on cognitive ability and earnings.[18] A sudden decrease in prices can have similar impacts on farm households by decreasing their incomes. Food-price changes, when large enough, can force people to sell their assets and reduce investment, endangering future income flows and thus future food security.[19]

Inflation was generally subdued in Asia and the Pacific in 2018, with a population-weighted average general inflation rate of 3.9 percent.[20] Inflation was less than 7 percent in all countries for which data are available, with the exception of Iran (Islamic Republic of), where trade sanctions contributed to a general inflation rate of 19 percent. Food-price inflation was less than general inflation in both Southern Asia and the Pacific, indicating that inflation-adjusted (real) food prices declined. On the other hand, real

FIGURE 21
STUNTING BY WEALTH QUINTILE, SELECTED COUNTRIES IN ASIA, LATEST AVAILABLE YEAR



SOURCE: World Bank (2019). World Development Indicators (online) [Cited 25 January 2019]. https://data.worldbank.org

food prices increased slightly in Eastern and South-eastern Asia because the increase in food prices (5.6 percent in Eastern Asia and 4.1 percent in South-eastern Asia) was higher than the increase in overall prices (2.0 and 3.5 percent, respectively).

One of the biggest increases in food prices in 2018 was in the Philippines, where there was a jump of 6.9 percent due to reduced rice imports, higher fuel prices and damage by typhoons. This led to the passing of the Rice Liberalization Act, which removed both the role of the National Food Authority in importing rice and the authority of the government to determine the quantity of rice imports. The private sector can now import rice according to domestic (and world) market conditions, subject to a tariff of 35 percent on trade with member countries of the Association of South East Asian Nations (ASEAN) and higher tariffs on imports from other countries. Given that domestic rice prices in the Philippines have historically been higher than world market prices, the total volume of imports is likely to increase, thus reducing both domestic prices and inflation. People in the bottom income decile in the Philippines are net consumers of rice, and the liberalization of the rice market should therefore help make food more accessible and improve food security.[21] In Bangladesh, rice prices increased substantially in 2017 due to severe flooding, and they remained high into early 2018 until increases in production and imports helped ease domestic prices over the course of the year.

2.3 DISASTERS

Several major disasters occurred in the region in 2018, including drought in Afghanistan and the Democratic People's Republic of Korea; floods in India, the Lao People's Democratic Republic and Myanmar; cyclones in the Philippines and Tonga; a tsunami and earthquake in Indonesia; and an earthquake in Papua New Guinea. There were also refugee and displacement crises in Bangladesh, Myanmar and Pakistan. These and other disasters affected millions of people in the region in 2018, with the total damage valued at USD 89 billion.[22] Such events can exacerbate food insecurity and undernutrition directly by destroying assets; reducing food production, household incomes and access to health and nutrition services; and increasing the risk of disease.

Disasters can force households to sell productive assets in order to meet more immediate needs, but such sales mean reductions in household income in the future, potentially creating poverty traps.[23] Disasters can also reduce school attendance and force children to work. In both cases, short-term shocks can lead to long-term impacts. In Indonesia, for example, lower rainfall in the year of birth of girls has been shown to reduce their attained adult height, number of years of schooling, and adult earnings and health (no such impacts were found for boys, suggesting that, in times of hardship, boys receive priority over girls in the allocation of food and attendance at school).[24]

In responding to disasters, humanitarian relief is clearly essential to help prevent people from falling into poverty traps. Investing in building resilience is equally important, however, especially in the face of small repeated crises that may not trigger humanitarian relief operations.[25] Important ways to build resilience include linking social protection systems with humanitarian assistance and mainstreaming social protection as part of disaster-risk reduction. Part 3 discusses lessons learned in efforts to do this that may help prevent short-term shocks from leading to long-term poverty.

Major disasters can drive up food prices through effects on domestic and global markets, with impacts on people (both within and beyond the country) who may have been unaffected directly by the disaster. For example, an outbreak of African swine fever in Eastern and South-eastern Asia – which collectively produce more than half the world's pork – could dramatically reduce pork production,[26] with major implications for global pork markets. If pork prices rise, consumers would likely shift their buying patterns to other protein sources, such as poultry, beef, lamb and seafood. Thus, an outbreak of African swine fever in the region would reverberate through protein markets beyond Eastern and South-eastern Asia, making high-value animal protein less affordable and thus negatively affecting the nutrition of the poor. Many pig farmers will also suffer declines in income due to the production losses.[27]

2.4 SELECTED FOOD-RELATED POLICIES THAT AFFECT NUTRITION

Nutrition is affected by a wide range of food-related policies. This section, which is not intended to be comprehensive, describes recent policy developments in Asia and the Pacific in selected important areas: food fortification, taxes on sugar-sweetened beverages, and the elimination of trans-fatty acids (TFAs) from the food supply.

Food fortification

Micronutrient malnutrition ("hidden hunger") is still prevalent in Asia and the Pacific, and it is associated with poverty and disease.[28] A number of important policy initiatives were undertaken in 2018 to scale up food fortification in an effort to reduce such deficiencies.

Rice is the main staple food in most Asian countries, and thus the consumption of fortified rice can play an important role in addressing micronutrient deficiencies (the impact would be much smaller in the Pacific, where rice is a less important component of diets). Many Asian countries have initiated the provision of fortified rice through social assistance programmes that

reach vulnerable population groups. The Government of India launched a pilot scheme to introduce rice fortified with iron, folic acid and vitamin B12[29] through its Public Distribution System (PDS), which encompasses approximately 800 million people and is the world's largest social safety-net programme. The scheme will be scaled up in phases through the PDS. Myanmar is developing a rice fortification policy as part of its efforts to achieve SDG 2; once published, the policy will also help fortify other food vehicles, such as edible oils.

Sri Lanka and Timor-Leste have taken important steps towards introducing rice fortification by implementing pilots through their respective school-meal programmes. In Sri Lanka, the pilot programme has encouraged the government to draft national standards and guidelines for fortification. Bhutan is also implementing rice fortification in selected schools through its school feeding programme; the government has taken policy steps to scale up this effort throughout the country.

Standards and regulations are essential for the large-scale adoption of food fortification. In 2018, Afghanistan published national regulations for the fortification of wheat flour and cooking oil, and India published standards for rice, wheat flour, milk, oil and double-fortified salt.

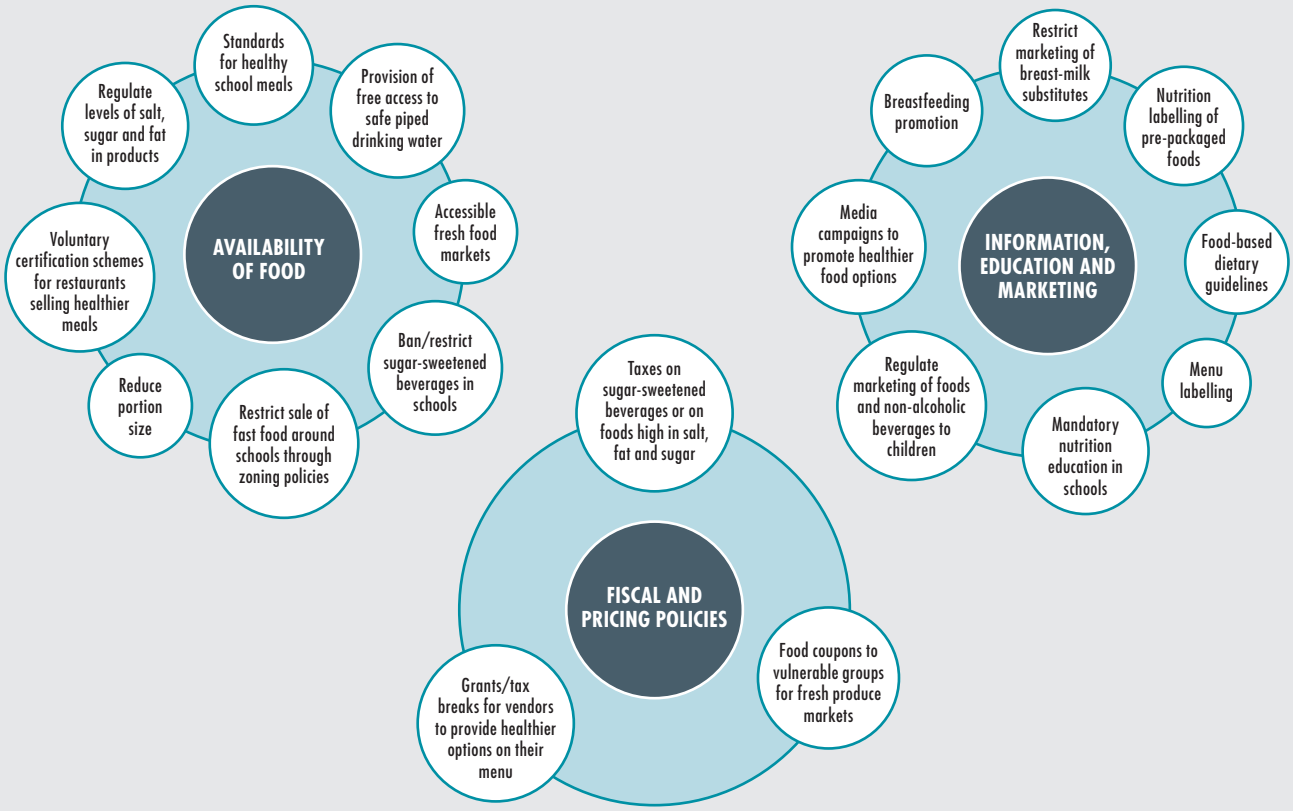
Taxes on sugar-sweetened beverages

As noted in Part 1, obesity and diet-related non-communicable diseases (NCDs) impose significant burdens on individuals and societies, and they put pressure on government budgets and divert financial resources that could be used for infrastructure or social services. The major force behind the increasing prevalence and burden of NCDs globally is the shift in food environments towards the greater availability of, and access to, energy-dense foods and beverages that are often high in fat, sugar and/or salt, coupled with lifestyles involving low physical activity.[30] Modern societies are converging on a diet high in saturated and trans fats, sugar, salt and highly-processed foods, with the associated increased risk of diet-related NCDs; this convergence can be seen as a byproduct of globalization, urbanization, and economic and income growth.[31]

In addition to a range of other interventions to prevent or reduce the prevalence of overweight and obesity (Figure 22), many countries in Asia and the Pacific are experimenting with fiscal policies, including taxes and subsidies, to incentivize healthy diets and discourage the consumption of foods and beverages high in fat, sugar or salt. There is clear evidence that taxes and subsidies can influence purchasing behaviour (especially for sugar-sweetened beverages – SSBs) and that the changed buying patterns can contribute to reducing obesity and diabetes, especially when part of comprehensive multisectoral population-based interventions. The WHO recommends applying taxes to SSBs as a mechanism for reducing sugar consumption, generating revenue for governments and incentivizing product reformulation by manufacturers.[32] A tax on sugary drinks that raises prices by 20 percent can lead to proportional reductions in consumption.[33]

As of April 2019, 16 countries and territories in Asia and the Pacific had taxes on SSBs. Roughly half the Pacific Island countries and territories monitored by the WHO have taxes on SSBs, typically ranging from 7 to 15 percent.[34] Brunei, the Maldives and Sri Lanka are among Asian countries to recently introduce SSB taxes. In January 2018, the Philippines implemented an excise tax on SSBs, raising the price by PHP 6 (USD 0.12) per litre on SSBs made with caloric and non-caloric sweeteners and by PHP 12 (USD 0.24) per litre on beverages made with high-fructose corn syrup. Notably, milk drinks, 100 percent fruit drinks and 3-in-1[35] were excluded from the excise tax.[36] Other countries in the region are considering the introduction of SSB taxes, but a different approach (taken, for example, in Singapore and China, Hong Kong SAR) is to work with companies to reformulate their products to contain less sugar.[37] Thailand has taken a hybrid route, phasing in a graded excise tax from 2017 to 2023 to encourage product reformulation:[38] in this approach, products with higher sugar content are taxed more and will incur an increase in tax every two years until 2023 if not reformulated. This graded tax structure is

FIGURE 22
EXAMPLES OF POLICIES AND PROGRAMMES AIMED AT PREVENTING OR REDUCING OVERWEIGHT AND OBESITY

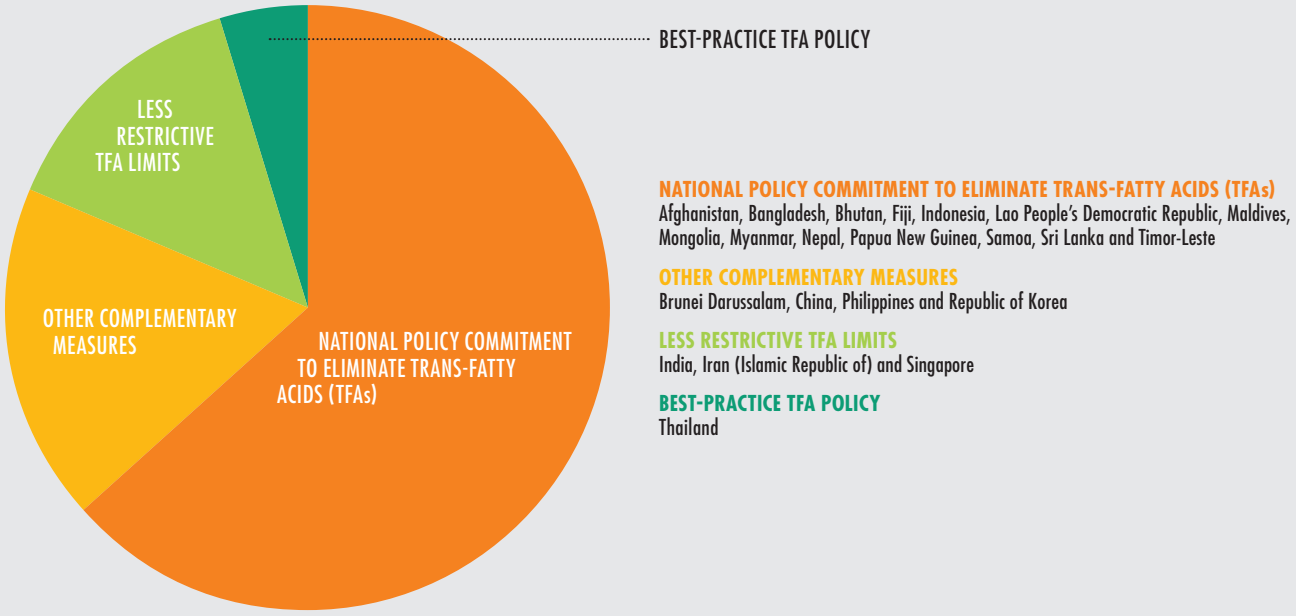


SOURCE: FAO, IFAD, UNICEF, WFP and WHO. 2019. *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns.* Rome, FAO.

encouraging manufacturers in Thailand to reduce the sugar content of their products.[39]

In some circumstances, studies have found that taxes can be effective in reducing the consumption of targeted foods but may not influence weight outcomes.[40] This may be due partly to the exclusion from taxation of some products that also contain high levels of free sugars and the potential for consumers to substitute taxed with untaxed products. For example, carbonated soft drinks are responsible for a substantial share of sugar consumption in the United States of America, but the importance of such beverages may be lower in Asia, where tea sweetened at the point of sale is widely available. In this case, taxes on bottled SSB might encourage greater consumption of sugar-sweetened tea, thus reducing the intended impact of the tax. Even in the United States of America, the beverage industry accounts for only about 30 percent of the total caloric sweetener market – most sugar and high-fructose corn syrup is used in foods, not beverages.[41] If sugar taxes are to help reduce sugar consumption, therefore, consideration should be given to a wide range of food and beverage

FIGURE 23
CURRENT POLICY SITUATION ON TRANS-FATTY ACIDS, ASIA AND THE PACIFIC



NOTE: No information was available, or data were missing, for other countries in Asia and the Pacific.
SOURCE: World Health Organization (WHO). 2019. *Countdown to 2023: WHO Report on Global Trans Fat Elimination 2019.* Geneva, Switzerland.

products, although such a system may be administratively complex. In designing and implementing SSB taxes, nutrient-profile models can be important tools for establishing criteria for determining which products are high in fat, sugar or salt and therefore should be taxed.[42]

Opponents of SSB taxes express concern that increasing the cost of sugary drinks will have negative implications for groups such as sugarcane farmers and the poor. For sugarcane farmers, governments can promote the production of alternative crops by designing phase-out strategies and providing extension services and new knowledge. Evidence shows that vulnerable groups such as low-income and young consumers are most responsive to changes in the relative prices of food and beverage products and therefore may benefit most in health terms from SSB taxes.[43] Providing low-income consumers with subsidies and ensuring the availability of healthier, untaxed substitutes can minimize regressivity.

Given varying food preferences and cultural and political contexts within and between countries, there is no silver-bullet solution for reducing sugar consumption. A growing body of evidence suggests that SSB taxes can be effective public interventions; their introduction, coupled with price subsidies for fruits and vegetables, could reduce inequities among vulnerable groups. The adoption of fiscal policies such as SSB taxes should, however, be undertaken only after context-specific analysis and as part of comprehensive policy packages for which the outcomes have been rigorously evaluated.

Policies to eliminate industrially produced trans-fatty acids from the global food supply by 2023

Partially hydrogenated oils are the main source of industrially produced TFAs.[44] TFAs were first introduced to the food supply in the early twentieth century as a replacement for butter and gained popularity with the discovery of the negative health impacts of saturated fatty acids. Industrially produced TFAs are contained in hardened vegetable fats such as margarine and ghee and are often present in snack, baked and fried foods.

The intake of TFAs can raise levels of LDL-cholesterol and lower HDL-cholesterol, thereby increasing the risk of cardiovascular disease. In 2018, WHO called on governments to eliminate industrially produced TFAs from the global food supply to contribute to the SDG target of reducing NCDs. Countries in Southern Asia have five of the ten highest proportions of cardiovascular disease deaths due to the excessive (i.e. greater than 0.5 percent of dietary energy) intake of TFAs: Pakistan (41 percent), Nepal and Bhutan (19 percent in each), Bangladesh (17 percent) and Iran (Islamic Republic of) (16 percent).[45]

Meaningful progress has been made globally in the elimination of industrially produced TFAs. Several countries (especially high-income countries in Europe and the Americas) have virtually eliminated industrially produced TFAs by legislating TFA content in restaurant and packaged foods or through national bans on partially hydrogenated vegetable oils. Given such progress in many high-income countries, the main focus of action now is on low- and middle-income countries, where controls on the use of industrially produced TFAs are often weaker.

Most countries in Asia and the Pacific have made national policy commitments to eliminate TFAs from their food supplies (Figure 23 shows the progress made, by country). Four countries in Eastern and South-eastern Asia have undertaken concrete complementary measures, such as the mandatory declaration of TFAs on nutrition labels and a front-of-pack labelling system that includes TFAs and mandatory limits on industrially produced TFAs in foods in specific settings (such as public institutions). Three countries have adopted limits on TFAs, although these are less restrictive than the recommended approach. Thailand put in place a ban on partially hydrogenated oils in 2019 – an example of global best practice.

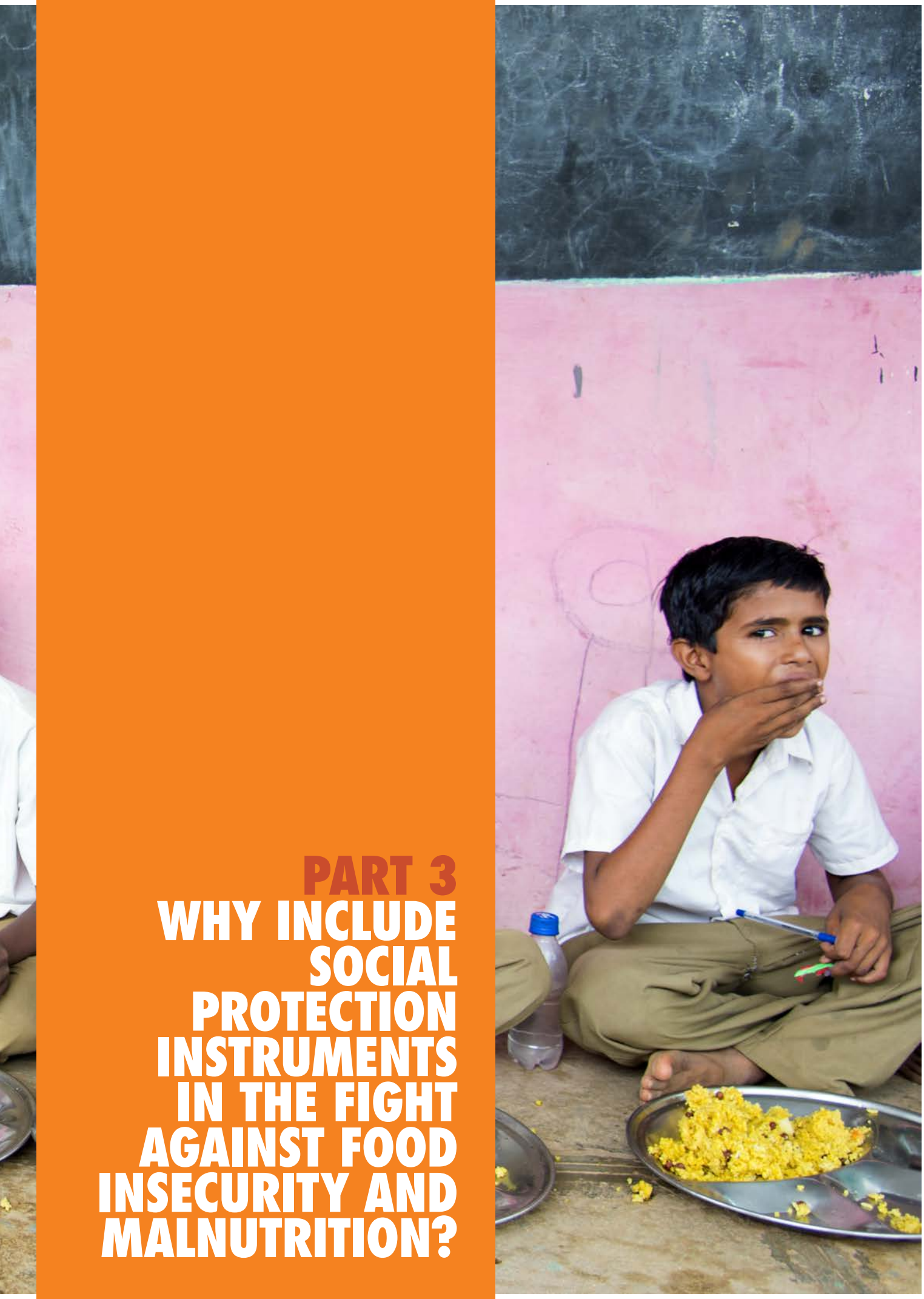
2.5 CONCLUSIONS

Ongoing economic growth in Asia and the Pacific has the potential to improve food security and nutrition – as long as the benefits reach the poor. Growing inequality, however, reduces the impact of economic growth on nutritional outcomes. The region remains prone to disasters, which also hinder efforts to eradicate malnutrition.

Recent developments – such as national laws on food fortification and the implementation of fiscal policies to promote healthy diets – could prove beneficial. Several countries in the region are fortifying foods and condiments with, for example, iodine, iron, folic acid, vitamin A, vitamin D, and B vitamins. This largely involves rice, but some countries are also publishing national standards and regulations for the fortification of wheat flour, milk, edible oils and other foods. Such efforts should be strengthened to combat micronutrient deficiencies.

Many countries in Asia and the Pacific have introduced taxes on sugar-sweetened beverages to combat obesity and the increase in diet-related NCDs. A growing body of evidence suggests that such taxes can be effective public interventions. National policy commitments to eliminate industrially produced trans-fatty acids are increasing in the region. Nevertheless, more policy interventions and the implementation of international-standard approaches will be needed if the region, as a whole, is to reach the global target of zero TFAs by 2023. ■

INDIA
Children in Maharashtra in India enjoy lunch as part of a local government school feeding programme.



PART 3
WHY INCLUDE SOCIAL PROTECTION INSTRUMENTS IN THE FIGHT AGAINST FOOD INSECURITY AND MALNUTRITION?

PART 3

WHY INCLUDE SOCIAL PROTECTION INSTRUMENTS IN THE FIGHT AGAINST FOOD INSECURITY AND MALNUTRITION?

The contribution of social protection[1] to the goal of zero hunger (SDG 2) is now widely recognized,[2] in addition to its contribution to reducing poverty and inequality. Accelerating progress on ending all forms of malnutrition requires integrated approaches and large-scale interventions that address key structural causes, including poverty and inequality; social protection is one such approach.

In Asia and the Pacific, the world's most disaster-prone region, many people suffer from transitory food insecurity due to human-caused or natural-hazard-induced disasters that are increasing in intensity and frequency in the changing climate. Although such food insecurity may be only temporary, it can lead to permanent adverse changes in nutritional outcomes and poverty when families curtail expenditure on nutritious food or investment in human capital. Social protection, therefore, has a key role to play.[3] The provision of regular and predictable social protection to people who are vulnerable to multiple risks (including those associated with climate change) has proved effective in building resilience before disasters hit,[4] preventing falls into poverty, and reducing the need to resort to coping strategies after disasters that might negatively affect food security and nutrition. Moreover, social protection has shown remarkable results in supporting the transition to more sustainable food production practices, addressing the economic barriers for the adoption of new technologies and innovative approaches, and increasing the resilience of rural livelihoods to climate-related risks.[5] Social protection has also proved an effective instrument in response to shocks, thereby addressing the humanitarian–development nexus.

Most countries in Asia and the Pacific have increased investments in social protection over the past two decades. Yet countries still only spend around 14 percent of total government expenditures on social protection, compared to an average of 42 percent of government expenditure in Europe.[6] Recent scenario analysis from UNESCAP illustrates the levels of investment required for developing inclusive social protection systems across 13 countries in Asia and the Pacific using 1 per cent and 1.5 to 2 per cent of GDP respectively. It shows that an investment of 1 per cent of GDP could cover a pension for all citizens from the age of 70 years, alongside disability benefits for children and adults, and a child benefit for all children aged 0–4 years.[7] Increasing this investment to 1.5 to 2 per cent of GDP with the same value of transfers would extend the benefit to children up to the age of 12 years and lower the eligibility age of the old-age pension to 65 years. These calculations show that investing in social protection is within fiscal reach.[8]

In the region, government tax revenues are relatively low in many countries, with an average of 19.6 percent of GDP (compared to an average of 34 per cent in OECD countries).[9] The widespread prevalence of the informal sector makes it difficult to broaden the tax base, but governments can explore additional taxes on corporations, inheritance, property and wealth. Governments can use a variety of other methods to mobilize resources to ensure financial, fiscal and economic sustainability of national social protection systems, such as re-allocating public expenditures; drawing on official development assistance; fighting illicit financial flows; tapping into reserves; and borrowing or re-structuring debt.[10]

For example, less than one third of the total tax revenue in the region is collected from income, profits and capital gains.[11] A progressive tax policy[12] could allow governments to invest in social protection and help address prevailing inequalities. Through its Old Age Allowance, which requires an investment of only 0.3 per cent of GDP, Thailand provides a benefit to 72 per cent of all older persons who are not eligible for a contributory pension scheme.[13]

For natural resource-rich low and middle-income countries, other options include taxation on mining and natural resource extraction to fund social protection. For instance, the Government of Mongolia established the Human Development Fund (HDF) in 2009 to support financing of old-age pensions and child and family benefits through excess revenues from the mining sector. In addition to pensions, the HDF is currently being used for providing health-care, housing and educational benefits to Mongolian citizens.[14] Another option may be to earmark "sin taxes" on goods recognized as harmful. For example, in 1982, the Republic of Korea introduced a tax on alcohol and tobacco that was earmarked for education.[15]

The size and scale of many social protection programmes, and their steady expansion in many countries in the region in recent years, offer a valuable opportunity to increase food security and nutrition for poor, vulnerable and nutritionally at-risk households and individuals.

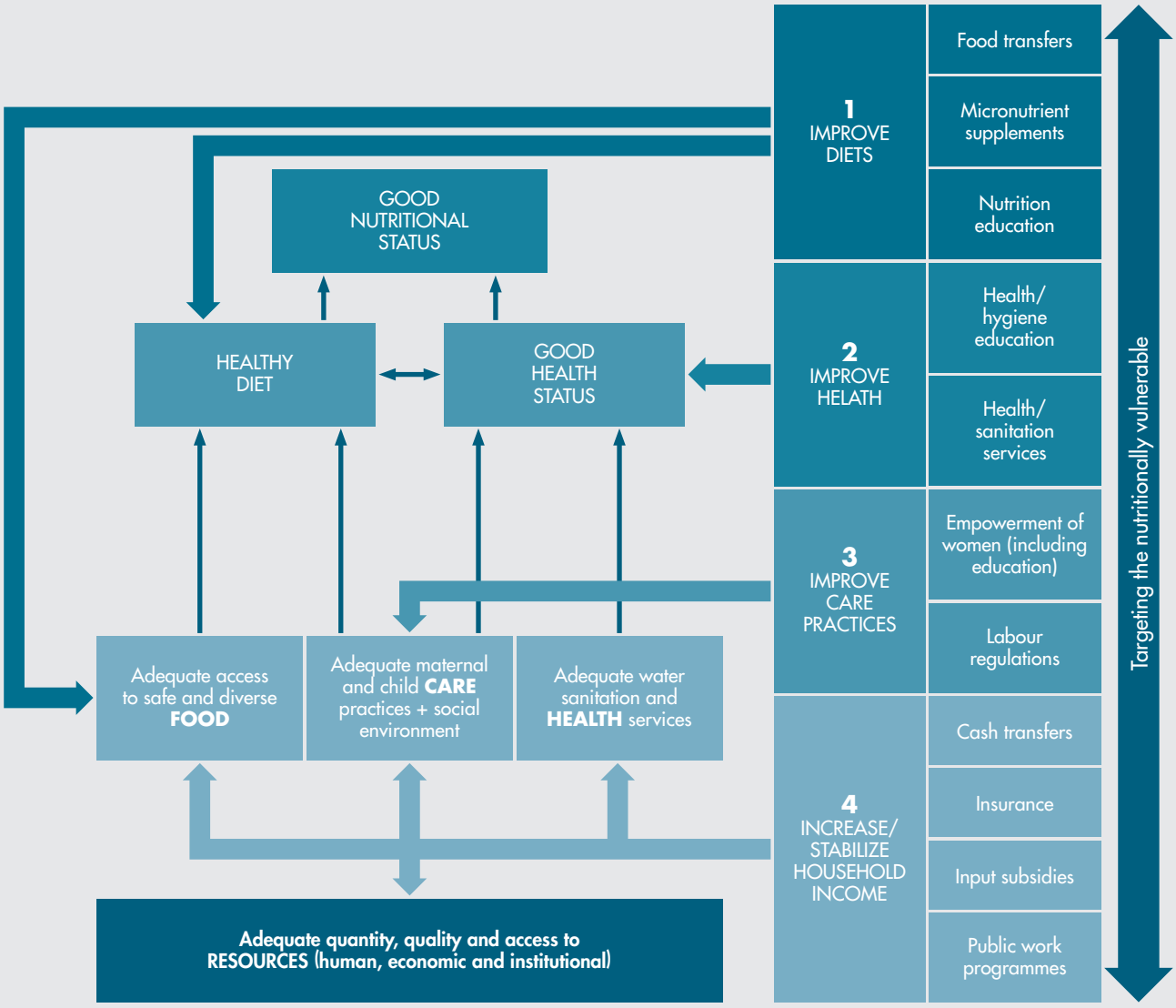
3.1 PATHWAYS BY WHICH SOCIAL PROTECTION CAN CONTRIBUTE TO BETTER FOOD SECURITY AND NUTRITION

Using the conceptual framework of malnutrition is an effective way of visualizing the multiple linkages between social protection and nutrition outcomes. Figure 24 shows the four main pathways by which social protection can positively affect nutrition. Dietary intake, healthy diets and health status are among the immediate determinants of nutritional status, and healthcare, care practices and household income are underlying factors.

Improve diets

Evaluations of cash-transfer programmes in the region indicate positive impacts on household dietary diversity,[16] with particularly promising results for children.[17] Participants in such programmes have increased their spending on protein-rich foods (e.g. the Philippines' Pamilya Pilipino Programme – "4Ps"), and poor households have reported increases in the consumption of more nutritious foods by their children (e.g. 4Ps and Indonesia's Programme Keluarga Harapan – PKH).[18] A key finding from social protection reviews, however, is that household dietary diversity improves children's diets only when combined with directed nutrition action such as social behaviour change communication (SBCC). This calls for an integrated approach and linkages between social protection and other sectors, discussed below.

FIGURE 24
POTENTIAL PATHWAYS TO NUTRITION THROUGH SOCIAL PROTECTION



SOURCE: FAO. 2015. *Nutrition and social protection.* Rome (available at www.fao.org/3/a-i4819e.pdf)

Improve health

Health outcomes can be improved by removing economic and social barriers to accessing health and sanitation services (e.g. transport costs and user fees) and providing direct access to an increased supply of health services. Evaluations of cash-transfer programmes also point to increases in expenditure on health among beneficiaries (e.g. 4Ps).[19] Cash transfers have increased health-seeking behaviour,[20] especially for children, including increases in the number of children receiving age-appropriate health services (e.g. Save the Children's maternal and child cash transfer pilot in Myanmar)[21] such as regular growth monitoring, the receipt of deworming pills, and Vitamin A supplementation. Changing the health-seeking behaviour of mothers, such as antenatal care and healthcare-professional-assisted deliveries or delivery at health facilities, has been less evident, however.[22] Health insurance schemes can directly support households' access to health services. The increase in income due to social protection transfers can also break down financial barriers that limit access to health services by covering out-of-pocket expenses or (in remote areas) making travel to healthcare centres more affordable, both in normal times and after shocks.

Improve care practices

Improvements in care practices can be achieved by increasing women's decision-making power related to, for example, access to use of household income; access to services, time and protection related to breastfeeding; and control over the diets of their children. Labour regulations can be used to address issues such as women's time poverty and to provide key labour protections, including maternity and parental leave. Increasingly, studies are reporting greater knowledge of caring and feeding practices among cash-transfer programme participants, especially those programmes that are complemented by behaviour change communication (BCC) or SBCC to support better eating, feeding and caring practices.[23] Households have improved feeding practices, such as by introducing solid foods to their infants' meals after six months[24] and ensuring that children are fed at appropriate times (4Ps);[25] and by increasing the duration of exclusive breastfeeding and administrating vitamin A (Bangladesh's Challenging the Frontiers of Poverty Reduction programme).[26]

Increase and stabilize household income

Incomes can be stabilized through cash transfers, insurance, input subsidies and public work programmes. The potential of social protection measures to increase household purchasing power is well documented. Most social protection measures, such as cash transfers in the form of child grants, family benefits and public work programmes, increase income, which can in turn increase the consumption of both staple and costlier nutritious foods.[27] Households may also invest transfers in productive assets, including for agriculture, thereby increasing their productivity and income and thus further increasing their purchasing power.[28]

Efforts to scale up social protection during shocks have increased access to food and basic services, thereby avoiding drops in well-being, including nutrition. After the earthquake in Nepal in 2015, 81 percent of beneficiaries used their transfers to buy food and 45 percent used them to buy medicines. About two-thirds of beneficiaries lived in households with at least one child; thus, the shock response through the social protection system benefited those most vulnerable to a lack of food security and nutrition.[29] In Fiji, topping up social protection programmes gave beneficiaries affected by Cyclone Winston access to more nutritional and diverse food baskets. Indeed, food was the main expenditure reported by beneficiaries. An evaluation found that households receiving cash top-ups recovered faster from the effects of the disaster compared with non-recipients, reducing reliance on coping strategies detrimental to food security and nutrition.[30]

An increase in household income, however, does not automatically result in improved diets and nutrition for children. Additional actions are required, such as BCC (with specific nutrition objectives) and actions tailored to young children, mothers and the nutritionally vulnerable.

TABLE 1
KEY NUTRITION-SENSITIVE PRINCIPLES

1. Define objectives[31] and indicators[32] based on systematic assessment to identify the food security and nutritional problems and their causes, understand the extent of poverty and exclusion (including gender analysis), and identify context-specific impact pathways (thereby also defining the design features and linkages). This will help ensure that nutritionally vulnerable groups are reached effectively.

2a. Incorporate nutrition considerations and actions into the design of social protection mechanisms, such as the:

- cost of nutritious diets and the safety, quality and nutritional value and diversity of (food) transfers,
- regularity and predictability of transfers,
- duration of benefit,
- timeliness of the benefit/intervention.

2b. Create appropriate linkages with interventions and strategies that support improved diets and nutrition, such as by:

- providing access to high-quality health and sanitation services,
- promoting strategies that enable households to diversify their diets and livelihoods, including in terms of production (i.e. nutrition-sensitive agriculture),
- providing food and nutrition education,
- providing certain individuals in households, such as young children and women, with micronutrient supplements or fortified foods,
- empowering women, such as by increasing their decision-making power over household expenses, the intra-household distribution of food, and access to services.

3. Ensure the ability to reduce vulnerability, enhance resilience and respond to shocks Social protection programmes can help households prepare for, cope with and recover from shocks that may have negative impacts on their food security and nutrition. The capacity to withstand shocks can be increased when households have access to predictable social protection, thus building resilience over time and minimizing negative coping mechanisms that can affect food security and nutrition. In addition, the acute and long-term negative effects of shocks can be reduced if social protection systems already in place are expanded or adapted in a timely manner. It is crucial for consumption stabilization that social protection programmes have the capacity to respond to changes in income or food security and nutrition arising from both sudden and slow-onset shocks[33]

SOURCE: Interagency Social Protection Assessments (ISPA). Practical tools: improving social protection for all (online). Rome. [Cited 11 July 2019]. https://ispatools.org; FAO. 2015. *Nutrition and social protection.* Rome (available at www.fao.org/3/a-i4819e.pdf)

Gender-sensitive social transfers can (if properly designed) increase the decision-making power of women and the contribution of social protection to gender equality. This can, in turn, change the intrahousehold distribution of resources and lead to an increase in spending on economic and productive activities as well as access to food and basic services. Women's economic empowerment goes beyond their role as caregivers and aims to increase their economic and productive capacity.[34]

Although social protection programmes help address the immediate and underlying determinants of malnutrition, only a few programmes (e.g. PKH, 4Ps and Nepal's child grant programme)[35] have shown improvements in anthropometrics such as stunting.[36] The lack of improvement has been attributed partly to the complexity of the problem and the multiple factors involved.[37] A few studies (e.g. in Bangladesh and India) have pointed to reductions in micronutrient deficiencies from both cash and food transfers.[38]

3.2 FOOD SECURITY AND NUTRITION OUTCOMES ARE NOT AUTOMATIC

The above outlines the various ways in which regular social transfer programmes can contribute to food security and nutrition in normal times. Social protection is likely to work through similar channels in times of crisis. Such interventions can help maintain food security and nutrition status in the face of shocks and build the resilience of poor and near-poor people, who are often the most exposed to hazards and have the least means to cope. When the use of social protection systems enables the timely, cost-efficient provision of support it will likely increase the benefits of the response for food security and nutrition.

BOX 2
TOOLS USED IN THE REGION TO INFORM SOCIAL PROTECTION DESIGN

The Inter-Agency Social Protection Assessments (ISPA)[39] provides practical tools to help countries improve their social protection systems by analysing their strengths and weaknesses and offering options for further action. ISPA tools enable deeper analyses of social protection programmes and address aspects of implementation. "Fill the Nutrient Gap Assessment", a tool developed by the World Food Programme and partners, identifies context-specific barriers and entry points for food, health and social protection systems to improve nutrition by increasing the availability, accessibility, affordability and choice of nutritious foods. The tool combines a review and analysis of secondary data on food and nutrition with analysis of the cost of a nutritious diet and the modelling of food-group options. It has informed a wide array of social protection programmes, such as cash transfers, school meal programmes and in-kind transfers in Cambodia, the Lao People's Democratic Republic, Pakistan, the Philippines and Sri Lanka.

Despite their immense potential, however, social protection programmes do not always deliver improvements in food security and nutrition.[40] The lack of impact of some programmes is often linked to their design. Common deficiencies include benefits of insufficient size to improve dietary intake; a lack of programme longevity, sustainability and predictability – such as long intervals between payments, irregular payments throughout the year, and payment schedules that do not take into consideration livelihood calendars (i.e. for subsistence farmers); and an inability to link with other interventions to maximize the impacts of transfers.

To increase the likelihood of positive outcomes, certain food security and nutrition objectives and principles should be applied in social protection design, implementation and monitoring, and links promoted with other sectors (such as health and agriculture) and services to address the underlying key determinants of malnutrition. Below, general principles are outlined to provide a basis for the design, implementation and monitoring of social protection interventions to improve food security and nutrition outcomes.

3.3 HOW TO MAKE SOCIAL PROTECTION WORK FOR FOOD SECURITY AND NUTRITION

Social protection measures and programmes can be designed and implemented in nutrition-sensitive ways (Table 1) to improve the nutrition of participants in social protection programmes, both in normal times and during crisis.

Include food security and nutrition objectives as part of social protection design

To enhance the impact of social protection on food security and nutrition, it is important, as a starting point, to clearly define the nutrition objectives being sought based on a thorough understanding of the nutritionally at-risk groups and their needs. Various tools can support the identification of impact pathways and therefore the appropriate design and implementation features of programmes (Box 2).[41]

BOX 3
FOCUSING ON THE FIRST 1 000 DAYS

The aim of Myanmar's maternal and child cash transfer programme is to empower pregnant and lactating women with additional purchasing power by providing them with a cash benefit of MMK 15 000 per month over the course of pregnancy and until the child is 24 months of age. The programme has been rolled out in five areas with high rates of poverty and widespread vulnerabilities and child deprivations (e.g. 41 percent and 38 percent of children under five years of age are stunted in Chin and Rakhine, respectively). The programme covers more than 130 000 mothers and children, and, according to the government's social protection costed sector plan, it will encompass 1.5 million people by 2022. Registered women (who are pregnant or lactating) are provided with regular (i.e. quarterly) awareness raising on topics related to improved nutritional outcomes such as health, nutrition and hygiene. Local midwifes hold awareness-raising sessions in Chin, Kayah and Kayin states and deliver messages to beneficiaries in Rakhine and Naga during personalized health visits. Sessions, which are delivered in the local language, are adapted to the needs and interests of the local women and build on their existing knowledge and practices in the areas of health, nutrition and hygiene.

As recognition has grown of the window of opportunity for tackling malnutrition provided by the 1 000 days between conception and a child's second birthday,[42] some countries have designed specific programmes targeting this group. The maternal and child cash transfer (MCCT) programmes in Cambodia and Myanmar (Box 3) specifically address the nutritional needs of pregnant mothers and young children by providing regular and predictable cash transfers, thereby building children's "cognitive capital".[43] The programmes have proved effective and have potential to be scaled up and applied universally.

Well-designed social protection programmes can act as mechanisms to widen the coverage of social protection, especially for food-insecure and nutritionally vulnerable groups, such as women and girls of reproductive age, orphans, people living with Human Immunodeficiency Virus infection and Acquired Immune Deficiency Syndrome (i.e. HIV/AIDS), and the sick and elderly. The adaptation and scaling up of such programmes is a key policy option for shock-responsive social protection in Asia and the Pacific. Myanmar's MCCT, for example, has been designed with a shock-responsive component. Similarly, Nepal's child support grant is being re-designed to make it more shock-responsive. Lessons learned show that, in responding to shocks, social protection programmes with high coverage and robust systems may have greater capacity to reach nutritionally vulnerable groups.

Other aspects of design that should be considered in any social protection intervention is its scope, frequency, duration and timeliness. In the case of monetary transfers, such as in child grants and public work programmes, the transfer size should be predictable to allow households to manage risk, as well as sufficiently large to help households meet their needs for a nutritious diet (see, for example, Save the Children's cost-of-the-diet assessment).[44] In in-kind transfers, such as school meals and food transfers, the quantity and quality of the food transferred, and its nutrient content, should cover the nutrient deficiencies of the targeted group.

Regular and predictable transfers increase the likelihood that the additional income will be spent on food and basic services.[45] Similarly, timeliness is key to ensuring that households have access to transfers during crises, thereby enabling them to avoid negative coping mechanisms (such as skipping a meal a day).

Some food-transfer programmes are experimenting with diversifying their food baskets to include more nutritious food as well as fortified

foods. The Government of India, for example, includes pulses and fortified oil in the food basket in some states and fortified rice in rice-consuming states. The state of Gujarat has experimented with fortifying PDS wheat flour with iron and folic acid[46] to support improved nutrition outcomes.

In Indonesia, the government launched an e-voucher programme called the BPNT (*Bantuan Pemerintah Non Tunai*) to replace Rastra, a rice-subsidy programme, with the aim of better reaching the poorest households and improving their nutrition.[47] A cost-of-diet study carried out in Indonesia by the World Food Programme, the government and development partners informed the diversification of the commodity basket in the food-voucher programme.[48] The BPNT enables targeted households to spend up to IDR 110 000 per month on rice or eggs. The government is also considering the inclusion of fresh vegetables and supplementary food to support access to age-appropriate, nutrition-complementary foods and the appropriate feeding of young children.

Complement social protection with sector interventions

Adjusting the design of social protection to better incorporate nutrition objectives will be helpful, but more is needed to eradicate hunger and malnutrition because food security and nutrition have complex determinants. Social protection programmes can offer an effective entry point for the delivery of complementary services, such as nutrition, health and communication on nutrition-sensitive agriculture. Given the objective of social protection to protect vulnerable households from loss of income, an alternative to designing new programmes is ensuring that the nutritionally vulnerable and their needs are identified and addressed within existing social protection programmes. Potential complementary interventions are discussed below.

Facilitate access to nutrition, health and sanitation services. Using social protection to leverage access to services can build indirect pathways towards improved food security and nutrition by prioritizing and connecting households with other public services, such as social and health services. For example, child grants are being leveraged for their reach and political acceptability to channel existing or emerging nutrition interventions. In Nepal, the national child grant programme provides cash transfers to households with children under the age of five years; with support from UN Children's Fund (UNICEF), the programme is coordinating with the health sector to improve maternal and child nutrition outcomes. The Government of Nepal is strengthening the capacity of the national health system to provide SBCC on child nutrition, including nutrition-related counselling and health services, to complement the cash transfers. Capacity building has also included efforts to improve networking between local bodies, health facilities and communities. A study of the programme in Nepal's Karnali Zone pointed to a significant reduction in the prevalence of childhood stunting, underweight and wasting.[49]

Building linkages with other programmes can also help address the needs of disaster-affected populations, which are likely to be complex because of the combination of chronic pre-existing vulnerabilities and new transient needs. An increasing body of evidence demonstrates that the combination of cash transfers and other interventions can help disaster-affected households recover better compared with the provision of cash alone.[50]

Provide nutrition-specific interventions. Social protection delivery platforms often lend themselves to the straightforward implementation of interventions that are more specifically aimed at improving nutrition. For example, the delivery of micronutrient-fortified staple foods such as rice, wheat flour and vegetable oils could be an effective intervention to address a high prevalence of certain micronutrient deficiencies (or a risk thereof) in a population of women of reproductive age and adolescent girls targeted by a social protection programme.

Promote access to livelihood interventions. The promotion of diversified, healthy and safe diets, especially among poor and agriculture-dependent households, requires supporting them to diversify production, such as by introducing small livestock or home gardening to provide more nutritious food. The diversification of livelihoods, and the

FIGURE 25
FIVE KEY OPTIONS FOR SHOCK-RESPONSIVE SOCIAL PROTECTION

DESIGN TWEAKS
Adjusting the design of routine social protection interventions

PIGGYBACKING
Use an existing programme's infrastructure

VERTICAL EXPANSION
Temporarily increase the value or duration of benefit for existing recipients

HORIZONTAL EXPANSION
Temporarily increase the number of recipients in an existing programme

ALIGNMENT
Align with other current or planned interventions

SOURCE: Oxford Policy Management. 2018. Shock-responsive social protection: findings from our global study (online). [Cited 11 July 2019] www.opml.co.uk/blog/shock-responsive-social-protection

subsequent diversification of sources of food and income, enables households to improve both their diets and socio-economic status and thus reduce their vulnerability to shocks.[51]

Build resilience. Empowering the recipients of social transfers with access to resources and support to adopt climate-smart agricultural practices and engage in adaptive livelihoods can increase their resilience to shocks and improve their food security and nutrition.[52] For example, the Sustainable Livelihood Programme in the Philippines[53] equips poor and disadvantaged families with micro-enterprise development skills and access to credit, technical vocational training and employment facilitation to become self-sufficient and resilient to economic shocks. The programme especially targets households under the 4P that are transitioning to "non-poor" status but which remain vulnerable and at risk of reverting to poverty.

Change behaviour and social practices. Increasing income or food availability at the household level does not necessarily mean better nutrition for household members and especially the most vulnerable. Improved outcomes require that those who make decisions on what food to purchase or produce and how to prepare it have sufficient knowledge of nutrition and healthy diets. It is equally important to understand the sociocultural barriers impeding the consumption of nutritious foods.

Food and nutrition education[54] comprises a combination of educational strategies, accompanied by environmental support, designed to facilitate the voluntary adoption of food- and nutrition-related behaviours conducive to good health and well-being. Nutrition education can be delivered via multiple avenues and involves activities at the individual, community and policy levels. It is conducted by trained workers, at times accompanied by nutritionists.

BCC is commonly defined as a research-based consultative process for addressing knowledge, attitudes and practices intrinsically linked to programme goals. Its vision includes providing participants with relevant information and motivation through well-defined strategies using an appropriate mix of interpersonal, group and

BOX 4
SHOCK-RESPONSIVE SOCIAL PROTECTION ENSURES FOOD SECURITY AND NUTRITION OUTCOMES

Fiji's national social protection system included both cash and voucher transfers, which made it comparatively easy to provide food vouchers to complement cash assistance in the response to Cyclone Winston. Participants in a lessons-learned workshop suggested that developing a food-security information system would help inform the design of future emergency responses through the system.[55]

In the Philippines after Typhoon Haiyan, households received food transfers in addition to the social protection top-up to help meet certain food needs that the market could not support because of the disaster. The top-up transfer value was calculated according to the cost of a nutritious food basket, taking into account the gaps households faced in meeting these needs. The condition of attending health checks and parenting sessions was waived post-disaster to reduce the burden on staff, services and beneficiaries at a difficult time.[56]

mass-media channels and participatory methods. BCC strategies tend to focus on the individual as a locus of change.[57] SBCC is often more comprehensive and aims to influence social norms and taboos.

In northwest Bangladesh, research found that cash transfers combined with SBCC had an impact on the children of ultra-poor women, leading to a 7.3 percent decrease in the proportion of children suffering from stunting over two years.[58] Linking SBCC with social protection programmes provides an important opportunity to promote positive behaviours and address household dynamics that affect caring and feeding practices, healthy diets and nutrition.

Empower women. Cultural issues, personal preferences and gender relations play larger roles in the household allocation of food than do considerations of nutrition requirements. Social protection measures can help break the intergenerational cycle of malnutrition if they increase women's access to education, assets and resources and consider women's workloads and time constraints (particularly when women are involved in public work programmes or other time-demanding activities related to social protection programmes). The positive impacts on nutrition can be strengthened if social protection also helps ensure that men make their contributions to household and child-caring tasks.[59] It is essential, therefore, that systematic social protection assessments include gender analyses to enable an understanding of gender dynamics.

3.4 HOW CAN SOCIAL PROTECTION ENSURE THAT FOOD SECURITY AND NUTRITION DON'T DETERIORATE, EVEN IN TIMES OF CRISIS?

When informed by risk variables and designed with flexible functions (in terms of targeting, delivery and financing), social protection programmes can help provide effective responses to shocks. They can build the capacity of vulnerable and poor households to manage risks and take early actions in predictable crises, and they can help ensure food security and nutrition in both normal times and during crises.

Social protection systems can be leveraged to respond to shocks by adapting existing programmes or designing new systems (depending on context) with the objective of building resilience. A key prerequisite is timely access to reliable information on risk for the

BOX 5
INTEGRATING CLIMATE AND DISASTER VULNERABILITY DATA IN A SOCIAL REGISTRY

In Pakistan, the flagship Benazir Income Support Programme is targeted at poor households using socio-economic data in the National Socio-Economic Registry, which covers most households in the country. The registry was updated recently to include data on climate vulnerability, increasing its potential for use in the design of disaster-risk management strategies by enabling the rapid identification of vulnerable areas and people.[60]

The social welfare database in Fiji isn't centralized or regularly updated. This made it difficult to rapidly locate social protection beneficiaries in the response to Cyclone Winston in 2016.[61]

design of programmes and to trigger one or more shock-responsive options at the right time (through standard operating procedures). Social protection programmes can be modified to make them more shock-responsive in five key ways (Figure 25).

Design tweaks involve adjustments to an existing long-term social protection programme to maintain the regular service in a crisis. The advantage for food security and nutrition of tweaking an existing system is that it enables existing support to continue to reach poor and vulnerable households during a crisis. For example, the Government of the Philippines passed a resolution in 2013 waiving the usual conditions required to receive the 4Ps benefit when a state of calamity is declared, meaning that affected families will continue to receive assistance when they need it most (but may be least able to meet conditions).

In *piggybacking*, elements of a social protection programme's delivery system (e.g. a beneficiary list, a payment system or a registration system) are used in a separately administered programme to support households that become vulnerable or are at increased risk of food insecurity and malnutrition due to a crisis. In 2008, for example, the Government of Indonesia provided cash assistance to mitigate the effects of fuel-price rises on the poor and near-poor. It used baseline data from a 2005 social protection programme to target the cash assistance, accompanied by a verification process. In response to the global financial crisis, the Government of Viet Nam introduced a programme in 2009 to provide one-off cash transfers to poor households, using the government's existing "poor list" for the rapid identification of beneficiaries.[62]

For existing participants of a social protection programme, *vertical expansion* involves a temporary increase in the value or duration of a benefit provided through an existing programme, thus enabling existing support to continue reaching poor and vulnerable households during crises. In Fiji, following Cyclone Winston in 2016, the government provided cash and voucher top-ups to the existing monthly benefits of three social transfer schemes targeting poor households, children and the elderly (Box 4).

Horizontal expansion is the temporary inclusion of new, crisis-affected beneficiaries in an existing social protection programme with the aim of supporting households that become vulnerable or are at an increased risk of food insecurity and malnutrition due to a crisis. In the recovery phase following the 2015 earthquake in Nepal, for example, the child grant programme targeting Dalit households was expanded in the affected areas to include other households with children aged under five years. The PKH, Indonesia's flagship conditional cash-transfer programme, targets households with pregnant or lactating mothers, children, and disabled and elderly members. It was expanded to new caseloads in response to a fuel-price increase in 2013.[63]

FIGURE 26
THREE-TIERED RISK-LAYERING STRATEGY FOR GOVERNMENTS

SOURCE: Mahul, O. 2017. *Disaster Risk Finance.* Poster presentation for the World Bank programme "Disaster risk financing and insurance programme". Available at https://www.microfinancegateway.org/sites/default/files/olivier.pdf

Alignment is the design and delivery of humanitarian assistance in a manner that contributes to building coherent long-term social protection systems. The aim is to address immediate needs – including those related to food security and nutrition – arising from a crisis and then to transition people with chronic vulnerability to longer-term assistance that is more appropriate for their needs. In Myanmar, a feasibility study[64] on the potential for shock-responsive social protection recommended that non-governmental actors implementing social transfer programmes adopt consistent policies and procedures for adapting and scaling up assistance in disasters. These steps can ensure the more coordinated implementation of emergency responses and help move towards standardized response packages that could eventually become institutionalized.

The five options described above show how an existing social protection system could be leveraged during a crisis. Ideally, however, a systematic, ex ante and proactive approach will be taken in the design of social protection systems with the objective of building long-term resilience and increasing the capacity of poor and vulnerable households to manage the risks of human-caused and natural-hazard-induced disasters and shocks. In the Philippines, for example, a feasibility study[65] on the potential for shock-responsive social protection and an assessment of cross-sectoral coordination recommended that increased coherence between social protection programmes and livelihood interventions (in all agriculture subsectors) would be key to increasing the resilience and thus food security of smallholder farmers and fishers.[66]

3.5 WHAT IS REQUIRED TO BUILD RISK-INFORMED, SHOCK-RESPONSIVE SOCIAL PROTECTION SYSTEMS?

There are several prerequisites for making social protection systems more risk-informed and responsive to shocks and thereby building resilience. They include developing robust information systems on both social protection and disaster risk; building flexibility into the design, delivery systems and financing of social protection programmes; and institutional coordination and capacity.

Robust information systems

Social protection information systems and integrated social registries typically collect and monitor data on the economic and social characteristics of households to identify those that are vulnerable to poverty and food insecurity.[67] Overlaying disaster-vulnerability indicators in these information systems would help identify vulnerable households that would need assistance in a crisis, thus contributing to preparedness and saving significant time in labour-intensive targeting processes after a disaster occurs.[68] Moreover, establishing or strengthening linkages between risk monitoring, early-warning systems and data on vulnerabilities and capacities can inform the prioritization of geographic areas and populations for targeting mid-to-long-term social protection aimed at building resilience (Box 5).[69]

Flexible programme design

Shock-responsiveness and building resilience should be considered in all elements of social protection programme design: eligibility criteria, transfer values, programme linkages and the duration of assistance in response to a shock. Assessments of socio-economic data, social protection coverage and disaster-risk data will determine who should be targeted. The greater the overlap between social protection coverage and the areas, individuals and households most exposed to hazards, the more useful it is likely to be to work with social protection programmes in responding to shocks and building resilience. An exit strategy for shock-responsive transfers must be designed and communicated so it is clear that the level of assistance (e.g. the revised transfer size or the increased number of recipients) will return to pre-disaster levels after an agreed period.

Flexible delivery systems

The operational processes and administrative systems through which a social protection programme registers, enrols, communicates with and disburses assistance to individuals or households represent one of the biggest opportunities for making social protection more shock-responsive. Realizing these benefits depends on system resilience, robustness, flexibility and the capacity to deliver without overburdening the system or undermining regular social protection.

For example, 4Ps beneficiaries in the Philippines receive their payments either via a card for an automated teller machine (ATM) or as cash over the counter. Typhoon Haiyan disrupted the ATM banking network, and many beneficiaries also lost their ATM cards. Restoring systems and replacing cards took several weeks. Over this period, Land Bank provided three mobile ATMs to help disburse cash payments to beneficiaries, while other participants were able to receive their cash payments over the counter. The government surged in additional social-welfare staff from unaffected regions to ensure the availability of sufficient personnel to administer the shock response. Nevertheless, the additional responsibilities taken on by social-welfare officers placed strain on them.[70]

Flexible finance systems

To fund shock-responsive social protection programmes, predictable and protected funding must be identified and secured before a crisis.

Humanitarian funds will continue to be a valid and important source of financing for shock-response activities, especially in large-scale crises, but mobilizing these funds is not predictable and can slow the response time. Given the inherent variability of disasters and associated funding requirements, layering risks (i.e. separating risks into tiers; Figure 26) through different financing instruments is important.[71] Additional finances can then be released based on pre-agreed rules and response plans through climate-related or disaster-risk financing.

Several countries in the region are well placed to develop disaster-risk financing strategies for shock-responsive social protection because they have established national funds on which to build.[72] Five funds in the Lao People's Democratic Republic – including the State Reserve Fund and the Social Welfare Fund – could be used to varying degrees for both preparedness and response activities. In Mongolia, Myanmar, the Philippines and Viet Nam, governments have allocated national contingency budgets and put in place disaster-management funds, including at subnational levels, although experience has demonstrated that these are not large enough to cover the actual expenses incurred.[73] Studies on shock-responsive social protection in all these countries highlight the importance of strengthening disaster-risk finance mechanisms in order to systematically manage the financial impacts of disasters.

Institutional coordination

Institutional coordination and capacity are important cornerstones in developing shock-responsive social protection systems, and these require effective collaboration between social protection, disaster-risk management and a wide range of other government and non-governmental actors and institutions. This, in turn, requires clear mandates, roles and responsibilities for all institutions and a commitment to providing human and other resources to enable those institutions to perform their roles.

In Fiji and Nepal, coordination mechanisms were not developed between the national social protection system and the humanitarian system. Thus, responses to recent crises through the social protection systems were not coordinated with assistance provided through humanitarian programmes, leading to gaps in assistance for some people who needed assistance.[74]

3.6 CONCLUSIONS: LEARNING FROM EXPERIENCES

Leveraging social protection to support improved food security and nutrition in normal times and during shocks is still a new field in Asia and the Pacific. Despite evidence from Latin America and Africa, only a few evaluations have been made in this region of the impacts of social protection programmes on food security and nutrition. Such evaluations are usually embedded in pilots and some have informed the scaling up of programmes. Although few in number, they provide insights into the potential of such programmes and what is required to realize this potential. Initial results indicate several key findings, outlined below.

Coverage is an enabling factor

Coverage is an important factor in considering social protection as an instrument for food security and nutrition and in building resilience to shocks. High coverage enables social protection to reach the poor and vulnerable, including those nutritionally at risk. It also helps social protection to act as a platform to deliver the specific services needed to tackle malnutrition. Moreover, having a mature social protection system in place ex ante increases the probability that people affected by a disaster will benefit from social protection and thus continue to access regular, predictable support that will enable them to withstand shocks and increase their resilience. Programmes with higher coverage of disaster-prone geographical areas or populations generally present more opportunities for flexing and scaling during emergencies.

Design matters

Although there is still a need for greater research to better understand the impact pathways and means for achieving better results in terms of anthropometric measures, recent meta-analyses[75] and assessments indicate the importance of design, especially in terms of the size of the cash transfer and access to health services. This is particularly important given that many programmes are still providing transfers that are too small to meet the competing basic needs of poor and vulnerable households.[76]

Few integrated programmes exist that are designed to achieve food security and good nutrition or which have objectives to support risk management, shock-responsiveness and the move to more resilient livelihoods and practices. Those that do exist show the great potential of complementary actions across sectors.
An evaluation of the integrated, cross-sectoral Souhardo project in Bangladesh[77] showed positive impacts on nutrition. Significant synergies were found in reducing stunting when the maternal and child-health nutrition component of the project was combined with poverty and food-security interventions (e.g. support for home gardens and income-generating activities and participation in public work). In contrast, smaller impacts were obtained from each intervention when they were implemented in isolation.

Include resilience objectives in social protection systems

Most shock responses through social protection, including those cited here, have been developed ex post. Although they were effective in serving humanitarian needs, the lack of planning and agreed ways of working contributed to challenges in communication, regulatory bottlenecks, the overburdening of staff and systems, and delays in the provision of assistance. To maximize impacts it is important to design social protection systems with the following objectives: building household-level resilience; developing standard operating procedures for implementing early and timely action in times of crisis; building the capacity of systems and institutions; creating linkages with early-warning systems; establishing trigger indicators and thresholds; and setting up risk-financing arrangements. Such objectives will ensure that social protection systems are more adaptive and resilient in the face of shocks and crises and therefore better able to continue providing services. Research shows that, when accompanied with a greater focus on preparedness and risk management, investment in social protection approaches and systems provides an opportunity for substantial later savings in the funds spent on humanitarian responses.

Coherence and coordination are key for integrated programme delivery

Social protection is recognized as one of the key interventions in multisectoral approaches to combating hunger and malnutrition, which requires the systematic promotion of complementary, consistent policies and programmes across sectors, including health, water, sanitation, agriculture and humanitarian assistance.

Coherence for improved food security and nutrition can be supported by high-level policies in national development strategies and plans and sectoral policy frameworks.[78] More dialogue between social protection practitioners and disaster-risk management specialists is needed to make social protection an effective instrument in building resilience and responding to shocks. Most countries in Asia and the Pacific realize the interlinkages between poverty and disasters and the need for multisectoral efforts to tackle the complex underlying vulnerabilities driving both.

Adequate coordination is also necessary to ensure that people and institutions work effectively across sectors. Food security and nutrition working groups and social protection working groups can be used to integrate the various actors and to promote coordinated action at the national and local levels.

Currently, the delivery of services that support better nutrition (e.g. social protection, health, sanitation) is often piecemeal and ultimately inadequate in responding to the complexity of malnutrition. Such delivery tends to be done

through vertical sectoral approaches, and the various service providers rarely coordinate their efforts. There is a need for more comprehensive and systematic approaches. For example, effective referral mechanisms and case-management systems are essential for ensuring that vulnerable children and households are identified, their needs are assessed correctly, and they receive sufficient cross-sectoral support to ensure positive outcomes.[79]

Ensure predictable finance

Predictable finance is instrumental for determining the success of social protection in tackling malnutrition. Thus, priority should be given to increasing spending on, and expanding the coverage of, social protection. Only 33.4 percent of mothers with newborns, 22.5 percent of unemployed persons and 9.4 percent of persons with a disability receive social protection benefits in Asia and the Pacific. The region spends, on average, 7.4 per cent of GDP on social protection, which is low compared with the world average of 11.2 per cent.[80] Predictable and protected funding for social protection programmes will also enable quick scaling up to respond to shocks.

Address inclusiveness and gender equality as a structural driver

Addressing inclusiveness and gender equality in nutrition-sensitive and shock-responsive social protection requires the disaggregation of data by sex, age and disability. It further requires the following considerations in policy and programming:[81]

- *Ensure women's access* – in scaling up social protection, women may be disproportionately excluded from benefits in emergencies,[82] and there is a strong need, therefore, to secure women's access, including through programme design.
- *Take into account intrahousehold dynamics*, especially when increasing the amount transferred. Although evidence generally shows that providing women with cash transfers has positive impacts on reducing gender-based violence, there is concern that, in certain circumstances, it may result in an increase in gender-based violence in households.[83]
- *Ensure that gender-transformative approaches are included through complementary programming.* Developing appropriate linkages with complementary programmes and services may help reduce adverse impacts and contribute to the longer-term objectives of empowerment and transformative change designed to overcome the social and economic barriers faced by women.

Conduct more research

Findings from evaluations suggest that knowledge is key. More research is needed on the intensity, type and delivery of nutrition education and its linkages with intrahousehold dynamics in the context of social protection programmes,[84] although findings from recent assessments suggest that it can play an important role. Given that many of the most successful results arising from the inclusion of nutrition education come from small (often donor-financed) pilots, there is also a need to understand the implications for scaling up pilots cost-effectively.

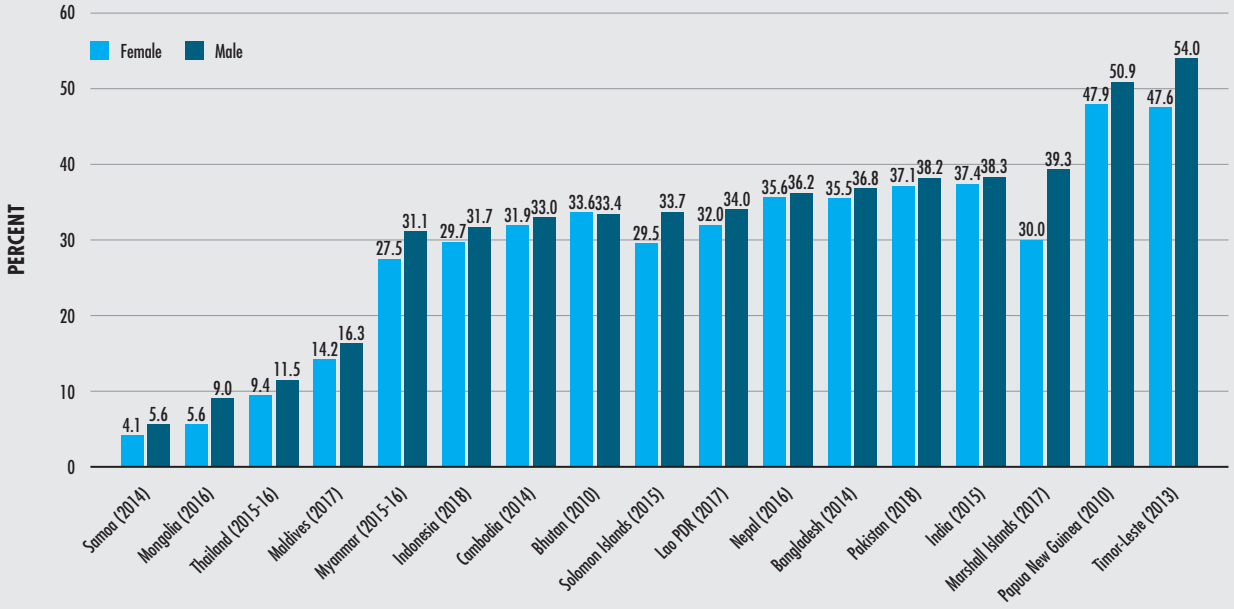
To sum up

The potential of social protection programmes to combat food insecurity and malnutrition is clear, but positive outcomes are not automatic. The aim, therefore, should be to apply specific nutrition-sensitive principles in the design, implementation, monitoring and evaluation of social protection programmes.

Poverty and malnutrition have multiple causes that cannot be addressed solely by any single sector or stakeholder. Protecting the socially vulnerable from poverty and exclusion and ensuring improved nutrition requires a multisectoral, multipartner approach operating at various levels.[85] Social protection can provide an effective platform for promoting linkages with other sectors to address the key social and economic determinants of malnutrition. ■

ANNEX TO PART 1

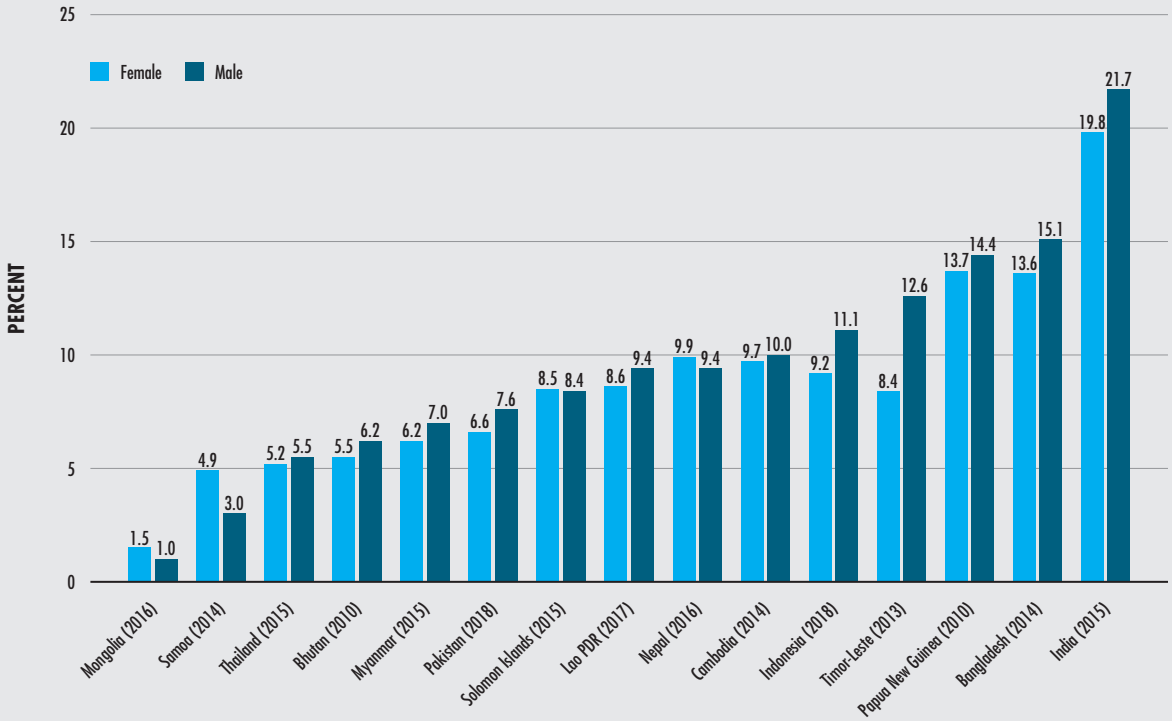
FIGURE A1
PREVALENCE OF CHILDHOOD STUNTING, SEX-DISAGGREGATED COUNTRY DATA



NOTE: Country estimates were updated for the Maldives (Demographic and Health Survey 2016–17).

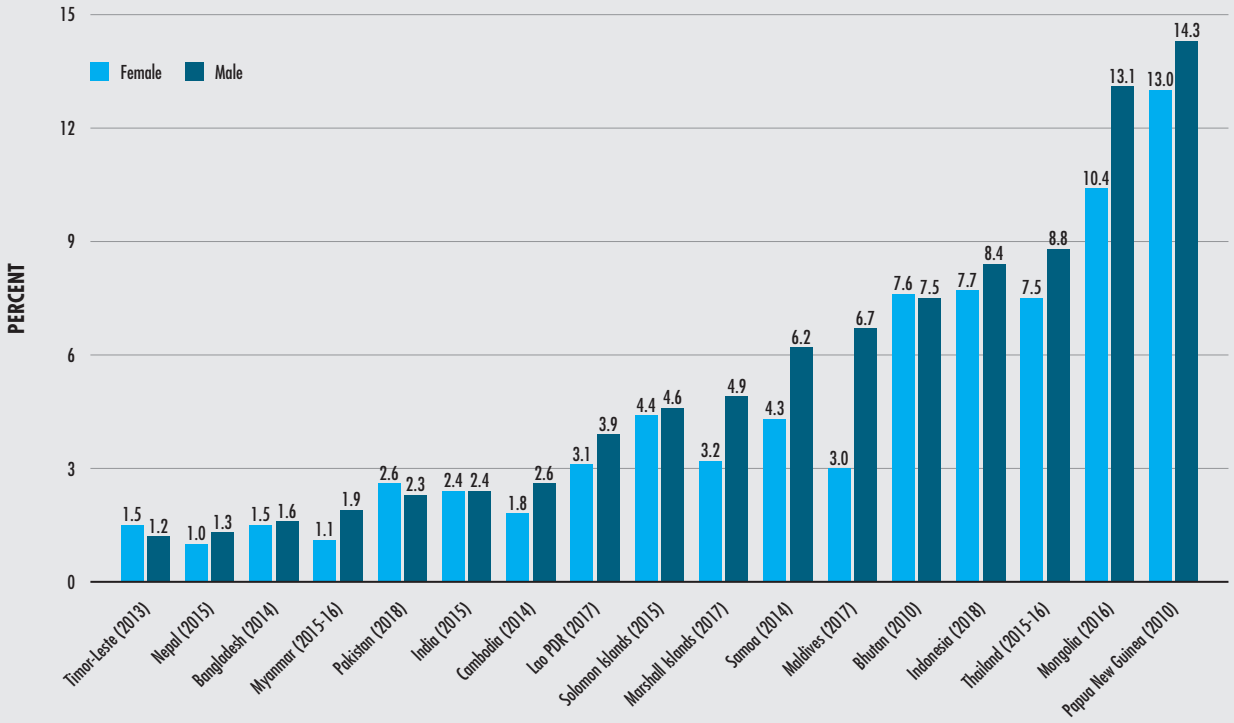
SOURCE: United Nations Children's Fund (UNICEF). Malnutrition (online). Stunting (national and disaggregated), by country. [Cited 28 August 2019]. https://data.unicef.org/topic/nutrition/malnutrition/

FIGURE A2
PREVALENCE OF CHILDHOOD WASTING, SEX-DISAGGREGATED COUNTRY DATA



SOURCE: United Nations Children's Fund (UNICEF). Malnutrition (online). Wasting (national and disaggregated), by country. [Cited 28 August 2019]. https://data.unicef.org/topic/nutrition/malnutrition/

FIGURE A3
PREVALENCE OF CHILDHOOD OVERWEIGHT, SEX-DISAGGREGATED COUNTRY DATA



NOTE: Country estimates were updated for the Maldives (Demographic and Health Survey 2016–17).

SOURCE: United Nations Children's Fund (UNICEF). Malnutrition (online). Stunting (national and disaggregated), by country. [Cited 28 August 2019]. https://data.unicef.org/topic/nutrition/malnutrition/

NOTES

NOTES TO PART 1

1 The definition of Asia and the Pacific used in this publication corresponds to FAO's regional office structure. Thus, Asia and the Pacific comprises Eastern, South-eastern and Southern Asia, and Oceania. Central and Western Asia are excluded. "Pacific" when used alone indicates Oceania excluding Australia and New Zealand.

2 Although sustainable agriculture is an important part of eradicating hunger and malnutrition, this report does not discuss the indicators in SDG 2 that pertain to sustainable agriculture.

3 In children, overweight is measured on the basis of weight for height, while stunting is measured on the basis of height for age. Thus, an individual child can be both shorter than a height-for-age standard and weigh more than a weight-for-height standard. In such cases, an individual suffers from a double burden of malnutrition (in this instance, both stunting and overweight). Another form of the double burden of malnutrition at the individual level would be an overweight child with micronutrient deficiencies.

4 World Health Organization (WHO). 2013. *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020*. Geneva, Switzerland. World Health Organization (WHO). 2014. *Global Targets 2025: To improve maternal, infant and young child nutrition*. Geneva, Switzerland (also available at www.who.int/nutrition/global-target-2025/en/).

5 Data availability refers to the UNICEF-WHO-World Bank Joint child malnutrition estimates.

6 http://apps.who.int/gho/data/node.main.CHILDSTUNTED?lang=en

7 For methodological details, see FAO, International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF), World Food Programme (WFP) and World Health Organization (WHO). 2019. *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns*. Rome, FAO.

8 Throughout this publication, and especially in Part 1, totals may not sum due to rounding.

9 For methodological details, see FAO, International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF), World Food Programme (WFP) & World Health Organization (WHO). *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns*. Rome, FAO.

10 Many countries have not validated estimates of food insecurity based on the Food Insecurity Experience Scale, so the analysis presented here addresses only the subregional level. The subregional estimates include the following countries: Eastern Asia – China, Japan, Mongolia and the Republic of Korea; South-eastern Asia – Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste and Viet Nam; and Southern Asia – Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), the Maldives, Nepal, Pakistan and Sri Lanka. No estimates are available for any Pacific Island countries.

11 CMIE and Business Standard: Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE). 2019. 11 million jobs lost in 2018. Text by M. Vyas. In: CMIE [online]. Mumbai, India. [Cited 10 May 2019]. https://www.cmie.com/kommon/bin/sr.php?kall=warticle&dt=2019-01-08%2009:28:37&msec=666

12 IMF DataMapper – World Economic Outlook (April 2019). In: IMF [online]. Washington, DC. [Cited 6 May 2019]. https://www.imf.org/external/datamapper/datasets/WEO

13 Figure 4 shows data for the prevalence of severe food insecurity. A similar pattern holds for the category "moderate or severe food insecurity".

14 United Nations Development Programme (UNDP) human development reports [online]. [Cited 13 October 2019]. http://hdr.undp.org/en/composite/GII

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39 The eight food groups are: 1) grains, roots and tubers; 2) legumes and nuts; 3) dairy products; 4) flesh foods, including meat, poultry and fish; 5) eggs; 6) vitamin A-rich fruits and vegetables; 7) other fruits and vegetables; and 8) breastmilk.

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NOTES TO PART 2

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4 Gini coefficients will remain unchanged if all people have equal percentage rates of income growth, but this is not equivalent to an equal sharing of additional income in absolute terms. Imagine two people with incomes of USD 1 000 and USD 100 respectively, and there is an increase in total income of USD 220, with USD 200 going to the rich party and USD 20 to the poor party. Inequality, as measured by the Gini coefficient, will remain constant even though the richer person received 91 percent of the additional income, simply because the rich person had 91 percent of the initial income. FAO. 2018. *Dynamic development, shifting demographics, changing diets*. Bangkok. 172 p.

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NOTES TO PART 3

1 The Social Protection Interagency Cooperation Board refers to social protection as "a set of policies and programmes aimed at preventing or protecting all people against poverty, vulnerability and social exclusion throughout their life cycle, with a particular emphasis towards vulnerable groups". Social protection is fundamental to achieving the SDGs, promoting social justice and realizing the human right to social protection. All social protection benefits represent social transfers, either in cash or in kind, and involves a transfer of income or services from one group in a society to another (e.g. from the active population to the old, the healthy to the sick or the affluent to the poor). Social protection comprises nine main policy areas (ILO, 2017): 1) child and family benefits; 2) maternity/parental leave; 3) unemployment support; 4) employment injury benefits; 5) sickness benefits; 6) health protection; 7) old-age benefits; 8) disability benefits; and 9) survivors' benefits. Social protection systems may address these nine policy areas through a mix of contributory schemes (e.g. social insurance) and non-contributory tax-financed social assistance. Benefits and schemes also differ in modality (e.g. cash, food, near-cash or subsidies) and targeting approach (e.g. universal, categorical or [poverty-] targeted benefits). ILO. 2017. *World Social Protection Report 2017–19: Universal social protection to achieve the Sustainable Development Goals*. Geneva, Switzerland (available at: https://www.ilo.org/global/publications/books/WCMS_604882/lang--en/index.htm).

2 Social protection may contribute to multiple objectives (and SDGs) such as alleviating and preventing poverty, vulnerability and social exclusion (SDG 1.3); eliminating hunger by promoting food security and access to improved nutrition (SDG 2); containing and reducing inequality, including income inequality (SDG 10.4); achieving health outcomes by contributing to realizing universal health coverage (SDG 3.8); gender equality by recognizing and valuing unpaid care and domestic work (SDG 5.4); the promotion of decent work and inclusive growth (SDG 8.5); and facilitating access to basic social services such as quality education (SDG 4) and clean water and sanitation (SDG 6). Sabates-Wheeler, R. & Deveraux, S. 2018. *Social protection and the World Food Programme*. Occasional Paper No. 25. Rome, World Food Programme (WFP) (available at https://docs.wfp.org/api/documents/WFP-0000073283/download).

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4 Perhaps best demonstrated in the role that social protection programmes played in the context of the 2008 global food and financial crises. O'Brien, C., Scott, Z., Smith, G., Barca, V., Kardan, A., Holmes, R., Watson, C. & Congrave, J. 2018. *Shock responsive social protection systems: Synthesis report*. Oxford, UK, Oxford Policy Management (OPM) (available at: https://www.odi.org/publications/11021-shock-responsive-social-protection-systems-synthesis-report).

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6 UNESCAP 2018. *Policy guide: How to finance inclusive social protection*. Bangkok. https://www.unescap.org/sites/default/files/How_finance_inclusive_social_protection.pdf

7 The old-age pension and disability benefit transfers would be paid at a value of 10 per cent of GDP per capita, and the child benefit would be paid at a value of 4 per cent of GDP per capita.

8 UNESCAP 2018. *Policy guide: How to finance inclusive social protection*. Bangkok. https://www.unescap.org/sites/default/files/How_finance_inclusive_social_protection.pdf

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12 Progressive pro-poor taxation systems grounded in the concept of solidarity emphasize taxing personal income, wealth and capital gains, rather than relying on broad support from consumption, such as VAT, which is usually regressive and anti-poor. UNESCAP 2018.

13 UNESCAP 2018. *Policy guide: How to finance inclusive social protection.* Bangkokhttps://www.unescap.org/sites/default/files/How_finance_inclusive_social_protection.pdf

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15 WHO estimates that a 5–10 per cent increase of the tobacco tax rate could net up to US$1.4 billion per annum in additional revenue in low-income countries and US$5 billion in middle-income countries.

16 Poor households participating in 4Ps in the Philippines, for example, reported spending 38 percent more per capita on protein-rich food such as dairy products and eggs. Moreover, poor households reported an increase in the consumption of more nutritious foods among their children. Mothers reported that they were feeding more high-protein food such as eggs and fish to young children. In Indonesia, children aged 18–60 months participating in the PKH were more likely to consume milk and to have consumed eggs. Cahyadi, N., Hanna, R., Olken, B.A., Prima, R.A., Satriawan, E. & Syamsulhakim, G.M.E. 2018. *Cumulative impacts of conditional cash transfer programs: experimental evidence from Indonesia* (available at https://economics.mit.edu/files/15075). World Bank. 2014. *Philippines Conditional Cash Transfer Program impact evaluation 2012.*

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31 Clearly stating nutrition objectives and the various pathways through which social protection interventions affect food security and nutrition, as well as including food security and nutrition indicators in the monitoring and evaluation frameworks, will help in identifying required actions and measuring the impact. This, in turn, can greatly enhance the positive impacts of social protection interventions on nutrition. Some cash-transfer programmes include the objective of improving nutrition. Some longstanding programmes incorporate it in human development objectives to help break the vicious cycle of intergenerational poverty.

32 The inclusion of appropriate direct and indirect indicators enables the tracking of progress. Indicators will vary depending on the objectives, addressing the immediate determinants (e.g. minimum dietary diversity for women of reproductive age, and the percentage of children with diarrhoea), underlying determinants (e.g. the early initiation of breastfeeding, growth, and the number of antenatal visits) and basic determinants (e.g. change in income or increase in the production of goods for own consumption) of malnutrition.

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Working for #ZeroHunger

2019

ASIA AND THE PACIFIC
REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION
PLACING NUTRITION AT THE CENTRE OF SOCIAL PROTECTION

KEY MESSAGES

To achieve SDG2 – "Zero Hunger" – by the end of 2030, Asia and the Pacific must lift more than 3 million people out of hunger each and every month.

➔ **Although substantial advances have been made in Asia and the Pacific towards eliminating hunger and malnutrition, progress has slowed recently.** This is concerning because nearly half a billion people in the region are still undernourished. Many stakeholders are making serious efforts to reduce malnutrition, but the timeline for achieving Sustainable Development Goal (SDG) 2 is getting shorter. Efforts need to be scaled up to tackle persistent problems as well as emerging threats.

➔ **The prevalence of stunting and wasting in the region remains high, with stunting rates exceeding 20 percent in a majority of the region's countries.** An estimated 77.2 million children under five years of age were stunted in 2018, and 32.5 million suffered from wasting.

➔ **The fight against child undernutrition is complicated by a general and growing prevalence of other forms of malnutrition.** In many countries in the region, child undernutrition, overweight, obesity and micronutrient deficiencies are converging at the national level, in individual households, and even, in some cases, in the same person. A multi-stakeholder approach is needed to address the multiple burdens of malnutrition.

➔ **To measure progress towards food security and better nutrition, more investment in high-quality data collection is needed.** Indeed, some countries are investing more, partly because of the need to monitor progress towards the SDGs. But, in many countries, a lack of good-quality data in national surveys of nutrition status limits the ability to make informed policies to address malnutrition in children.

➔ **The prevalence of adult obesity is increasing in Asia and the Pacific.** The most effective policies for reducing this problem are those aimed at prevention, especially by ensuring healthy diets for children to prevent stunting and obesity. The rates of obesity-related diseases, including diabetes and diet-related non-communicable diseases (NCDs), have soared in many countries in the region, particularly in the Pacific Islands, straining national healthcare budgets and causing losses in productivity.

➔ **Many countries in the region have introduced taxes on sugar-sweetened beverages to combat obesity and the increase in diet-related NCDs.** A growing body of evidence suggests that such taxes can be effective public interventions.

➔ **The fortification of foods and condiments – for example with iodine, iron, folic acid, vitamin A, vitamin D, and B vitamins – is underway in several countries in the region.** Some of this involves rice, but countries are also publishing national standards and regulations for the fortification of wheat flour, milk, edible oils and other foods. Such efforts should be strengthened to combat micronutrient deficiencies.

➔ **There is scope in the region to enhance the use of social protection to achieve improved nutrition.** To make more rapid progress, the design, implementation, monitoring and evaluation of social protection systems should incorporate objectives and principles on food security and nutrition. Empowering women is central to this approach.

➔ **Social protection can also be more nutrition-sensitive by being shock-responsive, so that shocks do not lead to adverse coping mechanisms and poor nutritional outcomes.** Examples include designing flexible social protection systems that can respond to shocks and build resilience among the poor and vulnerable.

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