

# LEVELS AND TRENDS IN CHILD MALNUTRITION

UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates

Key findings of the 2020 edition



**STUNTING**  
**144 million**

Stunting affected an estimated 21.3 per cent or 144.0 million children under 5 globally in 2019.



**WASTING**  
**47 million**

In 2019, wasting continued to threaten the lives of an estimated 6.9 per cent or 47.0 million children under 5 globally.



**OVERWEIGHT**  
**38 million**

An estimated 5.6 per cent or 38.3 million children under 5 around the world were overweight in 2019.

These new estimates supersede former analyses and results published by UNICEF, WHO and the World Bank Group.



# The ultimate aim is for all children to be free of malnutrition in all its forms

**Good nutrition allows children to survive, grow, develop, learn, play, participate and contribute** – while malnutrition robs children of their futures and leaves young lives hanging in the balance.

Stunting is the devastating result of poor nutrition in-utero and early childhood. Children suffering from stunting may never attain their full possible height and their brains may never develop to their full cognitive potential. Globally, 144.0 million children under 5 suffer from stunting. These children begin their lives at a marked disadvantage: they face learning difficulties in school, earn less as adults, and face barriers to participation in their communities.

Wasting in children is the life-threatening result of poor nutrient intake and/or disease. Children suffering from wasting have weakened immunity, are susceptible to long term developmental delays, and face an increased risk of death, particularly when wasting is severe. These children require urgent feeding, treatment and care to survive. In 2019, 47.0 million children under 5 were wasted of which 14.3 million were severely wasted.

There is also an emerging face of malnutrition: childhood overweight and obesity. There are now 38.3 million overweight children globally, an increase of 8 million since 2000. The emergence of overweight and obesity has been shaped, at least in part, by industry marketing and greater

access to processed foods, along with lower levels of physical activity.

While malnutrition can manifest in multiple ways, the path to prevention is virtually identical: adequate maternal nutrition before and during pregnancy and lactation; optimal breastfeeding in the first two years of life; nutritious, diverse and safe foods in early childhood; and a healthy environment, including access to basic health, water, hygiene and sanitation services and opportunities for safe physical activity. These key ingredients can deliver a world where children are free from all forms of malnutrition.

Despite this opportunity, the UNICEF, WHO, World Bank global and regional child malnutrition estimates reveal that we are still far from a world without malnutrition. The joint estimates, published in March 2020, cover indicators of stunting, wasting, severe wasting and overweight among children under 5, and reveal insufficient progress to reach the World Health Assembly targets set for 2025 and the Sustainable Development Goals set for 2030.

Improving children’s nutrition requires effective and sustained multi-sectoral nutrition programming over the long term, and many countries are moving in the right direction. Regular data collection is critical to monitor and analyse country, regional and global progress going forward.

## Forms of malnutrition\* highlighted in this key findings report



**Stunting** refers to a child who is too short for his or her age. These children can suffer severe irreversible physical and cognitive damage that accompanies stunted growth. The devastating effects of stunting can last a lifetime and even affect the next generation.



**Overweight** refers to a child who is too heavy for his or her height. This form of malnutrition results from energy intakes from food and beverages that exceed children’s energy requirements. Overweight increases the risk of diet-related noncommunicable diseases later in life.



**Wasting** refers to a child who is too thin for his or her height. Wasting is the result of recent rapid weight loss or the failure to gain weight. A child who is moderately or severely wasted has an increased risk of death, but treatment is possible.



**Overweight and stunted**



**Stunted and wasted**

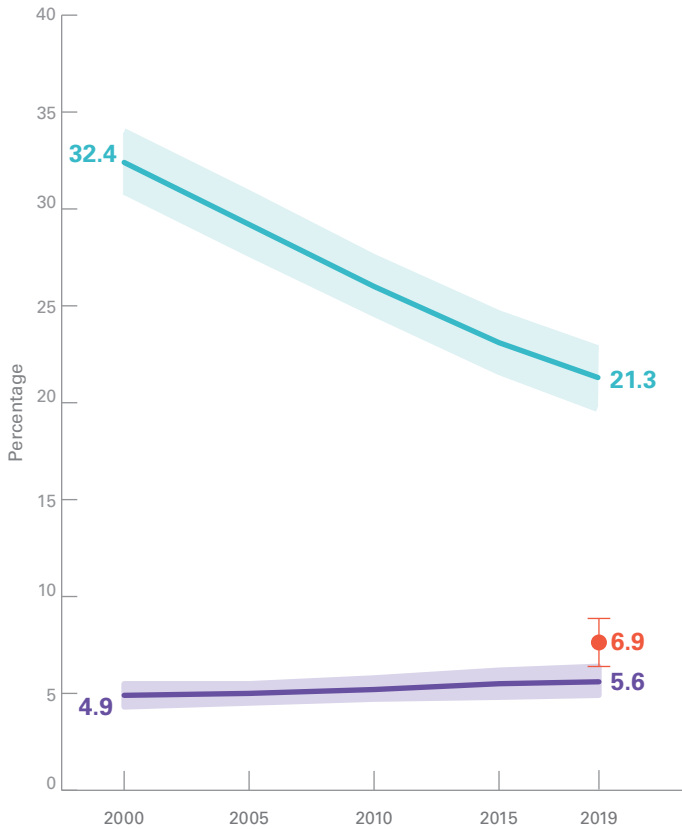
\* Some children suffer from more than one form of malnutrition – such as **stunting and overweight** or **stunting and wasting**. There are currently no joint global or regional estimates for these combined conditions.



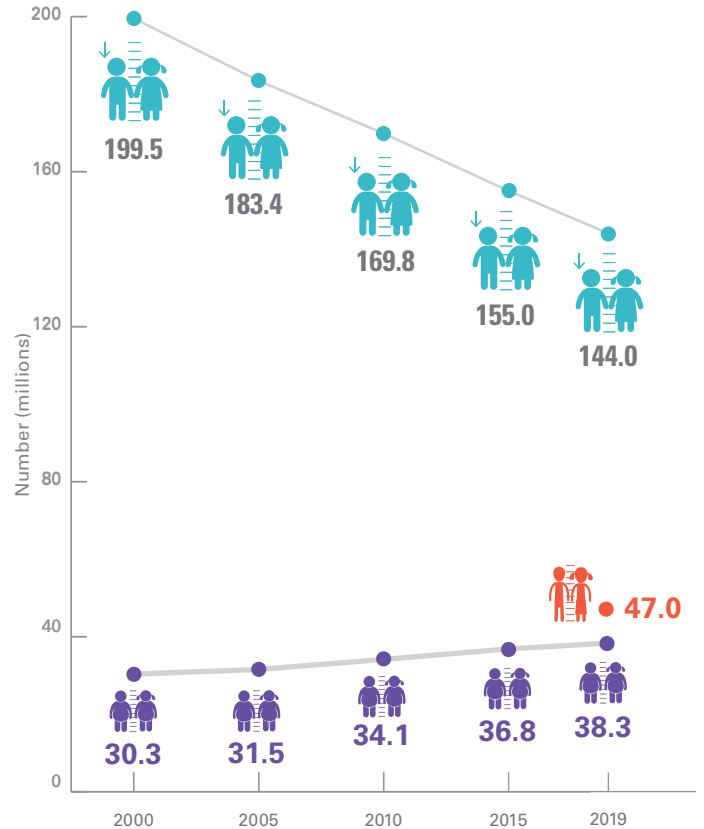
# GLOBAL OVERVIEW

Malnutrition rates remain alarming. Stunting is declining too slowly while wasting still impacts the lives of far too many young children

stunting 
 wasting 
 overweight 
 95% confidence interval



Percentage of stunted, overweight and wasted children under 5, global, 2000–2019



Number (millions) of stunted, overweight and wasted children under 5, global, 2000–2019

Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. See Notes on Data on page 14 on why only one time point is presented for wasting on the graphs above.

## Africa and Asia bear the greatest share of all forms of malnutrition



In 2019, more than half of all **stunted** children under 5 lived in Asia and two out of five lived in Africa.

In 2019, more than two thirds of all **wasted** children under 5 lived in Asia and more than one quarter lived in Africa.

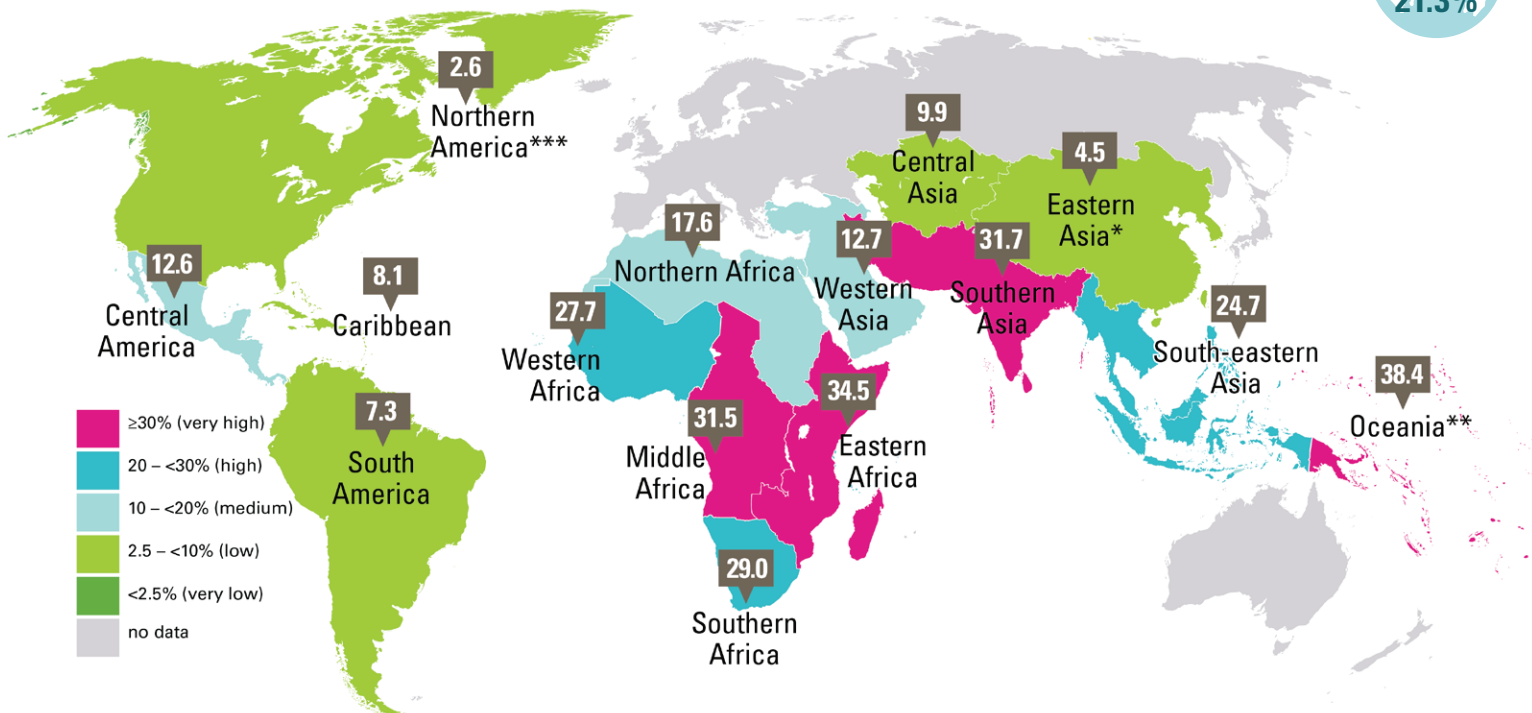
In 2019, almost half of all **overweight** children under 5 lived in Asia and one quarter lived in Africa.

# Stunting PREVALENCE

## Seven sub-regions have a high or very high stunting prevalence

Percentage of stunted children under 5, by United Nations sub-region, 2019

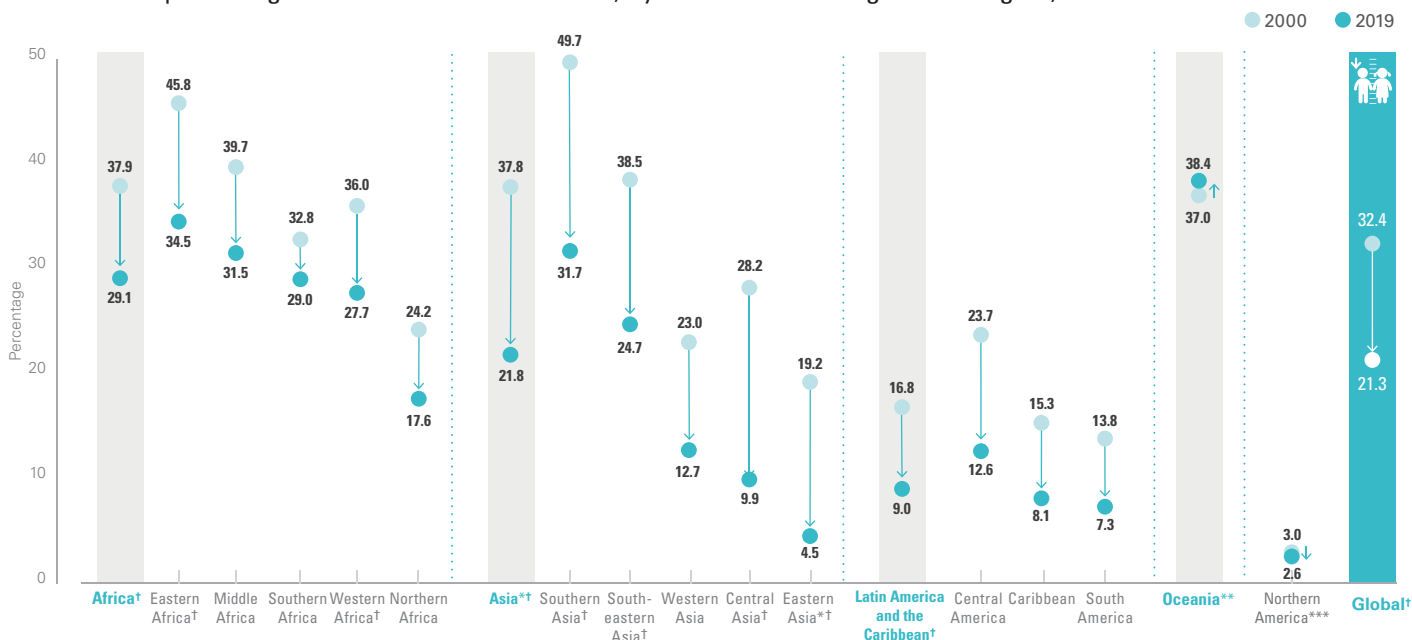
GLOBAL  
21.3%



Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand; \*\*\*Northern America sub-regional estimate based on United States data. There is no estimate available for the sub-regions of Europe or Australia and New Zealand due to insufficient population coverage. These maps are stylized and not to scale and do not reflect a position by UNICEF, WHO or World Bank Group on the legal status of any country or territory or the delimitation of any frontiers.

## Large disparities in stunting reduction exist within regions/between sub-regions

Trends in the percentage of stunted children under 5, by United Nations region/sub-region, 2000 and 2019



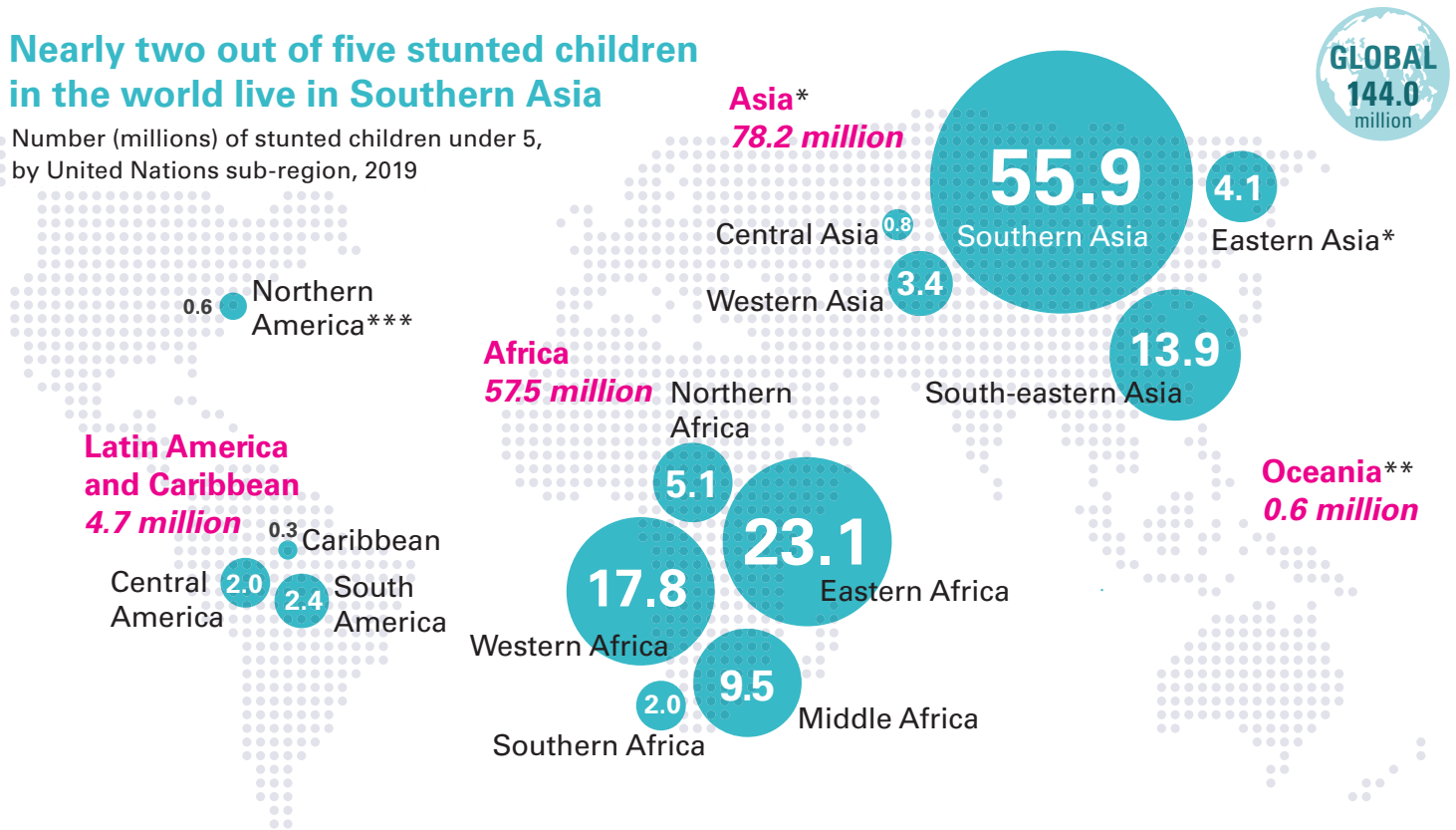
Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Asia and Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand; \*\*\*Northern America sub-regional estimates based on United States data. There is no estimate available for the More Developed Region or for sub-regions of Europe or Australia and New Zealand due to insufficient population coverage. †represents regions/sub-regions where the change has been statistically significant; see page 12 for the 95% confidence intervals for graphed estimates.

# Stunting

## NUMBERS AFFECTED

### Nearly two out of five stunted children in the world live in Southern Asia

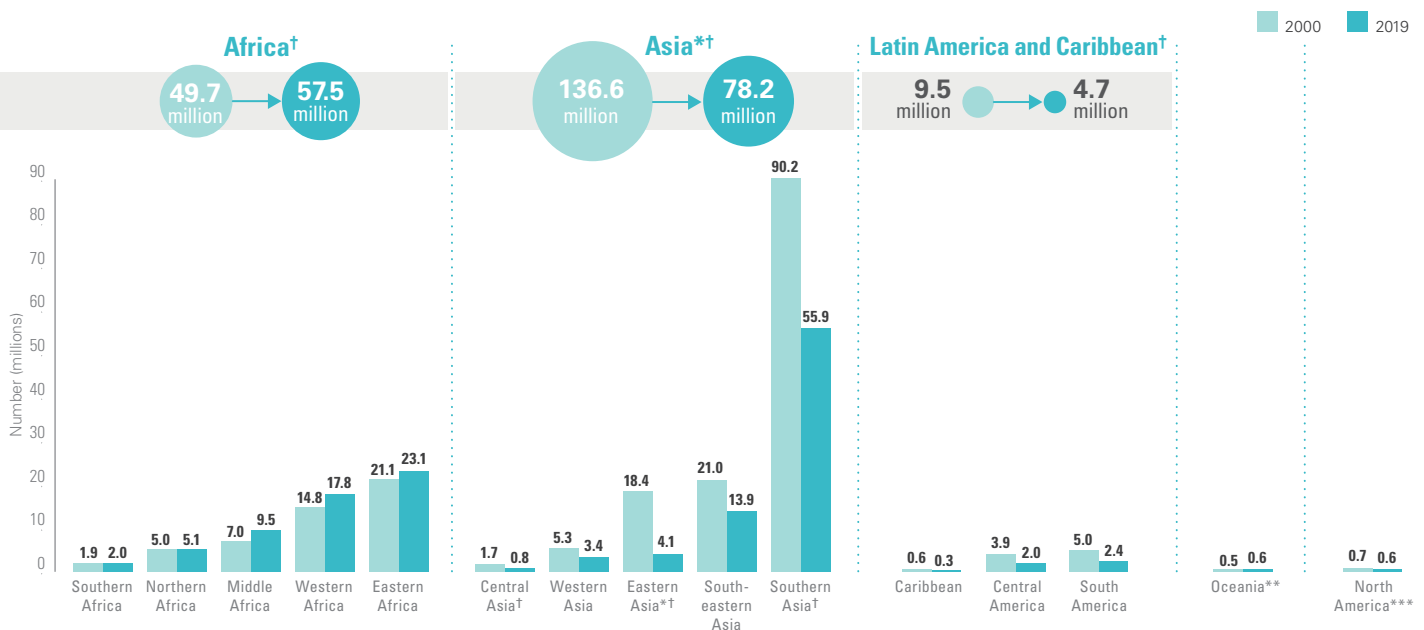
Number (millions) of stunted children under 5, by United Nations sub-region, 2019



Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand; \*\*\*The Northern America sub-regional estimate based on United States data. There is no estimate available for the More Developed Region or for sub-regions of Europe or Australia and New Zealand due to insufficient population coverage. Aggregates may not add up due to rounding and/or lack of estimates for the More Developed Region.

### Africa is the only region where the number of stunted children has risen

Trends in the number (millions) of stunted children under 5, by United Nations region/sub-region, 2000 and 2019



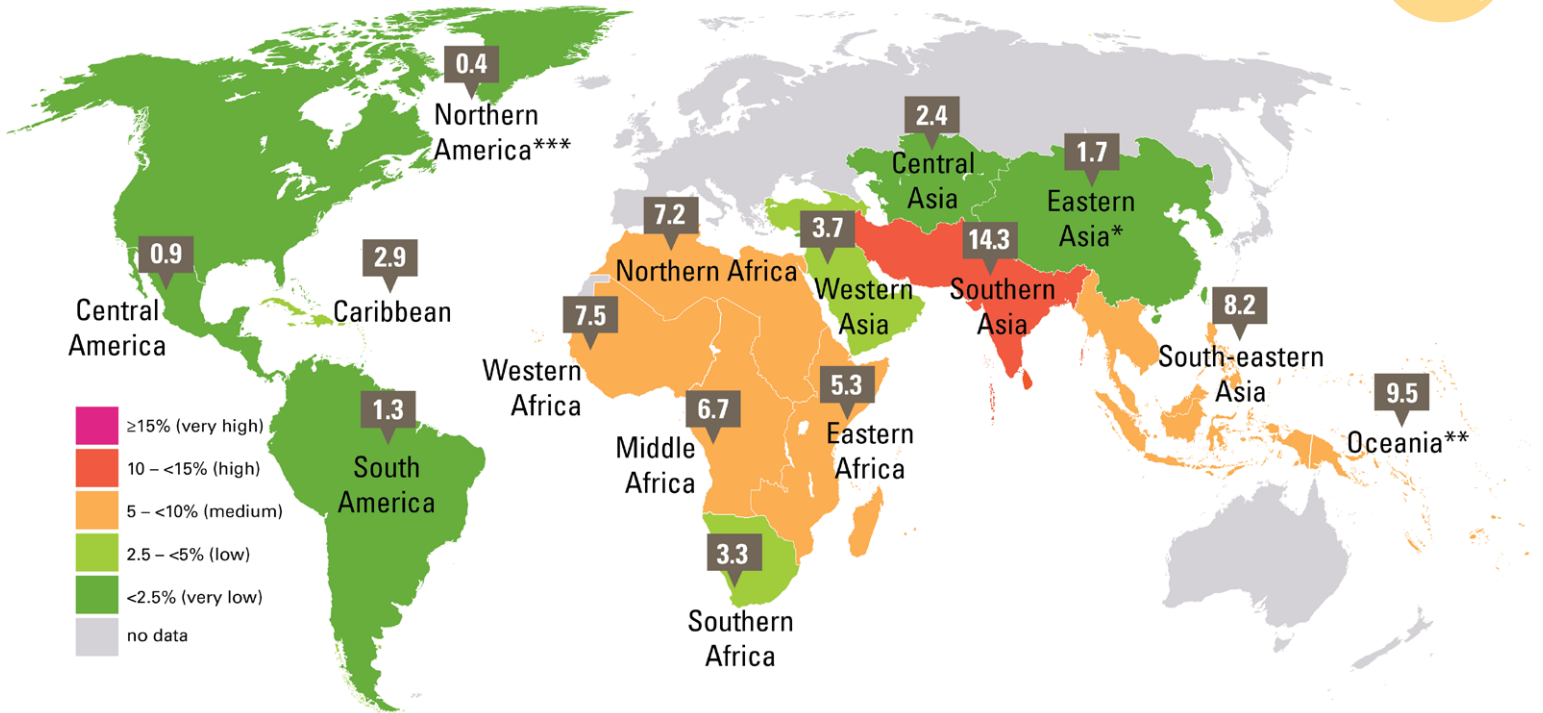
Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Asia and Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand; \*\*\*Northern America sub-regional estimates based on United States data. There is no estimate available for the More Developed Region or for sub-regions of Europe or Australia and New Zealand due to insufficient population coverage. †represents regions/sub-regions where the change has been statistically significant; see page 13 for the 95% confidence intervals for graphed estimates.



# Wasting PREVALENCE

## Southern Asia is the sub-region with the highest wasting prevalence in the world

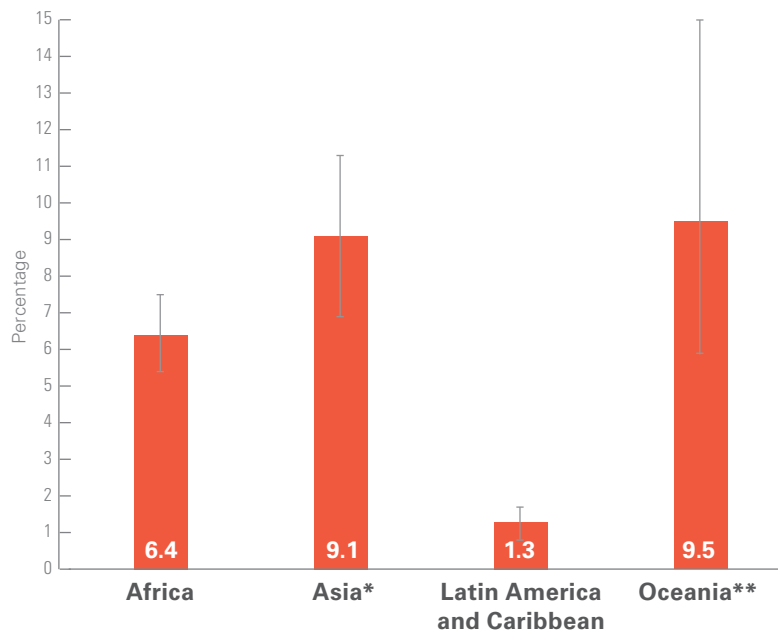
Percentage of wasted children under 5, by United Nations sub-region, 2019



Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand; \*\*\*Northern America sub-regional estimate based on United States data. There is no estimate available for the sub-regions of Europe or Australia and New Zealand due to insufficient population coverage. These maps are stylized and not to scale and do not reflect a position by UNICEF, WHO or World Bank Group on the legal status of any country or territory or the delimitation of any frontiers. The legend contains a category for ≥15 per cent (pink) but there is no sub-region with a prevalence this high.

## Millions of young lives are in jeopardy around the globe due to wasting

Percentage of wasted children under 5, by United Nations region, 2019



In Asia and Oceania, wasting is putting nearly **one in ten** children under 5 at increased risk of death

Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Includes 95% confidence interval. Note: \*Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand. There is no estimate available for the More Developed Region due to insufficient population coverage.



# Wasting

## NUMBERS AFFECTED

### More than half of all wasted children in the world live in Southern Asia

Number (millions) of wasted children under 5, by United Nations sub-region, 2019



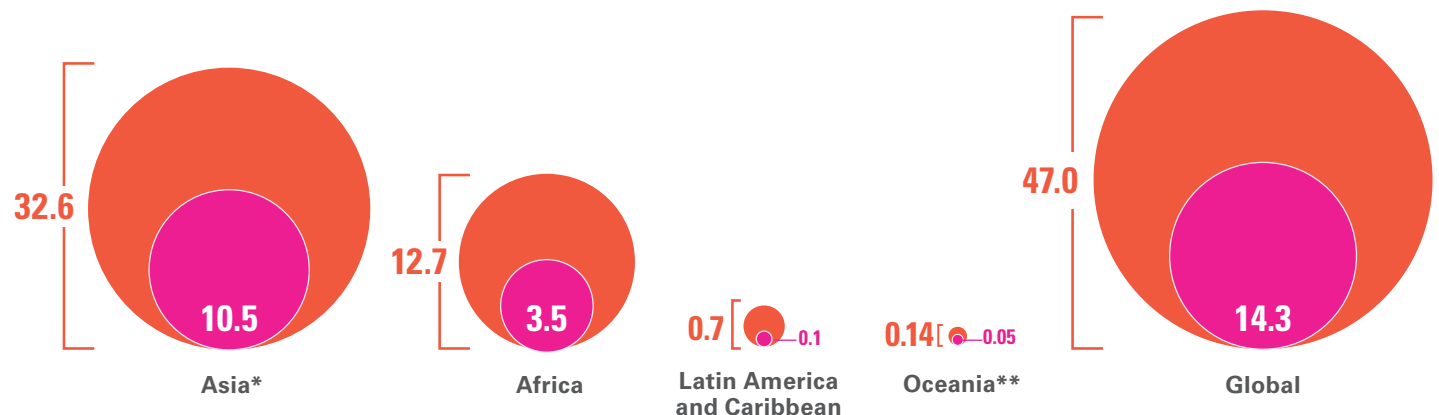
Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand; \*\*\*The Northern America sub-regional estimate based on United States data. There is no estimate available for the More Developed Region or for sub-regions of Europe or Australia and New Zealand due to insufficient population coverage. Aggregates may not add up due to rounding and/or lack of estimates for the More Developed Region.

### Asia is home to the majority of children under 5 suffering from wasting and severe wasting

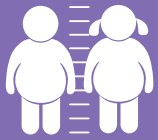
Number of wasted and severely wasted children under 5, by United Nations region, 2019

- Number of children under 5 wasted (moderate and severe)
- Number of children under 5 wasted (severe only)

47.0 million wasted of which 14.3 million are severely wasted



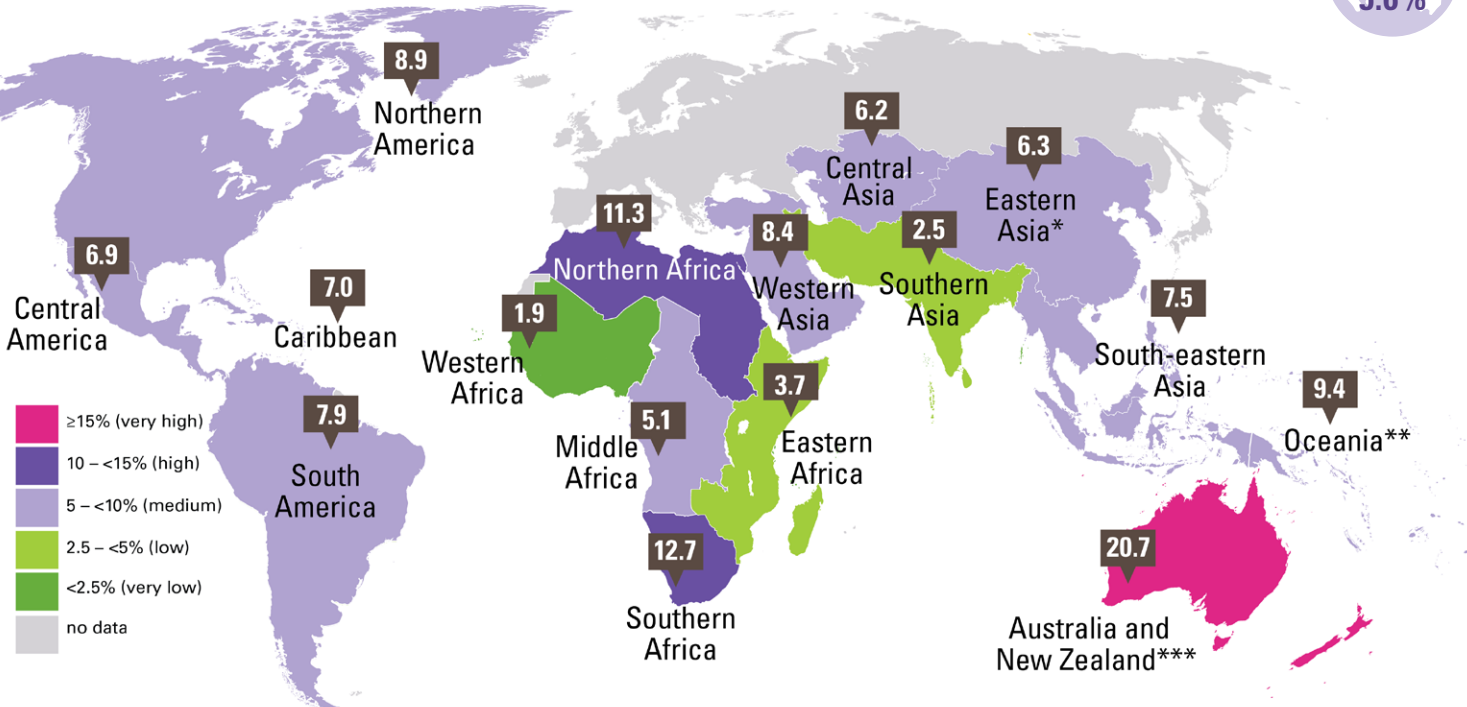
Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand. There is no estimate available for the More Developed Region due to insufficient population coverage. Aggregates may not add up due to rounding and/or lack of estimates for the More Developed Region.



# Overweight PREVALENCE

## Overweight is a concern in almost all regions of the world

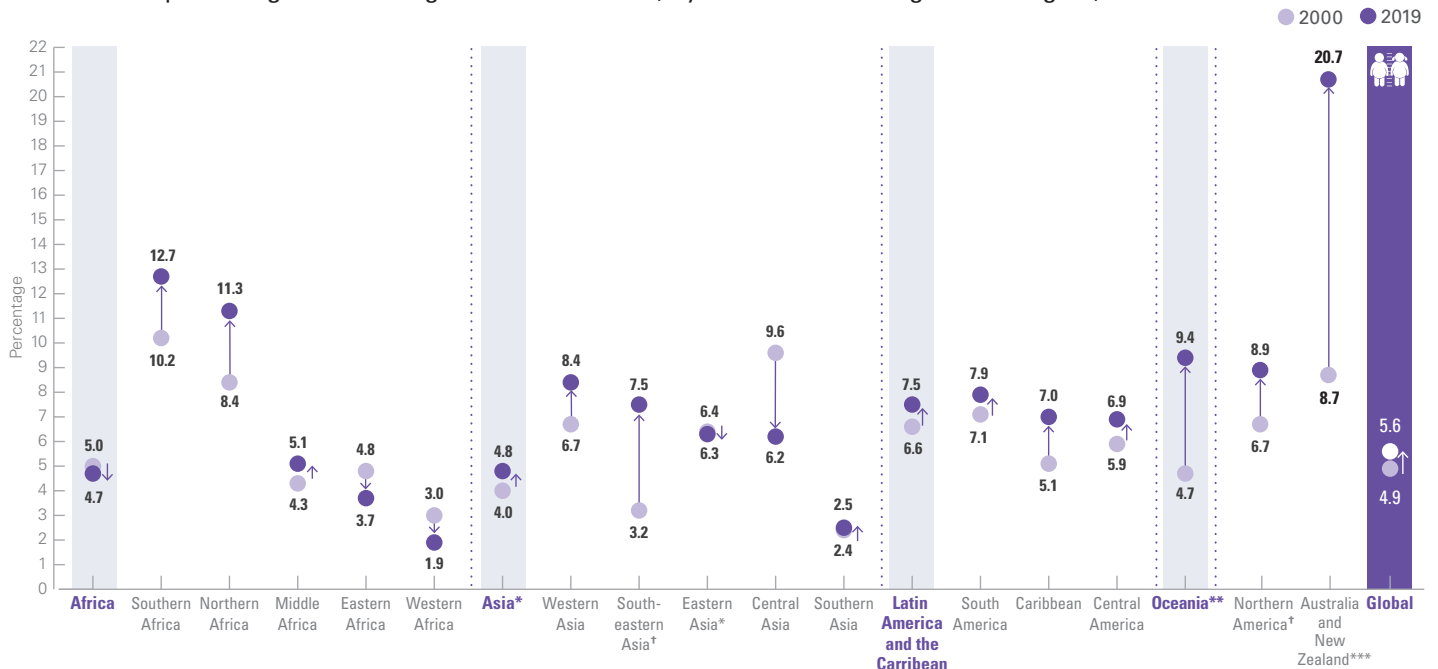
Percentage of overweight children under 5, by United Nations sub-region, 2019



Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand, \*\*\*The Australia and New Zealand sub-regional estimate is based only on Australia data. There is no estimate available for the sub-region of Europe due to insufficient population coverage. These maps are stylized and not to scale and do not reflect a position by UNICEF, WHO or World Bank Group on the legal status of any country or territory or the delimitation of any frontiers.

## There has been no progress to stem the rate of overweight in nearly 20 years

Trends in the percentage of overweight children under 5, by United Nations region/sub-region, 2000 and 2019



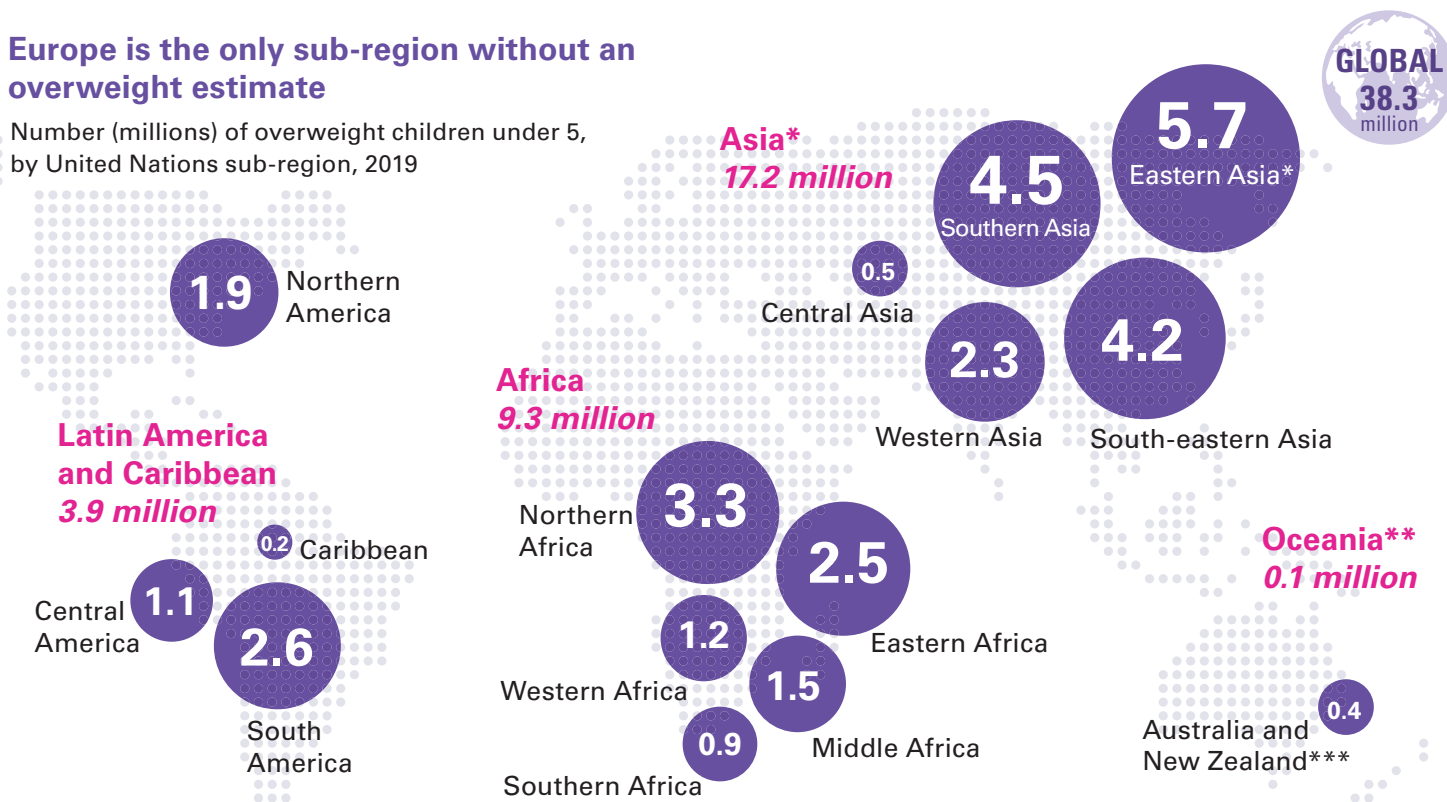
Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Asia and Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand. \*\*\*The Australia and New Zealand sub-regional estimates are based only on Australia data. There is no estimate available for the More Developed Region or for the sub-region of Europe due to insufficient population coverage. †represents sub-regions where the change has been statistically significant; see page 12 for the 95% confidence intervals for graphed estimates.



# Overweight NUMBERS AFFECTED

## Europe is the only sub-region without an overweight estimate

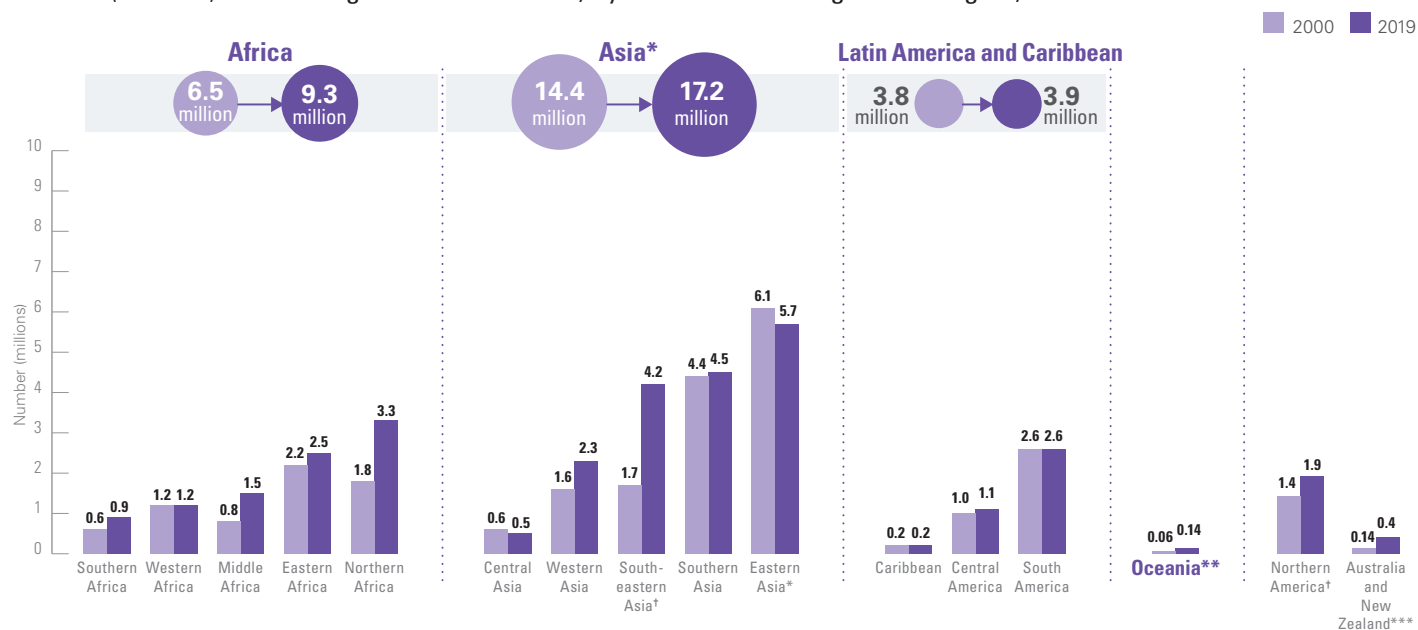
Number (millions) of overweight children under 5, by United Nations sub-region, 2019



Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand. \*\*\*The Australia and New Zealand sub-regional estimate is based only on Australia data. There is no estimate available for the More Developed Region or for the sub-region of Europe due to insufficient population coverage. Aggregates may not add up due to rounding and/or lack of estimates for the More Developed Region.

## South-eastern Asia and Northern America are the only sub-regions which had a significant increase in the number of overweight children since 2000

Number (millions) of overweight children under 5, by United Nations region/sub-region, 2000 and 2019

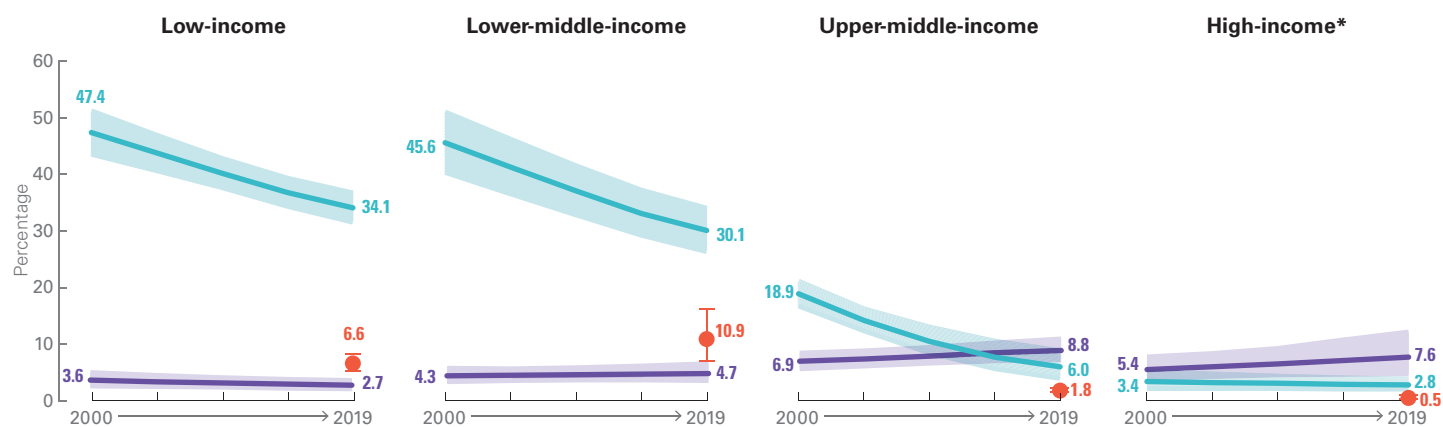


Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*Asia and Eastern Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand. \*\*\*The Australia and New Zealand sub-regional estimates are based only on Australia data. There is no estimate available for the More Developed Region or for the sub-region of Europe due to insufficient population coverage. †represents sub-regions where the change has been statistically significant; see page 13 for the 95% confidence intervals for graphed estimates.

## TRENDS

### Upper-middle-income countries reduced their stunting prevalence by more than two-thirds since 2000, while low-income and lower-middle income countries only achieved a decrease of one third

Percentage of stunted, overweight and wasted children under 5, by country income classification, 2000 – 2019

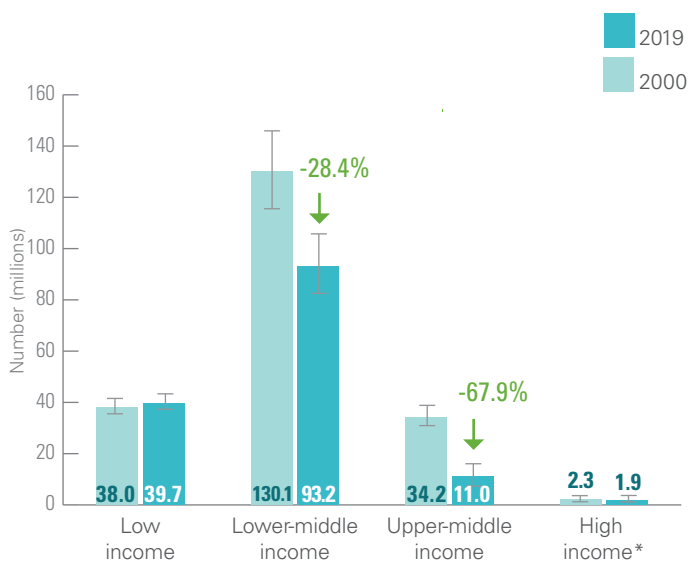


Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition.  
 Note: \*High-income countries: low (<50 per cent) population coverage in all time periods for overweight and wasting, and consecutive low population coverage in 2000 for stunting; interpret with caution.

stunting 
 wasting 
 overweight 
 95% confidence interval

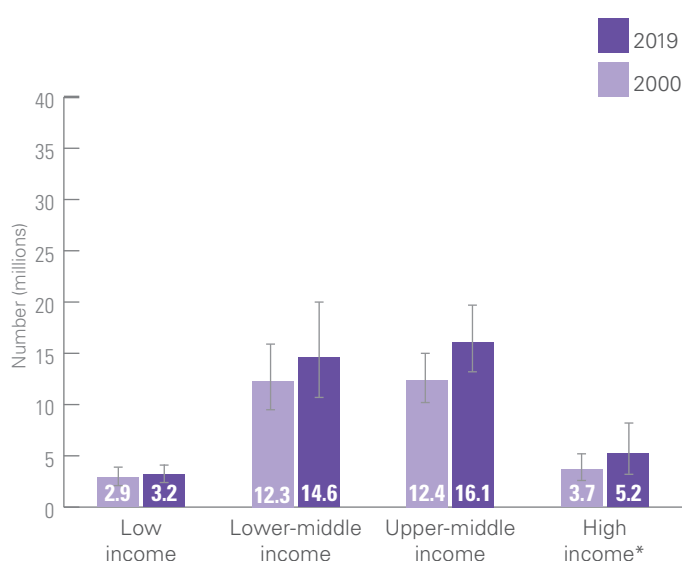
### Upper-middle-income countries have the largest relative declines in the number of stunted children of all income groups

Number of stunted children under 5, by country income classification, 2000 and 2019



### There has been no progress to stem the rate of overweight in nearly 20 years in any country-income group

Number of overweight children under 5, by country income classification, 2000 and 2019



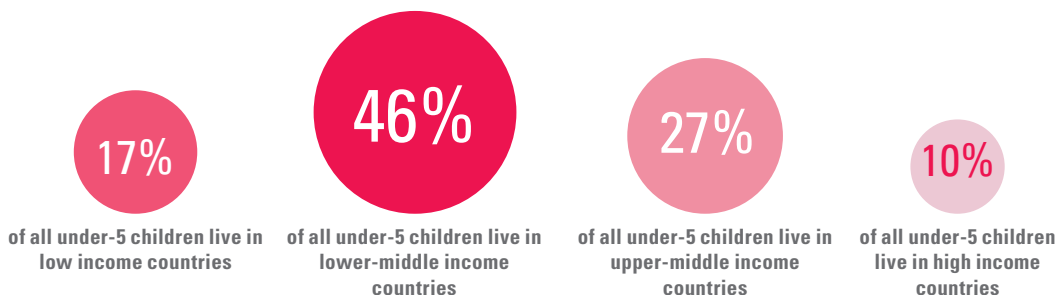
Source: UNICEF, WHO, World Bank Group joint malnutrition estimates, 2020 edition. Note: \*High-income countries: consecutive low (<50 per cent) population coverage in 2000 and 2019 for overweight and in 2000 for stunting; interpret with caution. Based on FY2020 World Bank income classification. The values for “percentage change since 2000” are based on calculations using unrounded estimates and therefore might not match values calculated using the rounded estimates presented in this brochure.

# Country Income Classification

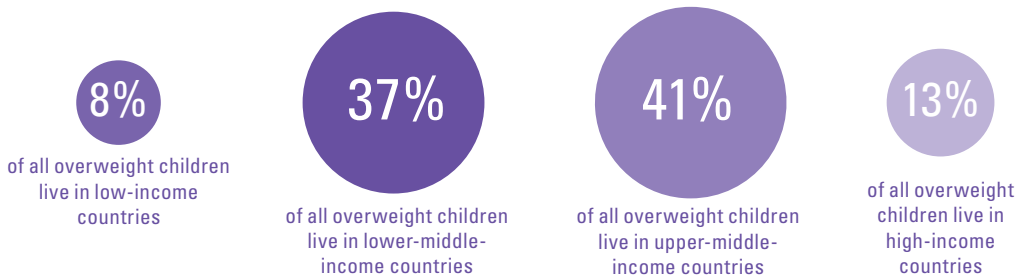
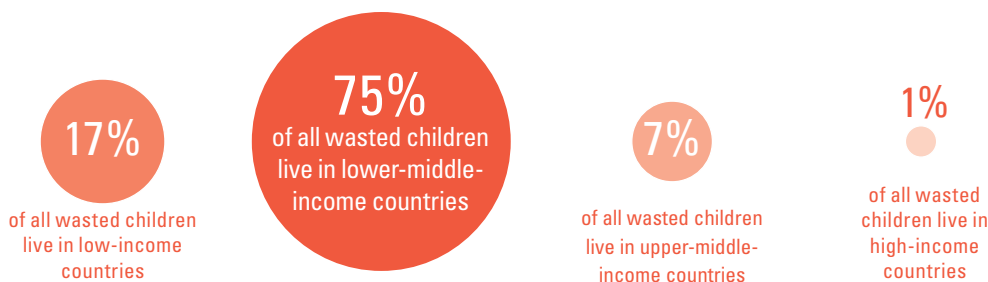
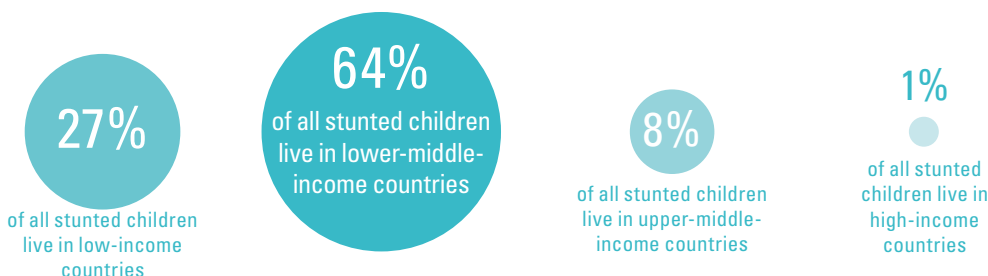
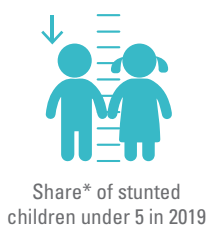
## SHARE BY REGION

While only about half of all children under-5 live in lower-middle income countries, two-thirds of all stunted children and three-quarters of all wasted children live there

Distribution of children under-5 in the world, by country income grouping, 2019



### Distribution of children under 5 affected by stunting, overweight and wasting in 2019



\*Share is relative to the total number affected across the 4 country-income groups; this varies from the global totals reported elsewhere in this brochure because the official JME global total is based on a model of United Nations regions. The differences are as follows: Stunting official global estimate 144.0 million; sum of 4 country-income groups = 145.8 million. Wasting official global estimate 47.0 million; sum of country-income groups = 45.3 million. Overweight official global estimate 38.3 million; sum of 4 country-income groups = 39.1 million).

# PREVALENCE ESTIMATES TABLES\*

	Stunting		Wasting and Severe Wasting				Overweight	
	2000	2019	2019	2019	2019	2000	2019	
	% stunted (moderate and severe)	% stunted (moderate and severe)	% wasted (moderate and severe)	% wasted (severe)	% wasted (severe)	% overweight (moderate and severe)	% overweight (moderate and severe)	
<b>Global</b>	<b>32.4 [30.9-34.0]</b>	<b>21.3 [19.7-22.8]</b>	<b>6.9 [5.7-8.2]</b>	<b>2.1 [1.6-2.6]</b>		<b>4.9 [4.3-5.5]</b>	<b>5.6 [4.9-6.4]</b>	
<b>United Nations Regions</b>								
<b>Less Developed Regions<sup>1</sup></b>	35.7 [34.0-37.4]	23.1 [21.4-24.8]	7.6 [6.2-8.9]	2.3 [1.8-2.9]		4.5 [4.0-5.0]	5.0 [4.3-5.7]	
<i>Africa</i>	37.9 [35.6-40.2]	29.1 [26.8-31.4]	6.4 [5.4-7.5]	1.8 [1.4-2.1]		5.0 [4.1-5.9]	4.7 [3.5-6.0]	
<i>Eastern Africa</i>	45.8 [41.2-50.5]	34.5 [30.7-38.5]	5.3 [3.8-7.4]	1.1 [0.8-1.5]		4.8 [3.7-6.2]	3.7 [2.9-4.6]	
<i>Middle Africa</i>	39.7 [34.1-45.6]	31.5 [26.4-37.0]	6.7 [5.1-8.7]	2.2 [1.7-2.9]		4.3 [2.9-6.4]	5.1 [3.3-7.6]	
<i>Northern Africa</i>	24.2 [18.1-31.6]	17.6 [11.6-25.7]	7.2 [3.6-13.9]	3.1 [1.6-6.2]		8.4 [4.8-14.4]	11.3 [5.6-21.5]	
<i>Southern Africa</i>	32.8 [28.7-37.2]	29.0 [25.5-32.8]	3.3 [2.2-4.8]	0.9 [0.6-1.2]		10.2 [7.1-14.4]	12.7 [8.6-18.3]	
<i>Western Africa</i>	36.0 [33.1-39.1]	27.7 [23.8-32.0]	7.5 [6.5-8.6]	1.8 [1.5-2.2]		3.0 [2.3-4.0]	1.9 [1.4-2.5]	
<i>Asia<sup>2</sup></i>	37.8 [35.5-40.2]	21.8 [19.3-24.3]	9.1 [6.9-11.3]	2.9 [2.1-3.8]		4.0 [3.3-4.7]	4.8 [3.8-5.8]	
<i>Central Asia</i>	28.2 [21.5-36.0]	9.9 [7.9-12.3]	2.4 [1.6-3.6]	0.6 [0.2-1.6]		9.6 [5.9-15.2]	6.2 [3.3-11.3]	
<i>Eastern Asia<sup>2</sup></i>	19.2 [17.8-20.6]	4.5 [4.1-4.9]	1.7 [1.6-1.8]	0.4 [0.4-0.4]		6.4 [5.8-7.1]	6.3 [5.5-7.2]	
<i>Southern Asia</i>	49.7 [45.6-53.9]	31.7 [27.3-36.4]	14.3 [10.4-19.3]	4.4 [3.1-6.2]		2.4 [1.5-4.1]	2.5 [1.5-4.4]	
<i>South-eastern Asia</i>	38.5 [32.7-44.7]	24.7 [18.7-31.9]	8.2 [5.9-11.4]	3.6 [1.7-7.6]		3.2 [2.5-4.0]	7.5 [4.3-12.6]	
<i>Western Asia</i>	23.0 [16.0-31.8]	12.7 [6.2-24.0]	3.7 [1.5-8.7]	1.1 [0.4-2.8]		6.7 [4.9-9.2]	8.4 [4.6-15.0]	
<i>Latin American and Caribbean</i>	16.8 [13.3-20.2]	9.0 [6.1-11.8]	1.3 [0.8-1.7]	0.3 [0.2-0.4]		6.6 [5.5-7.7]	7.5 [6.7-8.4]	
<i>Caribbean</i>	15.3 [7.5-28.7]	8.1 [3.5-17.8]	2.9 [2.1-4.0]	0.9 [0.8-1.1]		5.1 [3.9-6.5]	7.0 [3.6-13.2]	
<i>Central America</i>	23.7 [16.6-32.8]	12.6 [8.0-19.3]	0.9 [0.7-1.0]	0.2 [0.2-0.3]		5.9 [4.7-7.3]	6.9 [5.9-8.2]	
<i>South America</i>	13.8 [10.4-18.0]	7.3 [4.3-11.9]	1.3 [0.8-2.3]	0.2 [0.1-0.5]		7.1 [5.7-8.9]	7.9 [6.9-9.1]	
<i>Oceania<sup>3</sup></i>	37.0 [20.2-57.6]	38.4 [21.9-58.1]	9.5 [5.9-15.0]	3.6 [2.8-4.5]		4.7 [3.3-6.5]	9.4 [6.1-14.4]	
<b>More Developed Regions</b>								
<i>Australia and New Zealand<sup>4</sup></i>	0.8	-	-	-		8.7 [0.0-22.4]	20.7 [4.8-36.5]	
<i>Europe</i>	-	-	-	-		-	-	
<i>Northern America<sup>4</sup></i>	3.0	2.6	0.4	0.0		6.7 [6.4-6.9]	8.9 [8.6-9.2]	
<b>UNICEF Regions</b>								
<i>East Asia and Pacific</i>	24.2 [19.1-29.3]	11.0 [6.9-15.1]	3.7 [2.2-5.2]	1.4 [0.3-2.5]		5.0 [4.1-6.0]	6.8 [4.1-9.5]	
<i>Europe and Central Asia<sup>6</sup></i>	-	-	-	-		-	-	
<i>Eastern Europe and Central Asia</i>	20.2 [16.4-24.5]	7.7 [6.4-9.1]	2.0 [1.4-2.9]	0.5 [0.3-0.9]		8.2 [5.8-11.6]	10.8 [7.7-15.0]	
<i>Western Europe</i>	-	-	-	-		-	-	
<i>Latin America and Caribbean</i>	16.8 [13.3-20.2]	9.0 [6.1-11.8]	1.3 [0.8-1.7]	0.3 [0.2-0.4]		6.6 [5.5-7.7]	7.5 [6.7-8.4]	
<i>Middle East and North Africa</i>	22.9 [17.5-29.3]	14.3 [9.0-21.9]	6.7 [4.1-10.8]	2.7 [1.4-5.1]		8.9 [6.6-12.0]	11.0 [6.6-17.8]	
<i>North America<sup>4</sup></i>	3.0	2.6	0.4	0.0		6.7 [6.4-6.9]	8.9 [8.6-9.2]	
<i>South Asia</i>	51.3 [49.6-53.0]	33.2 [31.2-35.3]	14.8 [11.3-19.2]	4.5 [3.3-6.2]		2.4 [1.4-4.0]	2.5 [1.5-4.2]	
<i>Sub-Saharan Africa</i>	43.1 [39.7-46.5]	32.7 [30.5-34.9]	6.9 [6.0-7.9]	1.8 [1.5-2.1]		4.4 [3.5-5.3]	3.1 [2.4-3.8]	
<i>East and Southern Africa</i>	45.6 [39.9-51.4]	32.7 [30.6-35.0]	5.6 [4.1-7.7]	1.3 [0.9-1.8]		4.6 [3.5-6.2]	3.7 [2.6-5.1]	
<i>West and Central Africa</i>	40.4 [37.2-43.7]	32.7 [29.0-36.6]	8.2 [7.4-9.1]	2.3 [1.9-2.8]		4.2 [3.2-5.5]	2.6 [2.0-3.2]	
<b>WHO Regions</b>								
<i>African Region</i>	42.3 [38.6-46.2]	32.5 [29.8-35.3]	6.4 [5.2-7.8]	1.6 [1.2-2.2]		4.6 [3.8-5.5]	3.1 [2.4-3.9]	
<i>Region of the Americas</i>	11.1 [5.7-20.5]	6.3 [3.8-10.3]	0.8 [0.5-1.4]	0.1 [0.0-0.4]		6.7 [6.1-7.5]	7.3 [6.1-8.7]	
<i>South-East Asia Region</i>	49.6 [45.8-53.3]	31.0 [26.9-35.4]	14.7 [11.3-18.9]	4.6 [3.3-6.2]		2.4 [1.4-4.1]	3.0 [1.3-6.5]	
<i>Eastern Mediterranean Region</i>	34.1 [25.1-44.5]	24.2 [15.6-35.5]	7.5 [5.9-9.4]	3.0 [2.2-4.0]		6.0 [4.3-8.4]	5.7 [3.5-9.3]	
<i>Europe Region</i>	-	-	-	-		-	-	
<i>Western Pacific Region</i>	20.8 [16.9-25.2]	6.2 [3.4-11.1]	2.1 [1.4-3.2]	0.5 [0.3-0.8]		5.6 [4.1-7.6]	6.2 [5.4-7.1]	
<b>World Bank Income</b>								
<i>Low income</i>	47.4 [43.6-51.2]	34.1 [31.6-36.7]	6.6 [5.3-8.2]	1.6 [1.2-2.0]		3.6 [2.6-4.9]	2.7 [2.1-3.5]	
<i>Middle income</i>	35.2 [31.9-38.6]	21.1 [18.6-23.7]	7.5 [4.7-10.4]	2.3 [1.4-3.2]		5.3 [4.5-6.2]	6.2 [5.1-7.4]	
<i>Lower-middle income</i>	45.6 [40.4-51.0]	30.1 [26.4-34.0]	10.9 [7.1-16.3]	3.4 [2.3-5.2]		4.3 [3.3-5.6]	4.7 [3.5-6.4]	
<i>Upper-middle income</i>	18.9 [16.8-21.1]	6.0 [4.0-8.8]	1.8 [1.5-2.2]	0.4 [0.3-0.6]		6.9 [5.6-8.3]	8.8 [7.2-10.8]	
<i>High income</i>	3.4 [2.2-5.1]	2.8 [2.1-3.8]	0.5 [0.3-1.1]	0.0 [0.0-0.1]		5.4 [3.8-7.6]	7.6 [4.7-12.0]	
<b>World Bank Regions</b>								
<i>East Asia and Pacific</i>	24.2 [19.1-29.3]	11.0 [6.9-15.1]	3.7 [2.2-5.2]	1.4 [0.3-2.5]		5.0 [4.1-6.0]	6.8 [4.1-9.5]	
<i>Europe and Central Asia</i>	-	-	-	-		-	-	
<i>Latin America and Caribbean</i>	16.8 [13.3-20.2]	9.0 [6.1-11.8]	1.3 [0.8-1.7]	0.3 [0.2-0.4]		6.6 [5.5-7.7]	7.5 [6.7-8.4]	
<i>Middle East and North Africa</i>	22.8 [17.4-29.3]	14.3 [9.0-21.9]	6.8 [4.1-10.8]	2.7 [1.4-5.1]		8.9 [6.6-12.1]	11.0 [6.6-17.8]	
<i>North America<sup>4</sup></i>	3.0	2.6	0.4	0.0		6.7 [6.4-6.9]	8.9 [8.6-9.2]	
<i>South Asia</i>	51.3 [49.6-53.0]	33.2 [31.2-35.3]	14.8 [11.3-19.2]	4.5 [3.3-6.2]		2.4 [1.4-4.1]	2.5 [1.5-4.2]	
<i>Sub-Saharan Africa</i>	42.9 [39.6-46.3]	33.0 [30.7-35.3]	6.8 [5.6-8.2]	1.7 [1.3-2.3]		4.4 [3.7-5.3]	3.0 [2.4-3.7]	

## Footnotes

1. Only estimates for Less Developed Regions are displayed; the More Developed Region estimates are not displayed due to insufficient population coverage.
2. Asia excluding Japan; Eastern Asia excluding Japan.
3. Oceania excluding Australia and New Zealand.
4. The Northern America estimates are derived applying mixed-effect models with sub-regions as fixed effects; for stunting, wasting and severe wasting, data were available only for the United States, preventing the estimation of standard errors (and confidence intervals). The Australia and New Zealand estimates are based only on Australian data applying linear regression; for stunting, only two data points were available, and thus estimation of standard errors (and confidence intervals) was not possible. Further details on the methodology are described in de Onis M. et al. Estimates of global prevalence of childhood underweight in 1990 and 2015. JAMA vol. 291, 2004:2600-6. Model selection is based on best fit.
5. Consecutive low population coverage; interpret with caution.
6. Eastern Europe and Central Asia excluding Russia.

# NUMBER (MILLIONS) AFFECTED TABLES\*

	Stunting			Wasting and Severe Wasting			Overweight		
	2000	2019		2019	2019		2000	2019	
	number (millions) stunted (moderate and severe)	number (millions) stunted (moderate and severe)	footnote	number (millions) wasted (moderate and severe)	number (millions) wasted (severe)	footnote	number (millions) overweight (moderate and severe)	number (millions) overweight (moderate and severe)	footnote
<b>Global</b>	199.5 [190.0-209.0]	144.0 [133.6-154.5]		47.0 [38.7-55.3]	14.3 [11.1-17.5]		30.3 [26.8-33.8]	38.3 [32.9-43.6]	
<b>United Nations Regions</b>									
<b>Less Developed Regions<sup>1</sup></b>	196.3 [187.0-205.5]	140.9 [130.6-151.2]		46.2 [37.9-54.4]	14.2 [11.1-17.4]		24.8 [22.0-27.6]	30.6 [26.2-35.0]	
<b>Africa</b>	49.7 [46.7-52.8]	57.5 [53.0-62.0]		12.7 [10.7-14.8]	3.5 [2.8-4.2]		6.5 [5.3-7.8]	9.3 [6.9-11.8]	
<i>Eastern Africa</i>	21.1 [19.0-23.3]	23.1 [20.6-25.8]		3.6 [2.6-4.9]	0.7 [0.5-1.0]		2.2 [1.7-2.8]	2.5 [2.0-3.1]	
<i>Middle Africa</i>	7.0 [6.0-8.0]	9.5 [8.0-11.2]		2.0 [1.5-2.6]	0.7 [0.5-0.9]		0.8 [0.5-1.1]	1.5 [1.0-2.3]	
<i>Northern Africa</i>	5.0 [3.8-6.6]	5.1 [3.4-7.5]		2.1 [1.1-4.0]	0.9 [0.5-1.8]		1.8 [1.0-3.0]	3.3 [1.6-6.3]	
<i>Southern Africa</i>	1.9 [1.7-2.1]	2.0 [1.7-2.2]		0.2 [0.1-0.3]	0.1 [0.0-0.1]		0.6 [0.4-0.8]	0.9 [0.6-1.2]	
<i>Western Africa</i>	14.8 [13.6-16.0]	17.8 [15.3-20.6]		4.8 [4.2-5.5]	1.1 [0.9-1.4]		1.2 [0.9-1.6]	1.2 [0.9-1.6]	
<b>Asia<sup>2</sup></b>	136.6 [128.0-145.1]	78.2 [69.1-87.3]		32.6 [24.6-40.6]	10.5 [7.5-13.6]		14.4 [12.0-16.9]	17.2 [13.5-20.9]	
<i>Central Asia</i>	1.7 [1.3-2.1]	0.8 [0.6-1.0]		0.2 [0.1-0.3]	0.1 [0.0-0.1]		0.6 [0.3-0.9]	0.5 [0.3-0.9]	
<i>Eastern Asia<sup>2</sup></i>	18.4 [17.1-19.7]	4.1 [3.7-4.5]		1.5 [1.5-1.6]	0.4 [0.3-0.4]		6.1 [5.5-6.8]	5.7 [5.0-6.5]	
<i>Southern Asia</i>	90.2 [82.6-97.7]	55.9 [48.2-64.2]		25.2 [18.4-34.2]	7.8 [5.5-11.0]		4.4 [2.7-7.3]	4.5 [2.6-7.7]	
<i>South-eastern Asia</i>	21.0 [17.9-24.4]	13.9 [10.5-18.0]		4.7 [3.3-6.4]	2.0 [0.9-4.3]		1.7 [1.4-2.2]	4.2 [2.5-7.1]	
<i>Western Asia</i>	5.3 [3.7-7.4]	3.4 [1.7-6.5]		1.0 [0.4-2.4]	0.3 [0.1-0.8]		1.6 [1.1-2.1]	2.3 [1.2-4.1]	
<b>Latin American and Caribbean</b>	9.5 [7.6-11.5]	4.7 [3.2-6.2]		0.7 [0.4-0.9]	0.1 [0.1-0.2]		3.8 [3.1-4.4]	3.9 [3.5-4.3]	
<i>Caribbean</i>	0.6 [0.3-1.1]	0.3 [0.1-0.6]		0.1 [0.1-0.1]	0.0 [0.0-0.0]		0.2 [0.2-0.2]	0.2 [0.1-0.5]	
<i>Central America</i>	3.9 [2.8-5.4]	2.0 [1.3-3.1]		0.1 [0.1-0.2]	0.0 [0.0-0.0]		1.0 [0.8-1.2]	1.1 [0.9-1.3]	
<i>South America</i>	5.0 [3.8-6.5]	2.4 [1.4-3.9]	<sup>5</sup>	0.4 [0.2-0.7]	0.1 [0.0-0.2]	<sup>5</sup>	2.6 [2.1-3.2]	2.6 [2.2-2.9]	<sup>5</sup>
<b>Oceania<sup>3</sup></b>	0.5 [0.2-0.7]	0.6 [0.3-0.9]		0.1 [0.1-0.2]	0.1 [0.0-0.1]		0.1 [0.0-0.1]	0.1 [0.1-0.2]	
<b>More Developed Regions</b>	-	-		-	-		-	-	
Australia and New Zealand <sup>4</sup>	0.0	-		-	-		0.1 [0.0-0.3]	0.4 [0.1-0.7]	
Europe	-	-		-	-		-	-	
Northern America <sup>4</sup>	0.7	0.6		0.1	0.0		1.4 [1.4-1.5]	1.9 [1.9-2.0]	
<b>UNICEF Regions</b>									
East Asia and Pacific	38.1 [30.1-46.1]	16.9 [10.6-23.2]		5.7 [3.4-8.0]	2.1 [0.5-3.8]		7.9 [6.5-9.4]	10.4 [6.3-14.6]	
Europe and Central Asia <sup>6</sup>	-	-		-	-		-	-	
<i>Eastern Europe and Central Asia</i>	3.9 [3.2-4.8]	1.6 [1.4-2.0]		0.4 [0.3-0.6]	0.1 [0.1-0.2]		1.6 [1.1-2.3]	2.3 [1.6-3.2]	
<i>Western Europe</i>	-	-		-	-		-	-	
Latin America and Caribbean	9.5 [7.6-11.5]	4.7 [3.2-6.2]		0.7 [0.4-0.9]	0.1 [0.1-0.2]		3.8 [3.1-4.4]	3.9 [3.5-4.3]	
Middle East and North Africa	8.5 [6.5-10.9]	7.1 [4.4-10.8]		3.3 [2.0-5.4]	1.3 [0.7-2.5]		3.3 [2.4-4.5]	5.4 [3.2-8.8]	
North America <sup>4</sup>	0.7	0.6		0.1	0.0		1.4 [1.4-1.5]	1.9 [1.9-2.0]	
South Asia	90.1 [87.1-93.1]	56.1 [52.7-59.6]		25.1 [19.1-32.5]	7.7 [5.6-10.5]		4.2 [2.5-7.1]	4.2 [2.5-7.1]	
Sub-Saharan Africa	49.5 [45.6-53.4]	57.0 [53.2-60.8]		12.1 [10.4-13.8]	3.1 [2.6-3.7]		5.1 [4.1-6.1]	5.4 [4.2-6.6]	
<i>East and Southern Africa</i>	27.1 [23.7-30.6]	28.0 [26.1-29.9]		4.8 [3.5-6.6]	1.1 [0.8-1.5]		2.8 [2.1-3.7]	3.1 [2.2-4.4]	
<i>West and Central Africa</i>	22.4 [20.6-24.2]	29.0 [25.8-32.4]		7.3 [6.6-8.1]	2.0 [1.7-2.5]		2.3 [1.8-3.0]	2.3 [1.8-2.9]	
<b>WHO Regions</b>									
African Region	47.2 [43.0-51.4]	55.3 [50.7-60.1]		10.9 [8.9-13.3]	2.8 [2.1-3.7]		5.1 [4.2-6.1]	5.3 [4.1-6.7]	
Region of the Americas	8.6 [4.4-15.9]	4.6 [2.8-7.6]		0.6 [0.4-1.0]	0.1 [0.0-0.3]		5.2 [4.7-5.8]	5.3 [4.5-6.4]	
South-East Asia Region	90.6 [83.8-97.4]	52.6 [45.6-60.1]		24.9 [19.1-32.1]	7.7 [5.7-10.5]		4.4 [2.5-7.5]	5.0 [2.3-11.0]	
Eastern Mediterranean Region	22.4 [16.5-29.2]	20.6 [13.3-30.3]		6.4 [5.0-8.0]	2.6 [1.9-3.5]		4.0 [2.8-5.5]	4.9 [3.0-7.9]	
Europe Region	-	-		-	-		-	-	
Western Pacific Region	25.9 [21.1-31.4]	7.5 [4.1-13.3]		2.6 [1.7-3.9]	0.6 [0.4-1.0]		7.0 [5.1-9.5]	7.4 [6.5-8.5]	
<b>World Bank Income</b>									
Low income	38.0 [35.0-41.0]	39.7 [36.8-42.8]		7.7 [6.2-9.6]	1.8 [1.4-2.4]		2.9 [2.1-3.9]	3.2 [2.4-4.1]	
Middle income	164.2 [148.5-180.0]	104.1 [91.7-116.5]		37.1 [23.2-51.1]	11.4 [7.0-15.9]		24.7 [20.8-28.7]	30.8 [25.2-36.4]	
<i>Lower-middle income</i>	130.1 [115.0-145.4]	93.2 [82.0-105.2]		33.8 [22.1-50.5]	10.6 [7.0-16.1]		12.3 [9.5-15.9]	14.6 [10.7-20.0]	
<i>Upper middle income</i>	34.2 [30.4-38.3]	11.0 [7.4-16.1]		3.3 [2.8-4.0]	0.8 [0.6-1.0]		12.4 [10.2-15.0]	16.1 [13.2-19.7]	
High income	2.3 [1.5-3.6]	1.9 [1.4-2.6]	<sup>5</sup>	0.4 [0.2-0.7]	0.0 [0.0-0.1]	<sup>5</sup>	3.7 [2.6-5.2]	5.2 [3.2-8.2]	<sup>5</sup>
<b>World Bank Regions</b>									
East Asia and Pacific	38.2 [30.2-46.2]	17.0 [10.6-23.3]		5.7 [3.4-8.0]	2.2 [0.5-3.8]		8.0 [6.5-9.5]	10.4 [6.3-14.6]	
Europe and Central Asia	-	-		-	-		-	-	
Latin America and Caribbean	9.5 [7.6-11.5]	4.7 [3.2-6.2]		0.7 [0.4-0.9]	0.1 [0.1-0.2]		3.8 [3.1-4.4]	3.9 [3.5-4.3]	
Middle East and North Africa	8.5 [6.5-11.0]	7.1 [4.5-10.9]		3.3 [2.1-5.4]	1.3 [0.7-2.5]		3.3 [2.5-4.5]	5.4 [3.3-8.8]	
North America <sup>4</sup>	0.7	0.6		0.1	0.0		1.4 [1.4-1.5]	1.9 [1.9-2.0]	
South Asia	90.1 [87.1-93.1]	56.1 [52.7-59.6]		25.1 [19.1-32.5]	7.7 [5.6-10.5]		4.2 [2.5-7.1]	4.2 [2.5-7.1]	
Sub-Saharan Africa	49.2 [45.4-53.1]	57.5 [53.6-61.5]		11.8 [9.8-14.2]	3.0 [2.3-4.0]		5.1 [4.2-6.1]	5.2 [4.2-6.5]	

\*Complete data series for stunting and overweight (1990, 1995, 2000, 2005, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 and 2019) and the latest year for wasting (2019) estimates of prevalence and numbers affected can be found at the websites below for global as well as for the following groupings: (i) United Nations regions and sub-regions; (ii) UNICEF regions; (iii) WHO regions; (iv) World Bank country income classifications; (v) World Bank regions; (vi) SDG regions; and (vii) FAO's low income food deficient countries classification. These websites also contain a file with the country compositions for each grouping:

UNICEF <<https://data.unicef.org/topic/nutrition/malnutrition/>> WHO <[www.who.int/nutgrowthdb/estimates](http://www.who.int/nutgrowthdb/estimates)> World Bank Group <[data.worldbank.org/child-malnutrition](http://data.worldbank.org/child-malnutrition)>

# NOTES ON THE DATA AND METHODOLOGY

## Strengths and weaknesses of malnutrition data

Prevalence estimates for stunting and overweight are relatively stable over the course of a calendar year. It is therefore possible to track global and regional changes in these two conditions over time.

Wasting and severe wasting are acute conditions that can change frequently and rapidly over the course of a calendar year. This makes it difficult to generate reliable trends over time with the input data available, and as such, this report provides only most recent global and regional estimates.

The joint global and regional estimates that make up the UNICEF/WHO/World Bank Group Joint Child Malnutrition Estimates have been generated using a country-level dataset which is mainly comprised of estimates from nationally representative household surveys. These data are collected infrequently (every 3 to 5 years in most countries) and measure malnutrition at one point in time (e.g. during one or several months of field work), making it difficult to capture the rapid fluctuations in wasting that can occur over the course of a given year. Incidence data (i.e. the number of new cases that occur during the calendar year) would allow for better tracking of changes over time; however, these data currently do not exist.

**The analysis methods and presentation have remained unchanged from the 2012 report<sup>1</sup>, except for minor refinements detailed below:**

### 1. Year assigned to each survey

When data collection begins in one calendar year and continues into the next, the survey year assigned is the one in which most of the fieldwork took place. For example, if a survey was conducted between 1 September 2009 and 28 February 2010, the year 2009 would be assigned, since the majority of data collection took place in that year (i.e., four months in 2009 versus two months in 2010). This method has been used since the 2013 edition (prior to that, the latter year was used by default – e.g., 2010 in the example above).

<sup>1</sup> United Nations Children's Fund, World Health Organization, The World Bank. UNICEF-WHO-World Bank Joint Child Malnutrition Estimates. (UNICEF, New York; WHO, Geneva; The World Bank, Washington, DC; 2012).

### 2. Final reports only

As of the 2014 edition, the country-level dataset used to generate the global and regional joint malnutrition estimates is based only on final survey results. Preliminary survey results are no longer included in the dataset since the data are sometimes retracted or change significantly when the final version is released.

### 3. Updated data sources

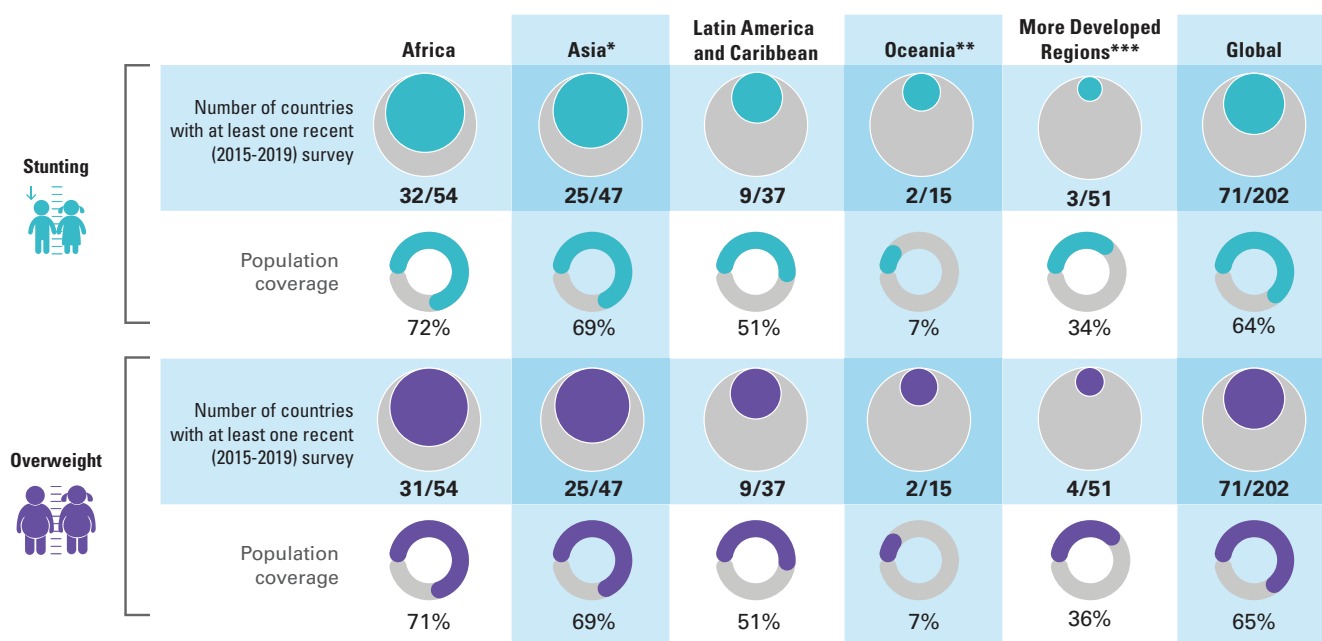
- i. The updated joint dataset includes:
  - 924 nationally representative surveys;
  - data from 152 countries and territories, representing more than 90 per cent of all children under 5 globally (population coverage varies by regions and periods). The majority of data available are from low- and middle-income countries – more efforts are needed to generate data from high-income countries.
- ii. The under 5 population estimates were based on The United Nations World Population Prospects, 2019 Revision. These were used as weighting factors for each country survey to derive the regional and global prevalence estimates and calculate the numbers affected.
- iii. Regional and country income classifications were based on FY2020 World Bank income classification.

### 4. Footnotes on population coverage

As started in the 2014 edition, a separate exercise was conducted to assess population coverage. This was important in order to alert the reader, via footnotes, to instances where the data should be interpreted with caution due to low population coverage (defined as less than 50 per cent). A conservative method was applied looking at available data within five-year periods around the projected years. Population coverage was calculated as:

$$\frac{\text{the sum of country five-year average populations for which surveys are available in the dataset}}{\text{the total of country five-year average population for all countries in the region}}$$

## Population coverage for the most recent period (2015-2019), by UN regions



Note: \* Asia excluding Japan; \*\*Oceania excluding Australia and New Zealand. \*\*\* The More Developed Region malnutrition estimates are not displayed in the brochure due to lack of adequate population coverage (<50 per cent) in all year ranges since 1990. Also note that figures for wasting are the same as for stunting and therefore not presented.



## 5. Prevalence thresholds for wasting, overweight and stunting in children under 5 years

New thresholds, presented in Table 1, were established through the WHO-UNICEF Technical Advisory Group on Nutrition Monitoring (TEAM)<sup>2</sup> and released in 2018. These new thresholds have been used for development of prevalence-based maps in this brochure. The thresholds were developed in relation to standard deviations (SD) of the normative WHO Child Growth Standards. The international definition of 'normal' (two SD from the WHO standards median) defines the first threshold, which includes 2.3% of the area under the normalized distribution. Multipliers of this "very low" level (rounded to 2.5%) set the basis to establish subsequent thresholds.

Table 1. Prevalence thresholds and corresponding labels for stunting, overweight and wasting

Labels	Prevalence thresholds (%)	
	Stunting	Overweight and Wasting
Very low	< 2.5	< 2.5
Low	2.5 – < 10	2.5 – < 5
Medium	10 – < 20	5 – < 10
High	20 – < 30	10 – < 15
Very high	≥ 30	≥ 15

2 de Onis, M., et al. (2018). Prevalence thresholds for wasting, overweight and stunting in children under 5 years. *Public health nutrition*, 22(1), 175–179.

## ONLINE MATERIALS

This key findings report of the 2020 edition of the Joint Malnutrition Estimates summarizes the new regional and global numbers and main messages for official United Nations data on child malnutrition. Additional information is available and the following materials can be downloaded from the links on the bottom right:

- the latest country-level joint malnutrition dataset, a time series of all country estimates that were used to generate the joint child malnutrition global and regional estimates;
- the joint malnutrition global and regional estimates database by various regional groupings (e.g. United Nations, UNICEF, WHO, etc., regional groupings) and for more years than presented in this brochure;
- a reference document outlining the composition of the various regional groupings for which the joint estimates have been produced.
- interactive dashboards, which allow users to visualize and export the global and regional estimates for a number of regional groupings.

UNICEF: <<https://data.unicef.org/resources/jme>>

WHO: <[www.who.int/nutgrowthdb/estimates](http://www.who.int/nutgrowthdb/estimates)>

World Bank Group: <[data.worldbank.org/child-malnutrition](http://data.worldbank.org/child-malnutrition)>

## INTERACTIVE DASHBOARD OVERVIEW

**Tabs where you can select different visualizations for global and regional data**

**Options**

- Select your regional grouping (UNICEF, WHO, United Nations, World Bank Income)
- Select regions to view
- Select years to view
- Hover over data points for detailed information
- With these links you can view the dashboard on the UNICEF, WHO or World Bank Group websites
- Download the graphics and data here

ISBN 978-92-4-000357-6



## Acknowledgements

*This publication was prepared by:* the Data, Analytics and Innovation Section of the Division of Data, Analytics, Planning and Monitoring, UNICEF New York together with the Department of Nutrition for Health and Development, WHO Geneva and the Development Data Group of the World Bank, Washington DC. March 2020.

*Organizations and individuals involved in generating this publication:*

**UNICEF:** Chika Hayashi, Julia Krasevec, Richard Kumapley, Juan Manuel Puyana, Vrinda Mehra

**WHO:** Elaine Borghi, Elisa Dominguez, Jose Luis Alvarez Moran, Mercedes de Onis

**World Bank Group:** Espen Beer Prydz, Umar Serajuddin, Emi Suzuki

**Design:** Nona Reuter (UNICEF); **Writing and editing:** Julia D'Aloisio (UNICEF)

*Special thanks go to Victor Aguayo (UNICEF), Francesco Branca (WHO) and Mark Hereward (UNICEF)*

ISBN 978-92-4-000357-6 (electronic version)

ISBN 978-92-4-000358-3 (print version)

© United Nations Children's Fund (UNICEF), the World Health Organization, and the International Bank for Reconstruction and Development/The World Bank, 2020. Some rights reserved. This work is available under the CC BY-NC-SA 3.0 IGO licence.

Suggested citation: United Nations Children's Fund (UNICEF), World Health Organization, International Bank for Reconstruction and Development/The World Bank. *Levels and trends in child malnutrition: Key Findings of the 2020 Edition of the Joint Child Malnutrition Estimates*. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.

<[data.unicef.org/nutrition](https://data.unicef.org/nutrition)>; <[www.who.int/nutgrowthdb](https://www.who.int/nutgrowthdb)>; <[data.worldbank.org](https://data.worldbank.org)>.



Email: [data@unicef.org](mailto:data@unicef.org)



Email: [nutrition@who.int](mailto:nutrition@who.int)



Email: [data@worldbank.org](mailto:data@worldbank.org)