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REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION IN LATIN AMERICA AND THE CARIBBEAN

**TOWARDS HEALTHIER FOOD
ENVIRONMENTS THAT ADDRESS ALL
FORMS OF MALNUTRITION**

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2019

**REGIONAL
OVERVIEW OF
FOOD SECURITY
AND NUTRITION**

**TOWARDS HEALTHIER FOOD ENVIRONMENTS THAT
ADDRESS ALL FORMS OF MALNUTRITION**

Food and Agriculture Organization (FAO)
Pan American Health Organization (PAHO)
World Food Program (WFP)
United Nations Children's Fund (UNICEF)
Santiago, Chile, 2019

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FOREWORD

Healthy food environments to address malnutrition in all its forms

Reaching the goals and targets of the 2030 Agenda for Sustainable Development means achieving a world without hunger, food insecurity and malnutrition in any of its forms. In recent decades, the region of Latin America and the Caribbean has made significant progress towards the effective exercise of the right to adequate food and the protection of the health of all its inhabitants. However, the current period of low economic growth, severe climatic phenomena, unsustainable modes of food production and consumption, as well as the demographic, epidemiological and nutritional transition, risk jeopardizing the advances made to date.

The latest available data on undernourishment in Latin America and the Caribbean show an increase in the last four years: 42.5 million people were hungry in 2018, representing an increase of 4.5 million people compared to the 38 million people reported in 2014. Food insecurity - understood as the partial or total interruption in access to food - affects 187 million people in the Region and manifests itself unequally in adulthood: almost 55 million men suffer from food insecurity, compared to 69 million women.

In parallel, for every person who suffers from hunger in Latin America and the Caribbean, more than six are overweight or obese. The prevalence of overweight is increasing in all age groups, especially in adults and in school-age children. Currently, almost a quarter of the adult population in the Region suffers from obesity, with a higher prevalence among women (28%) than men (20%). Meanwhile, the prevalence of overweight in children under 5 has already reached 7.5%, higher than the worldwide figure of 5.9%. A major challenge in the Region is to address the problem of malnutrition from a multisectoral public policy approach. This requires a coordination and collaborative commitment that ranges from the political system to individuals.

For the second consecutive year, four United Nations bodies—the Food and Agriculture Organization of the United Nations (FAO), the Pan American Health Organization/World Health Organization (PAHO/WHO), the United Nations Children’s Fund (UNICEF) and the World Food Program (WFP)—have come together to publish this report.

The 2019 edition of the Regional Overview of Food Security and Nutrition in Latin America and the Caribbean presents an analysis based on food environments, understood as the spaces of interaction between people and the physical, economic, political and socio-cultural conditions that influence the way they acquire, prepare and consume food.

The characteristics of food environments are essential to explain the different forms of malnutrition that affect Latin America and the Caribbean. For example, the high social and economic inequality in our Region, is reflected in the physical and economic difficulties that vulnerable population groups, including children, women and certain ethnic groups, face in accessing a healthy diet.

Food environments have changed at an ever-increasing rate. Today, Latin America and the Caribbean is a predominantly urban region, in which women enjoy a growing participation in the labor market. However, in many cases there is a lack of shared responsibility between men and women in domestic and unpaid work, which influences food environments. Likewise, the large food processing industries and supermarkets have taken on a dominant role in the way in which food products are produced, sold, advertised and labeled. These factors, combined with the increase in the consumption of products outside the home and at informal street stalls - which tend to have a poor level of food quality and safety - show the importance of understanding and improving food environments with the objective of providing healthy diets for all with sustainably produced food.

Recently, some countries in Latin America and the Caribbean have innovated in regulatory and public policy matters. Today it is recognized as one of the most advanced regions in terms of initiatives favoring the creation of food environments in which all people - especially children and young people - enjoy better access to food and information that allows them to acquire nutritious, safe and quality food. Social protection programs, such as school meals and cash transfers to families, have been essential to achieving this.

The 2019 Regional Overview presents a broad description of the different policies, regulations and laws that countries are developing in order to make food with higher nutritional values more accessible to consumers, promote proper food

labeling, improve regulation of food advertising, create healthier school spaces, and adopt fiscal and social measures that favor a healthy and diversified diet.

We want this edition to help recover the momentum needed to make the zero hunger generation a reality, and the end of malnutrition in all its forms, and to meet the objectives and goals of the 2030 Agenda. This demands urgent and harmonized initiatives by all governments, as well as by the various sectors and stakeholders of the food system, and which are carried out with the support of the United Nations and the international community. Only in this way, we can build food systems and environments that ensure adequate nutrition in the present and in the future that ensure a healthy lifestyle for all.

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ABBREVIATIONS

AMEXID	Mexican Agency for International Development Cooperation	NCDs	Noncommunicable diseases
BMI	Body Mass Index	OPA	Observatório de Publicidade de Alimentos
CONANDA	National Council for the Rights of Children and Adolescents	PAHO	Pan American Health Organization
ECLAC	Economic Commission for Latin America	PARLACEN	Parlamento Centroamericano
FAO	Food and Agriculture Organization	PARLANDINO	Parlamento Andino
FBDs	Foodborne diseases	PARLASUR	Parlamento del Mercosur
FIES	Food Insecurity Experience Scale	PARLATINO	Parlamento Latinoamericano y Caribeño
FLW	Food Loss and Waste	PPP	Purchasing power parity
GBD	Global Burden of Diseases, Injuries and Risk Factors Study	SDGs	Sustainable Development Goals
GDP	Gross Domestic Product	SICA	Central American Integration System
HLPE	High-Level Panel of Experts on Food Security and Nutrition	SMPs	School meals programs
IDEC	Instituto Brasileiro de Defesa do Consumidor	SPS	Sanitary and phytosanitary measures
IFAD	International Fund for Agricultural Development	TBT	Technical Barriers to Trade
IFBA	International Food and Beverage Alliance	UN	United Nations
ILO	International Labor Organization	UNDESA	United Nations Department of Economic and Social Affairs
INFAL	Inter-American Network of Food Analysis Laboratories	UNDP	United Nations Development Program
INFOSAN	International Food Safety Authorities Network	UNICEF	United Nations Children's Fund
IPC	Integrated Food Security Phase Classification	USD	United States Dollar
LAC	Latin America and the Caribbean	WB	World Bank
		WFP	World Food Program
		WFP	World Food Program
		WHO	World Health Organization
		WTO	World Trade Organization

GEOGRAPHICAL SUBREGIONS OF LATIN AMERICA AND THE CARIBBEAN AND COUNTRY CODES

LATIN AMERICA

Mesoamerica

BLZ	Belize
CRI	Costa Rica
GTM	Guatemala
HND	Honduras
MEX	Mexico
NIC	Nicaragua
PAN	Panama
SLV	El Salvador

South America

ARG	Argentina
BOL	Bolivia (Plurinational State of)
BRA	Brazil
CHL	Chile
COL	Colombia
ECU	Ecuador
GUY	Guyana
PER	Peru
PRY	Paraguay
SUR	Suriname
URY	Uruguay
VEN	Venezuela (Bolivarian Republic of)

THE CARIBBEAN

ATG	Antigua and Barbuda
BHS	Bahamas
BRB	Barbados
CUB	Cuba
DMA	Dominica
DOM	Dominican Republic
GRD	Granada
HTI	Haiti
JAM	Jamaica
KNA	Saint Kitts and Nevis
LCA	Saint Lucia
TTO	Trinidad and Tobago
VCT	St. Vincent and the Grenadines

PRESENTATION

Some of the causes of malnutrition have their origin in the functioning of the food system. Understanding how malnutrition is linked to the processes of production, distribution and consumption of food makes it possible to identify possible areas of intervention. In this way, forms of production and eating habits that favor healthy and sustainable diets can be promoted from an economic, social and environmental point of view.

The food environment is a propitious space for the design of these policies since it represents the physical, economic, political and socio-cultural context in which individuals interact with the food system. This environment determines people's options and decisions relating to how they acquire, prepare and consume food.

In this line, the countries of Latin America and the Caribbean have promoted different policies, legal frameworks and programs in recent years to foster the creation of healthier food environments.

For this reason, the Regional Overview of Food Security and Nutrition in Latin America and the Caribbean 2019 focuses its attention on the food environment. It proposes to describe the challenges and discuss the policy options that can contribute to eliminating the multiple forms of malnutrition in the Region.





CHAPTER 1
SUSTAINABLE
DEVELOPMENT
GOALS RELATED
TO FOOD



SUSTAINABLE DEVELOPMENT GOALS RELATED TO FOOD

KEY MESSAGES

→ In 2018, 6.5% of the regional population lives with hunger, equivalent to 42.5 million people. From a longer-term perspective, the Region has managed to reduce the number of undernourished people by 20 million when compared to the year 2000. However, 2018 marks the fourth consecutive year in which the level of hunger has increased.

→ Moderate or severe food insecurity in Latin America increased significantly. Food insecurity, measured on the Food Insecurity Experience Scale, increased from 26.2% to 31.1% between the 2014-2016 and 2016-2018 trienniums. This increase resulted in more than 32 million people joining the almost 155 million people living with food insecurity in the Region in 2014-2016.

→ The Region has shown significant progress in reducing child malnutrition. Stunting in children under 5 years old was reduced from 16.7% to 9% between 2000 and 2018 and the rate of wasting is 1.3%. In both cases, the Region records rates significantly below the global prevalence of malnutrition in children.

→ However, malnutrition due to overweight in the Region is one of the highest in the world, and continues to increase. The prevalence of overweight in children under 5 years old rose from 6.2% to 7.5% between 1990 and 2018, which means that 4 million children in the Region live with this condition. In adults, the prevalence of overweight and obesity increased from 42.7% to 59.5% between 1990 and 2016, which is equivalent to 262 million people in the Region.

→ Obesity affects adult men and women unequally. Obesity in women 18 years of age and older in the Region reached 27.9%, while for men in the same age group it was 20.2%. As a result, it is estimated that, of the 105 million adults with obesity in 2016, 59% or 62 million are women.

→ Unhealthy eating is one of the four main risk factors for the development of noncommunicable diseases, along with insufficient physical activity, tobacco and harmful alcohol consumption. An estimated 11 million adults died worldwide due to causes associated with poor diet in 2017. Of those, about 600 000 lived in the Region. Among the food risk factors that help explain this result are the low intakes of whole grains, nuts, seeds and vegetables, along with a high sodium intake

Over the past two decades, the Latin American and Caribbean region (LAC) has made significant progress in eliminating hunger, achieving food security and improving nutrition. This means it is clear that the Region has the capacity to meet Sustainable Development Goal 2 (SDG 2) of the Sustainable Development Agenda, known as Zero Hunger. However, food-related issues still present different challenges, while new ones appear, such as overweight and obesity, which aggravate malnutrition problems and jeopardize the fulfillment of other SDGs.

First, it is essential to maintain and accelerate the reduction in undernourishment¹ and other challenges associated with the lack of access to sufficient and appropriate food to meet people's minimum energy and nutrient requirements. Secondly, it is essential that the Region slow down and reverse the increase in overweight and obesity that can be seen in all population groups in recent years.

In particular, it is important to prevent excess weight at an early age in order to protect children's health and prevent further rises in the adult population with these conditions, as

1 Undernourishment is defined as the condition of a person whose usual food consumption is insufficient to provide the amount of food energy necessary to lead a normal, active and healthy life. By contrast, malnutrition arises from a nutritional intake that is deficient in quantity or quality, or the poor absorption or biological use of the nutrients consumed as a result of repeated exposure to disease. Malnutrition includes low weight for age, low height for age (stunting), low weight for height (wasting) and vitamin and mineral deficit (micronutrient malnutrition) (FAO, IFAD, WHO, UNICEF and WFP, 2019). In this publication the concepts of hunger and undernourishment are used interchangeably.

well as to reduce the metabolic risks that lead to the development of noncommunicable diseases (NCDs) and a higher probability of premature death.

This chapter presents an analysis of the evolution of undernourishment and malnutrition with a special emphasis on the indicators associated with the SDGs. The first section presents the situation and trend in indicators for undernourishment, food insecurity, malnutrition and overweight, all related to the Zero Hunger objective.

Likewise, it offers a series of reflections on obesity in adults, which, although not an SDG 2 indicator, is a risk factor for the development of noncommunicable diseases, both of which are growing problems in the Region.²

The second section presents an analysis of some of the indicators established to follow up on the Health and Welfare objective (SDG 3). Specifically, the indicators associated with health conditions that are largely a consequence of poor nutrition are analyzed.³

2 In 2013 the World Health Assembly adopted a Comprehensive Global Monitoring Framework for the prevention and control of noncommunicable diseases that includes overweight and obesity in adults within the group of key indicators to monitor global progress in the prevention and control of the principal noncommunicable diseases and their main risk factors.

3 For more details on the goals and indicators associated with SDGs 2 and 3, see Annex 1.

1.1 SDG 2: END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

Malnutrition encompasses the problems associated with a poor or excessive diet and inadequate nutritional quality. This section is devoted to analyzing the problems of hunger, food insecurity, malnutrition, overweight and obesity that correspond to goals 1 and 2 of SDG 2. Micronutrient deficit will be addressed in Section 1.3.

Target 2.1. End hunger and ensure access for all people to safe, nutritious and sufficient food

Prevalence of undernourishment

The undernourished population in the Region fell from 62.6 million to 42.5 million between 2000 and 2018 (Figure 1). This represents a 32% decrease in the number of people suffering from hunger. Meanwhile, global hunger was reduced by a smaller proportion during the same period, falling from 909 million people to almost

822 million, corresponding to a 10% reduction.

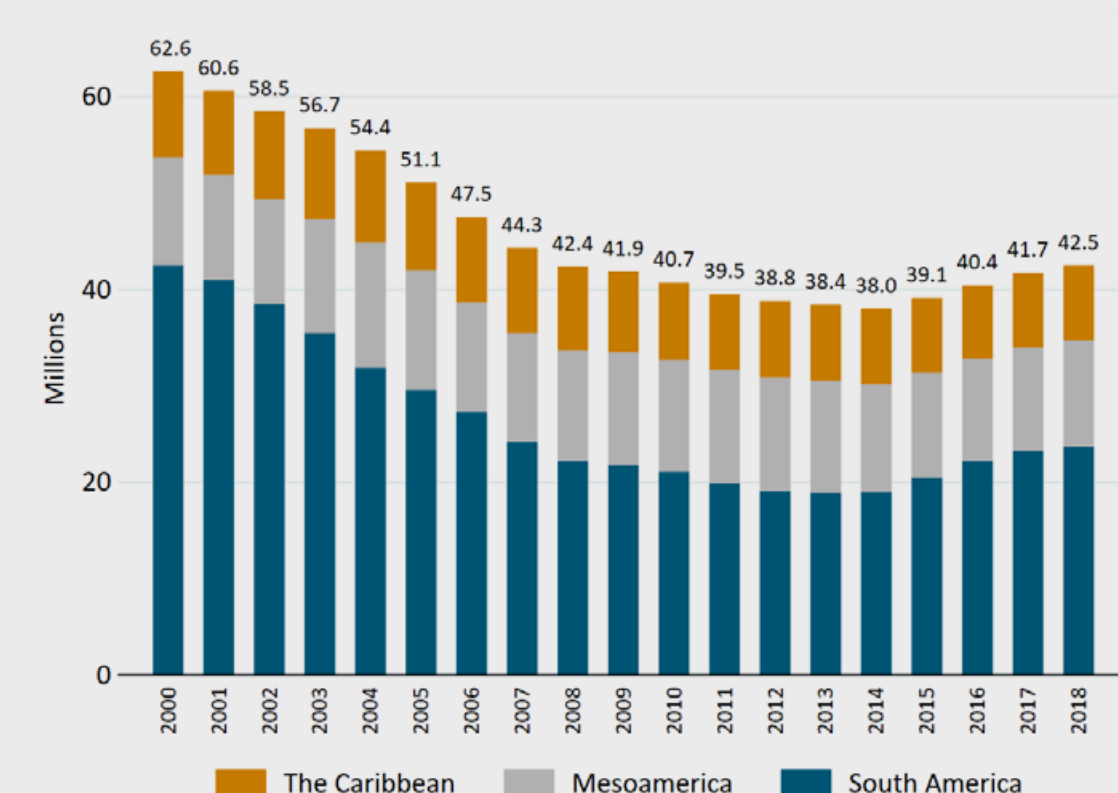
The reduction in the number of undernourished people is attributable above all to the progress achieved in South America. This subregion reduced its undernourished population by almost 19 million people. That is, the number fell from 42.6 million in 2000 to 23.7 million in 2018. In contrast, the other two subregions report moderate changes in these figures. In the Caribbean, hunger fell from affecting 8.9 million people to 7.8 million respectively, and in Mesoamerica, the undernourished population was reduced by about 200 000 people, but remained around 11 million over almost the entire period.

Furthermore, the trend of undernourishment in LAC over the past two decades has not always been downward. Between 2000 and 2014, it fell continuously until reaching a minimum in 2014. Since then, hunger has reversed its downward trend and has begun to increase.

The 42.5 million people who suffered from hunger in the Region in 2018 represent an increase of 4.5 million compared to the minimum of 38 million reported in 2014. This increase is attributable almost entirely to South America, where the number of undernourished people grew by 4.7 million between 2014 and 2018.

The analysis by country indicates a high level of variation in results of the fight against undernourishment. On the one hand, some countries reduced the number of undernourished people. Among them, Colombia stands out for having reduced its number of undernourished

FIGURE 1
UNDERNOURISHMENT TRENDS IN LATIN AMERICA AND THE CARIBBEAN BY
SUBREGIONS, IN MILLIONS OF PEOPLE, 2000-2018



SOURCE: FAO, 2019

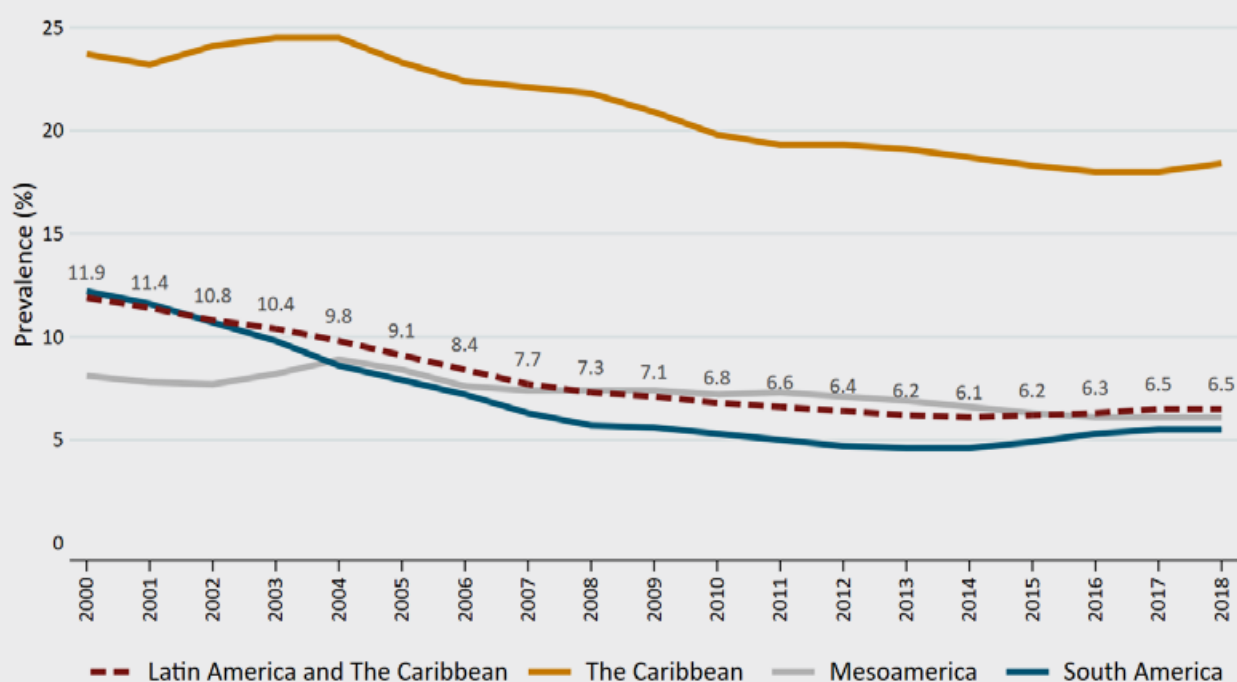
people from 3.6 million to 2.4 million between the 2013-2015 and 2016-2018 trienniums. Mexico and the Dominican Republic are also notable for having reduced hunger by magnitudes of 300 000 people.

Other countries recorded increases in undernourishment in the same period. Among them, Venezuela stands out since the number of people suffering hunger more than doubled, from 2.9 million people in 2013-2015 to 6.8 million in 2016-2018.

The prevalence of undernourishment in LAC decreased from 11.9% to 6.5% of the total population between 2000 and 2018 (Figure 2). The largest falls correspond to the subregions of South America and the Caribbean, where rates decreased by at least 5 percentage points in that period.

Just as with the number of undernourished people, the lowest prevalence of undernourishment in the last two decades was recorded in 2014. Since that year, the Region has

FIGURE 2
EVOLUTION OF THE PREVALENCE OF UNDERNOURISHMENT IN LATIN AMERICA
AND THE CARIBBEAN BY PERCENTAGE, 2000-2018



SOURCE: FAO, 2019

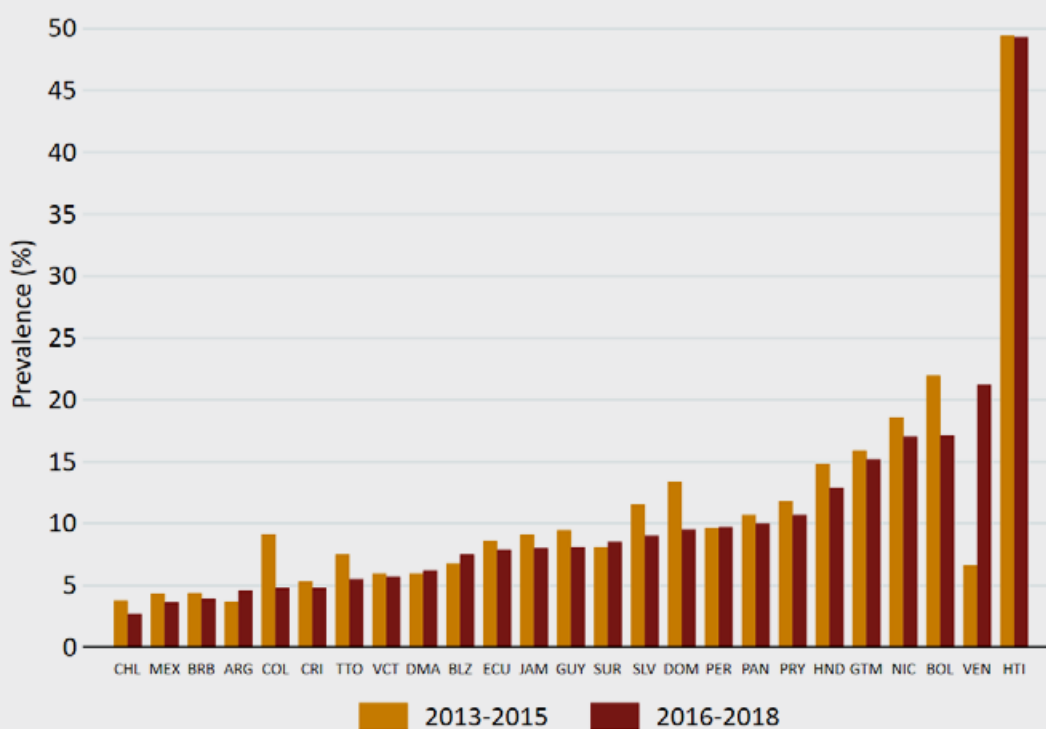
reported continuous increases in this percentage, with the prevalence rising from 6.1% to 6.5% between 2014 and 2018.

Most of the countries of the Region show decreases in the prevalence of undernourishment between the 2013-2015 and 2016-2018 trienniums. Bolivia, Colombia and the Dominican Republic reduced this figure by at least 2 percentage points during that period (Figure 3). On the other hand, over the same period the most pronounced increase was reported in Venezuela, where the prevalence increased from

9.5% in the 2013-2015 triennium to 21.2% in the 2016-2018 period.

It should be noted that Haiti remains the country with the highest prevalence of undernourishment in the Region. Almost half of its population suffers hunger, a situation that has remained virtually unchanged over at least the last two decades. Table 1 presents the prevalence figures and the number of people suffering from hunger in countries throughout the Region for different periods since the year 2000.

FIGURE 3
PREVALENCE OF UNDERNOURISHMENT IN DIFFERENT COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS A PERCENTAGE, 2013-2015 AND 2016-2018



NOTE: Countries whose prevalence of undernourishment is below 2.5% (Brazil, Cuba and Uruguay) are not included.
 SOURCE: Prepared by the authors based on fao, 2019

Prevalence of moderate or severe food insecurity

The SDG 2 target related to ending hunger and achieving access to healthy, nutritious, diversified and sufficient food also includes the indicator for the prevalence of moderate or severe food insecurity according to the Food Insecurity Experience Scale (FIES). This measurement helps to better understand the complexity of the phenomenon of hunger, assessing the experience of households in accessing sufficient quality food. It is an especially significant indicator for LAC because it is better able to identify

changes in food security in middle-income and upper-middle-income countries, since food insecurity problems in these countries are more frequently associated with seasonal phenomena than permanent ones. Meanwhile, it allows disaggregate data by individuals, which facilitates the characterization of food insecurity, for example, by sex or ethnic group.

People are said to be in a situation of severe food insecurity when a member or members of the household have run out of food, have experienced

TABLE 1
UNDERNOURISHMENT IN COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS A PERCENTAGE AND IN MILLIONS OF PEOPLE, IN TRIENNIUMS FROM 2000-02 TO 2016-2018*

	Prevalence (%)					Millions of people				
	2000-2002	2010-2012	2013-2015	2016-2018	Change 2013-2015 and 2016-2018	2000-2002	2010-2012	2013-2015	2016-2018	Change 2013-2015 and 2016-2018
Argentina	4.1	3.9	3.4	4.6	▲	1.5	1.6	1.5	2.1	▲
Barbados	5.8	4.9	3.9	3.9	=	<0.1	<0.1	<0.1	<0.1	=
Belize	5.0	5.8	7.7	7.5	▼	<0.1	<0.1	<0.1	<0.1	=
Bolivia (Plurinational State of)	31.6	24.5	19.4	17.1	▼	2.7	2.5	2.0	1.9	▼
Brazil	10.6	<2.5	<2.5	<2.5	=	18.8	n.d.	n.d.	n.d.	n.d.
Chile	4.4	4.0	3.5	2.7	▼	0.7	0.7	0.6	0.5	▼
Colombia	9.4	10.8	7.5	4.8	▼	3.9	5.0	3.6	2.4	▼
Costa Rica	5.3	5.2	5.4	4.8	▼	0.2	0.2	0.3	0.2	▼
Cuba	2.8	<2.5	<2.5	<2.5	=	0.3	n.d.	n.d.	n.d.	n.d.
Dominica	4.4	5.6	6.3	6.2	▼	<0.1	<0.1	<0.1	<0.1	=
Ecuador	18.8	9.1	8.1	7.9	▼	2.4	1.4	1.3	1.3	=
El Salvador	9.3	12.5	10.6	9.0	▼	0.6	0.8	0.7	0.6	▼
Guatemala	18.1	15.8	16.0	15.2	▼	2.2	2.4	2.5	2.6	▲
Guyana	7.9	10.5	8.4	8.1	▼	<0.1	<0.1	<0.1	<0.1	=
Haiti	56.0	49.5	49.3	49.3	=	4.9	5.0	5.2	5.4	▲
Honduras	18.5	15.2	14.5	12.9	▼	1.2	1.3	1.3	1.2	▼
Jamaica	6.8	9.0	9.2	8.0	▼	0.2	0.3	0.3	0.2	▼
Mexico	4.4	4.6	4.1	3.6	▼	4.5	5.5	5.0	4.7	▼
Nicaragua	29.3	20.0	17.2	17.0	▼	1.5	1.2	1.0	1.1	▲
Panama	26.2	11.8	9.6	10.0	▲	0.8	0.4	0.4	0.4	=
Paraguay	12.2	11.9	11.7	10.7	▼	0.7	0.7	0.8	0.7	▼
Peru	21.7	10.1	9.2	9.7	▲	5.7	3.0	2.8	3.1	▲
Dominican Republic	27.1	14.6	12.1	9.5	▼	2.4	1.5	1.3	1.0	▼
St. Vincent and the Grenadines	14.8	6.4	5.5	5.7	▲	<0.1	<0.1	<0.1	<0.1	=
Suriname	12.9	8.1	8.1	8.5	▲	<0.1	<0.1	<0.1	<0.1	=
Trinidad and Tobago	11.2	8.6	6.4	5.5	▼	0.1	0.1	<0.1	<0.1	=
Uruguay	4.1	<2.5	<2.5	<2.5	=	0.1	n.d.	n.d.	n.d.	n.d.
Venezuela (Bolivarian Republic of)	16.3	3.7	9.5	21.2	▲	4.1	1.1	2.9	6.8	▲
WORLD	14.9	11.6	10.8	10.7	▼	929.8	814.3	791.4	809.9	▲
LATIN AMERICA AND THE CARIBBEAN	11.4	6.6	6.2	6.5	▲	60.6	39.6	38.5	41.5	▲
THE CARIBBEAN	23.7	19.5	18.7	18.1	▼	8.9	7.9	7.8	7.7	▼
MESOAMERICA	7.9	7.2	6.6	6.1	▼	11.0	11.7	11.2	10.8	▼
SOUTH AMERICA	11.5	5.0	4.7	5.4	▲	40.7	20.0	19.5	23.1	▲

* The figures are reported in three-year averages to reduce the margin of error. ▲ increase. ▼ decrease. = no change.

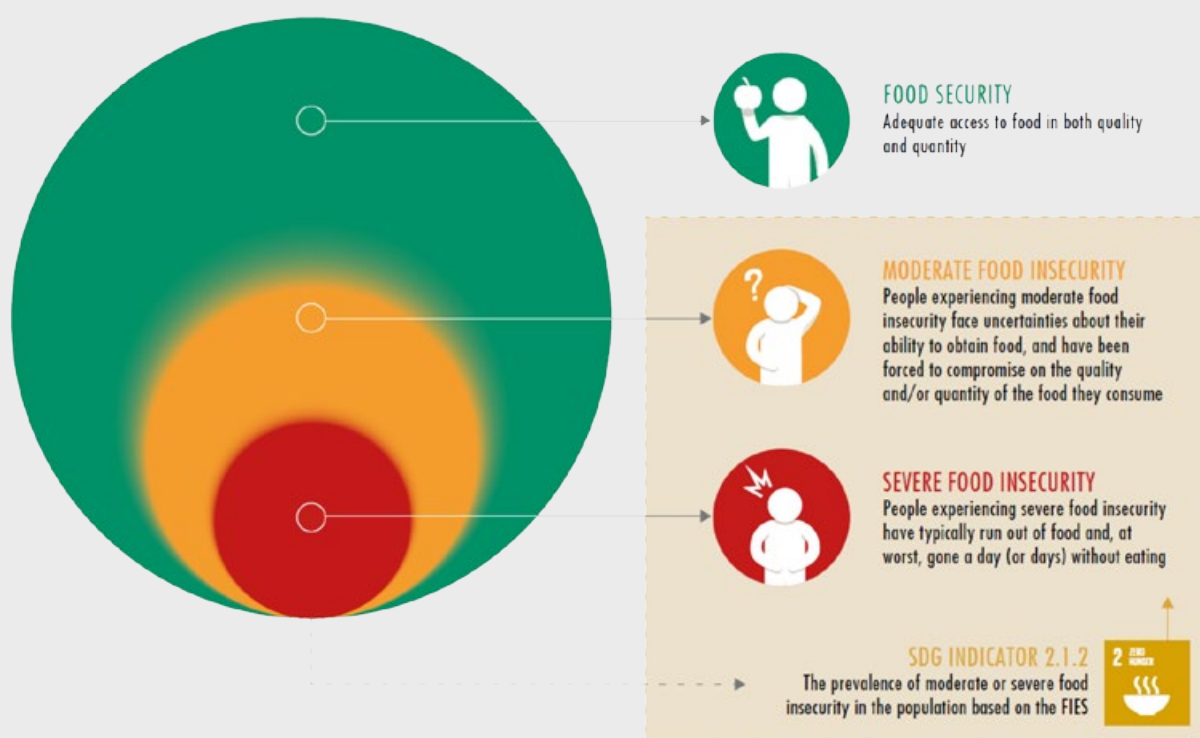
n.d. no data.

<2.5 refers to a rate of less than 2.5%.

<0.1 refers to a population of fewer than 100 000.

SOURCE Prepared by the authors based on FAO, 2019

FIGURE 4
SEVERITY LEVELS OF FOOD INSECURITY QUANTIFIED BY THE FOOD INSECURITY EXPERIENCE SCALE



SOURCE: FAO, IFAD, WHO, UNICEF AND WFP, 2019.

hunger or, in the extreme situations, have spent several days without eating (see Figure 4). Meanwhile, moderate food insecurity refers to members of a household being forced to modify the quantity or quality of the food they consume because of the uncertainties associated with their ability to access food.

FAO estimates that more than 1.9 billion people around the world suffered moderate or severe food insecurity in the 2016-2018 three-year-period, that is, one in four people. Of these, more than 650 million experienced severe food insecurity (Table 2).

The data for Latin America⁴ indicate that 187 million people suffer from moderate or severe food insecurity. Of these, 53.7 million were in a situation of severe food insecurity during the same three-year-period. Approximately two-thirds of that population was concentrated in South America, and the rest in Mesoamerica.

The prevalence of food insecurity in Latin America increased between the 2014-2016 and

⁴ Currently, it is not possible to estimate the total population suffering from food insecurity in the Caribbean because there is not enough information available on these countries.

TABLE 2
SEVERE AND MODERATE OR SEVERE FOOD INSECURITY IN LATIN AMERICAN AND CARIBBEAN COUNTRIES WITH INFORMATION FROM THE FIES, PREVALENCE AS A PERCENTAGE AND IN MILLIONS OF PEOPLE, 2014-2016 AND 2016-2018*

	Inseguridad alimentaria grave				Inseguridad alimentaria moderada o grave			
	Prevalence (%)		Millions of people		Prevalence (%)		Millions of people	
	2014-2016	2016-2018	2014-2016	2016-2018	2014-2016	2016-2018	2014-2016	2016-2018
Argentina	5.8	11.3	2.5	5.0	19.1	32.1	8.3	14.2
Chile ^a	n.d.	3.4	n.d.	0.6	n.d.	13.6	n.d.	2.5
Costa Rica	4.8	5.2	0.2	0.3	21.4	23.2	1.0	1.1
Ecuador ^a	7.1	7.1	1.1	1.2	23.3	23.3	3.8	3.9
El Salvador	13.5	12.7	0.9	0.8	42.3	40.0	2.7	2.5
Guatemala	15.6	16.4	2.5	2.8	43.1	43.6	7.0	7.4
Honduras	18.5	17.7	1.7	1.6	52.4	49.3	4.7	4.6
México	9.0	8.9	11.3	11.5	28.5	28.0	35.9	36.2
Santa Lucía ^a	4.5	4.5	<0.1	<0.1	22.2	22.2	<0.1	<0.1
Uruguay	6.6	7.6	0.2	0.3	20.6	25.3	0.7	0.9
WORLD	7.9	8.7	584.6	654.1	23.5	25.4	1736.8	1915.1
LATIN AMERICA	7.3	8.9	43.2	53.7	26.2	31.1	154.6	187.0
MESOAMERICA	10.5	10.6	18.2	18.8	32.2	31.7	55.5	56.2
SOUTH AMERICA	6.0	8.2	25.0	34.9	23.8	30.8	99.1	130.8
THE CARIBBEAN	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

* The figures are reported in three-year averages to reduce the margin of error.

^a From official national data.

n.d. no data.

<0.1 refers to a population of fewer than 100 000.

SOURCE: FAO, 2019.

2016-2018 trienniums. Specifically, moderate or severe food insecurity increased from 26.2% to 31.1%, while severe food insecurity increased from 7.3% to 8.9%. These figures show that the number of people facing moderate food insecurity increased by a larger amount. This may be directly related to the processes of economic slowdown and recession that have been experienced by several countries in the Region, which have jeopardized access to food for a significant part of the population.

It is clear that there are substantial differences

between the percentage variations in severe food insecurity and undernourishment. This can be associated to the fact that, while the figures of the prevalence of undernourishment reflect structural factors that influence food availability and inequality in access, the figures of severe food insecurity are more sensitive to short-term factors that affect people's direct experience of access to food, as indicated in the surveys. This fact may be especially important in the Region, which continues to show high levels of inequality. In addition, important climatic, political and economic phenomena that have

TABLE 3
SEVERE AND MODERATE OR SEVERE FOOD INSECURITY IN ADULTS (18 YEARS AND OLDER) IN SEVERAL LATIN AMERICAN COUNTRIES ACCORDING TO SEX, PREVALENCE AS A PERCENTAGE AND IN MILLIONS OF PEOPLE, 2016-2018*

	Inseguridad alimentaria grave				Inseguridad alimentaria grave o moderada			
	Prevalence (%)		Millions of people		Prevalence (%)		Millions of people	
	Men	Women	Men	Women	Men	Women	Men	Women
Argentina	8.3	11.5	1.3	2.0	24.9	32.9	4.0	5.7
Chile ^a	4.0	4.6	0.3	0.3	15.5	18.8	1.1	1.4
Costa Rica	4.1	5.4	0.1	0.1	18.7	24.1	0.4	0.5
Ecuador ^a	16.8	18.1	1.0	1.1	41.3	46.8	2.4	2.8
El Salvador	10.7	13.4	0.2	0.3	33.9	42.4	0.7	1.1
Guatemala	14.9	16.0	0.8	0.9	38.5	44.5	2.0	2.5
Honduras	16.1	18.1	0.5	0.6	45.4	50.2	1.4	1.6
México	7.5	9.9	3.5	4.7	24.9	29.1	11.6	14.0
Uruguay	6.4	7.2	0.1	0.1	20.9	25.1	0.3	0.4
WORLD	8.6	9.1	240.0	254.8	24.0	25.4	670.3	709.1
LATIN AMERICA	8.3	10.0	18.3	23.0	24.8	29.9	54.9	69.1
MESOAMERICA	9.0	11.2	5.6	7.3	27.9	32.5	17.5	21.2
SOUTH AMERICA	8.0	9.5	12.6	15.7	23.6	28.9	37.2	47.7
THE CARIBBEAN	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

* The figures are reported in three-year averages to reduce the margin of error.

^a Based on official national data.

n.d. no data.

SOURCE: Prepared by the authors based on FAO data, 2019

affected the food security of its population have recently been experienced in LAC.

As already noted, an important aspect of the FIES is that it makes it possible to measure the degree of food security for different population groups and, therefore, to observe the differences between them. For example, it may be observed that food insecurity is more frequent among women than among men. Global figures indicate that the prevalence of severe food insecurity among adult women was 9.1% in the

2016-2018 triennium, while among adult men the percentage was 8.6% in the same period (Table 3). This difference means that the population of women suffering from severe food insecurity exceeds that of adult men by almost 15 million.

The gender gap in food insecurity is also evident among the Latin American population, and is even more pronounced than the gap worldwide. In the 2016-2018 triennium, the prevalence of severe food insecurity was 10% among adult women in Latin America, while among men it

BOX 1

"LEAVE NO ONE BEHIND." SURVEY OF INTERCULTURAL STATISTICAL DATA FOR THE INDIGENOUS PEOPLES OF EL SALVADOR AND PANAMA

One of the main difficulties in promoting the ethnic development and food security and nutrition of indigenous peoples in LAC has to do with the absence of robust statistical data that serve to guide the application of public policies and programs, based on an intercultural approach.

For this reason, FAO has initiated an innovative process to improve statistical measurements for indigenous peoples. Through cultural adaptation of various statistical methodologies, FAO works together with El Salvador's General Directorate of Statistics and Census (DIGESTyC) and Panama's National Institute of Statistics and Census (INEC), and in close collaboration with the authorities of the Lenca, Kakawira, Emberá, Guna Yala and Ngäbe Bugle indigenous peoples to achieve that goal.

The inter-institutional teams have discussed the following issues: technical and budgetary feasibility; choice of communities to work with; verification of the available community mapping; review of the questionnaires and the identification of elements that may need to be adjusted; reproduction of questionnaires and the detailed elaboration of the work schedule for the execution of the 2018 pilots.

The proposal was made to the indigenous authorities and their communities using free, prior and informed consent (FPIC). This tool is a specific right that belongs to indigenous peoples and is recognized in the United Nations declaration on the rights of Indigenous Peoples (DNUDPI). The indigenous authorities of El Salvador and Panama gave their consent to carry out the pilot under the option of "consent after negotiation of the conditions under which the project will be implemented," which meant:

- ▶ Hiring of indigenous personnel (survey takers and cartographers).
- ▶ Inclusion of indigenous authorities in the project planning and monitoring team.
- ▶ Dissemination of the results to local indigenous authorities once the pilot has concluded.

An intercultural element of utmost importance for the success of these pilot experiences was the training and incorporation of indigenous survey takers. This made it possible to apply the questionnaires in indigenous languages. This strategy increased the confidence of the surveyed population and reduced non-response rates. It also facilitated the interpretation of some concepts, for example, the Food Insecurity Experience Scale. Likewise, the poll takers provided logistical support to the field survey, since they understood the socio-cultural dynamics of the indigenous territories in detail. This greatly facilitated the data collection processes and updating the maps.

This exercise will make it possible to rethink the data collection instruments (questionnaires or ballots) in order to more accurately reflect cultural conceptions, traditional norms and the particular characteristics of forms of social and productive organization. This will provide better inputs for the development of social policies, plans and projects that contribute to better lives for indigenous peoples.

As a result of these pilots, the FIES food security module was introduced as part of Panama's national household survey. In El Salvador the potential of this form of measurement in rural and indigenous territories was verified.

Source: FAO, 2018.

was 8.3%. The prevalence of moderate or severe food insecurity among women was 29.9%, and among men 24.8%. In absolute terms, this shows that 69.1 million adult women suffer moderate or severe food insecurity, compared with 54.9 million men.

Recent analyses by FAO, IFAD, WHO, UNICEF and WFP (2019) and by Broussard (2019) help explain the global gender difference in food insecurity. This gap seems to be greater in poorer strata of the population with a lower level of education, as well as in urban settlements, that is, large cities and their suburbs. This is important in the case of Latin America, where gender gaps in terms of labor participation, education and poverty are high (ECLAC, 2016; ECLAC, 2019c). Likewise, the same analyses highlight the importance of considering other forms of discrimination against women, such as access to health and social protection systems, which could explain this difference largely.

Women and girls in the Region suffer more strongly the disadvantages associated with the sexual division of labor, namely the allocation

of care tasks and unpaid domestic work. As a consequence, they face extended working hours, poor working conditions, a high impact from informality of labor, lower income and low economic autonomy (Brito and Ivanovic, 2019).

Today, the disaggregated FIES has been applied more widely to understand the different experiences of food security of men and women. In addition, FAO is also working to understand more about the food insecurity of indigenous groups (see [Box 1](#)).

Undernourishment indicators and FIES are tools that make it possible to assess the hunger and food security situation at the country level, as well as improving comparisons between countries at the global level. However, the level of aggregation and periodicity with which they are reported hinders the timely identification of emergency situations at specific times and in specific territories. For this reason, different actors at the international level have collaborated for over a decade on the development of indicators that allow identification and timely action in countries or territories experiencing acute situations of food insecurity (see [Box 3](#)).

BOX 2 POLICIES TO ADDRESS HUNGER AND FOOD INSECURITY IN THE FACE OF THE ECONOMIC SLOWDOWN

The periods of greatest economic growth in LAC over recent decades have coincided with the most significant periods of reduction in hunger. Similarly, when growth levels have receded, the decline in food insecurity figures have slowed down or even showed an increase. Between 2000 and 2014 (the latter being the year with the lowest prevalence of undernourishment in the Region since records became available), average economic growth stood at 3.2% per year, and the number of hungry people fell by almost 25 million. However, since 2014 average economic growth has been practically zero, and the number of hungry people increased by 4.5 million.

Therefore, the economic slowdown affecting the Region's countries is one of the factors that most affects the food security and nutrition of people and households, with differing impacts on the various population groups. This is especially significant for a region with high levels of inequality. Therefore, it is important to have short-term and long-term policies that have clear objectives to improve nutrition and increase household resilience and reduce the impacts of economic shocks on the population, with special emphasis on groups in a situation of greater vulnerability.

First, social protection programs and policies that seek to protect the purchasing power and access to social services of households and population groups with greater needs are essential to their recovery in the wake of adverse economic episodes. These actions must be complemented with measures that contribute

to the consolidation of social protection systems that manage to meet the specific characteristics of the different population groups in terms of income, geographical location, age and gender. LAC has a long tradition of this type of policies or other instruments¹

Second, a further set of equally important measures to deal with economic slowdowns are countercyclical policies. Some examples of this type of policies in the agri-food sector are those aimed at boosting domestic food production through financial facilities for the purchase of inputs and improvements to equipment, strengthening of support and rural extension services and incentives for technological innovation and commercialization. These measures must be accompanied by structural policies that help diversify economic options in rural areas, the inclusion of young people and women, infrastructure investments, research and training.

Therefore, it is necessary to highlight the importance of implementing two-way policies, achieving a balance between a set of short and long-term policies that make it possible to reduce economic vulnerabilities and to develop a rapid response capability when economic disturbances occur. In addition, it is essential to integrate measures that seek to improve food security and nutrition and poverty reduction, in order to reduce gender inequalities and social exclusion of different population groups.

1/ A recent example in this regard is Argentina, which formalized the extension of the national food emergency until December 31, 2022 as a result of the economic slowdown. A decree was passed that increased the budget for public food and nutrition policies by at least 50%.

Source: FAO, IFAD, WHO, UNICEF and WFP, 2019.

BOX 3 INTEGRATED FOOD SECURITY PHASE CLASSIFICATION

The Integrated Food Security Phase Classification (IPC) is a set of tools that make it possible to analyze and classify the severity of food insecurity and malnutrition at the national, regional or global level. The objective of the Classification is to provide decision makers with rigorous analysis of the food security situation in emergency contexts and inform the design of policies or programs in the medium and long term.

The CIF makes it possible to classify the nature and severity of food insecurity according to international

scientific standards. Specifically, the Classification assesses the severity of food insecurity, the areas where it occurs, the number of people affected and its causes. The CIF comprises three different scales: 1) acute food insecurity, 2) chronic food insecurity and 3) acute malnutrition. Each scale makes it possible to define specific interventions for each context. The following table sets out each of the scales addressed by the CIF, how it is defined and the different phases into which it is divided.

BASIC CHARACTERISTICS OF THE THREE SCALES OF THE INTEGRATED FOOD SECURITY PHASE CLASSIFICATION

Scale	Definition	Phases	
<i>Acute food insecurity</i>	Food insecurity at a given time and of a gravity that threatens the life or ways of life of people, or both, regardless of the causes, context or duration	1.	None/minimum
		2.	Accentuated
		3.	Crisis
		4.	Emergency
		5.	Humanitarian catastrophe /famine
<i>Chronic food insecurity</i>	Lasting food insecurity principally due to structural causes, including seasonal food insecurity events	1.	Low
		2.	Moderate
		3.	High
		4.	Very high
<i>Acute malnutrition</i>	Expressed as thinness or presence of edema in children	1.	Acceptable
		2.	Alert
		3.	Severe
		4.	Critical
		5.	Very critical

The CIF methods allow comparability over time and between geographic areas. This helps the stakeholders involved to allocate resources to the population that needs it most. Unlike the undernourishment indicators and the FIES scale, which monitor and compare international progress towards the fulfillment of SDG 2, the information provided by the CIF helps decision makers plan interventions at specific times and in specific areas according to the type of problems and the phase of food insecurity or malnutrition. This makes the CIF a key instrument in food emergency situations.

The CIF protocols were developed and first applied in Somalia in 2004. At the time of publication, the CIF has been used in more than 30 countries in Africa, LAC and Asia. Various international and intergovernmental organizations, including Action Against Hunger, CARE International, FAO, FEWS NET, Joint Research Center of the European Commission,

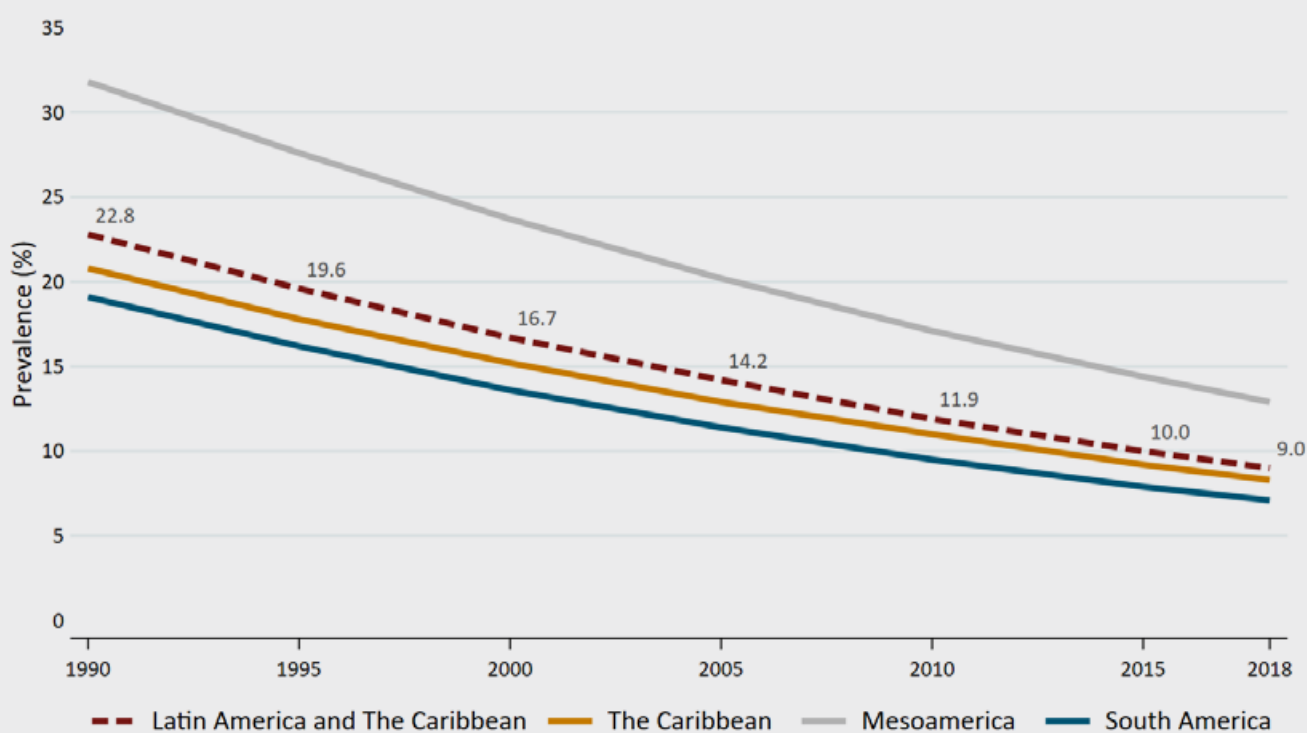
OXFAM, Save the Children, Central American Integration System (SICA), UNICEF and WFP are responsible for developing and implementing the CIF at the global, regional and national levels.

According to data from the Food Security Information Network (FSIN, 2019), in 2018 more than 113 million

people in 53 countries were in a situation of acute hunger that demanded urgent action (phase 3, crisis). It is also estimated that 143 million people in 42 countries were in a situation of acute food insecurity that same year (phase 2). This assessment considers this population at risk of crisis due to climatic, economic or social contingencies.

In 2018, conditions of acute food insecurity in crisis situation (CIF Phase 3) in LAC were related to climatic phenomena and adverse economic conditions. On the one hand, in Central America and the Caribbean, five countries were home to around 3.8 million people suffering from acute food insecurity due to climatic factors (approximately 1.6 million in the countries that comprise the Dry Corridor, namely El Salvador, Guatemala, Honduras and Nicaragua, and 2.3 million in Haiti). On the other hand, the economic crisis in Venezuela brought about a significant flow of migrants to neighboring countries. Since part of that population migrates in precarious economic conditions, sometimes with insufficient resources to buy food, an estimated 400 000 migrants in transit to Colombia, Ecuador and Peru experienced acute food insecurity. Overall, it is believed that in 2018 4.2 million people in the Region were in a situation of acute food insecurity that required urgent action.

FIGURE 5
EVOLUTION OF STUNTING IN CHILDREN UNDER 5 YEARS OLD IN LATIN AMERICA AND THE CARIBBEAN AND SUBREGIONS, PREVALENCE AS A PERCENTAGE, 1990-2018



SOURCE: Prepared by the authors based on UNICEF, WHO and World Bank, 2019.

Target 2.2. End all forms of malnutrition

Malnutrition in children under 5 years old

The eradication of child malnutrition is part of the international commitments of the 2030 Agenda for Sustainable Development. The target includes three indicators that monitor the different forms of malnutrition of children under 5 years of age: 1) stunting (chronic malnutrition or low height for age), 2) wasting (acute malnutrition or low weight for height) and 3) overweight (excess weight for height).

Stunting⁵

Over the past 30 years, LAC has steadily reduced the prevalence of stunting in children under⁵ years. The downward trend has allowed that prevalence to be reduced more than half between 1990 and 2018, from 22.8% to 9% (Figure 5). In terms of population, this means that the Region reduced the number of children with stunting from 12.9 million to 4.8.

The reduction of stunting in children reflects what has happened in each of the subregions. In all cases, the prevalence more than halved compared to the figures reported in 1990. The Caribbean and South America reduced the prevalence of stunting in children from 20% in 1990 to less than 9% in 2018. The decrease in Mesoamerica stands out, falling from 31.8% to 12.9% over the same period.

In the last two decades, the stunting in children has decreased in most of the countries for which information is available (Figure 6). However, some of them, especially in the subregions of Mesoamerica and the Caribbean, show a prevalence higher than 10% in the current decade. The most extreme case is that of

⁵ Stunting is defined as a height or length (in cm) for the age (months) that is two standard deviations lower than the median in the 2006 WHO child growth patterns. A low weight for height is an indicator reflecting the cumulative effects of malnutrition and infections from birth, and even earlier. Growth retardation may be the result of prolonged nutritional deprivation, recurrent infections and lack of water and sanitation infrastructure (FAO, IFAD, WHO, UNICEF and WFP, 2019).

Guatemala, where almost half of the girls and boys under 5 suffer from stunting.

Wasting⁶

Wasting or low weight for height is a rare condition among children under 5 years of age in the Region.

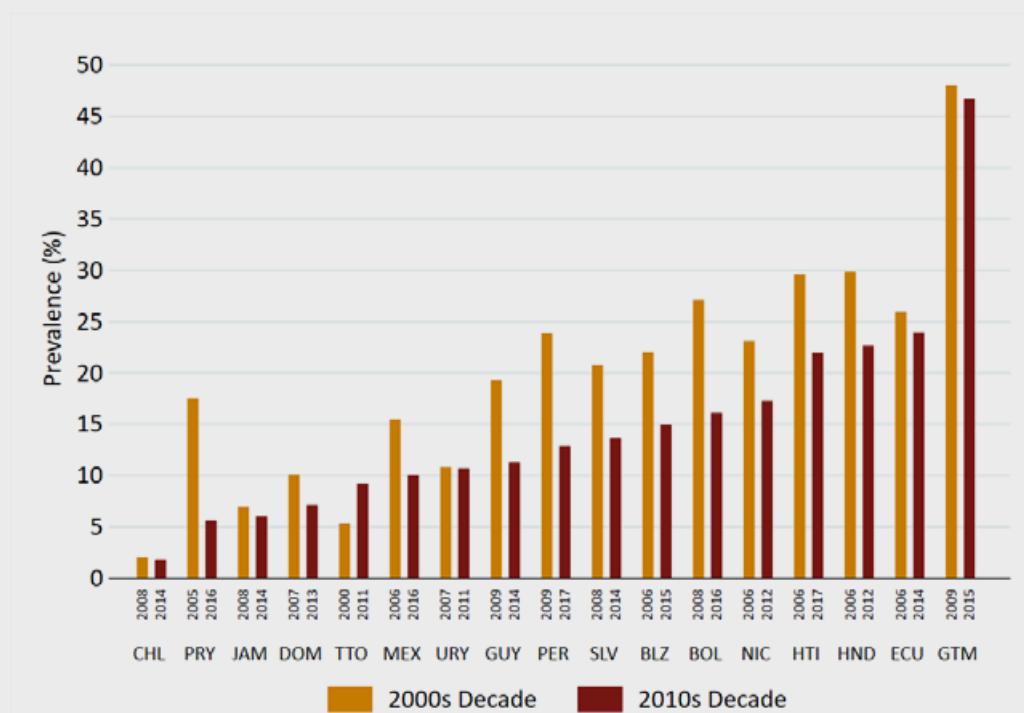
Its prevalence is well below the world (7.3% in 2018). It is estimated that 1.3% of the Region's child population suffered wasting in 2018, with a range from 0.9% in Mesoamerica to 3% in the Caribbean (Figure 7). That is, some 700 000 children in LAC suffered wasting in that year.

In general, wasting is more frequent in countries that, due to their geographical location, are subject to climatic impacts, conflicts or sudden economic contingencies that tend to affect access to food in a transitory, though recurrent and periodic manner, and temporarily impact the nutritional status of children as a result. This is the case of countries such as Guyana, Haiti, Jamaica and Trinidad and Tobago, where the prevalence exceeds the subregional average (Figure 8). This reality is also recurrent in certain territories of the Region exposed to extreme climatic phenomena, for example, in the so-called Central American Dry Corridor⁷ or in some areas of Colombia and the Andean region.

⁶ Wasting is defined as a weight (kg) for height or length (cm) that is two standard deviations lower than the median for the 2006 WHO child growth patterns. A low weight for height is an indicator of serious weight loss or inability to gain weight. It may be the result of insufficient food intake, or the incidence of infectious diseases, especially diarrhea (FAO, IFAD, WHO, UNICEF and WFP, 2019).

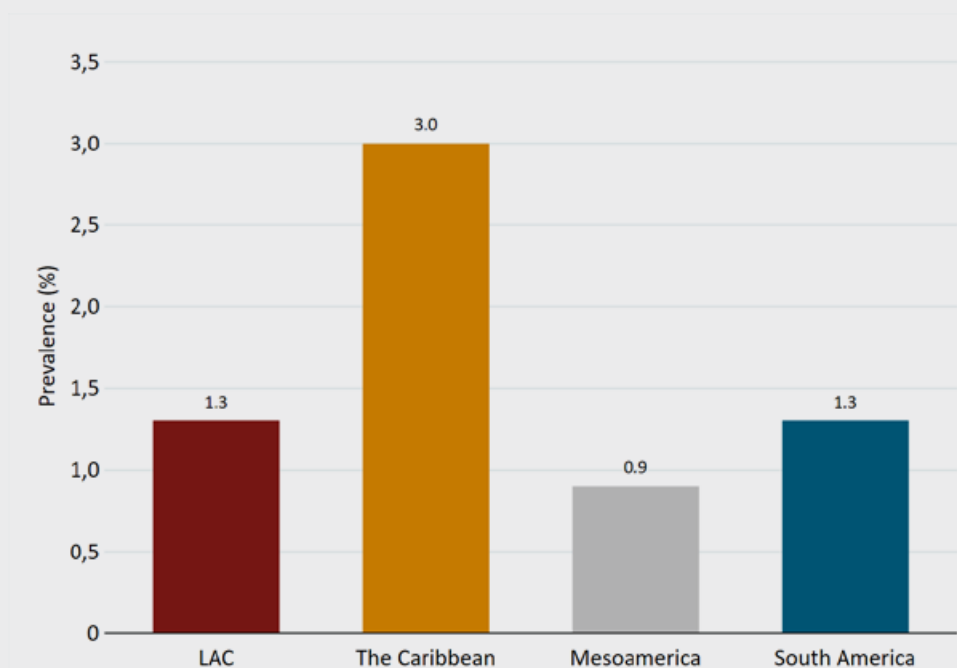
⁷ The Dry Corridor is characterized by a marked and prolonged season without rainfall and a latent risk of recurrent droughts. It covers 52% of the total area of El Salvador, Guatemala and Honduras. Of the total area of the Dry Corridor in these three countries, 6.4% is classified as a zone of severe drought impact, 54.2% as a zone of high drought impact, and 39.4% as a zone of low drought impact. In total, 768 municipalities in the three countries are affected by recurrent droughts to a greater or lesser extent.

FIGURE 6
STUNTING IN CHILDREN UNDER 5 IN SEVERAL COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS PERCENTAGES, MOST RECENT DATA FROM THE 2000S AND 2010S



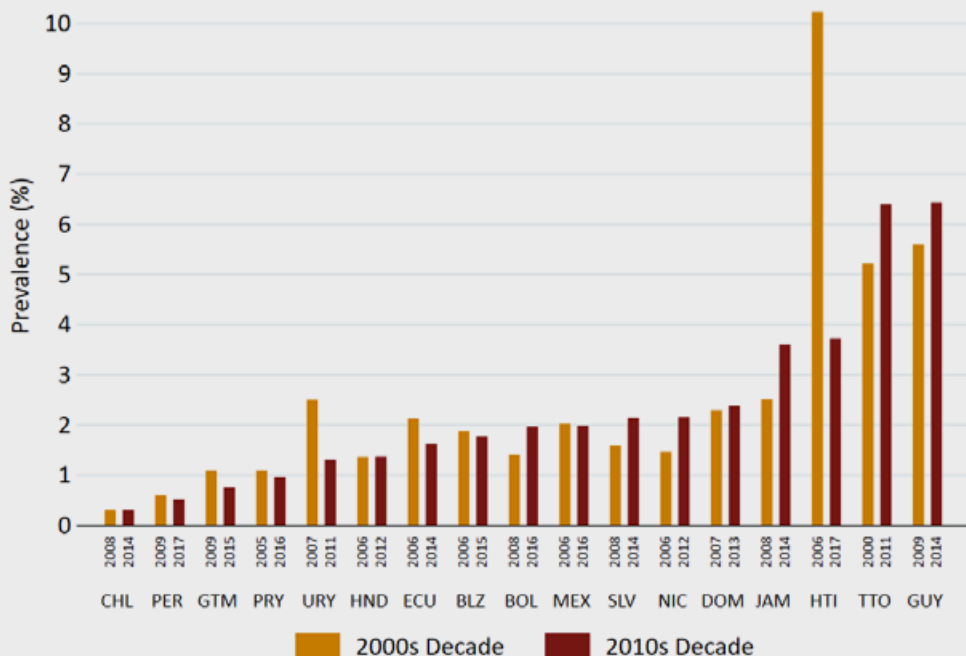
SOURCE: Prepared by the authors based on UNICEF, WHO and World Bank, 2019.

FIGURE 7
WASTING IN CHILDREN UNDER 5 IN LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS A PERCENTAGE, 2018



SOURCE: Prepared by the authors based on UNICEF, WHO and World Bank, 2019.

FIGURE 8
WASTING IN CHILDREN UNDER 5 IN SEVERAL COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS A PERCENTAGE, MOST RECENT DATA FROM THE 2000S AND 2010S



SOURCE: Prepared by the authors based on UNICEF, WHO and World Bank, 2019.

BOX 4 REACTIVE SOCIAL PROTECTION AGAINST EMERGENCIES: POLICIES, STRATEGIES AND PROGRAMS

In Latin America and the Caribbean, the frequency of natural disasters has increased by 3.6 times in half a century (Cecchini, Filgueira, Martínez, and Rossel, 2015). Disasters caused by natural phenomena originate significant economic losses that affect mainly the agricultural sector, which had losses of about USD 22 billion between 2005 and 2015 (FAO, 2018b).

Households living in poverty have greater exposure to the consequences of disasters and the disturbances arising from climatic, natural (earthquake) and social (economic crises and conflicts) phenomena. They are more exposed to threats and their risk management capacity is limited. As a result, crises and disasters can have devastating impacts on income and livelihoods, and they push people to adopt coping strategies that are

harmful to them, such as the sale of productive assets, reducing the food intake of children and adolescents or taking them out of school, as well as the overexploitation of natural resources.

Social protection systems can help reduce vulnerability to various threats and improve risk management capabilities, as well as contribute to rebuilding agricultural livelihoods. During emergencies affecting the agricultural sector, social protection helps to plan a rapid sectoral response, as well as to preserve the food security of the affected populations. Social protection makes it possible to maintain continuous levels of consumption (even in situations of shock and stress), minimizing such negative coping strategies.

BOX 4
(CONTINUED)

When policy makers consider the use of a social protection system to address needs during an emergency, they can use different strategies to increase the overall level of help the system provides to people in vulnerable situations:

Vertical expansion: increase the value or duration of the benefits of an existing program or system.

Horizontal expansion: add new people to an existing program or system.

Back-up: response in which the actors involved in the humanitarian response or governments use part of the administrative capacity of the national social protection system to channel their assistance.

Parallel alignment: develop a parallel humanitarian system that adapts in the best possible way to a current social protection system or to a potential future social protection program.

The number of countries in the Region that already use social protection systems to respond to emergencies has increased considerably in recent years, in what appears to be a new trend. Brazil, Chile, Colombia, Dominica, Ecuador, El Salvador, Guatemala, Mexico, Peru and the Dominican Republic have used the capacity of social protection programs to respond to emergencies.

In general, social protection systems in the Region are consolidated systems characterized by 1) strong government leadership (for example, incorporated

into legislation), 2) a comprehensive program system supported by well-established administrative systems, 3) high levels of institutional capacity, 4) robust systems for informed decision-making and better accountability (for example, through customized information systems), and 5) sustainable financing. Likewise, the widespread coverage of social protection systems in many countries of the Region makes it possible to reach large segments of the population, especially those in a situation of greater poverty and vulnerability. This provides a sound basis to support emergency response more quickly and within a more predictable, sustainable and efficient manner, therefore offering greater effectiveness and lower costs, although this is dependent on a number of factors (Beazley, Solórzano, and Barca, 2019).

Social protection programs can also be important entry points to recover agricultural livelihoods, through the promotion of sustainable practices, including the management of river basins, reforestation and the construction of terraces. In addition, in times of stability, social protection through cash transfers and support for productivity (programs for the generation of assets and human and financial capital) can promote the economic capacity of poor people. This allow them to manage risks and, in a virtuous circle, accumulate assets, thus enhancing the resilience of livelihoods to the risk of disaster and the effects of climate change.

Source: Cecchini, Filgueira, Martínez, and Rossel, 2015; FAO, 2018b; Beazley, Solórzano, and Barca, 2019.

Childhood overweight⁸

The third indicator of malnutrition in children under 5 years of age is overweight, which is at the other end of the weight distribution for height (excess). It is estimated that 4 million children under 5 are overweight in LAC, which is equivalent to 7.5% of the Region's child population.

Unlike the trends for wasting and stunting, overweight has shown a tendency to increase in the last three decades. The Childhood overweight rate in LAC rose from 6.2% in 1990 to 7.5% in 2018 (Figure 9), which is above the global prevalence of 5.9%.

This problem has steadily increased in all subregions. The most striking change was reported by the Caribbean, where the figure rose from 4.2% in 1990 to 7% in 2018. However, it is important to note that in absolute terms the number of overweight children in the Caribbean remained at around 200 000 over that period.

⁸ Childhood overweight is defined as a weight (kg) for height or length (cm) that is two standard deviations higher than the median for the 2006 WHO child growth patterns. This indicator reflects excessive weight gain for height, usually as a result of energy consumption that exceeds the energy needs of children (FAO, IFAD, WHO, UNICEF and WFP, 2019). In addition to food, other factors that help explain childhood overweight are physical activity, sedentary habits and sleep quality (WHO, 2019).

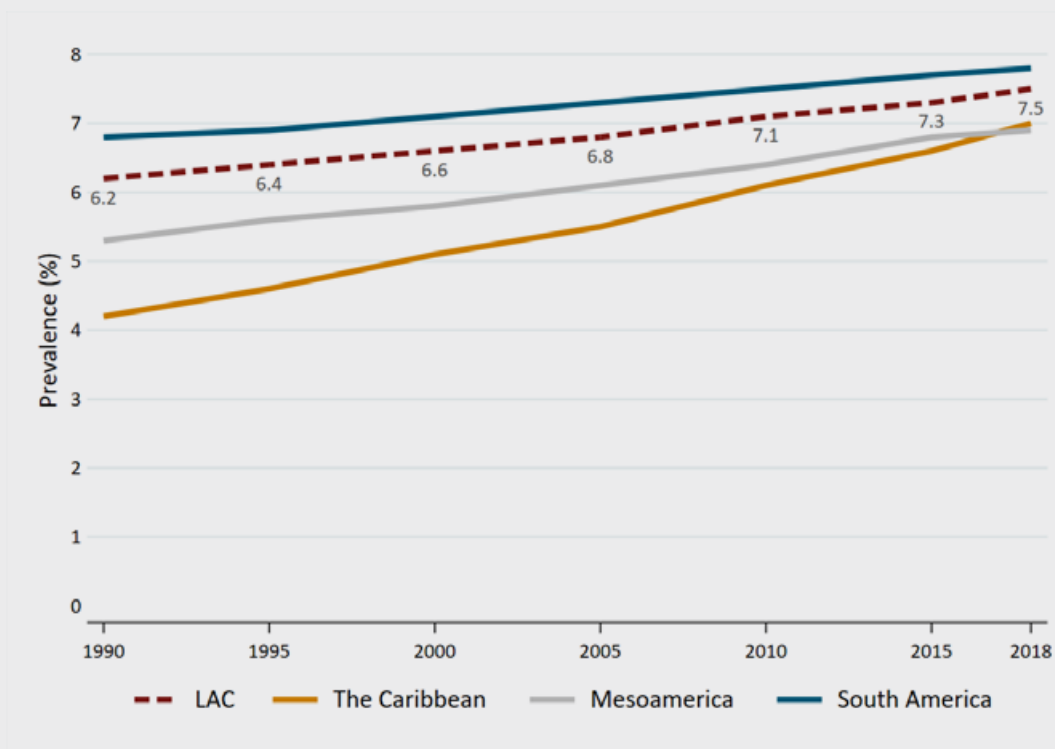
Therefore, the increase in prevalence is mainly the result of the fall in the population of children under 5 years of age.

The other significant increase in excess weight among children was observed among the countries of Mesoamerica. The prevalence of childhood overweight in this sub-region increased from 5.3% in 1990, to almost 7% in 2018. This meant that 200 000 children were added to the overweight child population in the subregion over the last thirty years.

The prevalence of overweight in children under 5 years increased more slowly in South America from 1990 to 2018, but the subregion continues to be home to the largest number of children affected. The most recent estimate suggests that two out of every three overweight children in the Region live in a South American country. That is, childhood overweight affects 2.6 million children under 5 years old.

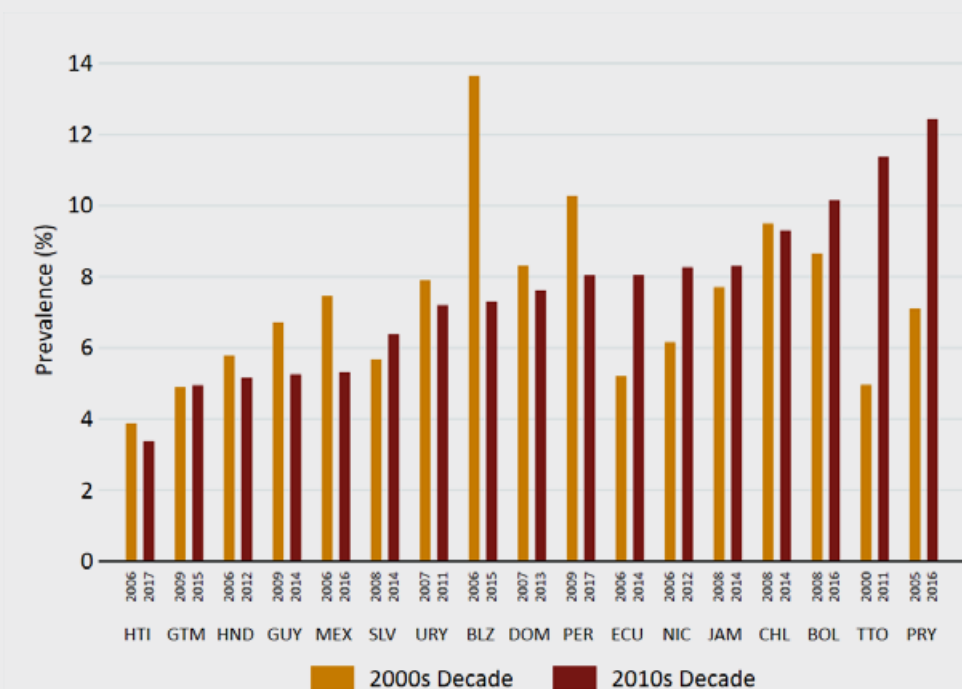
The tendency of childhood overweight by country shows mixed behaviors over the last two decades. On the one hand, substantial upward changes are observed in the prevalence of childhood overweight in Bolivia, Ecuador, Nicaragua, Paraguay and Trinidad and Tobago, while the trend is downward in Belize, Guyana and Mexico (Figure 10). On the other hand, the rest of the countries report relatively modest changes in overweight rates compared to the data from the last 20 years.

FIGURE 9
EVOLUTION OF OVERWEIGHT IN CHILDREN UNDER 5 IN LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS A PERCENTAGE, 1990-2018



SOURCE: Prepared by the authors based on UNICEF, WHO and World Bank, 2019.

FIGURE 10
OVERWEIGHT IN CHILDREN UNDER 5 IN DIFFERENT COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN, PREVALENCE AS A PERCENTAGE, MOST RECENT DATA FROM THE 2000S AND 2010S



SOURCE: Prepared by the authors based on UNICEF, WHO and World Bank, 2019.

Indicators related to malnutrition not covered in the SDGs: overweight and obesity throughout the life cycle⁹

Overweight and obesity pose health problems throughout the entire life cycle. Affected children suffer gastrointestinal, musculoskeletal and orthopedic complications, in addition to sleep disorders. They also suffer from an increased risk of early appearance of asthma and other respiratory problems, type 2 diabetes, hypertension and liver diseases (Lobstein and Jackson-Leach, 2006; Knight, 2011; WHO, 2016a). They may also suffer the psychological consequences of low self-esteem, depression, stigmatization and social isolation, and their educational potential may be reduced (Miller and Downey, 1999; Latzer and Stein, 2013; Miller, Lee, and Lumeng, 2015; WHO, 2016). Childhood overweight and obesity tend to persist until adulthood and leave a permanent mark on health that is a cause of issues throughout life (WHO, 2016a). In fact, adults with obesity have higher mortality rates due to an increased risk of cardiovascular disease, cancer and diabetes.

In line with global trends, the prevalence of overweight is increasing across all age groups in LAC. This growth is especially pronounced among adults and children of school age and adolescents (from 5 to 19 years old) who have recorded increases of 10 and 9 percentage points in their respective prevalences of overweight since 2000.

It is also important to remember the relationship between malnutrition that may be due to food insecurity, and the increased likelihood of obesity and NCDs in adulthood. From the development of the fetus and through the first years of life, malnutrition causes changes to physiology and metabolism that, in addition to hindering

physical growth and negatively impacting human capital, increase the risk of developing obesity and suffering from NCDs in the future.

Therefore, in order to effectively address the rising problems of overweight and obesity, and to prevent them from perpetuating from one generation to another, it is clear that a life-cycle-based approach is needed that promotes access to nutritious food, optimum feeding and nutrition of infants and healthy growth throughout life, from the development of the fetus to adulthood (FAO, IFAD, WHO, UNICEF and WFP, 2019).

With respect to the adult population of LAC, there has been an upward trend in overweight since the mid-1970s. Specifically, the prevalence of overweight in the Region remained higher than the global figure, rising from 30% to 60% between 1975 and 2016 (Figure 11). That is, about 262 million adults are overweight in LAC.

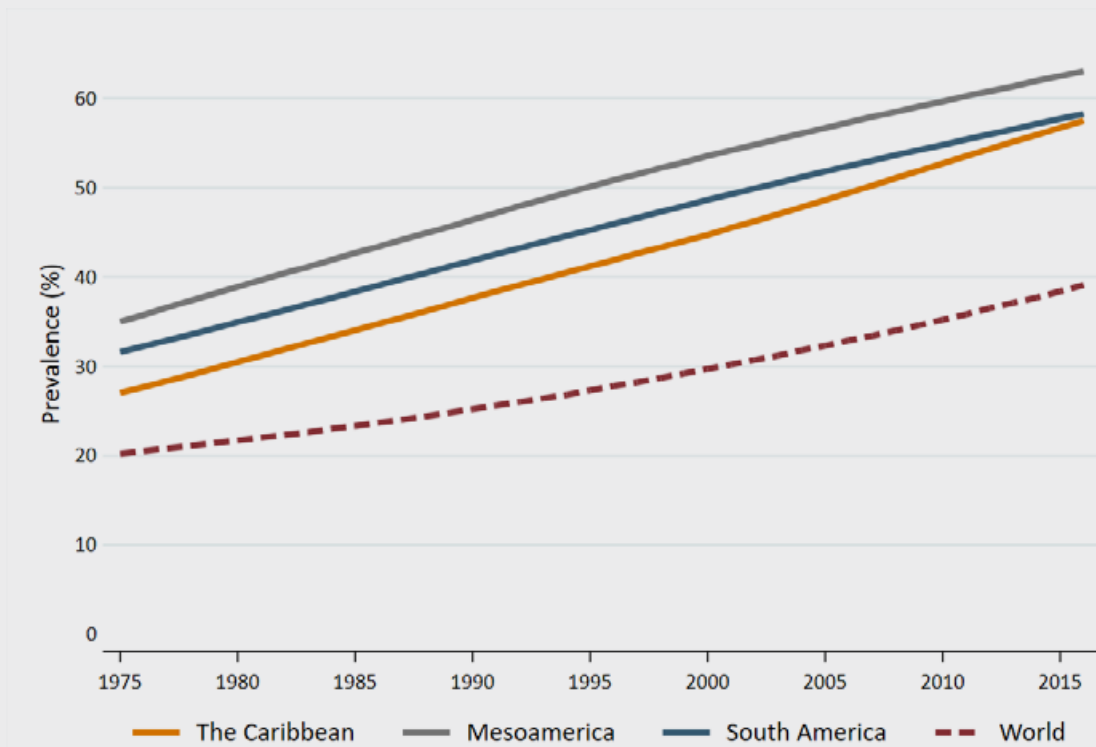
The increase in the prevalence of overweight in children and adults is alarming, but the high prevalence of obesity raises even more concern, as obese people suffer much more serious health consequences and their mortality risk compared to the non-obese population is higher. Obesity both worldwide and across the Region grew even more rapidly than overweight. While overweight rates worldwide and across the Region almost doubled between 1975 and 2016, obesity practically tripled, with growth from 5% to 13% in adults worldwide, and from 7% to 24% in the Region (Figure 12).

The most significant increase was recorded in the Caribbean, where the prevalence in adults quadrupled from 6% to 25%, with particularly rapid growth in the last 15 years. This phenomenon is even more striking when observed in absolute terms: the number of obese adults in the Caribbean rose from 760 000 to 6.6 million between 1975 and 2016.

Detailed analysis of the evolution of obesity by country shows that before the beginning of this century, the prevalences among LAC countries were much lower than at present. Figure 13 shows the extraordinary speed, in relative terms, with which this aspect of malnutrition in the Region has emerged.

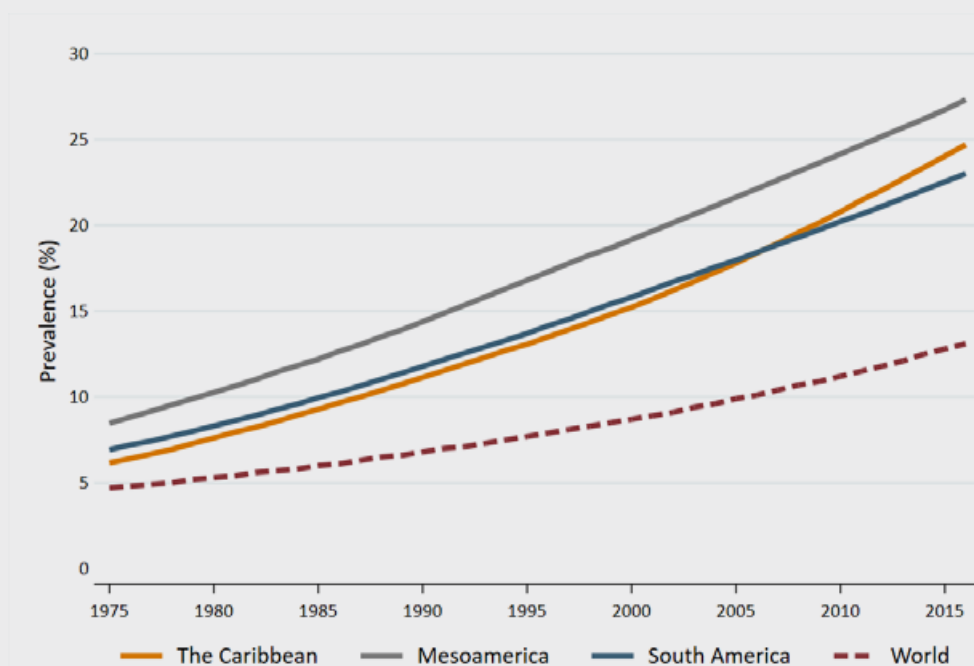
⁹ This section focuses on the analysis of overweight in adolescents and adults, indicators that are not part of the SDG 2 indicators, to report advances in the fight against malnutrition. However, its current levels and recent trends make it a complementary indicator to better understand and monitor malnutrition in the world.

FIGURE 11
TREND OF OVERWEIGHT IN ADULTS (18 YEARS AND OLDER) IN LATIN AMERICA AND THE CARIBBEAN AND THE WORLD, PREVALENCE AS A PERCENTAGE, 1975-2016



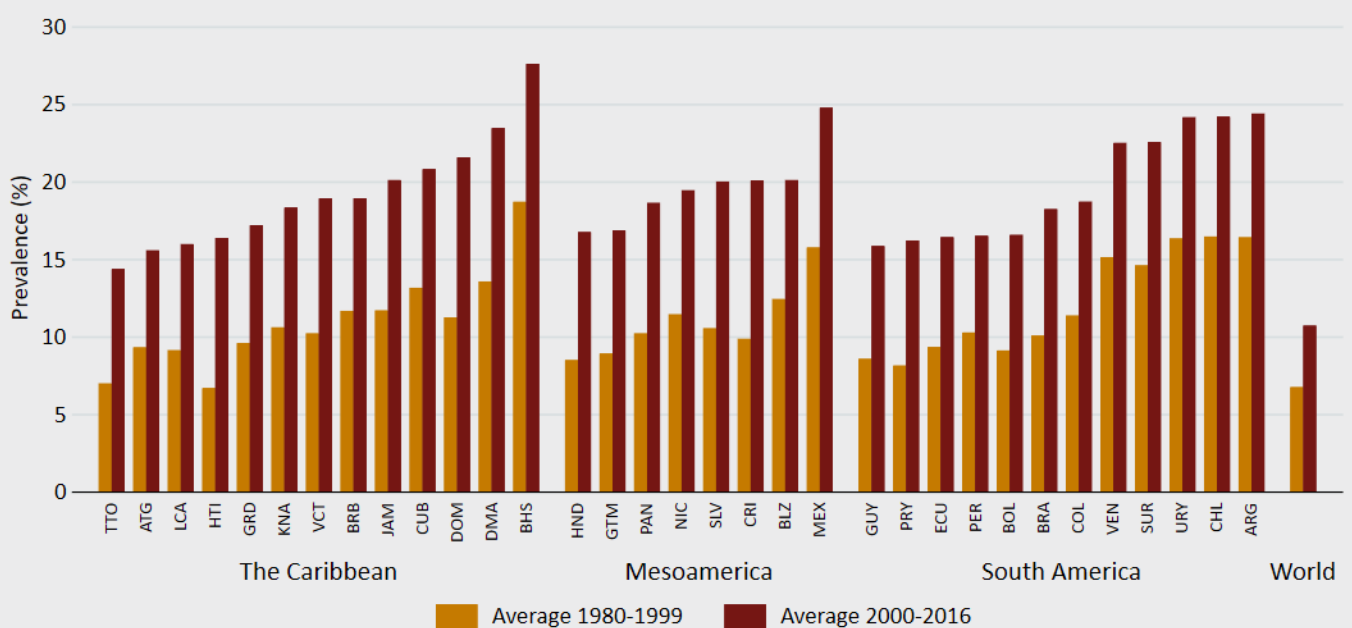
SOURCE: Prepared by the authors based on WHO, 2019.

FIGURE 12
TREND OF OBESITY IN ADULTS (18 YEARS AND OLDER) IN LATIN AMERICA AND THE CARIBBEAN AND THE WORLD, PREVALENCE AS A PERCENTAGE, 1975-2016



SOURCE: Prepared by the authors based on WHO, 2019.

FIGURE 13
CHANGES IN OBESITY IN ADULTS (18 YEARS AND OLDER) IN LATIN AMERICA AND THE CARIBBEAN AND THE WORLD, PREVALENCE AS A PERCENTAGE, 1980-1999 AND 2000-2016



SOURCE: Prepared by the authors based on WHO, 2019

To the above, we must add the fact that overweight and obesity are growing in rural areas of the Region. A study published by the collaborative group on Risk Factors for Noncommunicable Diseases (NCD-RisC, 2019) reported national, regional and global trends in the average body mass index by place of residence (rural or urban area) between 1985 and 2017. Body mass index (BMI) is increasing at the same rate or faster in rural areas as in cities in low-income and middle-income regions.

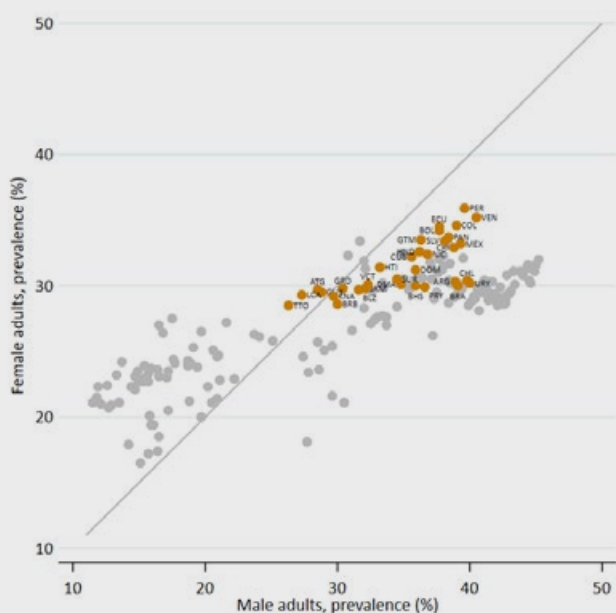
This trend is especially pronounced in middle-income and low-income countries, which include several in LAC. Therefore, deficiency malnutrition in rural areas is becoming accompanied by overweight and obesity, which

constitutes the double burden of malnutrition (see Box 5). As a result, it is important to consider an integrated approach to nutrition in rural contexts in order to improve physical and economic access to food that is beneficial to healthy eating.

In addition, according to WHO data (2019), overweight and obesity affect adult men and women unequally, a situation especially evident in LAC countries. In the Region, women represent 52% and 59% of the adult population with overweight and obesity, respectively. This means that of the 105 million adults with obesity in Latin America and the Caribbean in 2016, 62 million were women and 43 million men.

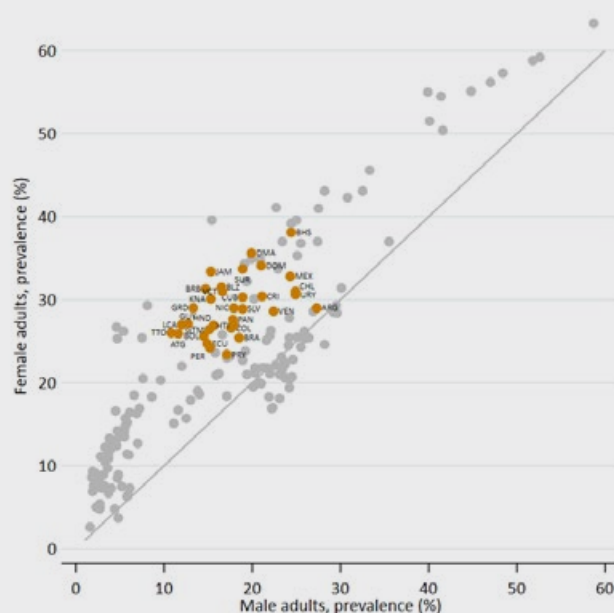
FIGURE 14
OVERWEIGHT AND OBESITY IN ADULTS (18 YEARS AND OLDER) IN LATIN AMERICA AND THE CARIBBEAN AND THE REST OF WORLD BY SEX, PREVALENCE AS A PERCENTAGE, 2016

A) OVERWEIGHT AND OBESE ADULTS



(A) Refers to the percentage of adults 18 years of age and older whose body mass index is greater than or equal to 25 and less than 30.

B) ADULTS WITH OBESITY



(B) Refers to the percentage of adults 18 years of age and over whose body mass index has a value greater than or equal to 30.

NOTE: The diagonal in both graphs traces a 45 degree line that represents equality between the prevalences of men and women.

SOURCE: Prepared by the authors based on WHO, 2019.

Figure 14 shows the prevalence of overweight and obesity in adults for 198 countries, highlighting the situation for the countries of the Region. Figure 14 shows a condition very specific to LAC: in most countries of the Region, overweight (not taking into account obesity) is higher in men than in women (panel A). By contrast, obesity affects women more in all countries (panel B). The latter is a trend that is reproduced in many countries around the world.

Therefore, in different countries of the Region, women suffer a double nutritional burden characterized by the coexistence of malnutrition with overweight, obesity or NCDs associated with diet (WHO, 2019). This supports the assertion of some authors that gender shapes the health of men and women by defining their roles, responsibilities, decision-making capacities, access to resources (such as education or information), opportunities and Vulnerabilities. In addition, it reveals the importance of gender

TABLE 4
PREVALENCE OF MALNUTRITION IN THE WORLD AND IN LATIN AMERICA AND THE CARIBBEAN AS A PERCENTAGE, BY SELECTED POPULATION GROUPS, DIFFERENT YEARS

Indicator	Year	World (%)	Latin America and the Caribbean (%)
Undernourishment, food insecurity and malnutrition			
Undernourishment	2018	10.8	6.5
Severe food insecurity	2018	9.2	9.0 ^a
Moderate or severe food insecurity	2018	26.4	30.9 ^a
Stunting in children under 5 years (chronic malnutrition)	2018	21.9	9.0
Wasting in children under 5 years (acute malnutrition)	2018	7.3	1.3
Overweight and obesity			
Overweight in children under 5 years old ^b	2018	5.9	7.5
Overweight in adults over 18 years ^b	2016	39.1	59.5
Women	2016	39.7	59.9
Men	2016	38.5	58.9
Obesity in adults over 18 years	2016	13.2	24.1
Women	2016	15.1	27.9
Men	2016	11.1	20.2

^aThe data for Latin America and the Caribbean excludes the Caribbean.

^b Includes individuals with obesity.

SOURCE: Prepared by the authors based on FAO, 2019; UNICEF, WHO and World Bank, 2019; UNDESA, 2019.

identification as a social determinant of health (Brito and Ivanovic, 2019).

As a summary, **Table 4** presents a comparison of the prevalence of hunger, food insecurity and the different types of malnutrition in the world and in LAC. In reality, the rates of undernourishment, food insecurity and malnutrition in adults and children in the Region are lower than the worldwide prevalence (with the exception of moderate or severe food insecurity). By contrast,

the LAC population is more frequently overweight and obese than the rest of the globe. Indeed, the prevalence of obesity in adults is almost double the reported worldwide rate. ■

**BOX 5
THE MULTIPLE BURDEN OF MALNUTRITION**

The coexistence of a relatively high prevalence of malnutrition with overweight and obesity is known as the “double burden” of malnutrition. If malnutrition is also present in its two main aspects, that is, by weight or height and by micronutrient deficit, this tends to be referred to as a “triple burden”. These burdens may occur at the country, region, household or individual level.

of different characters is associated with the nutritional transition (see the following table), which is characterized by diets with a higher consumption of sugars, fats and/or salt or sodium, ingredients that are usually more abundant in foods referred to as ultra-processed¹⁰ and hypercaloric.

The simultaneous manifestation of nutritional problems

STAGES OF THE NUTRITIONAL TRANSITION

Characteristic	Stages		
	Prior to the transition	Transition	After the transition
Diet (prevalent)	Cereals, tubers, vegetables, fruit. People mainly cook at home and mostly use raw ingredients.	Increased consumption of sugar, fats and processed foods. People cook less frequently at home and processed ingredients are used more often.	Processed foods with a high fat and sugar content and low fiber content. People frequently eat outside the home and prepared foods are consumed.
Nutritional problems	Malnutrition and nutritional deficiencies predominate.	Malnutrition, nutritional deficiencies and obesity coexist.	Overweight, obesity, nutritional deficiencies and noncommunicable diseases predominate.

Source: Adapted from FAO, IFAD, UNICEF, WFP and WHO, 2018.

¹⁰ The term “ultra-processed” is widely used in the Latin American and Caribbean region, and is even included in different public policy instruments such as the Food-Based Dietary Guidelines of Brazil, Ecuador and Uruguay. Box 7 gives more information about the concept and its use in this document.

12 SDG 3: ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

The objective of SDG 3 is to ensure healthy lives and promote well-being for all at all ages. Its targets include establishing aims that are closely related to achieving sufficient and quality food, such as reducing maternal and infant mortality and mortality due to noncommunicable diseases.

Target 3.1. Reduce maternal mortality

The nutritional status of the mother before and during pregnancy is a factor that has an important impact on the good progress of the pregnancy and the correct development of children in the future. Similarly, the lack of micronutrients such as iron and vitamin A increases the probability of maternal death. In addition, it is important to maintain adequate levels of calcium, vitamin D and folic acid during pregnancy to avoid various significant complications. Additionally, the intrauterine nutritional environment can be a determining factor in the development of obesity and NCDs in adulthood (FAO, PAHO, UNICEF and WFP, 2018).

Target 3.1 gives priority to reducing the maternal mortality rate to under 70 deaths per 100 000 live births. It is estimated that between 1990 and 2015 this rate decreased in the world by about 44%, from 385 to 216 deaths per 100 000 live births. That is, the annual number of maternal deaths decreased by 43%, from about 532 000 in 1990 to an estimated 303 000 in 2015 (WHO, UNICEF, UNFPA, World Bank, UNDESA, 2015).

During the same period, in LAC maternal mortality was reduced by half, from 135 to 67 deaths per 100 000 live births. This means the annual number of maternal deaths fell from 16 000 to 7 300.

Despite the progress made in the Region, it is estimated that a number of countries are far from meeting SDG target 3.1. As reflected in the Regional Overview of Food Security and Nutrition in Latin America and the Caribbean 2018, 13 of the 30 countries for which information is available have mortality rates above the target of 70 per 100 000 live births. Furthermore, the rates of Bolivia, Guyana, Haiti, Honduras, Nicaragua and Suriname are double or more those established by the target (Figure 15).

Target 3.2. End preventable deaths of newborns and children under 5 year of age

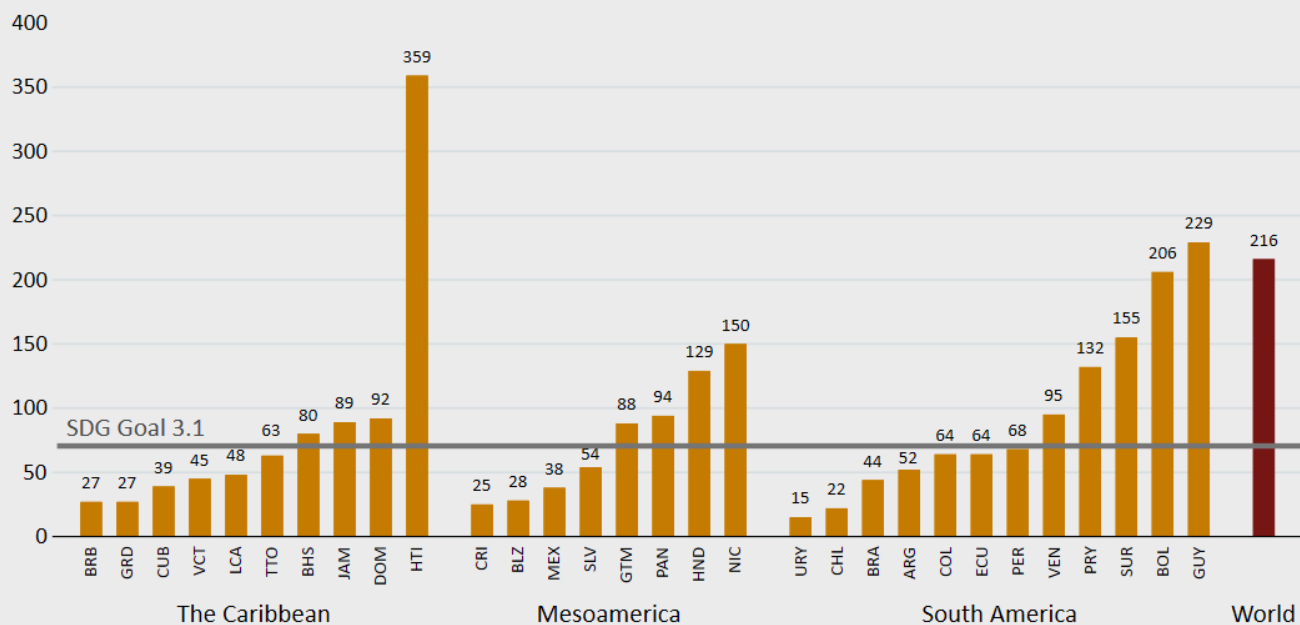
Target 3.2 seeks to end preventable deaths of newborns and children under 5. In the first case, the aim is to reduce neonatal mortality to at the most 12 deaths per 1 000 live births and, in the second case, to reduce mortality in children under 5 years to at the most 25 per 1 000 live births.

Neonatal mortality rate

In most of the countries of the Region there has been a reduction in neonatal mortality in recent years. One of the exceptions is Venezuela, which between 2015 and 2017 increased from 14.5 to 19.8 deaths per 1 000 live births (Figure 16). Dominica also showed an increase, rising from 25.1 to 27.3 deaths per 1 000 live births in the same period.

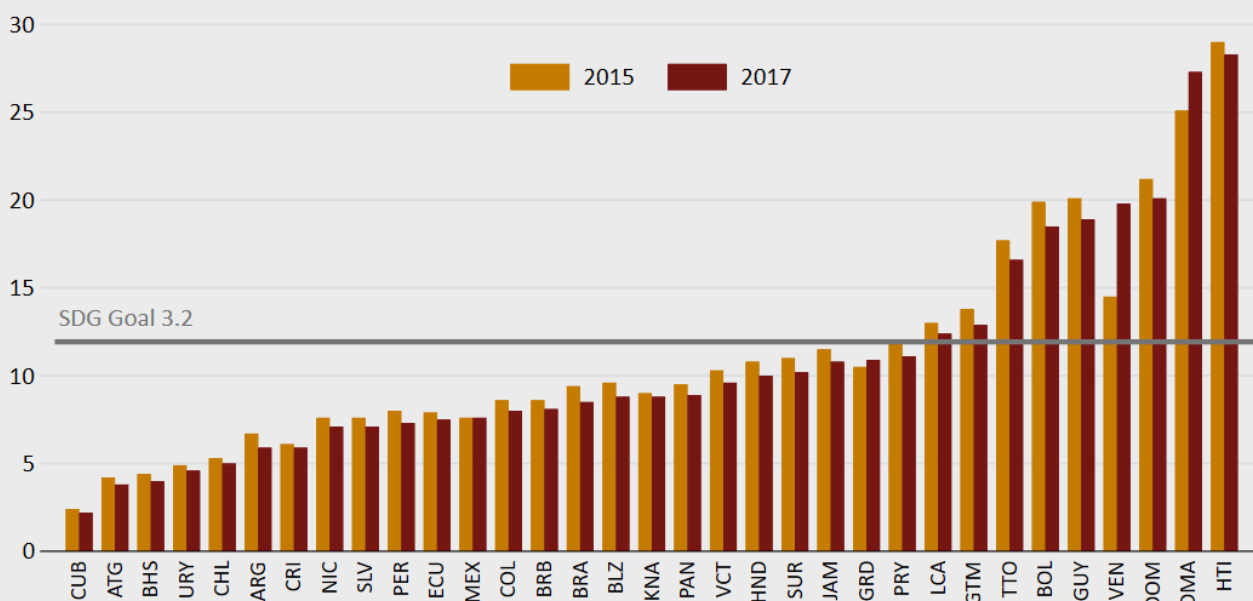
Regarding the target of not exceeding 12 deaths of newborns per 1 000 live births, there are

FIGURE 15
MATERNAL MORTALITY RATE (MATERNAL DEATHS PER 100 000 LIVE BIRTHS) IN LATIN AMERICA
AND THE CARIBBEAN AND THE WORLD, 2015



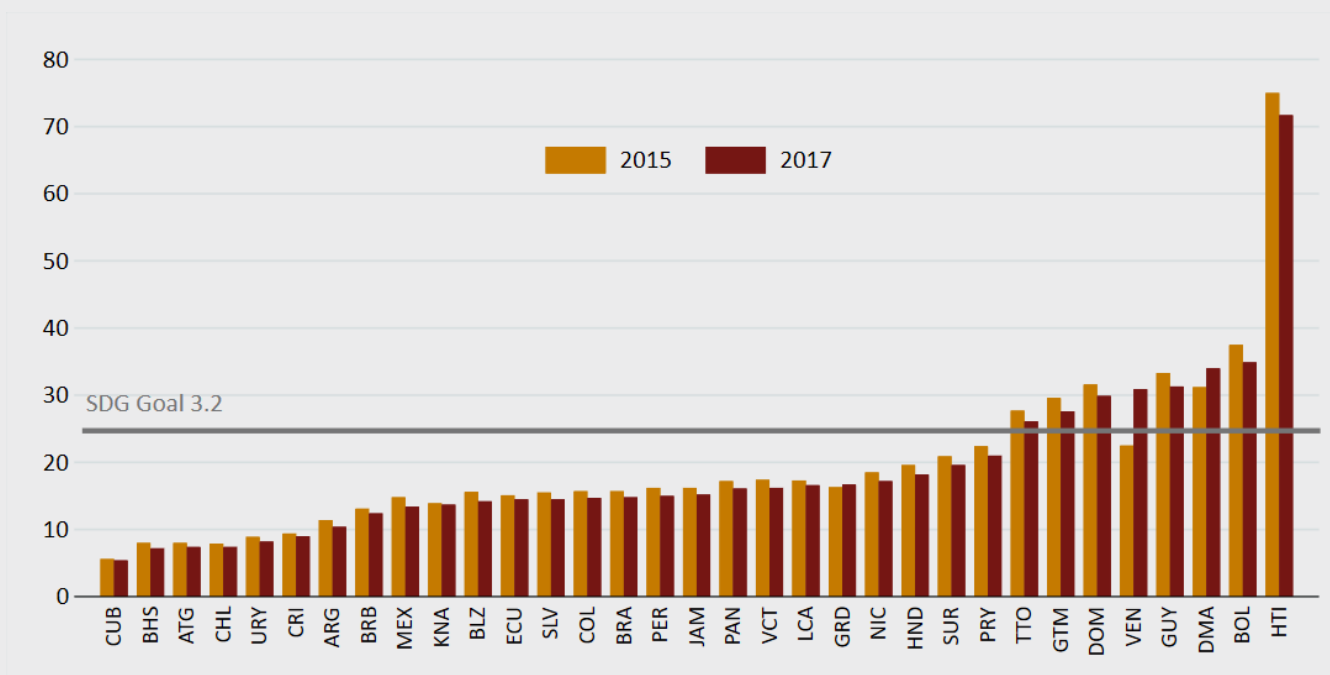
NOTE: Maternal mortality corresponds to death during pregnancy or within 42 days of the termination of pregnancy, regardless of the duration and place of pregnancy, due to any cause related to or aggravated by pregnancy or its treatment.
 SOURCE: Prepared by the authors based on WHO, 2018.

FIGURE 16
NEONATAL MORTALITY RATE PER 1 000 LIVE BIRTHS, LATIN AMERICA AND THE CARIBBEAN,
2015 AND 2017



SOURCE: Prepared by the authors based on WHO, 2019.

FIGURE 17
MORTALITY RATE IN CHILDREN UNDER 5 PER 1 000 LIVE BIRTHS, 2015 AND 2017



SOURCE: Prepared by the authors based on WHO, 2019.

nine countries that still remain above this target: Santa Lucia, Guatemala, Trinidad and Tobago, Bolivia (Plurinational State of), Guyana, Venezuela (Bolivarian Republic of), Dominican Republic, Dominica and Haiti.

Mortality rate of children under 5 years old

As highlighted in previous editions of the Regional Overview Food Security and Nutrition in Latin America and the Caribbean, the development of disease is closely associated with nutrient deficiency. Therefore, the fulfillment of this target is closely related to diet. Around the world, the underlying cause of 45% of child deaths is malnutrition. Children with severe wasting are more likely to suffer from common conditions such as diarrhea and respiratory diseases, the consequences of which increase the likelihood of death (FAO, PAHO, UNICEF and WFP, 2018).

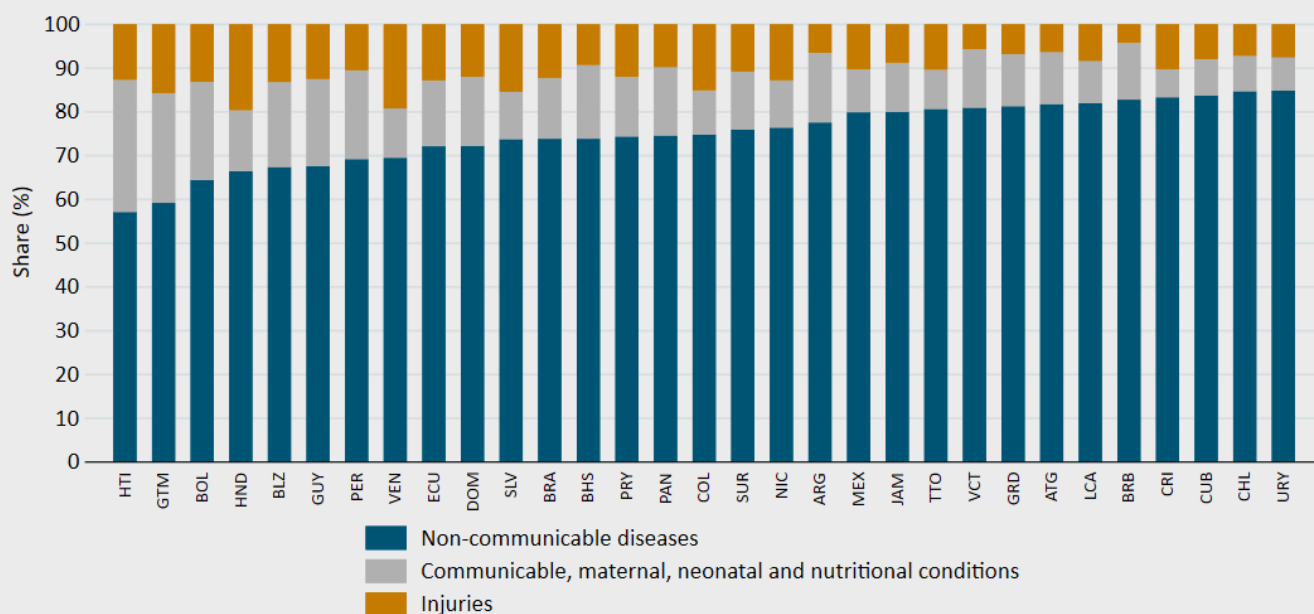
As mentioned above, the nutritional status of the mother is decisive for the newborn because

it determines their birth weight, their health and their nutritional status, and therefore their prognosis. The most frequent consequence of intrauterine growth restriction is a low birth weight, and the mortality of these children is higher than those born with an adequate weight (FAO, PAHO, UNICEF and WFP, 2018).

Eight countries in the Region do not meet this target today. They are Bolivia (Plurinational State of), Dominica, Guatemala, Guyana, Haiti, Venezuela (Bolivarian Republic of) Dominican Republic and Trinidad and Tobago (Figure 17). In Haiti, deaths exceed 70 per every 1 000.

In most countries the situation has improved since 2015, which was when the 2030 Agenda commitment was made. However, in Dominica and Venezuela there are significant increases, especially in Venezuela, whose mortality rate in 2015 was 22.5 points below the established target. According to the latest available data, it currently exceeds 30 deaths per 1 000 live births.

FIGURE 18
MAJOR CAUSES OF MORTALITY IN LATIN AMERICA AND THE CARIBBEAN, 2016



SOURCE: Prepared by the authors based on WHO, 2019a.

Target 3.4 Reduce premature mortality from noncommunicable diseases

Another of the targets of SDG 3 is to “reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and well-being” between 2015 and 2030 (Target 3.4). According to WHO, the main causes of death in the world in 2016 were NCDs, which essentially include coronary heart disease, infarction, cancer, chronic respiratory diseases and diabetes. In fact, it is estimated that NCDs killed more than 41 million people worldwide in 2016, equivalent to 71% of the world total. Of the remaining deaths, 29% were the result of communicable diseases, maternal, perinatal and nutritional conditions (20%) and external causes¹¹ (9%).

More than 80% of deaths from NCDs were caused by five ailments. In order of importance,

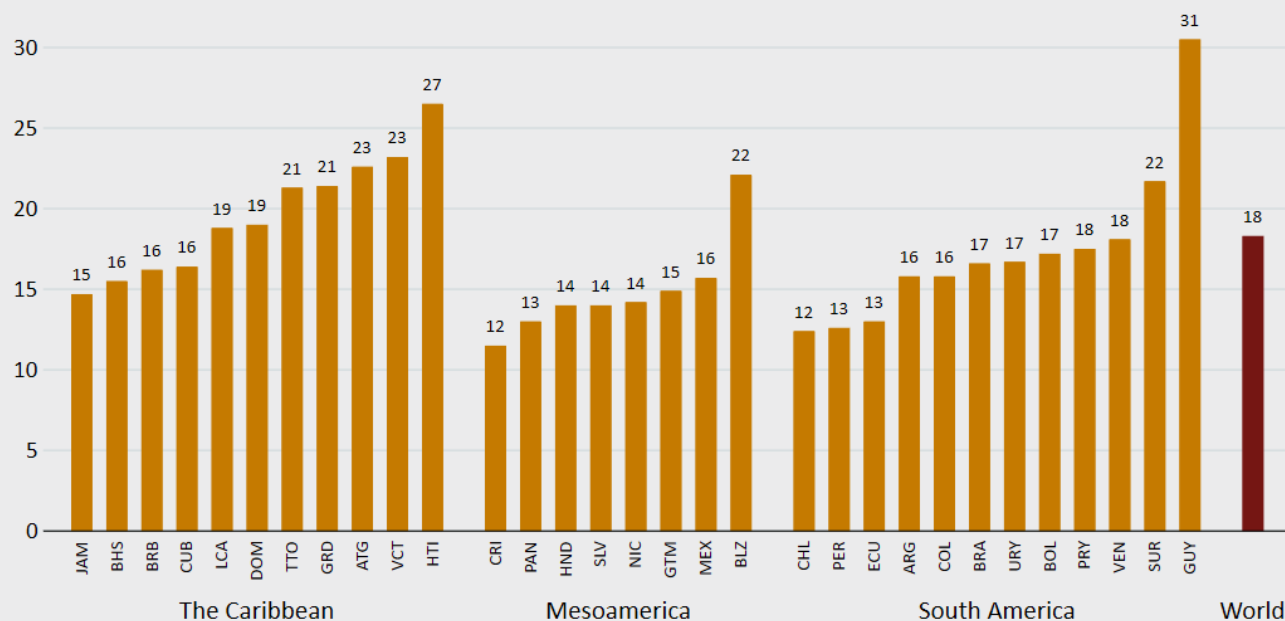
cardiovascular diseases (44%) were the leading cause of death, followed by several types of cancer (23%), respiratory diseases (9%), digestive diseases (6%) and diabetes (4%).

NCDs are also the leading cause of mortality in LAC. This group of diseases caused 3 out of every 4 of the total of 3.8 million deaths in the Region in 2016. As a whole, noncommunicable diseases were responsible for more than 50% of deaths in all the countries of the Region for which information is available, and in the Caribbean, Costa Rica, Mexico, Chile and Uruguay, these diseases caused at least 80% of deaths (Figure 18).

A key indicator to monitor advances in premature mortality due to NCDs is the mortality rate attributed to NCDs. It is estimated that the probability of a person aged 30 to 70 years dying as a result of cardiovascular disease, cancer, diabetes or chronic respiratory diseases is 18%. In most countries of the Region the chances of premature death are below that threshold (Figure 19).

¹¹ External causes include factors such as accidents, homicides and suicides, among others.

FIGURE 19
PROBABILITY OF DEATH FROM NONCOMMUNICABLE DISEASES IN PEOPLE AGED 30 TO 70 IN LATIN AMERICA AND THE CARIBBEAN AND THE WORLD, AS A PERCENTAGE, 2018



SOURCE: Prepared by the authors based on WHO, 2018.

Noncommunicable diseases, mortality and quality of dietary patterns

There is an international consensus that NCDs are preventable if the risk factors that cause them are addressed. This is based on the study of the link between socio-environmental determinants, lifestyles and living conditions, and morbidity and mortality from these diseases. In particular, the four main risk factors for NCDs are unhealthy eating, insufficient physical activity, tobacco consumption and harmful alcohol consumption (PAHO, 2017).

A study by GBD 2017 Diet Collaborators¹² (2019) evaluated the role of food as a cause of noncommunicable diseases and mortality. In general terms, the study revealed that a diet

with a low content of fresh and dried fruits, vegetables, whole grains and seeds, and/or high consumption of sodium, sugary drinks and trans fatty acids is associated with deaths from cardiovascular diseases, cancer and diabetes, more than any other risk factor, including tobacco use.

Table 5 shows a summary of the causal relationship between food quality and noncommunicable diseases according to the global burden of disease study conducted by GBD 2017 Diet Collaborators (2019). The study established a link between cardiovascular diseases and low consumption of fruits, vegetables, whole grains, legumes, nuts and seeds, as well as high consumption of sodium, sugary drinks and trans fatty acids. Meanwhile, cancers associated with diet are caused by low consumption of fruits, milk and fiber, and high consumption of processed and unprocessed meats and sodium. Finally, dietary risk factors for diabetes are closely associated with diets low in fruits, whole grains, nuts and seeds, and high in meats and sugary foods and beverages.

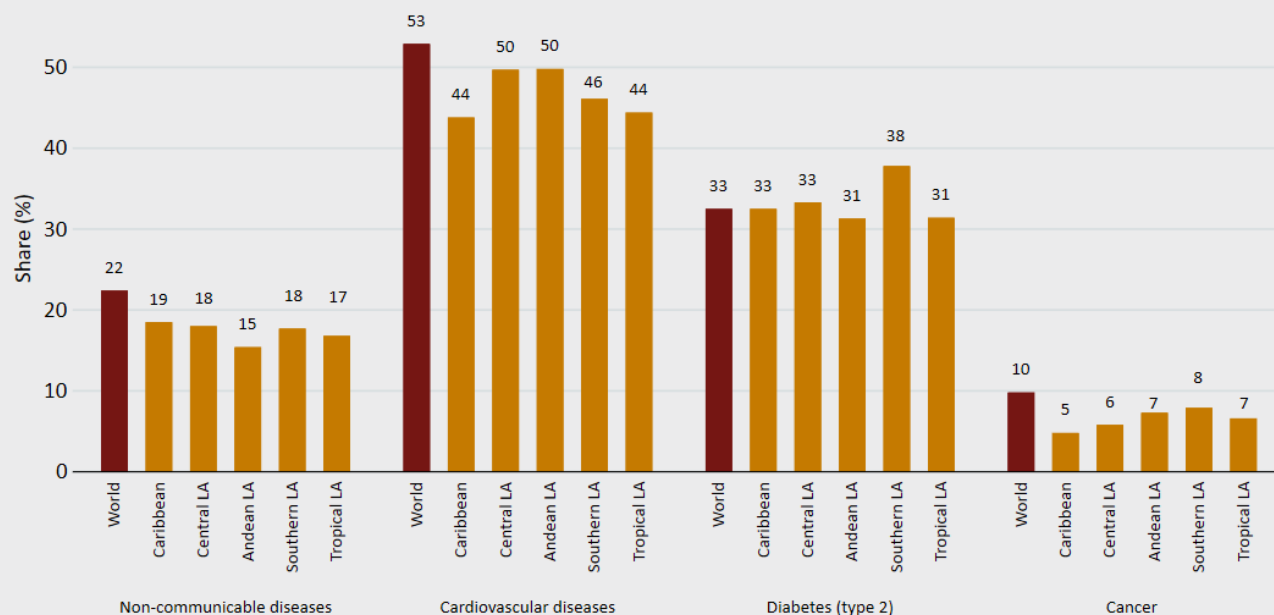
¹² The Study of the Global Burden of Diseases, Injuries and Risk Factors (GBD) is an effort by more than 3 600 researchers from more than 145 countries whose objective is to quantify health levels and trends. The work of the GBD makes it possible to compare the magnitude of diseases, injuries and risk factors by age group, sex, country, region and over time.

TABLE 5
EVIDENCE SUPPORTING CAUSALITY BETWEEN FOOD RISK FACTORS AND THEIR OUTCOMES IN TERMS OF NONCOMMUNICABLE DISEASES

Risk	Result
Diet low in fruit	Lip and oral cavity cancer
	Nasopharyngeal cancer
	Other malignant tumors of the pharynx
	Larynx cancer
	Trachea, bronchial and lung cancer
	Coronary heart disease
	Ischemic stroke
	Intracranial hemorrhage
	Subarachnoid haemorrhage
	Diabetes mellitus (type 2)
Diet low in vegetables	Coronary heart disease
	Ischemic stroke
	Intracranial hemorrhage
	Subarachnoid haemorrhage
Diet low in legumes	Coronary heart disease
Diet low in whole grains	Coronary heart disease
	Ischemic stroke
	Intracranial hemorrhage
	Subarachnoid haemorrhage
	Diabetes mellitus (type 2)
Diet low in nuts and seeds	Coronary heart disease
	Diabetes mellitus (type 2)
Diet low in milk	Colon and rectal cancer
Diet high in red meat	Colon and rectal cancer
	Diabetes mellitus (type 2)
Diet high in processed meat	Colon and rectal cancer
	Coronary heart disease
	Diabetes mellitus (type 2)
Diet high in sugary drinks	Coronary heart disease
	Diabetes mellitus (type 2)
Diet low in fiber	Colon and rectal cancer
	Coronary heart disease
Diet low in calcium	Colon and rectal cancer
Diet low in fish and omega 3 fatty acids	Coronary heart disease
Diet low in polyunsaturated fatty acids	Coronary heart disease
Diet high in trans fatty acids (trans fats)	Coronary heart disease
Diet high in sodium	Essential (primary) hypertension
	Stomach cancer

SOURCE: Adapted from GBD 2017 Diet Collaborators, 2019.

FIGURE 20
DEATHS ATTRIBUTABLE TO UNHEALTHY DIETS IN ADULTS, BY TOTAL AND PRINCIPAL NONCOMMUNICABLE DISEASE, AS PERCENTAGES, 2017



The subregions of Latin America and the Caribbean (LAC) correspond to the definitions established by Global Burden of Disease. Center: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and Venezuela (Bolivarian Republic of); Andes: Bolivia (Plurinational State of), Ecuador and Peru; South: Argentina, Chile and Uruguay; Tropical: Brazil and Paraguay.

NOTE: Calculations are the result of age-adjusted mortality rates.

SOURCE: prepared by the authors based on GBD 2017 Diet Collaborators 2019.

By isolating the indirect effect of diet on mortality, the authors estimated that a total of 11 million adults over 24 died in the world due to causes associated with inadequate diet. Of this total, the main direct cause of mortality was cardiovascular disease (88%), while the rest were due to different types of cancer (9%) and diabetes (3%). Likewise, more than half of these deaths were related to three food risk factors: high sodium consumption and low intake of whole grains and fruits.

Adult deaths in Latin America and the Caribbean due to causes associated with inadequate diet are estimated at almost 600 000 annually. The dietary risk factors that help explain this result are the low intakes of whole grains, nuts, seeds and vegetables, along with a high sodium intake.

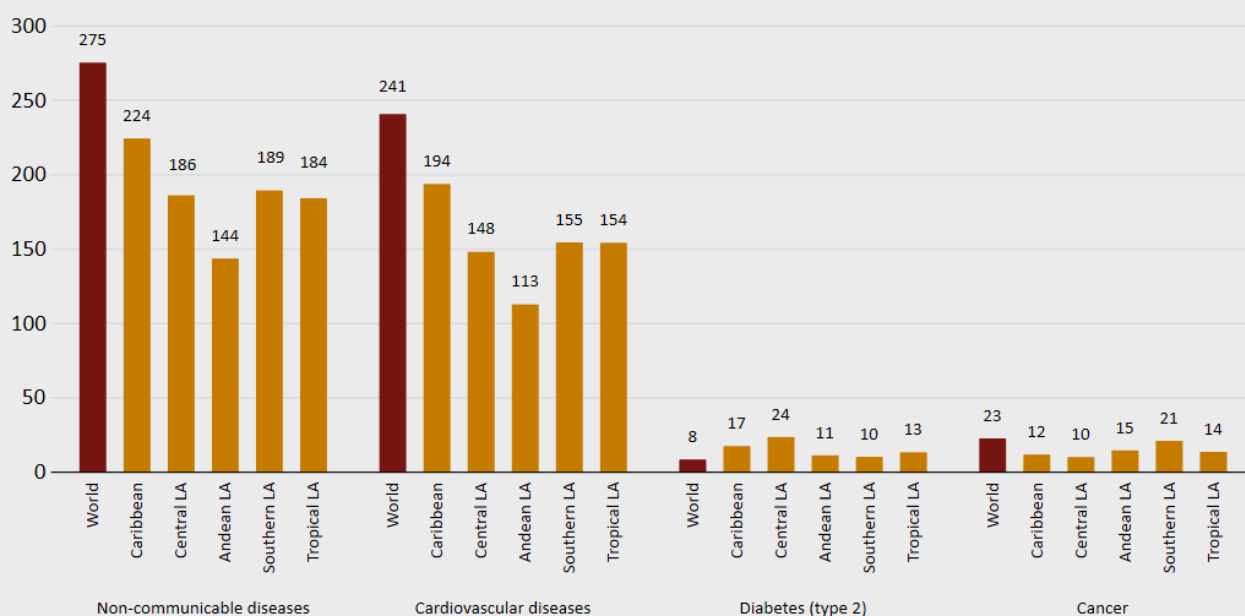
Total deaths related to inadequate diet accounted for 22% of total adult deaths globally in 2017. The analysis for each of the three main noncommunicable diseases indicated that an inadequate diet would explain 53% of deaths

from cardiovascular diseases, 33% of deaths from diabetes and 10% of deaths from various types of cancer (Figure 20).

In the case of adult mortality rates attributable to eating habits, a similar behavior is observed. In general, world rates are higher than those of the LAC subregions, the only exception being deaths due to diabetes (Figure 21), which are higher in the Region. This is striking, although the number of deaths is markedly lower than from cardiovascular diseases or cancer.

It is important to note that the quality of current dietary patterns is determined by a wider universe of products and ingredients than the one analyzed by the GBD 2017 Diet Collaborators, but which are also associated with the risk of NCDs. Among these elements are diets with high content of sugar, saturated fat and a high number of ultra-processed products and other products with high concentrations of sugar, fat, saturated fat or high energy density. All of those favor weight gain, the development of obesity

FIGURE 21
MORTALITY ATTRIBUTABLE TO UNHEALTHY DIETS IN ADULTS, BY TOTAL AND PRINCIPAL NONCOMMUNICABLE DISEASE, IN DEATHS PER 100 000 POPULATION, 2017



The subregions of Latin America and the Caribbean (LAC) correspond to the definitions established by Global Burden of Disease. Center: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and Venezuela (Bolivarian Republic of); Andes: Bolivia (Plurinational State of), Ecuador and Peru; South: Argentina, Chile and Uruguay; Tropical: Brazil and Paraguay.

NOTE: Calculations are the result of age-adjusted mortality rates.

SOURCE: prepared by the authors based on GBD 2017 Diet Collaborators 2019.

and of NCDs and increase the risk of mortality (FAO, 2010; WHO, 2015; PAHO, 2015; Poti, Braga, and Qin, 2017; Costa, Del-Ponte, Assunção, and Santos, 2018; Fiolet et al., 2018; Hall et al., 2019; Rico-Campà et al., 2019; Schnabel et al., 2019). Furthermore, it is recognized that, even if inadequate diet does not necessarily cause death, it is also important to consider other social, economic and environmental impacts.

For example, the medical treatment of an obese patient costs between 25% and 52% more than a person with normal weight (Kang, Jeong, Cho, Song, and Kim, 2011). With regard to total national expenditure on health, medical costs attributed to obesity represent between 2% and 7% of expenditure in developed countries (Kang, Jeong, Cho, Song, y Kim, 2011). In addition to the consequences of malnutrition for health, it is important to consider the economic (labor and productivity), education (deficit in learning capacity) and environmental impacts (inadequate energy and consumption habits based on

products that have a high ecological footprint). Finally, a study by ECLAC and WFP from 2017 estimates that the economic impact of the double burden of malnutrition in three countries of the Region (Chile, Ecuador and Mexico) for the year 2014 ranged from 0.2% to 4.3% of GDP, representing an average of between 493 million to 28.8 billion dollars, respectively.

1.3 OTHER INDICATORS

In 2012, Resolution 65.6 of the World Health Assembly (WHO, 2012) on the Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition adopted six global nutrition targets for 2025. Subsequently, in 2015, the Sustainable Development Goals established a global agenda to achieve a substantial improvement in nutrition by 2030, establishing a specific objective to end all forms of malnutrition by 2030, which includes meeting the targets by 2025 and addresses the nutritional needs of adolescent girls, pregnant and lactating women and the elderly (FAO, PAHO, UNICEF and WFP, 2018).

Four of the targets are related to childhood malnutrition and overweight, and the remaining two to the causes of child malnutrition from the early stages of development. Specifically, targets are established for breastfeeding of children, and on the nutritional status of the mother.

Due to the relationship of these last two targets with those of the SDGs relating to child malnutrition, this section analyzes some of the indicators associated with the targets for breastfeeding and anemia in women of reproductive age.

Breastfeeding and complementary feeding

Breastfeeding is a vital source of nutrition for children, which helps improve health outcomes for mothers and their children. The WHO and UNICEF recommendations on breastfeeding point to three best practices: 1) begin breastfeeding during the first hour after birth; 2) exclusive breastfeeding during the first 6 months, and 3) breastfeeding up to 2 years or more, together with a complementary, safe, nutritionally adequate and age-appropriate complementary diet from the sixth month.

One of the targets of the Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition is to increase the prevalence of exclusive breastfeeding in the first 6 months of life to at least 50%. In a recent review, it was established an increased in the target to a prevalence of 70% by 2030 (WHO and

UNICEF, 2018). Exclusive breastfeeding means that an infant receives only breast milk, and no other liquid or solid, not even water, with the exception of oral rehydration salts or drops or syrups with vitamins, mineral supplements or medications. There is ample evidence of the multiple benefits of breastfeeding, both for the child and for the mother and society as a whole. Breast milk is designed to cover all the nutritional and immunological needs of children under 6 months breastfed, meaning it is the best diet and the safest option to ensure the good health and growth of young children.

It is estimated that with optimal breastfeeding practices worldwide, 823 000 annual deaths of children under 5 and 20 000 annual deaths of women due to breast cancer could be prevented (Victoria et al., 2016). Breastfeeding has a protective effect for children in the short and long term. In the short term, the risk of illness and death from diarrhea, respiratory infections, otitis media and sudden infant death syndrome decreases. In the long term it reduces the risk of dental malocclusion, overweight and obesity, and diabetes mellitus (Horta, Loret de Mola, and Victoria, 2015). The risk of invasive breast and ovarian cancer and diabetes mellitus decreases in the mother. Exclusive breastfeeding is associated with longer periods of postpartum amenorrhea and therefore contributes to the spacing of pregnancies (Victoria et al., 2016).

It is proven that breastfeeding contributes to cognitive development. Children fed with breast milk have an IQ 2.6 points higher than those who were not breastfed, which improves the educational potential of children, the formation of human capital and very probably income in adulthood (Horta, Loret de Mola, and Victoria, 2015). It is estimated that the economic cost of low cognition is USD \$302 billion, and that it affects higher income countries to a greater extent (Rollins et al., 2016).

Therefore, protecting, promoting and supporting breastfeeding is an important method to ensure children have access to adequate food at all times, as well as preventing death and numerous diseases. Breastfeeding is even more important in emergency situations, because it protects against malnutrition and infections in contexts of food

insecurity, contaminated water, poor sanitation and overloaded health systems. Children who are not breastfed are vulnerable to infections such as diarrhea, can quickly become malnourished and dehydrated and therefore be at risk of death. For these reasons, breastfeeding is critical for the survival of infants and young children during humanitarian emergencies (WHO and UNICEF, 2018).

Despite the benefits of breastfeeding, much remains to be done to make optimal breastfeeding practices the social norm. Globally, only 44% of children begin breastfeeding in the first hour after birth, 41% of those under 6 months receive exclusive breastfeeding and 66% of young children continue breastfeeding between their first and second year of life (UNICEF, 2019).

The situation regarding exclusive breastfeeding in the Region is not very different. Forty-four percent of girls and boys in the Caribbean and 52% in Mesoamerica begin breastfeeding in the first hour of life. PAHO estimates suggest that 32.7% of children in Mesoamerica and the Caribbean are exclusively breastfed until six months of age (26% of Caribbean children and 34% of Mesoamerican children). Meanwhile, UNICEF estimates indicate that 36% of Caribbean children and 43% of Central American children continue breastfeeding for two years.

The results of the national surveys from the last decade show that in most of the countries in the Region for which information is available, about half of children are breastfed in the first hour of life. However, this figure is variable, ranging from 38.1% in the Dominican Republic in 2014 to 76.5% in Uruguay in 2013. In most countries, exclusive breastfeeding for 6 months ranges from 2.8% in Suriname in 2010 to 64.2% in Peru in 2017, with only three countries (Bolivia, Guatemala and Peru) reporting at least 50% of

children between birth and 5 months who receive exclusive breastfeeding. Three out of 23 countries with available data report that children are still breastfeeding at 2 years, with a duration of between 20 and 23 months.

The situation of breastfeeding both globally and regionally calls for strengthening measures aimed at protecting, promoting and supporting the right to breastfeeding. These measures include: 1) the adoption and monitoring of the International Code of Marketing of Breastmilk Substitutes (Code) and subsequent relevant resolutions of the World Health Assembly, 2) the ratification and adoption of all measures included in the Convention and the Recommendation of the International Labor Organization (ILO) on maternity protection, 3) the implementation of the Child-Friendly Hospitals Initiative (Iniciativa de Hospitales Amigos del Niño, IHAN), 4) advice and specialized assistance for feeding infants and young children, and 5) the inclusion of the topic of breastfeeding in the school curriculum.

In addition to breastfeeding, UNICEF (2019) recommends that after the first 6 months of life, girls and boys consume complementary foods from different food groups that are rich in nutrients and hygienically prepared. These foods must provide enough energy, protein, fat, vitamins and minerals that meet the growing needs of children and must be offered with a frequency and consistency suited to their age.

An inadequate complementary diet (e.g., not diverse or high in sugar and/or salt or sodium) during this stage predisposes children to prefer foods with high caloric density later in life and therefore defines unhealthy eating patterns. Some figures from UNICEF (2019) indicate that, globally, 29% of children between 6 and 23 months of age have access to a minimum acceptable diversity of food, which consists of

consuming at least 5 of 8 groups of possible foods.¹³ Food diversity in the Region is higher than worldwide. In the Caribbean, the minimum acceptable food diversity rate reaches 41%, while in Mesoamerica it is 60%. By country, it is observed that 9 of the 11 countries with information available in the last decade report a minimum acceptable food diversity rate of over 50%. The lowest rate was recorded in Haiti (19.2% in 2016) and the highest in Peru (72.9% in 2012).

Anemia

Anemia impairs women's health and well-being and increases the risk of adverse neonatal and maternal outcomes. Specifically, anemia due to iron deficiency leads to negative consequences in children's cognitive development is a higher risk factor for maternal and infant mortality and low birth weight. It can also have consequences on working capacity in adulthood, becoming a major public problem (FAO, 2013; FAO and PAHO, 2017). Although the causes of anemia are variable, it is estimated that half of all cases are a consequence of iron deficiency.

The most recent WHO estimates (2019) show that anemia in women of reproductive age (15-49 years) increased by 61 million cases between 2012 and 2016 in the world, rising from 552.2 million to 613.2 over that period. This means that about one-third of women in this age group suffer from anemia.

Estimates for LAC indicate that in this age group the regional prevalence of anemia was

22% in 2016. The data show a higher prevalence among pregnant women (29.2%) than among non-pregnant women (21.7%). Although this prevalence is lower than in other regions of the world, there are major variations between subregions. In the Caribbean, 31.3% of women suffer from this health problem, while in Mesoamerica and South America 15.5% and 23.9% of women are affected, respectively. Haiti is the country in the Region that reports the highest prevalence (46.2%), while Chile reports the lowest (15.0%).

These data show that more actions are required to achieve the objective of the World Health Assembly to reduce anemia by 50% in women of reproductive age by 2030.

The same trend is observed among children under 5 years old. After a sustained reduction in prevalence up until 2012, from that year the number of cases of anemia began to grow in this population group in LAC, increasing from 27.7% to 28.4%. ■

¹³ The eight food groups are: 1) breast milk; 2) cereals, roots and tubers; 3) legumes and nuts; 4) dairy products (infant formula, milk, yogurt, cheese); 5) meats (meat, fish, chicken and liver or offal); 6) eggs; 7) fruits and vegetables rich in vitamin A, and 8) other fruits and vegetables.



CHAPTER 2
POLICIES TO
PROMOTE
ADEQUATE FOOD
IN FOOD
ENVIRONMENTS



POLICIES TO PROMOTE ADEQUATE FOOD IN FOOD ENVIRONMENTS

INTRODUCTION

The food system consists of the elements, activities, products and results related to the production, processing, distribution, preparation and consumption of food. There are three elements that make up the food system that act as entry and exit points for nutrition. They are 1) food supply chains, 2) food environments and 3) consumer behavior¹⁴ (HLPE, 2017).

Within the food system, “the physical, economic, political and socio-cultural context in which consumers engage with the food system to make their decisions about acquiring, preparing and consuming food” (HLPE, 2017, p. 28).

This constituent element of the food system is, therefore, a fundamental space that determines the options available to the consumer when it comes to choosing one type of food or another. As a result, they present a strategic opportunity for states to develop public policies that protect and promote adequate food by expanding physical and economic access to contribute to healthy eating, improving access and use of information and developing skills for citizens to exercise their right to healthy eating. It is with

regard to food environments that the discussion and implementation of new policies and regulatory frameworks to address malnutrition have proliferated in recent years (see **Box 6**).

The food environment comprises: 1) availability and physical access to food; 2) economic access to or affordability of food; 3) promotion, advertising and information, and 4) food quality and safety. Therefore, food environments are an important space for promoting a healthier diet that facilitates the consumption of nutritious foods and the improvement of the population’s dietary patterns, reducing malnutrition in all its forms (malnutrition, micronutrient deficiency, overweight and obesity) and diet-related noncommunicable diseases (HLPE, 2017).

This chapter summarizes the situation of the Region for each of the four aforementioned areas that make up the food environments, and describes, in turn, some of the main policies that the countries of Latin America and the Caribbean are developing to combat the different forms of malnutrition. However, although it is not the objective of this document, it should be borne in mind that in order to make effective progress towards (re)designing food environments, it will also be necessary to make coherent structural changes to the other two elements of the system, that is, to the nodes of production, processing and supply of the agri-food system, and to consumption habits themselves, in a context of sustainability and social equity. ■

¹⁴ The conceptual framework proposed by the HLPE can be found in Annex 2.

BOX 6 ZERO HUNGER PARLIAMENTS

In order to transform the current food systems into more just, healthy and sustainable systems, state policies and a strong commitment from all sectors of society are necessary.

To that end, the resolution adopted by the United Nations General Assembly on September 25, 2015, called Transforming our World: the 2030 Agenda for Sustainable Development indicates that parliaments can play a key role in enacting legislation, passing budgets and leading control and accountability processes.

Along the same lines, the Interparliamentary Union (IPU) argues that parliaments are the voice of the people and that their job is to ensure that the policies they enact benefit everyone, especially groups in situations of greater vulnerability.

In Latin America and the Caribbean (LAC), legislatures have joined forces to form the Parliamentary Front against Hunger in Latin America and the Caribbean. This is a regional network that has implemented a new way of designing policies by prioritizing:

1. The establishment of consensus and respect for the plurality of visions and interests.
2. Permanent technical and scientific assessment.

3. Collaborative work between a range of stakeholders, such as governments, the private sector, academia and civil society, among others.
4. Maintaining a medium and long-term vision when implementing new policies.
5. Permanent dialogue with citizens.
6. The 2030 Agenda as a map for action.

The Front is supported by FAO, the Spanish Cooperation and the Mexican Agency for International Development Cooperation (AMEXCID).

As of 2019 the Front has a presence in twenty-one countries (Argentina, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Grenada, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Dominican Republic, Panama, Paraguay, Peru, Saint Vincent and the Grenadines and Uruguay) and in four regional parliaments (Latin American and Caribbean Parliament [PARLATINO], Mercosur Parliament [PARLASUR], Andean Parliament [PARLANDINO] and Central American Parliament [PARALCEN]).

Since its formation in 2009, this platform has promoted more than twenty laws on public purchases from family farming, food labeling, reducing food losses and waste and school meals, among other issues (see Annex 3).

Source: prepared by the authors based on official data.

2.1 AVAILABILITY AND PHYSICAL ACCESS TO FOOD

KEY MESSAGES

- LAC has enough food to feed its entire population. The current average available calories per person per day is estimated at 3 000 calories.
- Cereals, sugar, and fats and oils are the three most frequently consumed food groups in the regional diet. The proportion of energy from sugar (14.2%) exceeds the limit of 10% recommended by the World Health Organization (WHO).
- The availability of processed foods, and especially so-called ultra-processed products, has grown rapidly in the countries of the Region. It is estimated that the consumption of ultra-processed foods and beverages increased by more than 25% between 2000 and 2013.
- Supermarkets and convenience stores have expanded considerably over the last two decades in the Region and are the principal sales channel for ultra-processed products. This is important because the contribution of macronutrients from these products are mainly in the form of sugar (43%), other carbohydrates (25%), fats (27%) and, to a lesser extent, proteins (5%).
- Among the factors limiting physical access to a healthy diet, especially among people in vulnerable situations, are so-called food deserts and food swamps. The first concept refers to the absence of food in certain geographical areas. The second indicates a relative abundance of processed and ultra-processed products that are not recommended as part of a healthy diet.

- Both public food supply and marketing systems and school meals programs have the potential to guarantee access to food for more vulnerable populations, promoting adequate food security and nutritional.

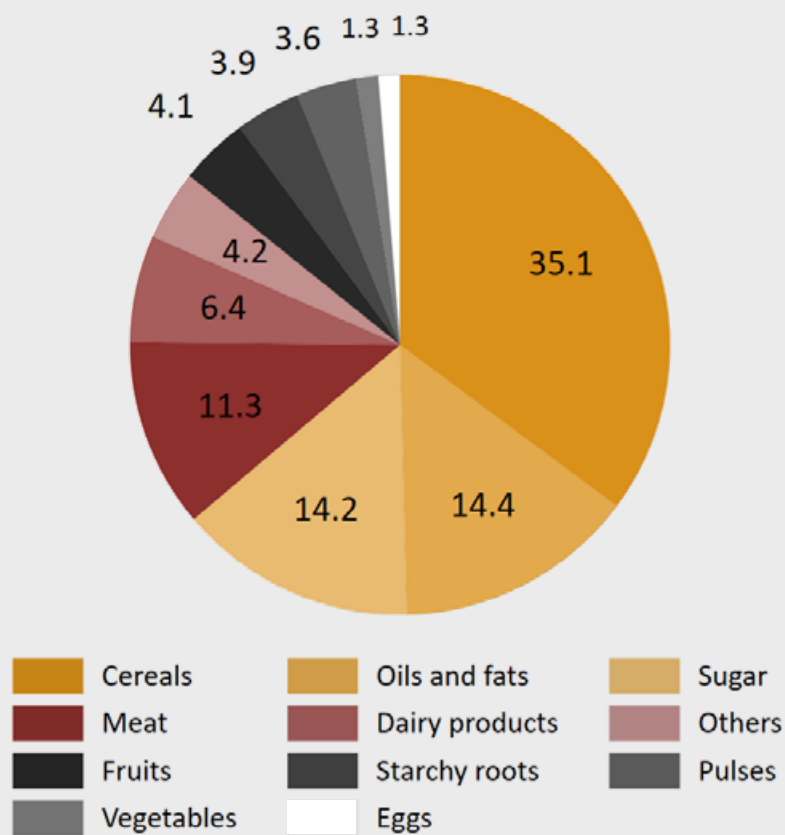
This section addresses the main challenges facing the Region to achieve an adequate food supply that contributes to a healthy diet and an adequate food environment that facilitates physical access to this supply.

The productive capacity and the commercialization mechanisms developed over the last few decades could provide nutritious food for the entire population of the Region. As noted in previous editions of this publication, the Region has sufficient productive capacity to feed itself. In fact, it has become a net exporter of agri-food products. However, the reality varies from country to country. For example, in most of the Caribbean territories, production is insufficient and imports are essential to increase food availability. Meanwhile, in South America, production exceeds domestic availability for most products. In contrast, in Mesoamerica production exceeds the minimum calorie requirements only in some food groups, such as vegetables, fruits, sugar and fish (FAO, PAHO, UNICEF and WFP, 2018).

Across the Region as a whole, on average the caloric availability per person per day is more than 3 000 calories, more than enough to meet individual caloric needs. Subregions show significant differences between average caloric availability. In South America it is 3 025 calories; in Mesoamerica, 3 011, and in the Caribbean, 2 781. Although the countries present different realities, in all of them the availability exceeds the recommended average consumption of approximately 2 000 calories per person per day.

When disaggregating caloric availability by type of food, the food groups that contribute most to the regional diet are examined. Cereals are the main source of calories in the Region, with 35.1% of available calories per person, followed by fats and oils with 14.4%, and sugar with a contribution of 14.2% (Figure 22).

FIGURE 22
DISTRIBUTION OF CALORIC AVAILABILITY PER PERSON PER DAY AND TYPES OF FOOD
IN LATIN AMERICA AND THE CARIBBEAN, 2013

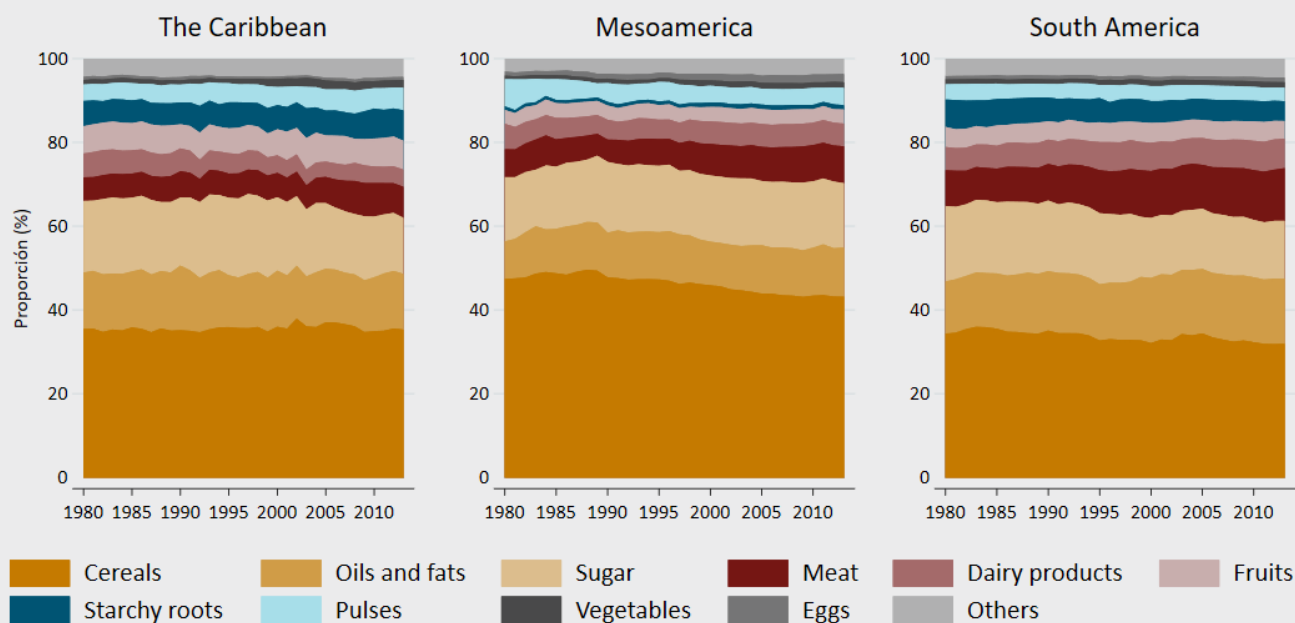


SOURCE: FAO, 2019.

Subregions show differences in the distribution of caloric availability by type of food and how it has evolved. In Mesoamerica, cereal availability has declined in absolute and relative terms. However, cereals still represent 40% of the total calories available, a figure that exceeds that of the other two subregions (Figure 23). Milk and its derivatives show a reduction in the contribution to total calories in the Caribbean, while in Mesoamerica it has remained stable and in South America it has increased. Fruits and vegetables have expanded their share of availability, especially in the Caribbean. Both the total

amount of meat and the proportion of calories available have increased in all subregions. This figure exceeds 12% in South America and is close to 8% in the other two subregions. Fats and oils exceed 15% in South America and 12% in Mesoamerica, which represents an increase in both cases, while in the Caribbean their share has remained close to 13%. The share of legumes have fallen in Mesoamerica, while in the Caribbean their contribution to the diet has increased and in South America it has not varied significantly.

FIGURE 23
EVOLUTION OF CALORIC AVAILABILITY BY TYPE OF FOOD AND SUBREGIONS OF
LATIN AMERICA AND THE CARIBBEAN, 1980-2013



SOURCE: FAO, 2019; UNDESA, 2019.

Although the availability of food exceeds the average levels necessary for a person to lead a healthy and active life, the indicator of food availability conceals their source and their degree of processing. This is of particular relevance if we take into consideration that over recent decades the consumption of processed foods has grown worldwide. Moreover, the growth of sales of ultra-processed products¹⁵ means that the consumption of calories from sugars, oils and fats has grown in importance (PAHO, 2015).

¹⁵ Ultra-processed products are industrial formulations made from substances derived from food or synthesized from other organic sources. In their current forms, they are inventions due to modern industrial food science and technology. Most of these products contain few or no whole foods. They are sold ready to eat or heated up, and therefore require little or no culinary preparation (PAHO, 2015). The NOVA classification proposed by a research team at the University of São Paulo and used in Brazilian food guides was employed to analyze the availability of and access to ultra-processed products. The NOVA system classifies foods according to the nature, purpose and degree of industrial processing and is one of several ways of classifying them (see Box 7).

Evolution of food systems and increased availability of ultra-processed products

The rapid global transformation of food systems over the last three or four decades has a number of characteristics. One of them is the increased presence of so-called ultra-processed products. This is the result of the intensification of production and increased productivity, the major advances in technological innovation in the industry that have led to a greater degree of food processing, improvements in sales infrastructure and distribution networks, and the expansion of supermarket chains and fast food stores. These changes have facilitated the supply of food products and beverages (such as processed and ultra-processed products) at lower relative prices (with a longer shelf life). However, it is also the result of the increased availability of sugars and other refined carbohydrates (and the consequent decline in consumption of whole grains, legumes and tubers) and of processed vegetable oils, the increase in meat production and the availability of processed meat, and of products with high amounts of sugar, fat and/or added salt/sodium (Popkin and Reardon, 2018; Anand et al., 2015; PAHO, 2015).

According to Popkin and Reardon (2018), urban areas and some rural areas of the Region are undergoing rapid transformation. Income growth, improved infrastructure, urbanization, liberalization of market regulation policies and the increase in non-agricultural rural employment are the main drivers of this transformation of the food system and food patterns in LAC.

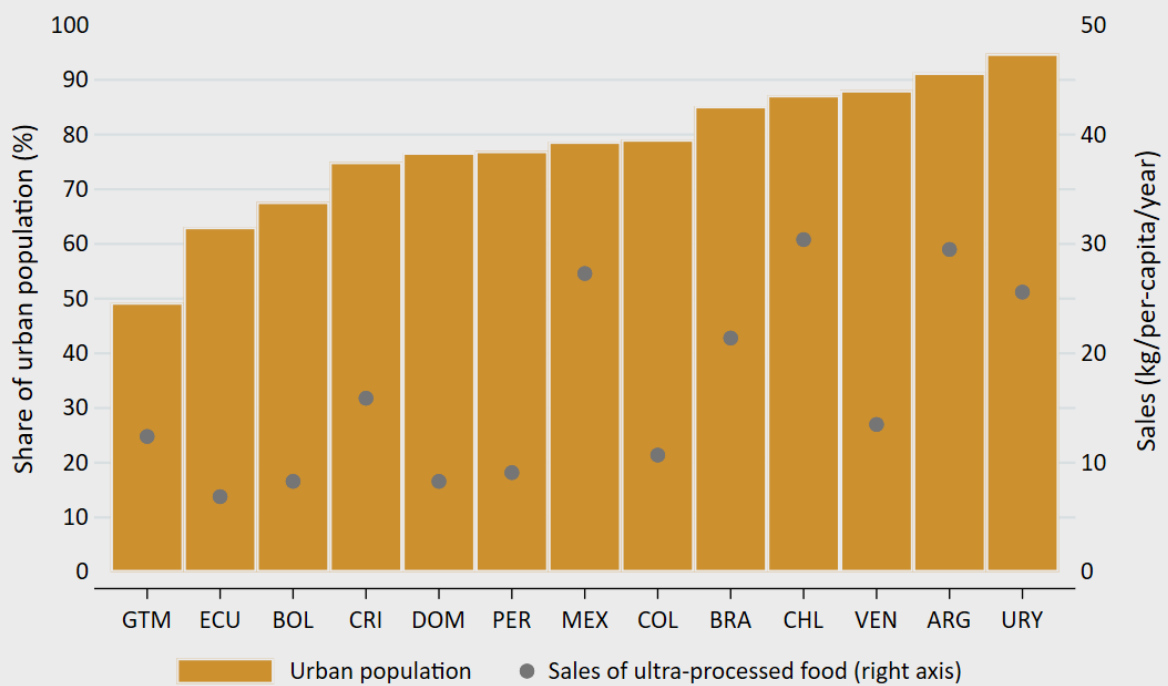
In addition, as societies become more urbanized, disposable income, travel times and the proportion of women in employment increase, with the result that ready meals and eating outside the home become attractive alternatives (Gracia Arnaiz, 2012; Aguierre, 2016; Moyano-Fernández, 2018). These changes have led to a more rapid increase in the consumption of ultra-processed food and fast food and street food in the countries of the Region in relation to developed countries (Monteiro, Moubarac, Cannon, Ng, and Popkin, 2013; Popkin and Reardon, 2018). **Figure 24** shows the direct relationship between the urban population percentage and the sale of ultra-processed products for some countries of the Region.

To all of the above must be added the inequality in access to land, which intensifies rural poverty, as well as the disproportionate and unequal amount of cultivated areas dedicated to the production of basic inputs for processed and ultra-processed products (oils, flours, sugar). While the areas dedicated to the production of fruits, vegetables and legumes decline (FAO and PAHO, 2017).

A recent study (PAHO, 2019c) that included Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela revealed that the calories in ultra-processed products come mostly from carbohydrates and fats. Specifically, according to this study the calories in these types of food were 43% sugar, 25% other types of carbohydrates, 16% fat, 11% saturated fat and only 5% protein.

Changes in the food system have also affected rural areas. In general, in middle-income

FIGURE 24
URBAN POPULATION AND SALE OF ULTRA-PROCESSED FOODS IN SELECTED COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN



NOTE: The correlation coefficient is 63%.
 SOURCE: PAHO, 2015; UNDESA, 2019c.

BOX 7 DEGREE OF FOOD PROCESSING ACCORDING TO THE NOVA FOOD CLASSIFICATION SYSTEM

To understand the meaning of adequate food, it is useful to understand the different levels of food processing and what they entail. Although processing itself is not the problem, as since most food is processed to some degree, it is important to note that excessive consumption of processed foods is displacing home-cooked and fresh foods. In addition, some of these products contain excess calories, sugar, fat and salt (FAO, 2015; Monteiro, Cannon, Lawrence, Da Costa Louzada, and Pereira Machado, 2019).

There are different types of food classification. However, the most used in LAC and the scientific literature is the NOVA system (Monteiro, Cannon, Lawrence, Da Costa Louzada, and Pereira Machado, 2019). This system groups food according to its nature, purpose and degree of processing and comprises four groups:

- 1. Unprocessed or minimally processed foods:** these are foods originating from plants (leaves, stems, roots, tubers, fruits, nuts, seeds) or animals (meat or other tissues and organs, eggs, milk) distributed shortly after harvesting, gathering, slaughtering or raising. Minimally processed foods are unprocessed foods that are altered in the sense that no substance is added or incorporated, but some parts of the food may be removed.
- 2. Processed culinary ingredients:** substances extracted and purified by industrial processes from food components or obtained from nature. Preservatives, stabilizers or "purifiers" may be used, in addition to other additives.
- 3. Processed foods:** these are made by adding salt or sugar (or another ingredient such as oil or vinegar) to foods to make them last longer or to make them more palatable. They are derived directly from food and are recognizable as versions of the original food. In general they are produced to be consumed as part of meals or dishes. Processes include canning and bottling, fermentation and other preservation methods such as salting, pickling or curing.
- 4. Ultra-processed products:** these are formulated mostly or entirely from substances derived from food or other organic sources. They usually contain few or no whole foods. They are packaged or bottled and are durable, practical, branded, accessible, with a pleasant or extremely pleasant taste, and are often habit-forming. In general, they are not recognizable as food, although they can mimic its appearance, shape and sensory qualities. Many of their ingredients are not available in retail stores. Some of them are derived directly from foods (such as oils, fats, starches and sugars) and others are obtained by further processing of food components, or are synthesized from other organic sources. Numerically, most of the ingredients are preservatives and other additives such as stabilizers, emulsifiers, solvents, binders, cohesive agents, volume enhancers, sweeteners, sensory highlighters, dyes and flavorings, and processing aids. Volume can be obtained by adding air or water. Products can be "fortified" with micronutrients, such as chips and other packaged snacks, ice cream, chocolates, candies, cookies, jams, margarines, carbonated drinks, energy drinks, milk-based sugary drinks, and so on.

NOTE: The NOVA system is one of several food classifications that exist. Its use in this analysis does not constitute validation by FAO.
SOURCES: Monteiro, Cannon, Lawrence, Da Costa Louzada, and Pereira Machado, 2019; PAHO, 2015; FAO, 2015.

countries the mechanization of agriculture, improvements in road infrastructure, the increased use of motor vehicles, the increase in non-agricultural rural employment and the reduction of some domestic tasks that are no longer necessary have led to less physical activity, reducing energy expenditure. At the same time, the rising incomes and the availability of products subjected to a higher degree of processing has led to increased food consumption. This has led to the body mass index in rural areas rising at a faster rate than in urban areas, especially among women (NCD-RisC, 2019).

Changes in food distribution channels and in the consumption of ultra-processed products

Food production and distribution channels are changing. Agriculture and food production are increasingly oriented towards supplying supermarkets and hypermarkets. This process is part of a trend of changes that are occurring in food systems (Intini, Jacq, and Torres, 2019).

A concentration of supermarkets has taken place in most LAC countries, especially since the 2000s. International chains have acquired several local chains and currently occupy a significant portion of the market (Popkin and Reardon, 2018).

Although supermarkets can offer a diverse range of foods, there also appears to be a direct relationship between the presence of supermarkets and the consumption of ultra-processed products. In fact, there is evidence that buying food in supermarkets can increase the proportion of ultra-processed purchases (Asfaw, 2008; Battersby and Crush, 2014; Demoscopic and ICEI, 2017; Popkin and Reardon, 2018). In Brazil, for example, processed and ultra-processed foods represent 60% of supermarket sales, while fresh food other than meat represents only 12% of supermarket sales (Fonseca, 2016), and the population buys 25% more ultra-processed food in supermarkets than in other stores (Machado, Claro, Canella, Sarti, and Levy, 2017). In Guatemala, ultra-processed and processed products represent 40% of the calories acquired

in supermarkets (Asfaw, 2008).

According to a study conducted by PAHO (2015) in thirteen countries of the Region, the consumption of ultra-processed food and beverages has increased rapidly. On average, the increase in grams between 2000 and 2013 was 26.2%. The increases in Uruguay and Bolivia stand out, at 146.4% and 129.8%, respectively. On average, the daily consumption of ultra-processed foods exceeds 50 grams and that of sugary drinks is 300 ml, which adds up to 350 grams of ultra-processed foods per person per day. The countries with the highest consumption per person are Mexico and Chile, with 581 and 550 grams per person per day, respectively.

A new PAHO study (2019c) indicates that sales of ultra-processed products are the fastest growing in Latin America. This increases the exposure of populations to excessive amounts of sugar, sodium and fat. It also displaces recommended foods as part of a healthy diet. Moreover, the study projects a near 8% increase in ultra-processed calories sold in seven countries of the Region¹⁶ between 2015 and 2019.

In Brazil, the consumption of unprocessed, minimally processed foods and processed culinary ingredients¹⁷ in homes has been replaced by the consumption of ultra-processed foods. The latter represent on average more than 25% of calories and in the case of higher income households, more than 30% of calories (Monteiro, Levy, Claro, de Castro, and Cannon, 2010). In the same country, calories from purchased ultra-processes increased from 18.7% in 1987 to 26.1% in 2003 (Monteiro, Moubarac, Cannon, Ng, and Popkin, 2013).

Likewise, a study conducted in Chile (Cediell et al., 2018) showed that ultra-processed products represent 28.6% of calories and more

16 The countries included in the study are Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela, which together represent 80% of the regional population.

17 See Box 7 for the description of degrees of food processing.

than half of sugar consumption, which means that an increase of 5 percentage points in ultra-processed calories implies an increase of 1 percentage point in the sugar content in the diet. According to the same study, in Chile sugar consumption is 57% higher than the maximum amount of 10% recommended by WHO and FAO, while in Mexico calories from ultra-processed products accounted for 29.8% in 2012.

On the other hand, fast food consumption¹⁸ has also shown a significant increase in some countries of the Region, with an increase of 38.9% between 2000 and 2013, with Brazil and Peru the largest consumers of fast food in the latter year (PAHO, 2015). It should be noted that proximity to fast food restaurants is directly related to higher consumption of this type of food (Boone-Heinonen et al., 2011; He et al., 2012).

Globally, between 2001 and 2014 the sale of processed and ultra-processed products through supermarkets and convenience stores showed a significant increase, especially in high-middle-income countries,¹⁹ rising from less than 40% to reach 50% of the sale of processed and ultra-processed food. In high-income countries, the increase is less rapid, but the percentage of sales through supermarkets and convenience stores is much higher, reaching 75%. In low-middle-income countries, the distribution of processed and ultra-processed products through supermarkets and convenience stores is lower, but has also shown an increase and their sale through these stores amounts to 30% (Global Panel on Agriculture and Food Systems for Nutrition, 2016). All this shows the importance that supermarkets and convenience stores are acquiring in the sale of ultra-processed foods, as they are an significant channel for these products to reach the population.

18 Fast food is defined as foods that can be prepared quickly and easily and that are offered in restaurants and cafeterias as food for immediate consumption or to take away (De Vogli, Kouvonen, and Gimeno, 2014).

19 The majority of the countries of the region are located in this category.

Supermarkets and convenience stores have gained in importance, to the detriment of traditional stores,²⁰ which have lost market share. Even so, the latter remain an important part of the food market in the countries of the Region. Small neighborhood stores represent at least 25% of food sales in LAC. Street and central markets in Brazil and Chile have an important function in the sale of fruits, vegetables and other fresh products (Ayala Ramírez and Castillo Girón, 2014; Araujo, Alves de Lima, and Macambira, 2015; Intini, Jacq, and Torres, 2019). According to an analysis carried out in some countries by the Global Panel on Agriculture and Food Systems for Nutrition (2016), the distribution channel for the sale of fresh products has presented few changes. In addition, traditional businesses are often important to lower-income populations, not only because of the lower costs and, in many cases, the most convenient sizes, but also because they represent an important source of work for these sectors. In addition, in the Region 293 wholesale markets have been identified that are key in the sustainability of the food chain, offering different fresh products that in many cases are locally sourced, which supports rural producers (Ayala Ramírez and Castillo Girón, 2014; Intini, Jacq, and Torres, 2019).

The expansion of supermarkets and convenience stores has had a significant impact on the consumption of ultra-processed products. However, some studies have shown that this could change if the availability of foods that contribute to healthy eating increased in these establishments. Also, markets selling easily accessible fresh produce can help increase the consumption of fruits and vegetables. Therefore, improving physical access to quality food involves designing solutions that involve both supermarkets and convenience stores and traditional stores (Odoms-Young, Singleton, Springfield, McNabb, and Thompson, 2016).

20 Wholesale markets, public markets, small stores, specialty stores, free fairs and itinerant markets.

Case studies in the Region and around the world.

One of the difficulties that the population has in terms of physically accessing fresh and nutritious food is the absence of establishments selling this type of food or the distance from their homes. This especially affects low-income groups. This phenomenon, which has become referred to as a food desert, occurs mainly in hard-to-reach areas with poor infrastructure, which is precisely where the population with the lowest income is concentrated.

A study conducted in Brazil (Borges, Cabral-Miranda, and Jaime, 2018) shows, for example, that establishments that give priority to ultra-processed products have a higher presence in medium and low-income territories than those that sell fresh and healthy food. In addition, it showed that there is a low density of healthy food establishments, especially in low-income territories. Another study (Duran, de Almeida, Latorre, and Jaime, 2015) conducted in the same country showed that low-income individuals living in areas with poor access to supermarkets and markets selling fresh produce have a low regular consumption of fruits and vegetables. However, another study (Castro Junior, 2018) also conducted in Brazil revealed that body mass index is lower in locations with a better food environment. The study identified that in Rio de Janeiro, low-income locations had a higher proportion of points of sale that predominantly offer fresh or minimally processed products, such as butchers, fishmongers, greengrocers and fairs. By contrast, higher-income neighborhoods had more supermarkets and convenience stores that predominantly sold ultra-processed products.

In Mexico City, other research (Bridle-Fitzpatrick, 2015) found that fresh food prices are higher in low-income territories. This represents a disadvantage for low-income families, as it hinders access for them to foods that contribute to healthy eating. In addition, establishments selling unhealthy food and fast food predominated, as well as wide availability of snacks and sugary drinks in places of low and medium income. In contrast, high-income

families had greater access to adequate food and lower access to less healthy food.

The term food desert has evolved and has expanded as studies have been conducted in developing countries. As described in the previous section, the proximity to a supermarket can increase the consumption of ultra-processed foods. However, several studies (Bridle-Fitzpatrick, 2015; Zhong et al., 2018; Wagner et al., 2019) have shown that it is insufficient to take only distance to food establishments as a significant variable for physical access, diversity of diet and food security.

To explain the importance of physical access for foods that facilitate healthy diets, the concept of food oases, which are associated with an abundance of adequate food, and that of food swamps, referring to an abundance of food inadequate to a healthy diet have also been coined (Wagner et al., 2019). Food swamps are choice environments that also strongly stimulate the consumption of ultra-processed products and where actions for immediate gratification are encouraged that, most likely, lead to the development of obesity (Yang et al., 2012; Bridle-Fitzpatrick, 2015; Wagner et al., 2019; Ghosh-Distidar et al., 2014).

Based on the foregoing and on the set of studies analyzed, it can be concluded that to improve physical access to foods that contribute to healthy eating, must be taken into account the distribution channels, the composition and distribution of the range of food on offer in the same premises, the income (of the families²¹ and of the entire sectors), the means of transport available, the degree of urbanization or rurality, the size of the cities,²² the concentration of the food supply market,

21 In low-income urban territories, the diversity of the diet does not necessarily increase, since the tendency is to consume a diet that is less healthy and diverse (Battersby and Crush, 2014).

22 Increasing the distance to supermarkets decreases the likelihood of including fruits and vegetables in the diet in metropolitan areas, but has no effect on non-metropolitan areas (Michimi and Wimberly, 2010).

etc. (Zhong et al., 2018; Bridle-Fitzpatrick, 2015; Duran, de Almeida, Latorre, and Jaime, 2015; Gordon-Larsen, 2014; Michimi and Wimberly, 2010; Battersby and Crush, 2014; Caspi, Sorensen, Subramaniam, and Kawachi, 2012; Oxfam, 2018; Odoms-Young, Singleton, Springfield, McNabb, and Thompson, 2016).

Policies to promote availability and physical access to food

Several policy options can favor the availability of adequate food. For example, policies can be developed and implemented that promote access to productive resources and inputs, physical capital, research and technology, technical assistance and rural outreach, financing and credits, animal and plant health, development of productive chains and public procurement mechanisms. In addition, imports and trade play a fundamental role in the availability of food products, as they affect the food and nutrition of the population. If their trade is facilitated, consumers with lower purchasing power can access basic foodstuffs at reduced prices.

Given that the 2019 edition of the Regional Overview of Food Security and Nutrition in Latin America and the Caribbean focuses on food environments, this section will address two policy options that seek to promote the availability of and physical access to adequate food: 1) public food supply and marketing systems and 2) school meals programs.

Importantly, the availability of food can be affected by market failures. It is estimated that 221 million tons of food are lost and wasted every year in the production and retail chains. That figure represents 11.6% of what is produced in the Region.²³ This represents an economic loss equivalent to 20% of the value of the annual production of the Region, amounting to USD 159 billion annually. The food groups with the most significant

losses are roots and tubers (25%) and fruits and vegetables (21%) (FAO, 2019e; #SinDesperdicio, 2019). LAC countries, aware of the moral, environmental and economic challenge that this represents, are pushing forward various measures to advance prevention and reduction solutions (see **Box 8**). To increase the availability of foods that contribute to healthy diets and reduce, in part, food deserts, it is necessary to achieve more efficient food systems, which include the prevention and reduction of losses and waste from production to consumption.

Public food supply and marketing systems²⁴

In LAC there are a range of public policies and mechanisms for food supply and marketing in place, with varying degrees of development, capacity for action, and practices. For example, countries like Antigua and Barbuda, Bolivia, Brazil, Chile, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Dominican Republic, Saint Vincent and the Grenadines, Trinidad and Tobago and Venezuela have such systems.

In general, in the Region, public food supply and marketing systems are aimed at price stabilization, production incentives, food stock management, product marketing and information generation.²⁵ (FAO, 2017b).

Public food supply and marketing systems have the potential to guarantee constant access to the population's food, promoting food security and maintenance of dietary patterns. These systems are a strategy to support groups in situations of greater vulnerability, as well as for those affected by economic, social,

24 As noted earlier, since this year the focus is on food environments, this section will focus on how these systems can, through public supplies, improve the availability of and physical access to adequate food and reduce food deserts.

25 Product prices, trend analysis of product costs, price and crop statistics, estimates of expected harvest (measured in hectares), agricultural production costs, production estimates, planting estimates, number of farms, total area planted (measured in hectares), production flow routes, number of producers, number of suppliers, market behavior, quantity of stored products, among others (FAO, 2017b).

23 For the calculation, the "total production" variable by food group was used, taking as reference the year 2015 and global loss coefficients (FAO, 2019a).

and natural disturbances. That is, they serve people or groups that lack their own capacity to guarantee a basic diet.

Likewise, they can support sustainable modes of production and supply inputs to the various social protection and school meals programs (FAO, 2017b). A number of examples are mentioned below.

In Antigua and Barbuda meat products and locally grown fruits and vegetables are offered at affordable prices in supermarkets.

Bolivia has implemented a strategy for the supply of essential items in supermarkets and in a network of warehouses and stores run by the Food Production Support Company (EMAPA) in the different departments of the country where the population has poor access to local markets.

Cuba has wholesale stores, retail stores and community kitchens.

Through its network of BANASUPRO stores throughout the country, Honduras sells basic products at different costs for the entire population, with special attention to people on lower incomes. • Through SEGALMEX-Diconsa, Mexico operates the Rural Supply Program, which has more than 27 000 fixed and 300 mobile stores throughout the national territory, 302 rural and central stores, three bulk warehouses and some 4 000 vehicles that travel roads and highways across the country, together with more than a dozen boats, reaching remote and difficult to access areas (Government of Mexico, 2019).

Nicaragua has food distribution outposts of the Nicaraguan Basic Food Company (ENABAS) to guarantee access to the main products of the basic food basket at a lower price than in the ordinary market.

The Dominican Republic, through the National Institute for Price Stabilization (INESPRE) and its physical warehouses, offers agricultural products at affordable prices. Meanwhile, mobile warehouses serve families in a situation of greater vulnerability

in areas that producer markets do not reach (FAO, 2017).

Storcksdieck, Caldeira, Gauci, Calleja, and Furtado (2017) point out that the acquisition of food and public food services, such as school meals, are a policy option that can encourage the reformulation of food and beverages and encourage healthier eating. Likewise, the implementation of a health-sensitive food acquisition process improves the nutritional quality of food services. It also relates to a healthier diet among children and adolescents, and has an important role in achieving a change in eating behaviors (Caldeira et al., 2017).

Public food supply and marketing systems can also set quality standards for food through technical standards for processing and preparation procedures, to guarantee food quality and safety (FAO, 2017).

In short, public food supply and marketing systems have the potential to improve the availability of and physical access to adequate food and thereby reduce food deserts. However, the development of inclusive and efficient food systems requires supply systems and mechanisms that pay particular attention to the sectors that are in a situation of greater vulnerability in the field of production and consumption, and that ensure the supply of food under any circumstances. To achieve this, public policies, mechanisms and decisions are required that promote the development of more efficient food supply and marketing systems, which ensure the availability and distribution of food for the entire population at all times.

To ensure that these systems provide for adequate food, the food environments of the populations they seek to serve, as well as their food patterns, must be considered and efforts be made to reduce imbalances in availability and access with respect to the population's dietary recommendations. Changes in rules of supply to facilitate consumption are widely used in schools and in social protection programs, but they are not yet so frequently

adopted in other spaces.²⁶

In addition, it is necessary to look for mechanisms that shorten the distribution chain since it has been shown that this leads consumers to increase the variety and quantity of fresh foods, such as fruits and vegetables (Ostrom, 2007).

School meals programs

School meals programs are the most frequent social protection network in the world (World Bank, 2015). In LAC, National School Meals Policies and Programs have proven very effective in facilitating physical access to food. In addition, they play a fundamental role in the fight against hunger and malnutrition in all its forms. For this reason, it is not surprising that the school environment has become a convenient space for the Region's countries to implement measures to promote healthy eating among children and adolescents (see [Box 9](#)).

Currently, these programs provide breakfast, lunch or snacks to more than 85 million schoolchildren in the Region, with an annual investment of approximately USD 4.3 billion (WFP, 2017). They also constitute a policy that focuses on a particularly important population group, since better diets among children and young people is crucial to their cognitive growth and learning, and therefore their opportunities to contribute to the development of their families and societies. As has been seen in recent decades, well-designed school meals strategies and programs offer multiple benefits and a return to investment in human capital through better health and education outcomes. At the same time, when they are linked to the acquisition of food from local and family agriculture, they also increase the diversity of food available at school, and provide growth opportunities for local markets and economies.

²⁶ For example, Brazil through Ordinance No. 1 274/2016 of the Ministry of Health (Portaria No. 1 274/2016 do Ministério da Saúde), provides guidelines on adequate and healthy eating in the workplace. In addition, it also has a guide to preparing healthy meals at events (Guia para a elaboração de refeições saudáveis em eventos).

In response to the Region's new challenges, SMPs have evolved from a framework mainly of food assistance and an incentive to school enrollment, to be seen as social protection networks that guarantee the rights to food and to education. A regional study conducted in sixteen countries (WFP, 2017) showed that, in fourteen of them, school meals already have a sound legal foundation in laws, decrees or in the constitution, and that more than 90% of the investment comes from national budgets, which indicates stability and ownership. Most countries apply a universal approach, and food security and nutrition are increasingly important goals for programs that seek to provide between 20% and 30% of the recommended nutritional requirement. Likewise, the countries analyzed try to acquire their food as locally as possible, and in thirteen of them fresh fruits and vegetables are already provided at different scales and, in eleven, fortified foods and beverages.

In light of the increase in overweight and obesity in all countries, measures have been put in place to restrict the supply of processed and ultra-processed products. To this is added the need to incorporate the theme of proper diet in schools in a transversal way, contemplating its multidimensionality and the development of skills for self-care, care for others and care for the environment in children.

The restriction of processed and ultra-processed products with excessive amounts of sugar, fat and sodium in schools' food supply policies is a further key element. It ensures consistency between a curriculum that addresses appropriate diet and the reality of the food environment, given that children learn at all times, in and out of the classroom, and absorb environmental indicators about what food is available and what is promoted and encouraged (see [Box 9](#)).

Countries' efforts are increasingly directed towards a better quality, effectiveness and sustainability of their national programs, and offer nutritious meals that adapt to different local cultures and that can be linked to local agriculture and markets (WFP, 2017). Today, SMPs have the potential to continue

**BOX 8
LEGAL FRAMEWORKS FOR THE PREVENTION AND REDUCTION OF FOOD LOSS AND WASTE**

In recent years, in Latin America and the Caribbean (LAC) one of the most active areas of work in the fight against food loss and waste (FLW) has been the formulation of legal frameworks to prevent and reduce it. FLW impacts local food availability and represent a loss of economic resources for all actors in the food system. It also constitutes one of the most significant sources of greenhouse gas emissions globally (IPCC, 2019).

According to an unpublished preliminary study by the Law Office for Development of the Legal Office and the FAO regional group, *Moving from Losses to Solutions*, six countries have specific laws on FLW and there are about 54 bills in progress. Among the laws passed in 2019, of note is Colombia for its Law 1 990 which provides for a Policy against Food Loss and Waste, and in Peru Law 30 988, which promotes the reduction and prevention of food loss and waste in Peru. In general, these laws determine which interinstitutional ministry or board is responsible for implementing strategic actions to prevent and reduce FLW. Likewise, these laws incorporate

incentive systems for donations of food in good condition for human consumption as a way to help meet the food needs of population groups in a situation of greater economic vulnerability.

The Parliamentary Fronts against Hunger in Latin America and the Caribbean work to support countries in the adoption, regulation and implementation of these laws in coordination with the national institutions mandated to provide solutions to FLW.

In 2019, eleven countries have formed intersectoral working groups that analyze regulatory proposals and address other issues, such as innovation and technology, in addition to establishing partnerships between the public and private sectors. These actions should make it possible to achieve Target 12.3 of the 2030 Agenda, that is, to reduce food waste per person by half worldwide in retail and consumer level, and to reduce food losses in production and supply chains, including post-harvest losses.

Source: IPCC, 2019; FAO, unpublished.

maximizing their contribution to health and nutrition in school, contributing to preventing and combating malnutrition in all its forms and promoting healthy eating habits throughout life.

Therefore, in a Region where there is an increasing burden of noncommunicable diseases (NCDs) and growing problems of malnutrition and obesity and overweight, school meals programs represent key interventions to facilitate access to a healthy diet, reduce malnutrition and promote appropriate food choices in children and adolescents. Likewise, in communities in situations of greater vulnerability, nutrition-sensitive school meals can offer a regular source of nutrients that are essential for the development of children and adolescents.

This type of program can also reduce the burden of household expenses by offering a free and universal food service at school. School

meals programs are part of social protection networks and can be used as interventions to respond in times of crisis (Beazley, Solórzano, and Barca, 2019). In addition, linking them with purchases of locally produced food directly benefits small agriculture, generating stable markets, promoting local agriculture, rural transformation and strengthening local food systems (Bundy, de Silva, Horton, Jamison, and Patton, 2018).

Likewise, the effectiveness of these programs increases when they include a component of food and nutrition education, making it possible to maximize the scope, effectiveness, adoption, implementation and maintenance of school food policies and interventions by understanding and exploiting the various alternatives and approaches of the measures. That is, it is necessary that they be treated as complementary and synergistic policies, which act at multiple levels to improve acceptability, fidelity, effectiveness and sustainability. ■

BOX 9 SCHOOL ENVIRONMENTS TO PROMOTE APPROPRIATE DIET

School food environments are understood as “all the spaces, infrastructure and conditions inside and around the school premises where food is available, obtained, purchased and/or consumed [...]also taking into account the nutritional content of these foods. The environment also includes all of the information available, promotion (marketing, advertising, branding, food labels, packages, promotions, etc.) and the price of food and food products” (FAO, 2019).

Nowadays, children and adolescents often grow up in obesogenic environments that promote weight gain, overweight and obesity. This is the result of various processes resulting from changes in food patterns, in the types of food consumed and their availability, in social values and cultural norms, in addition to more sedentary activities and less physical activity, among others (PAHO, 2014). In addition, the availability of food in the environment, advertising and education exert pressure on certain dietary patterns, positive or negative.

Children are exposed to a large volume of advertising for food products that do not promote appropriate diet, through techniques designed to persuade them. A study conducted in eleven countries²⁷ revealed that in all of them, more than half of food advertising corresponded to products with high concentrations of calories, sugar, fat or sodium. In addition, the advertising of this type of food products increased at children’s peak viewing times (Kelly et al., 2010).

Given that children and adolescents spend a significant part of their lives in school spaces and that food preferences develop at an early age and tend to persist throughout life, it is essential to implement policies that promote the development of healthy habits in the school environment (National Coalition to Prevent Childhood Obesity in Children and Adolescents, 2018; WFP, 2017).

For example, an analysis focused on Guatemala (Pehlke, Letona, Hurley, and Gittelsohn, 2016) analyzed the potential impact of the school food environment on malnutrition and overweight and obesity among children and adolescents among 5 and 12 years at low-income elementary schools. The various food sources that comprise the school food environment were explored, that is, kiosks inside schools, food brought from home, street food and food provided by the school through the school meals program (lunch). According to the study, the different sources tended to offer high-calorie and high-sugar products, despite the increase in overweight and obesity rates. Therefore, the environment is promoting the transition from the extreme of malnutrition to the extreme of overweight and obesity.

Mancipe et al. (2015) conducted a review of different types of interventions in schools, such as promoting the availability of foods that facilitate healthier diets and strategies to support the choice of more appropriate foods, physical activity and changes in the environment, among others made in some countries of Latin America, to prevent overweight and childhood obesity in school children aged 6 to 17 years. The research showed that mixed interventions, which combine measures of nutritional education, physical activity, nutritional changes or institutional policies are most effective in preventing overweight and obesity in schoolchildren. In addition, the incorporation of content on healthy eating and health promotion from teacher training and in the curriculum should be considered.

In LAC, various measures have been implemented to improve school feeding environments, through mandatory or voluntary mechanisms. Brazil, Chile, Costa Rica, Ecuador, Jamaica, Mexico, Peru, Trinidad and Tobago and Uruguay have mandatory standards for food available in schools, including restrictions on food products that do not promote an appropriate diet. In addition, Chile, Costa Rica, Ecuador, Jamaica, Trinidad and Tobago and Uruguay have mandatory regulations for the

²⁷ Germany, Australia, Brazil, Canada, China, Spain, United States of America, Greece, Italy, Sweden and the United Kingdom.

BOX 9 (CONTINUED)

advertising or marketing of food in schools and Bolivia, Brazil, Colombia, Costa Rica, El Salvador, Granada, Mexico, Paraguay and Peru established guidelines or standards of nutrition for school meals.

Massri, Sutherland, Kallestal, and Peña (2019) evaluated the impact of Law 20 606/2012 on the composition of food and its advertising, which prohibits the sale of foods and beverages high in calories, sugar and saturated fats in schools, and on the availability of food and drinks with high content of critical nutrients that are sold in the kiosks of public schools in Santiago, Chile. The study found that, with the implementation of the law, the availability of foods and beverages high in calories, sugar and saturated fat in school kiosks was reduced. Foods that exceeded the established limits decreased from 90% in 2014 to 15% in 2016. Likewise, it was observed that solid products reduced the content of calories, sugar, saturated fat and sodium. Meanwhile, liquid products saw a reduction in their concentrations of calories, sugar and saturated fats, while sodium increased. This is due to changes in the nutritional composition of food products that are high in calories, saturated fat, sugar and sodium.

However, a report by UNICEF (2015) found that food and beverages that do not meet the established nutritional criteria are still promoted and advertised in schools in Mexico, Costa Rica and Argentina. In the countries evaluated, promotion and advertising are present in posters, food or beverage vending machines, products and packaging in school kiosks, materials or items made available free of charge by companies, and school activities sponsored by companies. In addition, it was observed that 58% of the schools had kiosks or itinerant vendors and 25% had some type of promotion and advertising for food or drinks.

There are a number of opportunities for local governments, both municipal, state, and provincial, to adopt their own legislation and actions to protect and promote an appropriate school food environment. Depending on national legal norms, states and municipalities may restrict the marketing and advertising of unhealthy foods not only within schools, but also in nearby areas. They can also make these topics more prominent in the school curriculum to promote autonomy and critical thinking in students (IDEC, 2018).

Source: FAO, 2019; PAHO, 2014; National Coalition to Prevent Childhood Obesity in Children and Adolescents, 2018; WFP, 2017; Pehlke, Letona, Hurley, and Gittelsohn, 2016; Mancipe et al., 2015; Massri, Sutherland, Kallestal, and Peña, 2019; UNICEF, 2015; IDEC, 2018.

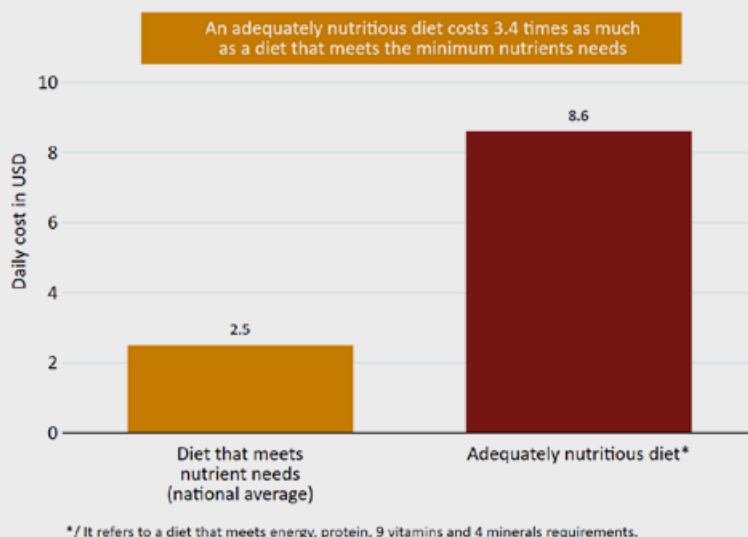
BOX 10
CLOSING THE NUTRIENT GAP IN ECUADOR: THE ROLE OF PHYSICAL AND ECONOMIC ACCESS TO NUTRITIOUS FOOD IN RELATION TO THE COUNTRY'S NUTRITIONAL SITUATION

Malnutrition in all its forms (malnutrition, micronutrient deficiencies, overweight and obesity) represents one of the most significant challenges in Ecuador. Between April and September 2018 the governmental institutions that make up the intersectoral Misión Ternura strategy, with the technical support of the World Food Program (WFP) in the country, undertook an analysis entitled "Closing the Nutrient Gap." The aim was to estimate the cost of a nutritious diet and the role

of physical and economic access in relation to the nutritional situation of the country, food production and consumption.

The results confirmed that, although food production is sufficient in Ecuador, the range of food is not very diverse and low in nutritional quality as a result of people's limited access to a varied diet and a lack of knowledge about nutritious and healthy eating habits that allow them to meet their daily requirements.

Cost of a diet that meets a person's energy requirements compared to the cost of a nutritious diet in Ecuador, 2018



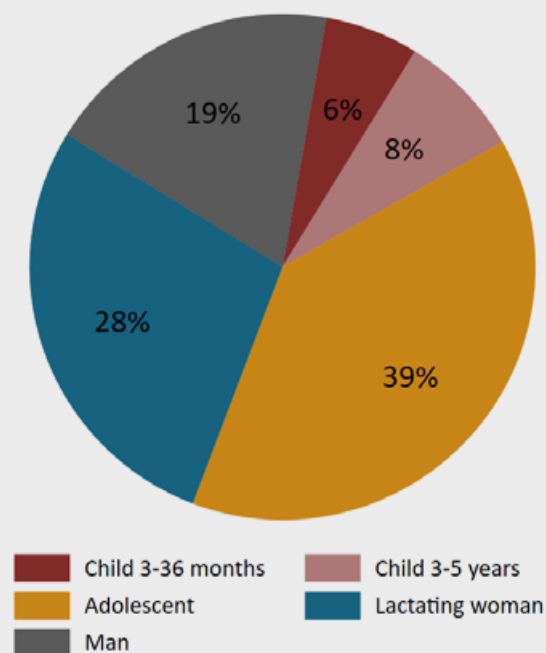
The estimate of a nutritious diet modeled for a family of five would cost an average of USD 8.60 per day compared to USD 2.50 for a diet that meets the energy requirements. This represents 250 and 75 USD per month, respectively. It should be noted that the unified basic monthly salary for 2019 is equivalent to USD 394. The analysis also reveals that the cost of a proper diet for

adolescents, lactating women and pregnant women is higher compared to other family members, which demonstrates the economic difficulty groups in situations of vulnerability face meeting the nutritional requirements.

The impact that possible interactions of Misión Ternura interventions could have on the cost and access to nutritious food for different individuals

BOX 10
(CONTINUED)

Proportion of household expenditure on food by type of member for a 5-person household in Ecuador, 2018



as well as for the home was also evaluated. It was found that the study “Closing the Nutrient Gap” has the potential to improve understanding of the different malnutrition contexts in the country, and to provide evidence to show which interventions could best contribute to improving access to nutritious food at the national and provincial level in different sectors and interest groups.

The analysis and the results of this study have made it possible to influence public policy within the framework of the government’s Misión Ternura strategy. This is aimed at strengthening investment in public policies and their impact on access to a nutritious diet for families. It is important to highlight the intersectoral character of the social interventions, notably the promotion of healthy eating habits with

a gender approach and with respect for cultural traditions, in order to boost empowerment and as a result the social and behavioral change of the population. Prioritizing users of state services and improving access to nutritious diets leads to the adoption of good dietary practices by the whole family, especially when implemented during the first thousand days of children’s lives (including exclusive breastfeeding during the first 6 months of life and adequate and safe complementary feeding from the sixth month, accompanied by breastfeeding until two years of age). The focus on food and nutrition continues according to the requirements of each age, up to 5 years old and throughout life (Technical Secretariat of the Whole Life Plan, 2018).

Source: Mirochnick et al., forthcoming; Technical Secretariat of the Whole Life Plan, 2018.

2.2 ECONOMIC ACCESS TO FOOD

KEY MESSAGES

→ Purchasing power is a determining factor in the choice of quantity, quality and diversity of food consumed by the population. Therefore, household income and the price of food influence the type of diet people choose.

→ In LAC there are signs of a decline in purchasing power over the past 5 years. Of greater concern is the increase in extreme poverty since 2014, which indicates that the population faces difficulties in accessing a food basket that covers their basic food needs.

→ Higher incomes are associated with greater quality and diversity of diets, that is, greater consumption of fruit, vegetables and fish. Likewise, in higher income countries there is a lower contribution of cereals as a source of calories, as well as a greater contribution of meats and dairy products.

→ Micronutrient-dense and healthy diets tend to have a higher calorie cost than diets with densely caloric, processed and less healthy foods. In addition, the price difference between products that contribute to healthy diets and those that do not has tended to increase. This means that it is easier for households to access food with relatively lower and high-calorie nutritional contributions that are not recommended for a healthy diet.

→ The development of economies is associated with greater food consumption, but its effect on the consumption of more nutritious foods is more variable. As a result, it can be seen that, as income per person increases, the problem of undernourishment tends to decrease, while problems of overweight and obesity tend to increase.

→ Taxes and subsidies that promote appropriate food can be key policies to reduce the consumption of foods high in critical nutrients and to cope with overweight, obesity and noncommunicable diseases (NCDs). In addition, social protection policies and programs make it possible to improve the access of more vulnerable population groups to food and have the potential to improve their nutrition.

Family income and the cost of food largely determine the quantity, variety and quality of food that people access. In other words, household purchasing power influences their ability to meet their caloric and nutritional needs to maintain a healthy and active life. Therefore, increases in household income can improve access to safe and nutritious food. On the contrary, high prices or abrupt changes in food prices can affect the quantity and quality of the diet that a given household has access to.

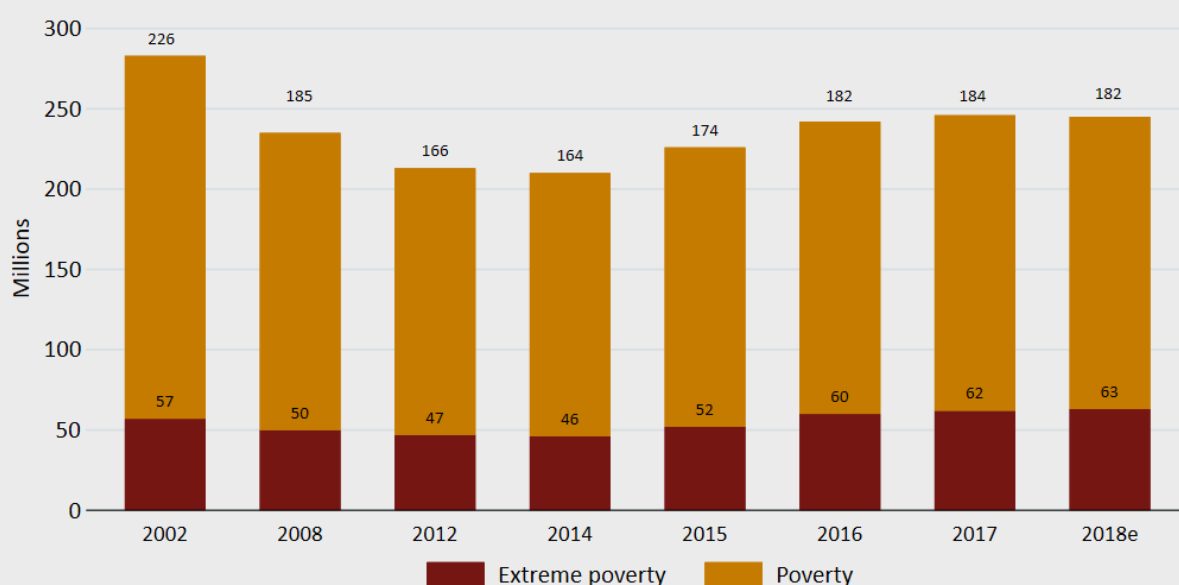
This section focuses on the evolution of household income and food prices in recent years. It begins with an analysis of the population in extreme poverty because this is the most sensitive sector with regard to accessing food, due to their low-income level. This is followed by a reflection on the importance of income to determining the type of diets of the Region's population.

Deterioration in economic access to food in the Region

According to the ECLAC definition, extreme poverty measured through monetary income is understood as a condition in which household income is insufficient to acquire a basic food basket that meets nutritional needs, that is, the minimum calories required to lead a healthy and active life.

According to ECLAC (2019c), extreme poverty in the Region has shown an upward trend in the last five years (Figure 25). According to the latest estimates, 10.2% of the regional population lives in extreme poverty, that is, 63 million people. This level shows a deterioration in the conditions of the population of the Region since 2014, the year in which extreme poverty reached its minimum in the last two decades with a rate

FIGURE 25
POVERTY AND EXTREME POVERTY IN LATIN AMERICA, IN MILLIONS OF PEOPLE, 2002-2018



e: Estimated figure.

SOURCE: ECLAC, 2019; ECLAC, 2019c.

of 7.8%, equivalent to 46 million people. As a result, the number of people in extreme poverty is greater than the 2002 level.

Similarly, general poverty (which considers economic access to services and basic goods additional to food) has also increased in recent years. Like extreme poverty, poverty in the Region reached its lowest level in 2014, before the trend reversed. Between 2014 and 2018 the poverty rate increased by two percentage points to reach 29.6%, which meant that the number of poor people in the Region increased from 164 million to 182 million.

This deterioration is explained by the economic performance of LAC. Since 2014, the Region has

reported a significant slowdown in economic growth, and contracted during the years 2015 and 2016, mainly due to the fall in the price of primary commodities that particularly affected South America.²⁸ Since then, recovery has been slow. It is estimated that during 2018, gross domestic product (GDP) grew just 1.2%, while for 2019 a growth rate of 1.7% is expected. This has led to an increase in the unemployment rate (which has exceeded 9% in the last 2 years) and

²⁸ For more details on the dependence on commodities, economic growth, poverty and food security and nutrition, see Chapter 2 of *The State of Food Security and Nutrition in the World 2019* (FAO, IFAD, WHO, UNICEF and WFP, 2019).

in the share of informal employment, which limits household income and exposes people to more precarious conditions (ECLAC, 2019a; ECLAC, 2019b; FAO, IFAD, WHO, UNICEF and WFP, 2019).

It is important to highlight that poverty and its consequences do not affect everyone equally, as some groups are in a situation of greater vulnerability. According to ECLAC estimates, poverty in rural areas of the Region is 46.4% (20 percentage points higher than urban poverty) and extreme poverty is 20.8%, three times higher than in urban areas. Likewise, poverty affects 51% of indigenous households in the Region, while extreme poverty in indigenous peoples is 19.1%, twice that of poverty and extreme poverty in non-indigenous households, respectively. Meanwhile, poverty also affects women to a greater extent, with a femininity index for poverty of 1.13, and for extreme poverty of 1.16 (ECLAC, 2019c). This implies that the problems associated with poverty, such as malnutrition and hunger, are greater in these more vulnerable groups than the national and regional averages.²⁹ (FAO, PAHO, UNICEF and WFP, 2018).

In this scenario of a deteriorating economic outlook and of increasing poverty, it is to be expected that undernourishment has also increased since the middle of the decade (see Chapter 1). This is due to the close relationship between extreme poverty and hunger. **Figure 26** presents this relationship measured on the basis of the international poverty line.³⁰ As expected, there is a positive correlation between the two, both globally and regionally, as both seek to reflect the ability of people to access enough food to meet their minimum food needs (FAO, IFAD, WHO, UNICEF and WFP, 2019).

29 For an extensive analysis of social inequalities in the Region's food systems, see the Panorama of Food Security and Nutrition in Latin America and the Caribbean 2018.

30 The World Bank defines the international poverty line as USD 1.90 according to the purchasing power parity (PPP) of 2011.

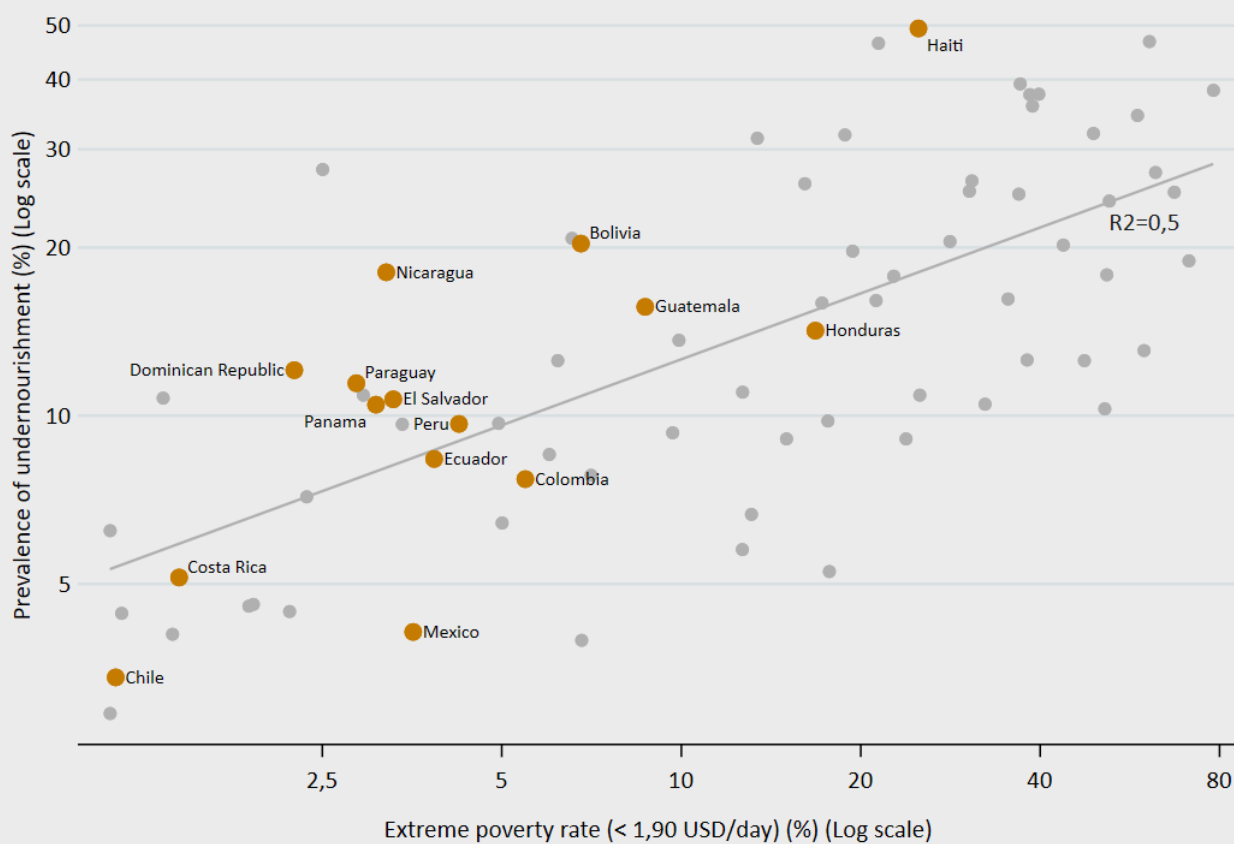
Differences in economic access to food according to household income level

In addition to family incomes, prices are a key element that determines the type of diet that households choose. Various studies have shown that nutrient-dense, healthy diets and fruits and vegetables tend to be more expensive than diets favoring densely caloric, processed and less healthy foods (Jones, Conklin, Suhrcke, and Monsivais, 2014; Wiggins and Keats, 2015; Drewnowski, 2010; FAO and PAHO, 2017; Hall et al., 2019; Lee, Raslton, and Truby, 2011). For example, in the United Kingdom it was shown that a basket of healthy foods is three times more expensive than a basket defined as unhealthy (Jones, Conklin, Suhrcke, and Monsivais, 2014).

Access to healthy diets can be especially difficult for low-income households. In fact, the experience of several countries has shown that the high cost of foods that are part of a healthy diet is an impediment for low-income families to access food that meets nutritional recommendations. In Chile it was estimated that a quality food basket, based on the recommendations of the dietary guidelines, would be 36.1% more expensive than the basic food basket, which would mean that up to 27% of the population could not access it (Cuadrado and García, 2015). A recent study that analyzed the cost of a healthier and more sustainable diet proposed by EAT-Lancet in 159 countries showed that this diet would be 64% more expensive than one that only minimally met the necessary nutrient requirements (Hirvonen, Bai, Heady, and Masters, 2019). In Brazil, fresh or minimally processed foods have a higher cost per calorie³¹ than moderately processed ones, and low and middle-income families report the highest consumption of sugary drinks (Wiggins and

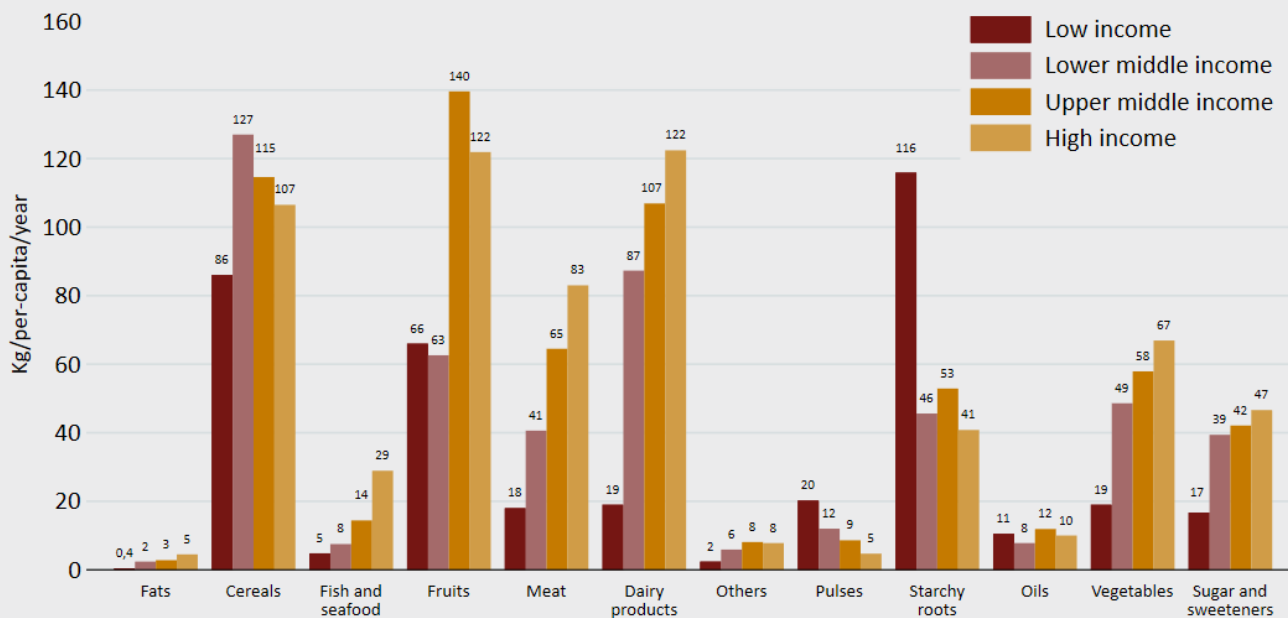
31 It should be borne in mind that fresh products such as vegetables are less energy dense compared to most processed and ultra-processed foods, that is, although vegetables have a higher cost per calorie, this is because one gram contains fewer calories than one gram of processed and ultra-processed foods. However, they are much denser in nutritional terms, so it is not necessary to buy large quantities of vegetables to obtain enough micronutrients (FAO and PAHO, 2017).

FIGURE 26
RELATIONSHIP BETWEEN UNDERNOURISHMENT AND THE INTERNATIONAL EXTREME POVERTY RATE,
AVERAGE RATES (%), 2010-2018



NOTE: The analysis includes 91 countries and excludes those with an undernourishment rate of less than 2.5%. The international poverty rate refers to the average for the 2010-2017 period, and for undernourishment to the 2010-2018 period.
SOURCE: Prepared by the authors based on data from the World Bank, 2019; FAO, 2019a.

FIGURE 27
AVERAGE FOOD AVAILABILITY (KG/PERSON/YEAR) ACCORDING TO INCOME LEVEL, COUNTRIES OF LATIN AMERICA AND CARIBBEAN, 2013



SOURCE: FAO, 2019a; World Bank, 2019.

Keats, 2015). On the other hand, households with higher incomes buy better-quality meat, more fish, fruits and vegetables and more ready-to-eat food (Drewnowski and Specter, 2004).

The difference between the prices of healthy and unhealthy food products has tended to increase. As processed and calorie dense foods have reduced their prices, nutrient dense foods prices has increased. Thus, inequalities have widened, and healthier diets are becoming less affordable (Wiggins and Keats, 2015; Jones, Conklin, Suhrcke, and Monsivais, 2014; Lee, Raslton, and Truby, 2011). For example, in an analysis conducted in four countries, the price of fruits and vegetables increased since 1990 at an average rate of between 2% and 3% per year, representing total increases of 55% and 99% between 1990 and 2012 (Wiggins and Keats, 2015).

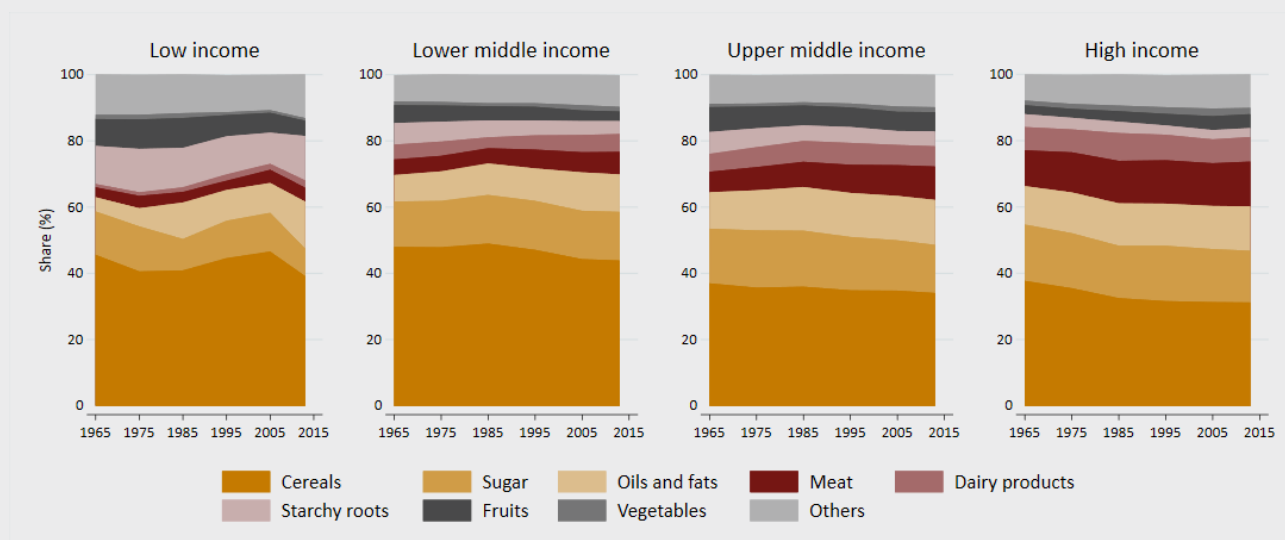
In contrast, the same study showed that the price of more densely caloric foods that contain fewer nutrients has fallen since 1990. Specifically, in Brazil the prices of fruits and vegetables increased more, while sausages and soybean oil

showed the lowest price increases between 1980 and 2009. Another example is Mexico, where the prices of sugary drinks have decreased over time (Wiggins and Keats, 2015).

When limits are placed on their budgets, low-income households often opt for low-cost, densely caloric and low-micronutrient products to meet their energy needs, since nutritionally dense, fresh, unprocessed or minimally processed foods such as fresh fruits and vegetables have a higher price per calorie (Wiggins and Keats, 2015; Drewnowski, 2010; FAO and PAHO, 2017; Headey and Alderman, 2019). For example, in Mexico the increase in food insecurity is associated with a lower diversity of diet (Vega-Macedo, Shamah-Levy, Peinador-Roldán, Méndez-Gómez, and Melgar-Quinónez, 2014).

All this has a major impact on household food security, not only from malnutrition due to deficit but also from excess. In fact, the difficulties faced by low-income households in accessing a healthier diet is associated with childhood obesity (Scott, Sutherland, and Taylor, 2018). A study carried out in England (Scott, Sutherland,

FIGURE 28
EVOLUTION OF FOOD PATTERNS ACCORDING TO INCOME LEVEL OF COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN, PERCENTAGE OF TOTAL CALORIES, 1965-2013



SOURCE: FAO, 2019a; World Bank, 2019.

and Taylor, 2018) shows that childhood obesity in areas with lower access is twice that in areas with greater economic access. However, changes in ultra-processed prices may change preferences. Some studies of elasticity have shown that price increases of sugary drinks, apart from decreasing their consumption, can increase the consumption of water, milk and sugar and reduce the consumption of candies and snacks (Colchero, Salgado, Unar-Munguía, Hernández-Ávila, and Rivera-Dommarco, 2015; Andreyeva, Long, and Brownell, 2010).

Evolution of food patterns and income level of countries in the Region

In the Region, food patterns vary according to the income level of the countries. In those with low and medium income, the availability of fruits, vegetables and fish is considerably lower than in high-income countries (Figure 27). On average, the supply of oils and animal fat is similar across them all, while that of sugar increases as the level of income increases. The availability of meat, milk, fish, fruits and vegetables becomes

greater as income increases.

Figure 28 shows the evolution of food patterns according to the income level of countries in the Region. Those with high-income and high-middle-incomes report a greater contribution of calories from fruits, while in those with low-incomes the contribution of these foods to calories consumed has decreased. It is striking that high-income countries show a low contribution of calories from fruits in comparison to others. However, the percentage of calories from vegetables is higher compared to lower-income countries.

It can be seen that, at a higher level of income, the contribution of calories from cereals decreases and the contribution of meat and milk increases. That is, countries are moving towards food sources that are more expensive per calories contributed (Drewnowski, 2010). Even so, cereals still represent the highest percentage of calories consumed in all the countries of the Region.

The caloric intake from oils and fats has increased at all income levels in the last 50 years.

The percentage of calories contributed by sugar is relatively similar in all, except in low-income countries.

According to a global analysis, in low and middle-income countries foods that contribute to a healthier diet tend to be more expensive than in high-income countries (Headey and Alderman, 2019). However, according to the Global Panel (2016), as the incomes of countries around the world increase, not only does the consumption of healthy and high nutrient content food increase, but so does that of unhealthy and high caloric-density products. Therefore, it is worth analyzing how the consumption of processed and ultra-processed foods has evolved. Globally, between 2000 and 2015 ultra-processed sales have increased in low-middle-income countries, and even more rapidly in high-middle-income countries. In contrast, in some high-income countries they have stagnated, although they remain high (Global Panel on Agriculture and Food Systems for Nutrition, 2016). Likewise, the average sale of calories per person from sugary drinks is much higher in high-income countries (132 kcal), than in those with high-middle-income (56 kcal) and low-middle-income (22 kcal), while the trend shows an increase in low-income countries (Development Initiatives, 2018).

In Brazil, for example, the consumption of ultra-processed products increased from 86 kg per person per year to 112 kg per year from 2000 to 2013, a period in which the level of income grew 38% (PAHO, 2015).³² In addition, the consumption of traditional foods with a low degree of processing declines, while that of ultra-processed food increases (Wiggins and Keats, 2015). Meanwhile, in Mexico, the consumption of ultra-processed foods has presented a significant increase (PAHO, 2015). Thus, in 2008, the consumption of sugary drinks Mexico exceeded US consumption by 30%, and in 2006 the consumption of sugary drinks, flavored milks, juices and alcohol corresponded to more than 20% of the calories consumed by adolescents and adults (Barquera, Hernández-Barrera, and Tolentino, 2008; Wiggins and Keats, 2015).

32 Measured by the World Bank as gross national income (GNI) per person. Source: World Bank, 2019.

Another manifestation of the close relationship between the composition of the diet and a country's level of income is the effect on the nutritional status of the population. As explained, higher levels of income tend to improve access to food, both in quantity and quality. However, the quality of the diet does not necessarily improve, especially when the availability of cheap and high-calorie foods is relatively high. This explains why as average income grows, the problem of hunger decreases, while the problems of overweight and obesity increase.

This relationship is not only observed at the regional level but across the globe. **Figure 29** shows that as countries levels of income rise (measured by constant GDP per person in 2010), the gap between undernourishment and obesity rates in adults tends to grow, that is, undernourishment levels fall while those of obesity rise. In the case of the Region, it is striking that this gap reaches its minimum, that is, the prevalence of undernourishment and obesity coincide, at levels of GDP per person of between USD 2 000 and USD 3 000, as in the case of Bolivia, Guatemala, Honduras and Nicaragua.

Policies to promote economic access to healthy diets

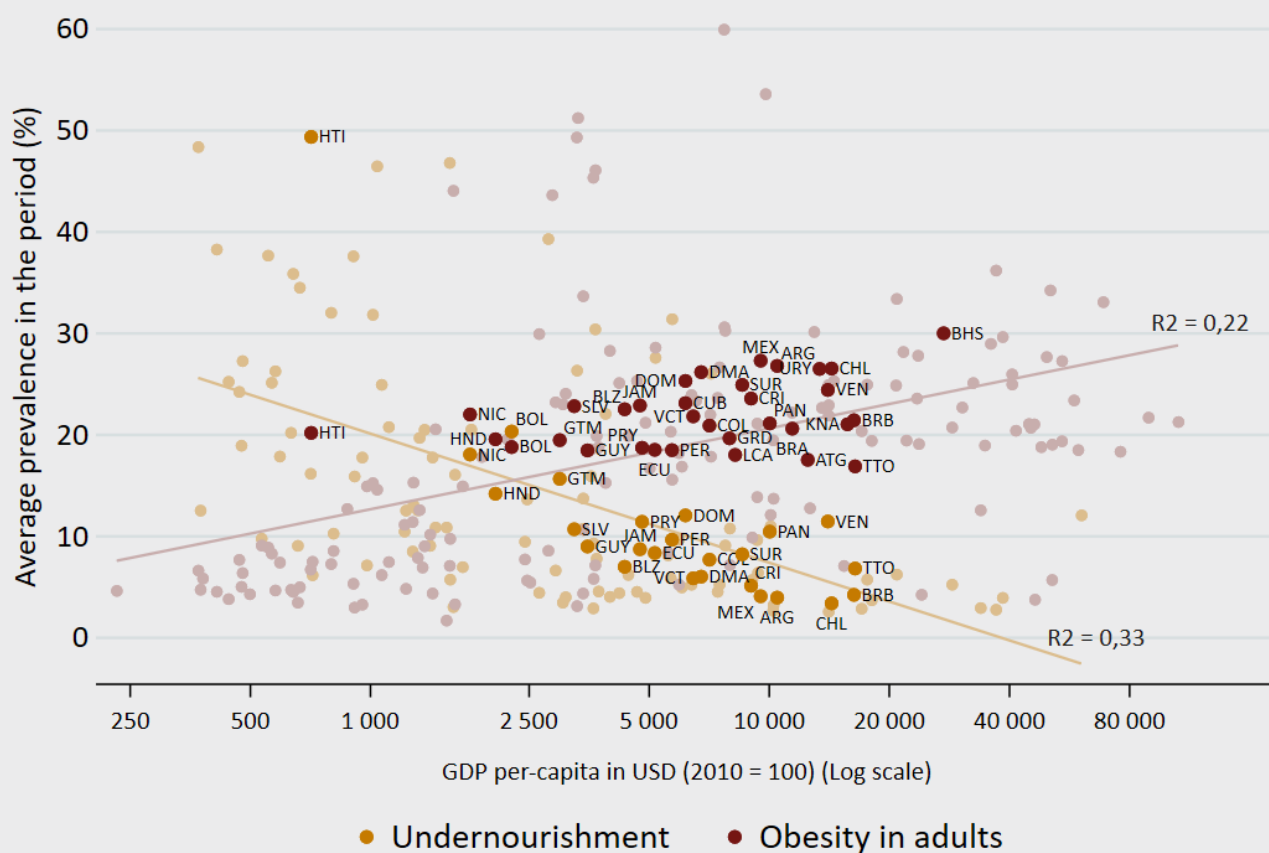
Fiscal policy to promote appropriate food

Price is a main determinant of food choices. Likewise, the price of food and beverages has implications for health equity, especially for people who are more price sensitive, particularly as a result of lower income. Therefore, price regulation and the affordability of food and beverages is an essential aspect of any policy that seeks to improve the nutrition of the general population, with special emphasis on population groups in a situation of greater vulnerability (UNSCN, 2019).

Tools of fiscal policy³³ used to improve diet, particularly selective consumption taxes and subsidies, are key to reducing the consumption of

33 The income of a government (taxes) and its spending policy. This section focuses on non-commercial taxes and subsidies related to food.

FIGURE 29
THE EFFECTIVENESS OF INTRODUCING OR INCREASING SELECTIVE TAXES ON THE CONSUMPTION OF SUGARY DRINKS IS PROPORTIONAL TO THE PRICE ELASTICITY



Excludes countries for which the undernourishment rate is less than 2.5%.
 The average rate of obesity in adults includes the period 2010-2016.
 NOTE: The analysis of undernourishment and obesity in adults includes 121 and 186 countries, respectively.
 SOURCE: Prepared by the authors based on WB data, 2019a; FAO, 2019.

high-calorie foods and addressing NCDs (WHO, 2016). Fiscal policy can be used as a mechanism to influence consumer behavior at the time of purchase, but also to reorient the food system.

This can be done by encouraging consumers to buy food that contributes to an appropriate diet

or by discouraging the purchase of products whose demand and supply should be reduced due to the damage they cause to health. The intent is to change consumption patterns so they are more consistent with an appropriate diet and a more sustainable food system, thus reducing risk factors related to food and NCDs.

Through selective consumption taxes, the demand for products with high critical nutrient content can be reduced by increasing the price of the products and discouraging their consumption. These taxes, combined or not, have progressive effects, as they protect populations with lower incomes more. For them, products with a high content of critical nutrients are more affordable and those recommended for an appropriate diet are less accessible. The goal is to correct this greater exposure to diseases, as well as the costs of treatment which the poorest populations are the least able to meet. By improving the health of these households, they incur lower medical expenses and their income increases as their potential years of work increase (Backholer et al., 2016).

On the other hand, production subsidies try to increase the production and availability of fresh and healthy foods, as well as reduce their price and increase their consumption. In this way, healthier eating habits are promoted (WHO, 2016). For example, subsidies to fruits and vegetables of between 10% and 30% can increase their consumption, with a focus on lower income populations (WHO, 2016). This improves the overall food quality of the beneficiary population.

The effectiveness of introducing or increasing selective taxes on the consumption of sugary beverages is proportional to the price elasticity of demand and is greater for lower income consumers, young people and overweight people. The price elasticity of demand for sugary drinks is generally around -0.9 to -1.3. A price elasticity of -0.9 means that for every 10% increase in the price of the product, a reduction by 9% of the amount consumed is expected (WHO, 2016).

As noted in the previous edition of the Regional Overview of Food Security and Nutrition in Latin America and the Caribbean (FAO, PAHO, UNICEF and WFP, 2018), various countries are considering these types of measures in order to promote appropriate diet.

Traditionally, selective taxes on the consumption of sugary drinks, as well as the consumption of tobacco and alcohol, have been applied in several countries. In 2013 Mexico brought into force the selective consumption tax (Special Tax on

Products and Services, IEPS) of one Mexican peso (MXN) per liter of sugary beverage, and 8% for foods with high caloric content. At this time, 19 countries in the Americas had a selective tax on the consumption of sugary drinks. By March 2019 they totaled 21 countries (PAHO, unpublished).

Countries such as Barbados, Brazil, Chile, Dominica, Ecuador, Mexico, Peru, Saint Vincent and the Grenadines and Saint Lucia apply taxes on sugary drinks or foods that exceed certain established limits of selected nutrients.

In 2015, Barbados began applying a 10% ad valorem tax on certain sugary drinks, which includes both locally produced and imported ones. One hundred percent natural fruit juices, sugar-free light drinks and sugar-free flavored waters, among others, are exempt from the tax. Initially, and according to a study conducted by Alvarado et al. (2017) before the tax was introduced, both the price of sugary and non-sugary drinks were growing at approximately 1% each year, with parallel fluctuation patterns. After the tax was applied, the growth in the prices of sugary drinks approached 3%, while that of non-sugary drinks decreased. Moreover, in the two quarters after the tax came into effect, the increase in average prices of sugary drinks compared to the previous year reached 5.9%, while non-sugary drinks remained between 0 and 1%.

In the case of Chile, sugary drinks containing more than 6.25 g of sugar per 100 ml are taxed with an ad valorem tax of 18% and sugary drinks with less than that amount of sugar have an ad valorem tax from 10%.³⁴ Initially, the analysis by Caro et al. (2018), found that, although purchases of beverages with high sugar content fell, it is believed that the tax has little impact on preventing excessive calorie intake or adverse health effects associated with the intake of sugary drinks. This is because the absolute reductions in purchases of drinks with high sugar content were small. In addition,

34 In 2015, the ad valorem tax for beverages with high sugar content was increased from 13% to 18% and the tax for beverages with low sugar content was reduced from 13% to 10%.

higher decreases in purchases are observed in households with higher socioeconomic status than in lower income households. In contrast, purchases of low-sugar beverages increased considerably. In addition, there was an increase in the prices of non-taxed beverages and a decrease in sales, despite no new taxes or changes in the tax rate.

Mexico taxes both drinks with added sugar, including milk and yogurt, and energy drinks. An initial study by Colchero, Popkin, Rivera, and Ng (2016) showed that, in the first year of implementation, consumers reduced their purchases of taxed sugary drinks. The study also revealed that purchases of untaxed drinks increased and that the decrease in purchases of taxed drinks is greater as the months go by. In 2014, the Mexican urban population reduced its purchases of taxed beverages by 5.5%. In a subsequent study, the same authors (2017) found that, during 2015, purchases of sugary drinks with taxes decreased by 9.7%. Moreover, both studies revealed that households with the lowest socioeconomic status had the greatest reductions, in both 2014 and 2015.

In addition, Mexico has applied an ad valorem tax of 8% to non-essential foods with high caloric density since 2014.³⁵ A study by Batis, Rivera, Popkin, and Taillie (2016)³⁶ to examine changes in the volume of purchases of taxed and non-taxed food and beverages revealed that, after the first year of applying taxes, the volume of purchases of taxed food and beverages decreased by 5.1%. In addition, the reductions in some food subcategories, such as salty and sweet cereal-based snacks, were statistically significant in households with low and medium socioeconomic status. Meanwhile, Taillie, Rivera, Popkin and Batis (2017) found that two years after implementing the tax on non-essential foods with high caloric density, purchases decreased by 6%, while the households that showed a greater preference for the taxed foods reported a greater fall in the amount

purchased. A subsequent study (Hernández-F, Batis, Rivera, and Colchero, 2019) confirmed the results obtained in the first evaluation, with a 5.3% reduction in purchases. Two years after they came into force, the ad valorem tax seems to be effective in reducing purchases of taxed food. The most significant changes can be seen in urban areas (-6.9%), in households with children (-7.0%), in households where the head of the household has an educational level corresponding to high school (-9.9%) and in the southern region of the country (-14.8%). However, the study shows that in rural areas there were no significant changes in purchases of taxed food. These results come from the study by Colchero, Zavala, Batis, Shamah-Levy and Rivera-Dommarco (2017), which shows that prices increase less than the tax rate in the rural area.

Another of the measures taken to promote appropriate diet is the implementation of subsidies for the consumption of fruits and vegetables. Antigua and Barbuda, Bahamas, Barbados, Belize, Guyana and Saint Lucia are some of the countries where such measures have been implemented (HCC, 2019).

A review of studies on food subsidies by Thow, Downs, and Jan (2014)³⁷ reveals an increase in the consumption of specific foods (which were classified as healthy foods or fruits and vegetables) of at least half the magnitude of the subsidy applied.

Also, Afshin et al. (2017) point out that, on average, a 10% decrease in the price increases the consumption of appropriate foods by 12%. According to the review, subsidies increased fruit and vegetable intake by 14%, and other appropriate food groups by 16%. In addition, changes in the prices of fruits and vegetables reduced the body mass index. The different results appear to support the effectiveness of subsidies when it comes to increasing the consumption of appropriate foods.

35 Defined as foods that contain 275 or more calories per 100 g.

36 The study also includes the tax on sugary drinks mentioned in the previous paragraph.

37 In Australia, Brazil, United States of America, Finland, France, New Zealand, Norway, Netherlands, United Kingdom and Sweden.

In summary, fiscal policy options, such as taxes and consumer subsidies that seek to promote adequate food, can reduce the consumption of foods high in critical nutrients and address overweight, obesity and NCDs. Through taxes and subsidies, incentives are generated that encourage behaviors associated with better health outcomes, affordability is improved, the consumption of appropriate food is encouraged, and the consumption of less appropriate options is discouraged. Taxes and subsidies influence the purchasing behavior of people and households, and thereby contribute to addressing public health problems such as overweight, obesity and noncommunicable diseases.

These types of policies are being considered by an increasing number of countries to promote appropriate diet, especially when they are part of population-based comprehensive multisectoral interventions. Furthermore, these fiscal policy options can encourage the food industry to reformulate food to improve the nutritional quality of its products. They also help to generate public revenues and governments can use these funds for the care and promotion of the population's health (WHO, 2016). However, to move forward with these measures it is necessary to bear in mind the political and economic contexts of each country. In practice, these changes generally imply costs for different stakeholders in food systems, and as a result implementing these measures usually requires extensive negotiation and political leadership processes.

Social protection systems

Social protection seeks to protect the more vulnerable populations against the economic, environmental and social causes of poverty, inequality and food insecurity (FAO, PAHO, UNICEF and WFP, 2018).

Social protection programs (whether contributory such as social security, non-contributory such as social assistance or labor market interventions such as job training programs or unemployment insurance) can increase the purchasing power of consumers. As a result they are connected to the foods that people acquire and consume. In addition, they are a relatively stable source of household income that can help to provide

a certain security that allows for medium-term decisions. Likewise, lower-income families allocate most of their budget to expenditure on basic needs, so most of the resources received by families from social protection programs are used to purchase food.

Social protection can be an important strategy to address structural causes³⁸ of malnutrition by protecting household income, crops and assets, and ensuring that basic needs can be met, including access to a nutritious diet.

These types of policies can contribute to improving household nutrition through food and monetary transfers, and facilitating access to health care through transfers that may or may not be conditioned. The impact on nutritional status can be maximized through social protection systems, through complementary actions sensitive to nutrition with a focus on more vulnerable groups, adapted to the specific nutritional needs of each group (see [Box 11](#)). In this sense, nutrition-sensitive social protection aims to introduce tools that directly affect nutritional indicators. Fortification with micronutrients, coupons that can be exchanged for more nutritional food, or strategic behavior change communication (SBCC) that promotes diversity of diet, are some of the most relevant examples for the Region. These actions must be linked to other sectors and services such as early childhood development, sanitation and hygiene, health services and family planning, family farming linked to school meals programs. The design and implementation of these tools and their link with these sectors and services will have the potential to achieve a greater impact on poverty, hunger, food insecurity and malnutrition (Devereux and Nzabamwita, 2018).

On the other hand, social protection systems in LAC are increasingly used in emergency

38 Structural causes include inequality, discrimination and exclusion. Therefore, "Gender-sensitive social protection puts the emphasis on gender-based social risks and vulnerabilities such as exclusion, discrimination and violation of rights, and the potential of social protection programs and systems to promote greater gender equality." (WFP, 2017a, p. 5).

responses, despite being conceived for other purposes. This occurs because social protection is responsible for assisting those in need, regardless of whether this need is an established socioeconomic condition (for example, chronic poverty), is part of the life cycle (for example, elderly people) or the result of a shock (Beazley, Solórzano, and Barca, 2019).

Likewise, when public social protection and nutrition policies foster protection networks through the implementation of different programs and actions in the territory, they not only facilitate individual or family access to the programs, but also the coordination of different actions, in different sectors, and for different dimensions of life, strengthening the network of protection and guarantee of rights. In addition, they can support the generation of resilience and link emergency and development approaches. In general, people and households affected by malnutrition suffer most from the consequences of a situation that disrupts their livelihoods. Social protection interventions can protect the population and households in a situation of greater vulnerability and help them recover from emergencies (FAO, 2015a).

In particular, LAC has a long history in terms of development of social protection systems, among which conditional cash transfer programs stand out. This type of program provides a monetary transfer to families, in exchange for compliance with certain conditions (usually related to health and education). Their aim is to mitigate current poverty, as well as to break the cycle of poverty transmission to the next generation through the development of human capital in the families benefiting from the programs. The proportion of poor households benefiting from conditional cash transfer programs in the Region increased from 3.6% to 20.2% between 2000 and 2016, reaching approximately 130 million people (Cecchini and Atuesta, 2017). In 2017, in 20 countries of LAC³⁹ there were more than 30 conditional cash transfer

programs in active operation (Cecchini, Atuesta, and Morales, 2018).

A literature review of studies conducted by Segura-Pérez, Grajeda, and Pérez-Escamilla (2016) indicates that the conditional cash transfer programs of Brazil, Colombia and Mexico had positive impacts on the health and nutritional status of children in those countries.

Likewise, Hoddinott and Wiesmann (2008) in their analysis of conditional transfer programs in Mexico (Progresá), Honduras (Family Allowance Program) and Nicaragua (Social Protection Network) found that exposure to these programs increased caloric acquisition by households in the poorest tertile by 5.6% in Mexico, 6.9% in Honduras and 12.7% in Nicaragua. They also showed that there is a probable improvement in the diversity of the beneficiaries' diet, especially in the poorest households.

A study by Bortoletto Martins and Monteiro (2016) revealed that the Bolsa Família program for low-income Brazilian families positively affects food availability. Compared to non-beneficiary families, the families enrolled in the program spent more money on food and had a greater availability of fresh food and culinary ingredients, including those that improve the quality and diversity of food. However, no statistically significant differences were found regarding expenditure and availability of processed and ultra-processed foods and beverages. Likewise, studies reviewed by Martins, Canella, Baraldi, and Monteiro (2013) on the Bolsa Família program in Brazil indicate that, in general, the program has had positive effects on the nutritional status, food intake and food security of children in beneficiary households. The children presented positive anthropometric results (height and weight appropriate for their age) compared to those not benefitting from the program (Paes-Sousa, Santos, and Miazaki, 2011; Assis et al., 2014). In addition, mortality associated with diarrhea and malnutrition of children under 5 years old was reduced (Wolf and Barros Filho, 2014). It has also been revealed that the beneficiaries of the program spend more on raw or minimally processed food (7.3% more) and on ingredients for cooking (10.4% more),

39 Argentina, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Dominican Republic, Trinidad and Tobago and Uruguay.

compared to non-beneficiaries (Martins and Monteiro, 2016). Meanwhile, Lima, Fisberg, Uchimura, and Picheth (2013) carried out a study to assess the quality of the diet of the adult population enrolled in the Bolsa Família program in Curitiba, in the state of Paraná. The average Healthy Eating Index (HEI)⁴⁰ was 51 points, which represents a diet that needs improvement. According to the evaluation, the population presents a monotonous diet with an adequate intake of legumes, but low in fruits, vegetables and dairy products. The educational level and occupation of the observed population were the variables that showed statistically significant differences in terms of the average HEI. The better the quality of food, the greater the energy consumption and the lower the percentage of total fat and cholesterol.

In the case of the Families in Action program in Colombia, the reviews carried out by Attanasio, Syed, and Vera-Hernandez (2004) and Attanasio, Battistin, Fitzsimons, Mesnard, and Vera-Hernández (2005) indicate there was an increase in food consumption, both in rural and urban areas, and this increase was higher for sources of animal protein. However, Lopez-Arana, Avendano, Forde, Van Lenthe, and Burdorf (2016) in a quasi-experimental study investigated the effects of the program on the nutritional status of preschool and school-age children, in order to better understand the possible effects of conditional cash transfers on overweight and obesity among this population. The results of the study did not show any effect of the program on overweight or obesity in the children, although the results relating to the body mass index (BMI z-scores) were higher for children in the treatment group, making it probable that there is a statistically significant increase in the BMI of this age group due to the program. In Mexico, children between 12 and 36 months of age who participated in the defunct National Education, Health and Food Program (Progresa) were taller. It was also noted that children under 6 months of age from urban households benefiting from the Oportunidades

program were taller and had higher weights (Leroy et al., 2008).

In conclusion, social protection networks make it possible improve the access to food in crisis situations or in periods of income shortage. In addition, they have the potential to improve the nutrition of populations in a situation of greater vulnerability. To ensure that these policies comprehensively combat malnutrition, a nutrition-sensitive approach should be used in their design and implementation.

It is also essential that these types of policies employ an intercultural approach when necessary, based on an approach using criteria of ethnic or racial self-identification, as well as the application of a cross-cutting gender approach to improve attention to more vulnerable population groups. Social protection policies represent a unique opportunity to change the persistent biases that undermine people's rights. ■

40 The Healthy Eating Index is an instrument that classifies people according to the consumption levels of the different food groups.

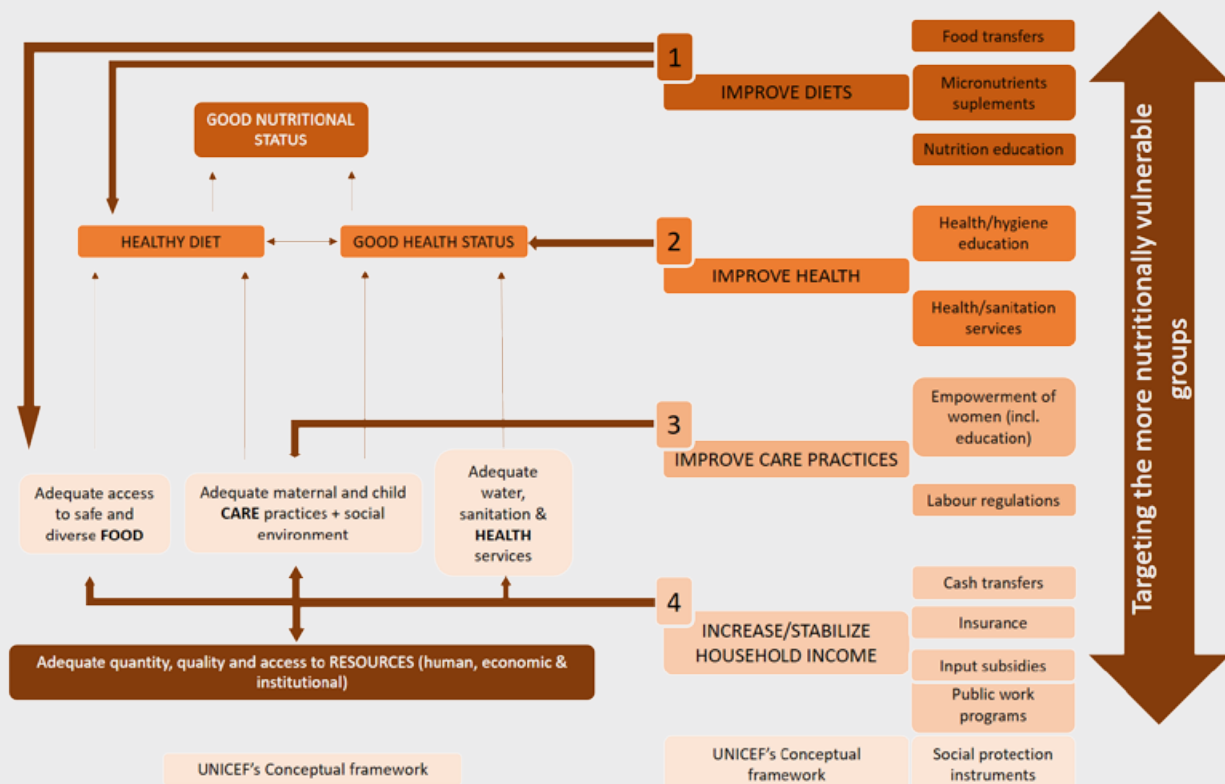
BOX 11 NUTRITION-SENSITIVE SOCIAL PROTECTION APPROACH

Social protection policies and programs can have a positive impact on nutrition by increasing or stabilizing household income and improving the quality of their food, their health and care practices, among others. In addition, the nutrition-sensitive social protection approach can influence the diversity, safety and quantity of food consumed by each person, improve maternal and child health, and access to health, hygiene and water and sanitation services (FAO, 2015a).

In order to implement a nutrition-sensitive social protection approach, it is necessary that policies focus

on the most vulnerable groups from a socioeconomic or nutritional perspective, expanding social protection networks in crisis. It is also necessary to promote strategies so that households and people can diversify their food and livelihoods. Women must be empowered and be the beneficiaries of social protection policies and programs. The links between social protection, nutrition and health and sanitation services must be strengthened, and nutrition education must be promoted. In addition, explicit nutrition objectives and indicators must be established (FAO, 2015a).

Conceptual framework of malnutrition and possible points of action for social protection



SOURCE: FAO, 2015a and adapted from UNICEF, 1990.

2.3 PROMOTION, ADVERTISING AND INFORMATION RELATING TO FOOD PRODUCTS

KEY MESSAGES

- In the Region, 18 million children over 5 years of age and 32 million adolescents are overweight, while obesity in both childhood and adolescence tripled between 1990 and 2016.
- Children are especially vulnerable to the influence of advertising and promotion. The exposure of children and adolescents to advertising and the promotion and consumption of unhealthy products causes problems of malnutrition such as overweight, obesity and noncommunicable diseases (NCDs) during childhood, adolescence and adult life.
- Excessive consumption of sugar, fats (total, saturated, trans) and/or salt/sodium are associated with health risks. The front-of-pack food labeling systems in LAC have been designed with the purpose of informing consumers quickly and easily which products contain an excessive amount of sugar, fats and/or salt/sodium and represent a health risk.
- Measures to regulate the advertising and marketing of food and beverages are considered one of the key strategies to address the problem of childhood obesity and the development of NCDs. Nutritional labeling and frontal nutrition warning labeling can contribute to a healthy food environment that empowers consumers and provides them with more information when they buy their food and drinks.

In the food environment, the different ways in which food is presented to consumers are relevant for making decisions about what food to buy and what to eat. Consumers may know products completely or incompletely through advertising, promotion and information provided by those who sell them.

On the one hand, advertising is present in different media (television, Internet, social networks, etc.), in the type of packaging, logos and product placement, and so on. Then there are promotions, in the form of sales with discounts, prizes, samples, coupons, contests and cross-selling. Advertising and promotion can influence consumers' preferences and shopping habits in different ways. On the other hand, the information present in the labeling of the products can help consumers to identify the nutritional suitability of acquiring one food or another (HLPE, 2017).

Effect of advertising and promotion on children and adolescents

The demand for harmful products, such as tobacco, alcoholic beverages and ultra-processed beverages, is largely driven by marketing strategies implemented through advertising and promotion. These influence consumer decisions and can lead to less critical and rational choices when purchasing a product (Hirigoyen, 2012; Tversky and Kahneman D, 1974; Brosch et al., 2012; Hoyer, 1984; Knutson et al., 2007; Deshpande et al., 1982; Olshavsky and Granbois, 1979; Wright, 1975; Johnson and Payne 1985; Johnson, 1984). In this way, they can promote the consumption of products or foods that are not suitable for people's health. Several studies have shown that the preference for ultra-processed products that have a high content of fats, sugars and/or salt/sodium is influenced by the mass marketing strategies of advertising and promotion (PAHO, 2011).

Of particular concern is the exposure of children to food and beverage advertising messages that do not comply with the recommendations for optimal growth and development, especially because vulnerability and difficulty to make discerning choices are greater during childhood and adolescence (Bjurström, 2000). Promotion and advertising tries to establish emotional links with children, encouraging brand loyalty and repeated purchases through various techniques to attract attention (animated characters, gifts, collectibles, competitions, etc.). Young people's attention is also distracted by advertising and promotion in the school environment (PAHO, 2011).

A study in eleven countries revealed that, in all of them, more than half of food advertising was for products with high concentrations of calories, sugar, fat or sodium. In addition, the proportion of advertising for this type of products was even higher at peak viewing times for children (Kelly et al., 2010).

Castronuovo, Gutkowski, Tiscornia, and Allemandi (2016) show that in Argentina children are exposed to 61 television advertisements each week for processed and ultra-processed foods that are far from promoting an appropriate diet. The most recurrent advertisements are for desserts, dairy products, sugar-free sugary drinks, fast food restaurants and salty snacks. In addition, the analysis of Allemandi, Castronuovo, Tiscornia, Ponce, and Schoj (2017) shows how the purchase decisions of parents, and therefore household consumption, are influenced by the products that children see in advertising and promotions. The same study indicates that a greater awareness exists among parents with a higher level of education regarding the consumption of certain types of foods, such as sugary drinks and ultra-processed foods, in comparison with those with a lower educational level. Another significant aspect is that the consumption of certain products is seen as something aspirational, while consuming certain brands and accessing certain products that were not previously available is emphasized.

The relationship between ultra-processed consumption and obesity has been studied by several authors (da Costa Louzada et al., 2015; De Deus Mendonça et al., 2016; da Silva Cruz Lopes, Araújo, Levy, Barreto, and Giatti, 2019). The effect of regular consumption of these products on childhood abdominal obesity (Costa et al., 2019), on chronic inflammatory markers in adults (da Silva Cruz Lopes, Araújo, Levy, Barreto, and Giatti, 2019) and on the development of NCDs has been described (Rocha and Libby, 2009; Navab, Gharavi, and Watson, 2008). Other studies show that the consumption of ultra-processed foods results in weight gain or obesity (Gómez-Donoso et al., 2019; Juul, Martinez-Steele, Parekh, Monteiro, and Chang, 2018; Hall et al., 2019).

This means that a children or adolescent who grows up in an environment strongly influenced by advertising and the promotion of unhealthy products is exposed to diets of low nutritional quality and an increased risk of obesity (Taveras, Gillman, Kleinman, Rich-Edwards, and Rifas-Shiman, 2010; Cairns, Angus, Hastings, and Caraher, 2013). Therefore, limiting exposure to advertising and the promotion and consumption of ultra-processed products, with a high content of sugars, fats and/or salt/sodium, could be an effective strategy for the prevention and treatment of obesity from an early age.

Figures 30 and 31 show how overweight and obesity have evolved in both children over 5 years old and adolescents in the Region. Childhood overweight (5 to 9 years old) increased from 17.5% to 33.7% between 1990 and 2016, with almost 18 million children affected in the Region. However, of greatest concern is that the biggest increase is seen in the obesity rates of this population group, which tripled from 4 to 12 million over the same period, affecting 15% of the child population.

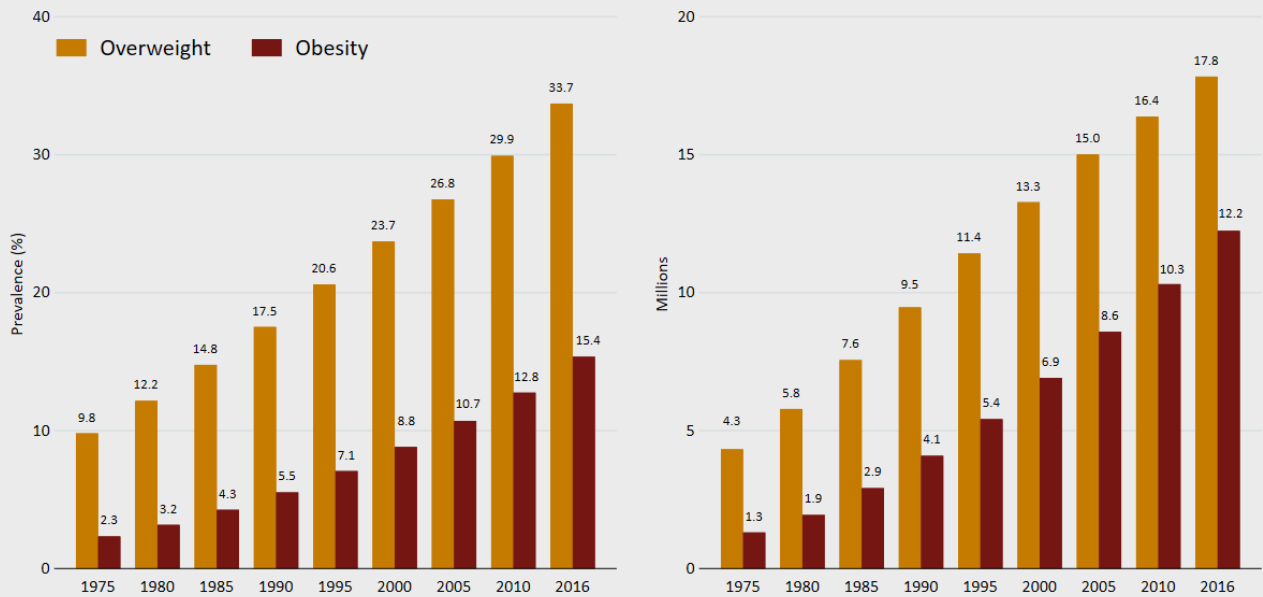
Likewise, overweight in adolescents (10 to 19 years old) has also registered a significant increase in the same period, from 15.5% to 29%, with almost 32 million people affected in the Region. In the same period, obesity has increased even more, from 3 to more than 11 million, which suggests that 10% of adolescents in the Region are obese.

It will be difficult to reduce the consumption of unhealthy products without effective regulation of the promotion and advertising of products high in calories and with low nutritional contribution, and without providing clear, easy-to-read and simple information to citizens, as will be seen in more detail in the subsection on public policies.

Composition of ultra-processed products and available information

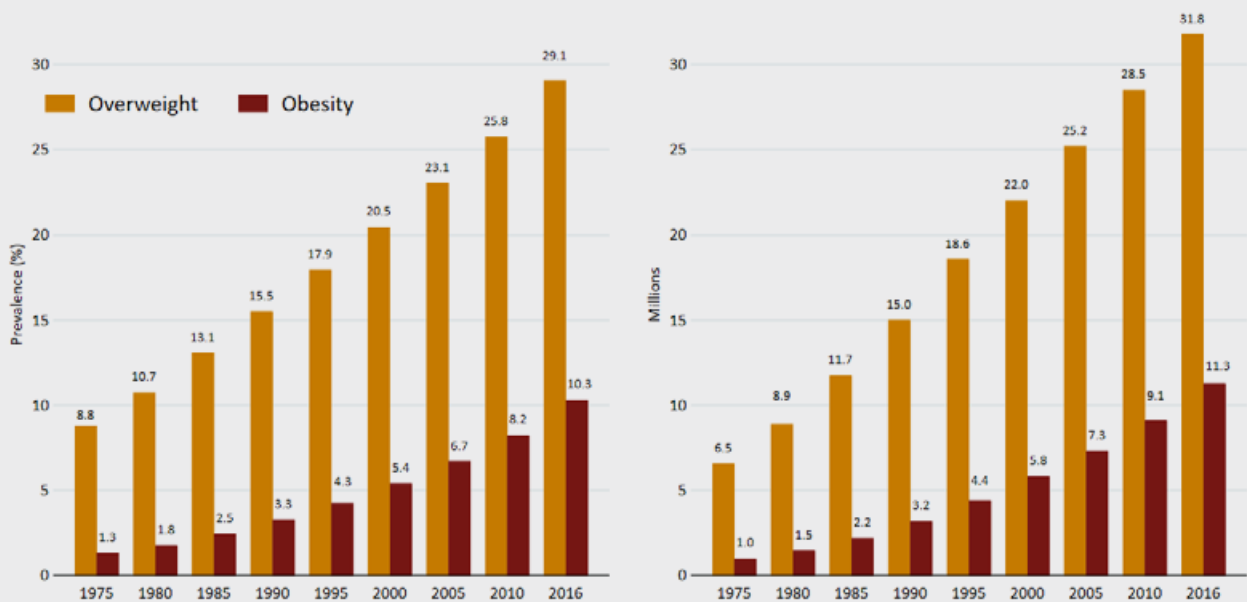
It has already been noted that the consumption of ultra-processed products in LAC is increasing. In some countries, people consume more than 580 grams per person per day. This makes it essential to investigate the composition of these

FIGURE 30
EVOLUTION OF OVERWEIGHT AND OBESITY IN CHILDREN (5-9 YEARS OLD) IN LATIN AMERICA AND THE CARIBBEAN, 1975-2016



SOURCE: WHO, 2019; UNDESA, 2019.

FIGURE 31
EVOLUTION OF OVERWEIGHT AND OBESITY IN CHILDREN (10-19 YEARS OLD) IN LATIN AMERICA AND OF THE CARIBBEAN, 1975-2016



SOURCE: WHO, 2019; UNDESA, 2019..

products, the nutrients they provide and how they can lead to an excessive consumption of fat, sugar and/or salt/sodium. It is also of great importance that this information is presented in a simple and transparent way to the consumer.

According to the World Nutrition Report (Development Initiatives, 2018), in all income groups and in all countries the maximum risk consumption of sugary drinks is exceeded, to the further detriment of the consumption of fruits, vegetables and whole grains. In high-income countries the recommended consumption of salt, processed meats, red meats, saturated fats and trans fatty acids (trans fats) is exceeded.

According to PAHO (2019c), in seven Latin American countries ultra-processed products contain an excessive amount of fats, saturated fats, sugar or salt, and almost 75% contain at least two of these ingredients in excess. More than half have an excess of sugar; two fifths, of fat; more than half, of saturated fat; and more than 60%, of sodium (PAHO, 2019c).

The nutrient composition in calories of the ultra-processed foods reviewed in the previous study is 43% sugar, 25% other carbohydrates, 16% other fats, 11% saturated fat and only 5% protein. In addition, on average they provide 600 mg of sodium per person per day. It is also known that 50% of the calories from sugar come only from carbonated drinks (PAHO, 2019c).

Several studies show that the consumption of ultra-processed foods is associated with a higher consumption of sugar, fat, salt/sodium and calories, with the various health risks they entail (GBD 2017 Diet Collaborators, 2019; Anand et al., 2015; Hall et al., 2019; Moodie et al., 2013). It has already been stated that the consumption of ultra-processed foods is associated with an increased risk of obesity and NCDs. Additionally, the widespread presence of these products and the excessive amount of these ingredients is not necessarily stated explicitly and clearly on the packaging and labeling of these foods. The absence of regulations for the labeling of foods that guarantee clear, simple and useful information leads citizens to follow inadequate diets, at the expense of their health (Egnell et al., 2018). Good labeling can influence both

consumer preferences and industry behavior, encouraging product reformulation and development (HLPE, 2017).

Promotion, advertising and information policies for healthier diets

Regulation of advertising and marketing of food and beverages

The advertising and promotion of food and beverages are broad in scope and in general focus on food products that are high in fat, sugar or salt. In turn, private resources dedicated to advertising food far outweigh public investment in promotion and campaigns for healthy eating. Various measures have been put in place to ensure that children above all are protected from the effects of advertising and marketing of products rich in fats, saturated fats, trans fatty acids, free sugars and/or salt/sodium and can grow and develop in an environment that promotes appropriate diet (WHO, 2010).

In the Region, especially in recent years, a number of countries have approved some mandatory regulation of advertising, promotion or marketing of food and non-alcoholic beverages to children and adolescents. In addition, Chile, Costa Rica, Ecuador, Jamaica, Panama, Trinidad and Tobago and Uruguay have mandatory regulations for the advertising or marketing of food in the school environment.

For example, Resolution 13/2014 of the National Council for the Rights of Children and Adolescents (CONANDA) in Brazil establishes advertising and marketing criteria for children and adolescents and prohibits any type of abusive advertising.⁴¹ However, some companies do not comply with this restriction and the complaint and prosecution processes are slow-moving. The Brazilian Consumer Protection Institute (IDEC), together with other civil society organizations, have set up the Food Advertising Observatory (OPA), which offers citizens a platform for identifying and reporting illegal advertisements

41 That is, any form of marketing communication that seeks to persuade children and adolescents to consume a product or service using strategies that attract them.

and marketing strategies. The OPA also helps to make public cases of illegal advertising that have been sanctioned (OPA, 2019).

Meanwhile, Law 20.606/2012 on the nutritional composition of food and its advertising in Chile, and its regulatory regulations make it illegal to provide or deliver free of charge, or to advertise, foods with high calorie, fat, sugar or salt content to children under 14. In addition, the Law states that such foods cannot be sold, marketed, promoted or advertised within preschool and basic education establishments. No advertising of this type of food can be directed to children or adolescents under 14 years of age. It must also be accompanied by a message that promotes an appropriate diet. Similarly, Law 20 869 on food advertising prohibits the advertising of breast milk substitutes for infants up to 12 months of age and prohibits the advertising, in television or cinemas, of any food “high in” unhealthy ingredients⁴² between six in the morning and ten at night, for all audiences.

With the objective of encouraging an appropriate diet, Costa Rica brought into law the Regulation for the operation and administration of the soft drinks service in public schools through Executive Decree 36.910-MEP-S. This reform restricts the direct and indirect advertising of food products with high levels of fats, sugars and salt in public preschool, primary and secondary centers of education. Likewise, through the Regulation of school canteens in the national education system, Ecuador prohibits the sale and advertising of processed foods and beverages where the contents exceed the parameters established in the regulation, including caffeine or non-caloric sweeteners, processed beverages containing less than 50% of the natural food linked to their description, and energy drinks. In Jamaica, a prohibition of sugary drinks in the school environment also came into force. In addition to restricting sugary drinks, the standard discourages the use of sweeteners to re-educate children’s palates.

42 Food and beverages that exceed the limits of certain nutrients are considered “high in” calories, sodium, sugars or saturated fats.

Within the framework of the National Strategy for the Prevention and Control of Overweight, Obesity and Diabetes, Mexico established regulatory measures for the advertising and labeling of food and non-alcoholic beverages.⁴³ The guidelines indicate that advertisements of food and non-alcoholic beverages that do not meet the established nutritional criteria can be advertised only at certain times and during the transmission of soap operas, sports, news, series and movies considered unsuitable for minors.

In Peru, Law 30 021/2013 on the promotion of healthy eating for children and adolescents seeks to encourage an appropriate diet and restricts any kind of advertising directed towards children and adolescents under 16 years of age. Meanwhile, Law 19 140/2013 on Healthy Eating in Centers of Education prohibits the advertising and marketing of food and beverages that do not meet the nutrition standards set out in the Law.

Panama has promoted several initiatives to regulate the harmful effects of advertising, promotion and consumption of products high in sugars, salt and fat in schools, such as Law 75 of November 15, 2017, which establishes measures to promote an appropriate diet and healthy lifestyle in centers of education. Resolution 3 623 of July 17, 2017, of the Ministry of Education, which dictates measures for healthy school meals in all official and private educational centers of the country; and Resolution 49 of January 30, 2018 of the Ministry of Health, which adopts the basic guidelines for the supply of healthy food in kiosks and cafeterias in Centers of Education in the country.

Correa, Reyes, Smith Taillie, and Dillman Carpentier (2019) analyzed food advertising on Chilean television before the first phase

43 Official Gazette of the Federation: 4/15/2014.

Guidelines setting out the nutritional and advertising criteria that advertisers of food and non-alcoholic beverages must observe in order to advertise their products on open and restricted television, as well as in cinemas, in accordance with the provisions of the articles 22 Bis, 79, section X and 86, section VI, of the Regulations of the General Law of Health in Advertising.

and after the final stage of implementing Law 20 606. Out of a total of 44 890 advertisements, 16% were related to food and beverages and the percentage of food advertising was higher in open broadcast television (21%) than in cable channels (11%). In addition, 34% of food and beverage advertisements included at least one product with a high presence of at least one of the four established critical nutrients (calories, saturated fat, sugar or salt). The study also notes that ads for “high in” products were seen by more children than adults and contained more marketing strategies targeting that age group than ads for other types of products. If that publicity were restricted to programs where 20% are children between 4 and 12 years old, 31% of their exposure and 8% of the general audience’s exposure to “high in” products would be reduced. Chilean regulations, which limit the advertising of foods with a high content of critical nutrients between six in the morning and ten at night, capture 80% of the exposure of the entire audience.

A study by Rincón-Gallardo Patiño et al. (2016) analyzed the nutritional quality of food and non-alcoholic beverages advertised, on Mexican television, and discovered that during the period studied⁴⁴ 2 554 advertisements for food and non-alcoholic beverages were released. The most popular products advertised were drinks (24.6%), followed by chocolate and sugar confectionery (19.7%), sweet cookies and cakes (12.0%), salty snacks (9.3%), breakfast cereals (7.1%), ready-to-eat meals (6.4%) and dairy products (6%). In general, foods advertised during cartoon programs had a higher content of energy and sugar, while those advertised during sports programs had the highest amount of total fat and salt. According to the study, more than 60% of the food and beverages advertised did not meet the nutritional quality standards. Therefore, they should not be marketed to children.

It is important to note that marketing tactics have evolved and expanded beyond the plane of television, to reach the Internet and social

networks. These media use other communicators, such as digital influencers, to bring brands and products closer to different audiences. This imposes the need to extend the target of advertising regulations to all marketing strategies, and to expand the monitoring, control and sanction mechanisms to all these marketing media and tactics. In summary, the influence of the promotion and advertising practices of foods and beverages with high levels of critical nutrients such as fats, sugar and salt is considered one of the main causes of obesity and the development of NCDs in adulthood. The regulation of these types of practices has been proposed as one of the most important and high-impact strategies to address the problem of childhood obesity and the development of NCDs.

Although progress has been made in the establishment of government regulations, especially in terms of promotion and advertising in schools, dissemination via the Internet (websites and social networks) and indirectly are modes of product promotion that have not yet been regulated.

On the other hand, the school environment is an ideal space to protect children and adolescents and to promote health. School spaces must be healthy food environments that facilitate the adoption of healthier eating practices and healthier lifestyles. The combination of a health-promoting school environment together with the inclusion in the curriculum of content on food, nutrition and physical activity could contribute to reducing the high burden of overweight and obesity in schools and in adult life (UNESCO and FAO, 2019). Other elements of interest for the school to be a healthy space are access to safe water, spaces for physical activity and the regulation of advertising, promotion and consumption of unhealthy products even around the school. In addition, the inclusion of content on healthy food and lifestyles in teacher training will serve to sensitize the educational community. It is also necessary to carry out actions to promote healthy eating with parents and other actors at the community level.

Front-of-package nutritional warning labeling

Nutrition labeling provides consumers with data on the nutrient content of a food (FAO and

44 Before the Mexican regulation on nutritional criteria and food advertising entered into force.

WHO, 1985). The Codex Alimentarius offers recommendations on food labeling and nutrition claims included in the labels, in order to guide consumers with regard to what they are buying and ensure that the product is what it claims to be. For example, in countries such as Argentina, Brazil, Chile, Paraguay and Uruguay, nutritional labels of prepackaged foods must, by law, include the content of trans fats. However, these labels require the individual to have some knowledge about nutrition and are difficult to interpret for the general population (HLPE, 2017).

The interpretation of the nutritional table, located on the back or side of the products, requires mathematical and nutritional knowledge in order to be able to evaluate the content of the product and compare products of the same or different category. The cognitive effort and time spent by consumers in decision making, particularly in the case of repeated food purchases, is minimal (Tversky and Kahneman, 1974; Brosch, Coppin, Schwartz, and Sander, 2012; Hoyer, 1984; Knutson, Rick, Wimmer, Prelec, and Loewenstein, 2007; Deshpande, Hoyer, and Jeffries, 1982; Olshavsky and Granbois, 1979; Wright, 1975; Johnson and Payne, 1985; Johnson MD, 1984), for that reason, the nutritional tables are little used and understood (Christoph, Larson, Laska, and Neumark-Sztainer, 2018; Persoskie, Hennessy, and Nelson, 2017).

Several LAC countries have adopted or implemented different labeling systems on the front of the packaging in order to help consumers easily and quickly identify products with excessive amounts of nutrients associated with the development of NCDs, which are the ones that cause most deaths and take off years of quality life in LAC. In addition, front-of-pack nutrition warning labeling can “influence packaged food choices towards healthier alternatives and improve the diets of a growing worldwide population who are overweight and obese” (INSP and UNICEF, 2016, p. 2).

Ecuador was the first country in the Region to adopt an interpretive labeling system, with a graphic system of textual information and horizontally placed color bars. The red bar is used to indicate high-content nutrients (sugar, sodium or fat) and is accompanied by the phrase “high

in”. The yellow bar is assigned to the medium content components and bears the phrase “medium in,” and the green bar indicates the low content components and has the phrase “low in” assigned.

In Chile, the regulation of Law 20 606 on the Composition of Food and its Advertising establishes limits on calories (275 kilocalories/100 g or 70 kilocalories/100 ml), sodium (400 mg/100 g or 100 mg/100 ml), sugars (10 g/100 g or 5 g/100 ml) and saturated fats (4 g/100 g or 3 g/100 ml). If its content exceeds these limits, the product is considered “high in” and food and beverages that exceed the limits must include a black and white octagonal warning symbol on the front of the package containing the text “high in” followed of calories, sodium, sugars or saturated fats, with one or more symbols as appropriate. In addition, the text “Ministry of Health” must be included in the symbol.

Correa et al. (2019) examined the understanding, perceptions and behaviors of parents in relation to front-of-pack nutrition warning labeling one year after its implementation in Chile. Among the results of the research, it is noted that parents were aware that products with more labels were less healthy than those that showed fewer octagons, and they used the quantity of labels as a guide. Likewise, it was noted that the labels allowed them to understand that some foods that were considered “healthy”, such as cereals, cereal bars and yogurts, in reality were not, since their sugar content is high. Another notable result is that after implementing the regulation, beverages and food with high energy levels, saturated fats, sodium and sugars can no longer be sold in schools, and school kiosks had to update their product range. These changes were accepted by children, but adolescents and preteens have been more resistant to changes in the school environment. Likewise, the surveyed parents point out that schools have become key actors in promoting changes in eating behavior, and that they believed that the new regulation was changing perceptions, attitudes and behaviors towards more appropriate dietary patterns. In the first months of the Law in Chile, a study in the Santiago Metropolitan region also identified that the labeling system

positively influenced purchasing decisions in 91.6% of respondents (Demoscopic and ICEI, 2017).

Various studies carried out in other countries⁴⁵ have also revealed that the “excess of” or “high in” type of front-of-pack labeling systems fulfill the purpose of informing the consumer when the products contain excessive amounts of critical nutrients. They are more useful, more relevant, fast and have greater capacity to correct misperceptions about products and a greater potential to change purchasing decisions (Arrúa et al., 2017; Cabrera et al., 2017; Khandpur et al., 2018; Goodman, Vanderlee, Acton, Mahamad, and Hammond, 2018). Within the framework of Law 30.021/2013 for the promotion of healthy eating in children and adolescents, Peru approved a frontal labeling system for processed foods whose sodium, sugar and saturated fat content exceed the established technical parameters. Advertising warnings must include an octagonal black and white warning symbol on the front of the package containing the text “high in” followed by “sodium”, “sugar” or “saturated fat”, in one or more separate symbols, as necessary. In addition, processed foods that exceed the limits of sodium, sugar and saturated fats should carry the text “avoid excessive consumption” under the octagons. In the case of processed foods that exceed the technical parameters related to trans fats, the text “avoid consumption” must be included.

Likewise, in Uruguay all products ready for consumption must have a frontal labeling system with octagonal design symbols, with a black background and white border, which include the text “excess” inside, followed by the nutrient or nutrients that exceed the indicated values: fats, saturated fats, sugars or sodium, and the acronym “MSP” in reference to the Ministry of Public Health.

In summary, food labeling is used by food producers and sellers in order to communicate with their buyers and consumers. It is also a strategy that can serve to empower consumers and a tool to protect their health in terms of food

safety and nutrition. It can be used to provide information about the identity and content of the product, and how to handle, prepare and consume it.

Labeling allows you to contribute to promoting a healthy food environment when you provide understandable information to citizens about the content of food, allowing them to make decisions that help protect their health; and it can motivate manufacturers to produce foods that contain healthier nutritional profiles (FAO, 2016).

However, in order for food labeling to have a greater impact on public health, it is necessary to increase its use by the population. Public health professionals can train people on the use of food labeling and raise awareness about the need for better food practices.

In addition, new ways of raising public awareness through changes in national campaigns or food labeling should be considered to reduce the proportion of the population that does not make use of such information. On its own, food labeling is not enough to modify the behavior of individuals, but it can be a tool that positively impacts efforts to combat obesity and food-related NCDs (Ollberding, Wolf, and Happy, 2011).

Likewise, it is necessary to call attention to the importance of considering the promotion, advertising and information that exists for products with some degree of processing that are not packaged and often not labeled. Such products are sometimes marketed informally and there is a lack of data and statistics to provide evidence of their impacts on nutrition and health and, therefore, in the development of specific policy instruments for these types of products and the food environments where they are found. ■

45 Brazil, Canada and Uruguay.

2.4 FOOD QUALITY AND SAFETY

KEY MESSAGES

- Food safety and quality are essential to achieve food security due to their cross-cutting relevance to the production, processing, storage, transportation, distribution, preparation and consumption of food.
- It is important to maintain a preventive approach with regard to food safety, since a contaminated food does not necessarily present sensory attributes (smell, shape, color, taste) that are different from a safe food.
- Unhealthy or poor quality foods have significant impacts on health and the economy. WHO estimates that in 2010 there were 600 million cases of foodborne diseases that caused 420 000 deaths. In economic terms, it is estimated that the loss of human capital due to foodborne diseases is costing the Region more than USD 7 billion annually.
- Lack of safety or poor food quality disproportionately affects the poor. As consumers, they usually acquire their food from informal food markets, which increases their exposure to food contamination risks. As producers or employees throughout the food chain, they face barriers to accessing markets.
- Policy measures aimed at promoting food safety seek to reduce health risks related to the consumption of contaminated food. Among these measures are domestic actions such as access to drinking water, actions of international scope such as surveillance and early warning systems for food and animal health or measures that seek to improve infrastructure and environmental hygiene.

→ Quality-related measures include actions related to nutritional quality, such as the reformulation of food to improve its nutritional properties. These measures are already being implemented in the various countries of the Region, either through voluntary agreements with the different sectors of the industry or through mandatory regulations.

Access to sufficient, quality and safe food is essential to leading a healthy life. Food safety, as defined in the Codex Alimentarius, is understood as “the assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use” (FAO and WHO, 2005). Water and food are harmless when they contain no dangerous microorganisms (bacteria, viruses, parasites or fungi), chemical contaminants (allergens, residues of veterinary drugs, agrochemicals, as well as food additives that exceed the maximum residual limits) or external physical agents (earth, hairs, insects, etc.) that represent a health risk (PAHO, 2019a).

Meanwhile, the quality of food is related to positive attributes (such as its nutritional value, its origin, color, aroma, texture and method of production or processing) that influence the value of a product for the consumer, as well as to the absence of negative attributes (decomposition, contamination by dirt, loss of color, unpleasant odors) (FAO, 2007). In that sense, the nutritional quality of food is closely related to the provision of adequate nutritional information to the consumer.

The safety and quality of food favor the adequate intake of nutrients, improving people’s nutritional and health status. Safe and quality foods are fundamental pillars of food security. Despite their importance, combining both elements represents a practical challenge because food safety and quality are transversal to the food system and originate in production, undergo transformation, storage, transport and distribution, and conclude with the preparation and consumption of food.

These elements have important repercussions on public health, productivity and poverty. The evidence indicates that informal food markets represent safety risks, and at the same time, these are the main source of food for the population in

poverty, especially in urban areas. In fact, it is estimated that the economic costs associated with losses due to illness, disability or death due to consumption of unhealthy food amount to USD 95.2 billion annually in low and middle-income countries. It is estimated that in LAC this cost amounts to USD 7.4 billion annually (Jaffee, Henson, Unnevehr, Grace, and Cassou, 2019).

Additionally, food safety and quality can affect livelihoods, especially those of the poorest, because they are key attributes to promoting access to markets and productivity, the main vehicles of economic development and the reduction of poverty, especially in rural areas (FAO and WHO, 2018a). Lack of safety or poor food quality can have negative impacts on the activities of small farmers and small and micro food processors and distributors, as well as the employment of workers involved in food marketing companies.

Health risks of eating contaminated food

The consumption of safe food is key to people's lives because foodborne diseases (FBDs) cause suffering and death. WHO (2015a) estimates that in 2010 there were 600 million cases of foodborne diseases that caused 420 000 deaths, of which 125 000 were among children under 5 years old. Some 550 million of those cases were associated with infectious agents that cause diarrhea.

Unhealthy foods can transmit infectious or toxic diseases caused by bacteria, viruses, parasites or chemicals harmful to health. According to WHO (2019b) a lack of food safety transmits up to 200 different diseases, from diarrhea to cancer. **Table 6** presents examples of some agents and foods involved in outbreaks of foodborne illness.

Foodborne diseases affect the entire population, in particular infants, children under 5 years of age, older adults and the immunocompromised population. Some FBDs cause gastrointestinal disorders and as a consequence the nutrients are not absorbed properly or the body does not take advantage of them. Others cause more severe disorders in various organs of the human body and induce precarious states of nutrition and increased risk of death.

Role of safety and quality in the food trade

Food safety problems not only pose a threat to health, but also to the economic development of a community. At present, the supply chain of certain foods has grown on a global scale thanks to international trade, which has made safety a fundamental component that facilitates or hinders the transit of food between cities, regions and countries.

The expansion of international food trade in recent decades has contributed to expanding opportunities for food producers and increasing the supply of food in domestic markets. This has resulted in economic improvements for food producers and improvements in physical and economic access to food by consumers.

However, unsafe foods open up the possibility that a local risk will become an international problem as a result of the transmission of pathogens and contaminants across borders, and therefore lead to curbs on the commercial flow of food. For this reason, the World Trade Organization (WTO) has established a series of rules for multilateral trade and acts as a forum for resolving differences and negotiating new rules. Since standards are essential for fluid trade, the WTO Agreements strongly recommend that governments harmonize their guidelines in accordance with international standards. With regard to food safety and quality, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the WTO Agreement on Technical Barriers to Trade (TBT Agreement) are based on Codex Alimentarius standards and take these as a point of reference for harmonization (FAO and WTO, 2018).

In addition, FAO and WHO promoted the creation of the International Network of Food Safety Authorities (INFOSAN) in 2004. This network has facilitated the exchange of information between countries for the management of possible risks arising from contaminated food. Thanks to the work of INFOSAN, it is known that the main food risks in 2017 came from the consumption of contaminated foods such as fish, shellfish, meat and its derivatives, and vegetables (FAO and WHO, 2018a).

TABLE 6
BIOLOGICAL AND CHEMICAL AGENTS INVOLVED IN OUTBREAKS OF FOODBORNE DISEASES,
SELECTION OF EXAMPLES

Biological and chemical agents		Examples of food vehicles
Biological agents		
Bacteria	<i>Salmonella</i> spp	Raw eggs, poultry and other animal products
	<i>Campylobacter</i>	Raw or undercooked poultry, contaminated water and unpasteurized milk
	<i>Enterohemorrhagic Escherichia coli (EHEC)</i>	Raw unpasteurized milk and undercooked meat. Also, fresh fruits and vegetables irrigated with water contaminated by animal feces
	<i>Listeria</i> spp	Unpasteurized dairy products, fruits and vegetables and various prepared foods
	<i>Vibrio cholerae</i>	Rice, vegetables, millet porridge and various types of seafood
	<i>Vibrio parahaemolyticus</i>	Raw and undercooked seafood
Viruses	Norovirus	Food and water contaminated with the virus. Among the foods are fruits and vegetables irrigated with contaminated water and shellfish harvested in contaminated water
	Hepatitis A	Food and water contaminated with the virus.
Parasites	Trematodes	Raw and undercooked fish and shellfish, as well as raw aquatic plants. In addition, it includes raw vegetables contaminated by human or animal feces
	<i>Echinococcus</i> spp	Food (vegetables) and water contaminated with feces of infected dogs
	<i>Taenia solium</i>	Raw or undercooked infected pork
	Ascaris, Cryptosporidium, Entamoeba histolytica or Giardia	Fresh foods that come from contaminated water or soil
Chemical agents		
Natural toxins	Mycotoxins (<i>Aspergillus</i> , <i>Penicillium</i> , <i>Fusarium</i> , others)	Corn and various cereals, coffee beans, nuts, others
	Marine biotoxins	Raw fish and seafood
Persistent Organic Pollutants (POPs)	Dioxins	They accumulate in the animal food chain and cause immunotoxicity in the human population, disruption of hormonal functioning, among other conditions
	Polychlorobiphenyls (PCBs)	
Heavy metals	Lead, cadmium and mercury	Foods contaminated with these substances via air, soil or water.

SOURCE: Prepared by the authors with data from CDC, 2019; FAO, 2019c; WHO, 2019b.

Safety and quality policies for healthier diets

The policy measures associated with promoting food safety seek to reduce the risks that the food consumed has harmful effects on the health of the consumer. An example of this is the disinfection of drinking water that protects the population from outbreaks of infectious and parasitic diseases found in water. The use of chlorine, chloramines, ozone, iodine, chlorine dioxide or ultraviolet light is intended to improve the microbial, chemical and aesthetic qualities of water (HLPE, 2017).

In broader terms of public policy, access to public infrastructure and services is essential to improve food safety. These measures include access to drinking water, access to sanitation, waste collection and management, and cleaning of public places where food is prepared or sold.

In addition to interventions that favor the production and commercialization of safe food, it is important to guarantee consumers' right to access safe food. Various factors such as "Increasing urbanization, changes in purchasing power and new marketing systems alter access to food and consumption habits, so it is necessary to

BOX 12 FOOD SAFETY: EVERYONE'S BUSINESS

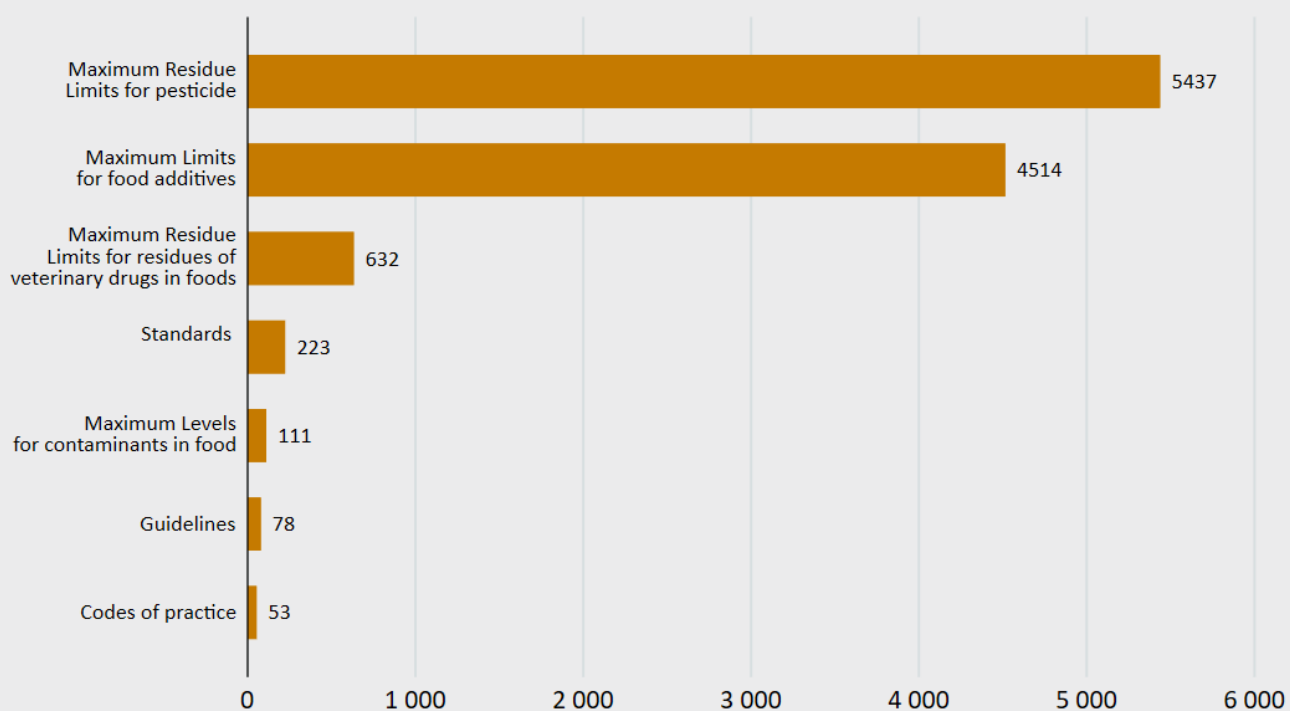
In recognition of the importance of food safety, in December 2018 the General Assembly of the United Nations decided to celebrate World Food Safety Day (WFSD) annually. Since 2019, every June 7 is dedicated to highlighting the benefits of food safety.

With regard to the first WFSD in history, FAO and WHO defined a series of actions on how participants throughout the food supply chain can contribute to achieving food safety. The actions include five steps to achieve sustained changes in food safety:

1. **Ensure safety:** governments must guarantee safe and nutritious food for all.
2. **Grow safe food:** agricultural and food producers must adopt good practices.
3. **Keep food safe:** business operators must ensure that food is transported, stored and processed safely.
4. **Check that they are safe:** all consumers need to have access to timely, clear and reliable information regarding nutritional and disease risks associated with their food choices.
5. **Act jointly for safety:** Governments, regional economic organizations, United Nations organizations, development agencies, trade organizations, consumer and producer groups, academic and research institutions, as well as private sector bodies should work together on food safety issues.

Source: Prepared with information from FAO and WHO, 2019.

BOX 13
WORK OF THE CODEX ALIMENTARIUS COMMISSION AND ITS MEMBER COUNTRIES.
GUIDELINES AND CODES OF PRACTICE BY SUBJECT



NOTE: Updated to July 2018.

SOURCE: FAO and WHO, 2019a.

provide consumers with the necessary capacity to make nutritious and safe food choices” (FAO and WHO, 2018, p. 2).

This concept includes the sale of street food, which has become a significant part of many people’s diets across most of the world, since it offers easily accessible and affordable food. It is an important sector to ensure that urban populations have access to low-cost meals (INFOSAN, 2010).

However, it is necessary to implement environmental hygiene infrastructures and measures that guarantee the safety of food production processes (INFOSAN, 2010). These include licenses for vendors to increase hygiene levels and reduce foodborne diseases, as well as training for vendors. One of the most cost-efficient options to reduce health risks is to raise awareness among vendors of the basic principles and measures necessary to guarantee food safety (INFOSAN, 2010).

In Latin American countries there are significant differences in food laws despite efforts to harmonize them. “With the exception of Argentina and Brazil, most of the provisions related to hygiene in food production, processing and handling are included in the sanitary codes that deal with most aspects of human and animal health, and depend on the ministry of health” (PAHO, 2019). However, the entity responsible for formulating standards related to products for human consumption is usually an independent government agency that is responsible for formulating food standards (PAHO, 2019).

Around the globe, countries are making efforts to implement, improve and coordinate their efforts internationally for the monitoring and follow-up of health risks resulting from contaminated food. Likewise, through the Joint FAO/WHO Codex Alimentarius Commission, countries develop consensus and evidence-based food standards that contribute to improving public health and boosting trade.

The Inter-American Network of Food Analysis Laboratories (INFAL), formed in 1997, is a mechanism for interaction between laboratories whose mission is to promote the guarantee

of food safety and quality in the Americas. To date, more than 250 laboratories in thirty-one countries are members of the INFAL and meet regularly.

As already mentioned, the quality of food refers to attributes such as size, shape, color, texture, taste and composition, in addition to the way in which they are produced or processed. While food quality includes several aspects, many interventions focus on nutritional quality.

In this sense, an example of policy instruments can be regulation or voluntary guidelines aimed at improving the composition of food and therefore, its quality in the food environment (HLPE, 2017).

An instrument aimed at demonstrating the quality of food products is PAHO’s nutrient profile model (2016), whose objective is to classify food and beverages, identifying processed and ultra-processed products with excessive amounts of free sugars, salt, total fats, saturated fats or trans fatty acids, according to WHO intake recommendations. This profile can be useful to guide the reformulation of food products.

In LAC there are several examples of mandatory or voluntary reformulation of products. For example, in Argentina and Paraguay, mandatory maximum salt limits were established for certain products. Meanwhile, in countries such as Argentina, Colombia, Chile, Ecuador and Peru it became mandatory to reduce or eliminate trans fats in certain products for human consumption. In addition, the countries of the Region approved the Action Plan to eliminate trans fatty acids from industrial production 2020-2025 through which options are put forward to eliminate trans fats (PAHO, 2019b).

Regarding voluntary initiatives, countries such as Argentina, Chile, Ecuador, Mexico and Uruguay have reached agreements with the bakery industry to reduce the salt content in bread. In addition, in Ecuador sausage producers joined this initiative. Meanwhile, as part of the framework of the national strategy to reduce salt consumption, Brazil is holding conversations with the food industry and established specific

biannual objectives for each food category and, through education and information, is trying to reduce the amount of added salt. A study by Nilson et al. (2017) found evidence that the voluntary approach to establish salt reduction targets in the country is leading to a gradual reduction of sodium content in most of the food categories studied, between 2011 and 2017.

Furthermore, the International Food and Beverage Alliance (IFBA)⁴⁶ is committed to the reformulation and innovation of products with the aim of offering food options that help people maintain a healthy and balanced diet. To achieve this, they are working on strategies to reduce salt, sugar and calories, and saturated fats, as well as the elimination of trans fats. In addition, IFBA members incorporate ingredients such as whole grains, fibers, fruits, vegetables and low-fat dairy products into their products. They also cooperate to improve the nutrition of the population at risk of vitamin and micronutrient deficiency. To do this, they are developing food and beverages enriched with micronutrients at an affordable price, in collaboration with scientists, local governments and health professionals.

Finally, while street foods are an important source of low-cost, ready-to-eat nutrients for the lower-income urban population, the sanitary risks they involve can affect people's health. Improving the safety of food sold on the street improves public health and promotes the development of the tourism sector. However, it is also necessary to raise awareness among tourists about foodborne diseases. To this end, the WHO Guide on Safe Food for Travellers can be used (INFOSAN, 2010).

Most countries do not have specific regulations on the safety of street food and when there is such regulation, monitoring compliance is a challenge given the large number of street food vendors and due to the itinerant character of some of the sellers (INFOSAN, 2010).

46 The Alliance brings together the twelve largest food and non-alcoholic beverage companies worldwide, with the aim of empowering consumers to make informed decisions. Its work is based on a set of actions recognized by WHO, governments and civil society.

Through product reformulation, countries can regulate and control the nutritional quality of food. However, it must be noted that, by itself, product reformulation is not enough to improve the food environment and encourage consumers to choose healthier products.⁴⁷ Therefore, these types of policies must be combined with other measures such as labeling (FAO, 2018a).

Despite advances in voluntary agreements, it is necessary to continue regulating the issue through the implementation of policies for the reformulation of processed foods in order to improve nutritional profiles. ■

47 Another important determinant of people's eating habits is food preferences (see Box 14).

BOX 14 TASTE PREFERENCES FOR SWEET AND SAVORY

Food preferences are formed early in life, from the uterus, and subsequently through breastfeeding and foods consumed in childhood. They are important determinants of daily intake and eating behaviors, and can persist from early childhood to adulthood. Therefore, the creation of preferences for foods that contribute to healthier eating from an early age is paramount for adequate food and health for life. In this sense, parents and caregivers can learn to deal with the innate aversion of babies to sour and bitter flavors, which can lead to the initial rejection of some healthy foods such as vegetables. Young children can learn to enjoy these foods through continuous exposure. On the contrary, if babies and children are accustomed to sweet and savory food and drinks, they are likely to keep asking for them in the future.

A WHO study in Europe (2019) found that many biscuits, wafers and potato fries had a very high energy density, which increased the risk of excessive energy consumption. Of the 7 955 foods or beverages studied targeted at infants and children aged 0 to 36 months, between 18% and over 50% contained more than 30% of calories from sugar*, while more than 30% of the products included sweeteners, and several

contained added sweet flavors. The predominant sweet taste in these products can foster a lifelong preference for sweet foods, which weakens the advice on appropriate diet. While the foods or beverages analyzed did not generally have high levels of salt/sodium, some products on the market contained salty ingredients or would promote a preference for salty foods at an early age. Although the International Code of Marketing of Breast Milk Substitutes and the WHO Guide to end the inappropriate advertising of food for infants and young children advice against the marketing of food for children under 6 months, between 28% and 60% of the products studied were sold as suitable for this age group.

As noted by Popkin and Reardon (2018), sugar is one of the main elements in all foods and beverages sold in LAC, which is up to three times higher than the levels recommended by FAO/WHO, especially in sugary drinks. In LAC, increased consumption of ultra-processed foods and beverages, snacks and other unhealthy behaviors are related to excessive intake of energy, sugar, salt/sodium and saturated fats.

*FAO and WHO (2003) recommend that no more than 10% of energy intake comes from added sugar, a figure WHO subsequently reduced to 5%.

Source: Own elaboration based on Beckerman, Alike, Lovin, Tamez, and Mattei, 2017; Popkin and Reardon, 2018; WHO Regional Office for Europe, 2019.

ANNEX 1

GOALS 2 AND 3 OF THE SDGS: TARGETS AND INDICATORS

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.1 By 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations

- ▶ Indicator 2.1.1 Prevalence of undernourishment
- ▶ Indicator 2.1.2 Prevalence of moderate or severe food insecurity in the population, according to the Food Insecurity Experience Scale (FIES).

Target 2.2 By 2030, end all forms of malnutrition, including achieving by 2025, the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, infants and the elderly.

- ▶ Indicator 2.2.1 Stunting prevalence (low height for age, standard deviation < -2 from the average growth patterns in children, of the World Health Organization WHO) among children under 5.
- ▶ Indicator 2.2.2 Malnutrition prevalence (low weight for height, standard deviation $> +2$ or < -2 from the average growth patterns in children, established by the WHO) among children under the age of 5, broken down by type (wasting and overweight).

Target 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

- ▶ Indicator 2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size
- ▶ Indicator 2.3.2 Average income of small-scale food producers, by sex and indigenous status

Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

- ▶ Indicator 2.4.1 Proportion of agricultural area under productive and sustainable agriculture

Goal 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.

- ▶ Indicator 2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities
- ▶ Indicator 2.5.2 Proportion of local breeds classified as being at risk, not at risk or at unknown level of risk of extinction
- ▶ Indicator 2.5.2 Proportion of local breeds classified as being at risk, not at risk or at unknown level of risk of extinction

Goal 2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

- ▶ Indicator 2.a.1 The agriculture orientation index for government expenditures
- ▶ Indicator 2.a.2 Total official flows (official development assistance plus other official flows) to the agriculture sector

Goal 2.b Correct and prevent trade restrictions and distortions in world agricultural markets,

including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.

- ▶ Indicator 2.b.1 Agricultural export subsidies

Goal 2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

- ▶ Indicator 2.c.1 Indicator of food price anomalies

Goal 3. Ensure healthy lives and promote well-being for all at all ages

Target 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100 000 live births.

- ▶ Indicator 3.1.1 Maternal mortality ratio
- ▶ Indicator 3.1.2 Proportion of births attended by skilled health personnel

Target 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births.

- ▶ Indicator 3.2.1 Under 5 mortality rate
- ▶ Indicator 3.2.2 Neonatal mortality rate

Target 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

- ▶ Indicator 3.3.1 Number of new HIV infections per 1 000 uninfected population, by sex, age and key populations
- ▶ Indicator 3.3.2 Tuberculosis incidence per 100 000 population
- ▶ Indicator 3.3.3 Malaria incidence per 1 000 population
- ▶ Indicator 3.3.4 Hepatitis B incidence per 100 000 population
- ▶ Indicator 3.3.5 Number of people requiring interventions against neglected tropical diseases

Target 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

- ▶ Indicator 3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory diseases.
- ▶ Indicator 3.4.2 Suicide mortality rate

Goal 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

- ▶ Indicator 3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders
- ▶ Indicator 3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol

Target 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.

Indicator 3.6.1 Death rate due to road traffic injuries

Target 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

- ▶ Indicator 3.7.1 Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods
- ▶ Indicator 3.7.2 Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1 000 women in that age group

Goal 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

- ▶ Indicator 3.8.1 Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases and service capacity and access, among the general and the most disadvantaged population)
- ▶ Indicator 3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income

Target 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

- ▶ Indicator 3.9.1 Mortality rate attributed to household and ambient air pollution
- ▶ Indicator 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack

of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)

- ▶ Indicator 3.9.3 Mortality rate attributed to unintentional poisoning

Goal 3.a Strengthen the implementation of the WHO Framework Convention on Tobacco Control in all countries, as appropriate.

- ▶ Indicator 3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older

Goal 3.b Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.

- ▶ Indicator 3.b.1 Proportion of the target population covered by all vaccines included in their national programme
- ▶ Indicator 3.b.2 Total net official development assistance to medical research and basic health sectors
- ▶ Indicator 3.b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis

Goal 3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.

- ▶ Indicator 3.c.1 Health worker density and distribution

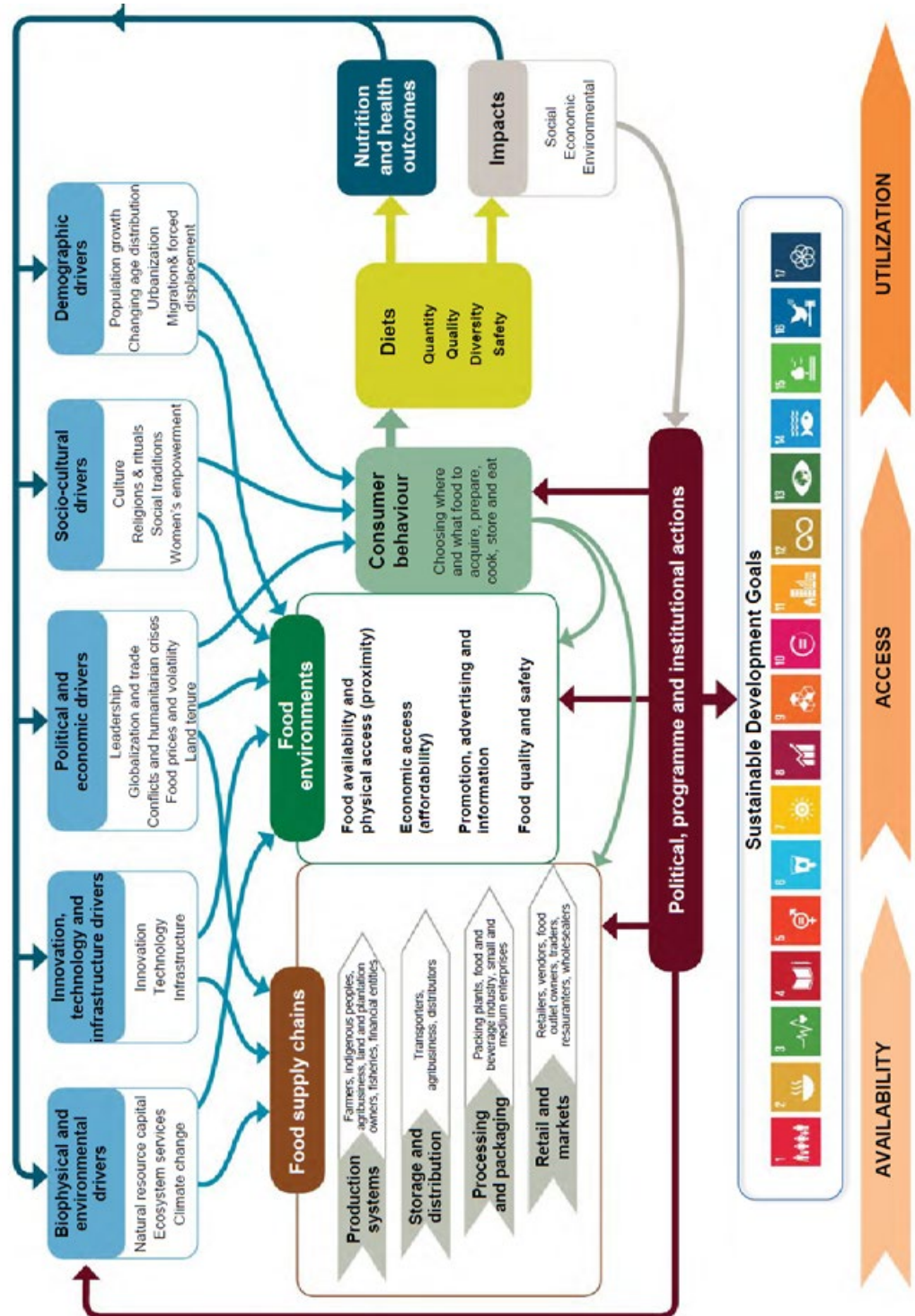
Goal 3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

- ▶ Indicator 3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness

Source: UNSTAT, 2017.

ANNEX 2

CONCEPTUAL FRAMEWORK OF FOOD SYSTEMS FOR DIETS AND NUTRITION



SOURCE: Adapted from HLPE, 2017.

ANNEX 3

LEGISLATIVE INITIATIVES OF THE PARLIAMENTARY FRONT AGAINST HUNGER TO PROMOTE FOOD SYSTEMS AND HEALTHY FOOD ENVIRONMENTS

Country	Food Loss and Waste	Food Labeling	School Meals	Food Donation	Healthy Nutrition
Argentina	<p>Law creating the “National Plan for Food Loss and Waste Reduction” (2018)</p> <p>Draft Law establishing the National Day for the Reduction of Food Loss and Waste on September 29 of each year</p>	Draft Law “Front-of-pack Labeling and Advertising of Food and Beverages for Human Consumption.”	Draft Law “Incorporation of the Subject of ‘Food and Healthy Cooking’ into the curriculum of the National Education System, at its different levels and modalities, in both formal and non-formal education.”	Donations Law Reform of the Special Regime Law for Food Donation (2017).	
Bolivia			School Meals Law in the framework of Food Sovereignty and the Plural Economy (2014)		<p>Law for the Promotion of Healthy Eating (2016)</p> <p>Project: Food Sovereignty for Living Well Draft Law.</p>
Brasil	Food Loss and Waste Draft Law.		Law on School Meals Guidelines (2009)		

ANNEX 3

Country	Food Loss and Waste	Food Labeling	School Meals	Food Donation	Healthy Nutrition
Chile	Draft Law to modify the Sanitary Code regarding Food Disposal to avoid its Waste.	Law on "Nutritional Composition of Food and its Advertising" (2015) Project: Motion for the Amendment to Law No. 20 606, on "Nutritional Composition of Food and its Advertising, with regard to care in the Feeding of Celiac Children or with other Immunopathological Diseases."	Draft Law promoting the Provision of Healthy Foods by the JUNAEB.	Draft Law regulating the Provision of Food to Non-Profit Organizations.	
Colombia	Law for the Prevention of Food Loss and Waste (2019)	Food Labeling for the Prevention of Obesity Draft Law.			Draft Law creating the National System for Food Security and Nutrition (SINSAN), and the National Food Safety Agency and establishing other provisions.
Costa Rica	Food Loss and Waste Draft Law.	Draft Law to incorporate nutritional criteria into products in the basic basket.			Framework Draft Law on the Human Right to Food and Food Security and Nutrition.
Ecuador		Official Regulations for the Labeling of Processed Foods for Consumption (2016)	Draft Organic Law on School Meals.		Organic Law of the Food Sovereignty Regime (2010) Substitute Sanitary Regulations on Processed Food for Human Consumption (2016)
El Salvador			Law No. 304 on the "School Glass of Milk Program" (2013)		Food and Nutrition Sovereignty and Security Draft Law.
Guatemala	Food Waste Draft Law.	Promotion of Healthy Eating Draft Law.	School Meals Law (2017)		
Haiti			School Meals Draft Law.		Food Security and Sovereignty Draft Law.

Country	Food Loss and Waste	Food Labeling	School Meals	Food Donation	Healthy Nutrition
Honduras		Preliminary Food Labeling Draft Law.	School Meals Law (2016)		Food Security and Nutrition Law (2011)
México					Amendment to the General Law on Social Development to recognize the Right to Nutritious Food (2016) Initiative with the Draft General Law for the Right to Food and Food Sovereignty.
Nicaragua					Nicaraguan Legal Digest of Food and Nutrition Sovereignty and Security Law (2009)
St. Vincent and the Grenadines					Zero Hunger Trust Fund.
Paraguay	Proposed Food Loss and Waste Draft Law.	Food Labeling Draft Law. Proposed Irradiated Foods Draft Law.	School Meals and Health Control Law (2015)		Framework Law on Food Sovereignty, Food Security and Nutrition and Right to Food in Paraguay (approved by the 2018 congress, vetoed by the government) Food Safety Draft Law.
Peru	Reduction and Prevention of Food Loss and Waste Law (2019)		Promotion of Healthy Eating for Children and Adolescents Law (2013) School Meals Draft Law.		Food Security and Nutrition Draft Law (approved in 2015, vetoed by the government)
Dominican Republic	Food Loss and Waste Draft Law.				Law creating the National System for Food and Nutrition Sovereignty and Security in the Dominican Republic (2016)

ANNEX 4

GLOSSARY

Acute food insecurity: Acute food insecurity is defined as a state of food insecurity in a specific area and at a given time, which is of such gravity that it threatens human lives or livelihoods, regardless of the causes, context or duration. In this regard, it is important to provide strategic guidance that focuses on short-term objectives to prevent, mitigate or reduce the effects of food insecurity that threatens human lives or livelihoods.

Chronic food insecurity: Food insecurity that persists over time, mainly due to structural causes. It may include seasonal food insecurity that occurs in certain periods under non-exceptional conditions. In this regard, it is important to provide strategic guidance that focuses on improving in the medium and long term both the quality and quantity of food consumption to lead an active and healthy life.

Exclusive breastfeeding: When an infant receives only breast milk, and no other liquid or solid, not even water, with the exception of oral rehydration salts or drops or syrups with vitamins, mineral supplements or medications.

Food Deserts: Geographical areas where residents have limited or no access to food due to the absence or low density of “food entry points” at a practical distance for travel.

Food environments: Refers to the physical, economic, political and sociocultural context that frames the interaction of consumers with the food system with a view to making decisions on the acquisition, preparation and consumption of food.

Food energy intake: Energy content of the food consumed.

Food oasis: A geographical area with an abundance of appropriate food.

Food swamps: Geographical areas with an overabundance of “unhealthy” foods and poor access to “healthy” foods.

Food Insecurity Experience Scale: A food security scale based on experience that is used to measure access to food at different levels of severity that can be compared in all contexts. It relies on people’s direct responses to questions about the presence of conditions and behaviors that are known to reflect limitations in access to food.

Food security: Situation that occurs when all people have, at all times, physical, social and economic access to sufficient safe and nutritious food to meet their nutritional needs and preferences for food in order to lead an active and healthy life. According to this definition, four dimensions of food security can be determined: food availability, physical and economic access to food, utilization of food, and stability over time.

Food systems: Food systems cover the entire range of actors and their interrelated activities related to production, harvesting, processing, distribution, consumption and disposal of food products. Food systems comprise all food products that come from agriculture and livestock, forestry, fisheries and aquaculture, as well as the wider economic, social and natural environments into which these production systems are integrated.

Healthy diet: A balanced, varied and adequate selection of foods consumed over a period of time. A healthy diet ensures that the needs of macronutrients (proteins, fats and carbohydrates, including dietary fibers) and essential micronutrients (vitamins, minerals and trace elements) specific to gender, age, level of physical activity and physiological status of each person are met. For a healthy diet: 1) the daily needs in terms of energy, vitamins and minerals should be met without consuming excess energy; 2) consumption of fruits and vegetables should exceed 400 g daily; 3) saturated fat intake should be less than 10% of the total energy intake; 4) the intake of trans fats should be less than 1% of the total energy intake; 5) the intake of free sugars should be less than 10% of the total energy intake or, if possible, less than 5%, and 6) the salt intake should be less than 5 g daily. A healthy diet for infants and young children is similar to that for adults, although the following elements are also important: 1) young children should be fed exclusively with breast milk during their first six months of life; 2) young children should continue to be breastfed until two years of age or later; 3) from 6 months of age, breastfeeding should be

supplemented with a variety of appropriate, safe and nutrient-rich foods. Salt or sugar should not be added to complementary foods.

Hunger: Hunger is an uncomfortable physical sensation or pain caused by insufficient consumption of food energy. In this report, the term “hunger” is used as a synonym for chronic undernourishment.

Macronutrients: The proteins, carbohydrates and fats that are available to provide energy. They are measured in grams.

Malnutrition: Abnormal physiological state due to insufficient, unbalanced or excessive consumption of macronutrients or micronutrients. Malnutrition includes undernourishment (stunted growth and childhood wasting, and vitamin and mineral deficiencies) as well as overweight and obesity.

Micronutrients: Vitamins, minerals and other substances that the body needs in small amounts. They are measured in milligrams or micrograms.

Moderate food insecurity: According to the FIES, this is the level of food insecurity in which people face uncertainty about their ability to obtain food and are forced, at certain times of the year, to reduce the quantity or quality of the food they consume due to lack of money or other resources. Therefore, moderate food insecurity is defined as the lack of uniform access to food, which reduces the quality of the diet, disrupts eating habits and can have negative consequences for nutrition, health and well-being.

Nutritional condition: Physiological state of a person deriving from the relationship between nutrient intake, nutrient needs and the body's ability to digest, absorb and use these nutrients.

Nutritional security: Situation that occurs when there is secure access to a sufficiently nutritious diet combined with a healthy environment and adequate health and sanitary care services, so that all family members can lead a healthy and active life. Nutritional security differs from food safety in that it also considers aspects related to proper care practices, health and hygiene in addition to diet sufficiency.

Obesogenic environments: Environments in which there is a high availability and accessibility of ultra-processed foods and beverages, with a high content of calories, fats, salt or sugars, made with substances extracted or refined from whole foods and a large number of additives.

Optimal breastfeeding practices: Refers to the early initiation of breastfeeding during the first hour of life, exclusive breastfeeding until the age of six months and continued breastfeeding until the age of 2 years or more, together with the introduction of a safe and appropriate complementary diet.

Overweight and obesity: Body weight greater than normal for height as a result of excessive fat accumulation. This is usually a sign that less energy is burned than is consumed. In adults, overweight is defined as a BMI of 25 kg/m² or more, and obesity as a BMI of 30 kg/m² or more. In children under five, overweight is defined as a weight for height greater than two standard deviations above the median of the WHO Child Growth Patterns, and obesity as a weight for height greater than three standard deviations above the median of the WHO Child Growth Patterns.

Prevalence of undernourishment: Estimation of the proportion of the population that lacks sufficient food energy to lead a healthy and active life. The prevalence of undernourishment is the traditional FAO indicator for tracking hunger, as well as being indicator 2.1.1 of the Sustainable Development Goals.

Severe food insecurity: Level of food insecurity in which people have probably run out of food, suffer from hunger and, in the most extreme case, spend days without eating, putting their health and well-being at serious risk, according to the FIES.

The multiple burden of malnutrition: The coexistence of different forms of malnutrition (childhood stunting and wasting, and vitamin and mineral deficiencies) with overweight and obesity in the same country, community, home or individual.

Traditional stores: Refers to wholesale markets, public markets, small stores, specialty stores, and itinerant markets.

Ultra-processed foods: Processed substances extracted or refined from whole foods (such as fruits, crops or grains) generally with little nutritional value compared to the original whole food.

Undernourishment: Undernourishment is defined as the condition in which the usual consumption of food is insufficient to provide the amount of food energy necessary to lead a normal, active and healthy life. For the purposes of this report, hunger is defined as a synonym for chronic undernourishment.

Undernutrition: Result of a nutritional intake deficient in quantity and/or quality, or of absorption and/or biological use of the nutrients consumed as a result of repeated cases of diseases. Malnutrition encompasses low weight for age, low height for age (stunting), low weight for height (wasting) and vitamin and mineral deficit (micronutrient malnutrition).

Wasting: Low weight for height, usually resulting from weight loss associated with a recent period of inadequate intake of food energy and/or illness. In children under five years of age, wasting is defined as a weight for height less than two standard deviations below the median of the WHO Child Growth Patterns.

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2019

REGIONAL OVERVIEW OF FOOD SECURITY AND NUTRITION

TOWARDS HEALTHIER FOOD ENVIRONMENTS THAT ADDRESS ALL FORMS OF MALNUTRITION

Latin America and the Caribbean face the challenge of providing a healthy, diversified and sufficient diet for its population. Firstly, the Region must find the solution to feed 42.5 million people who still go hungry. Secondly, it is essential to address the growing problem of overweight and obesity that afflicts all age groups and already amounts to more than 300 million people.

It is necessary to promote healthy eating patterns. Inadequate diets increase the risk of developing noncommunicable diseases and thereby the likelihood of premature death. It is currently estimated that one in six deaths in the Region has its origin in inappropriate consumption habits that lead to the development of cardiovascular diseases, cancer or diabetes.

Therefore, promoting the full development of our population demands that we ensure an appropriate diet that encourages optimal states of health. This requires a commitment by governments for this to be an attainable goal. In response, the governments of the Region have begun to implement measures that guide the production, distribution, marketing, processing and consumption of food. In particular, governments have focused efforts on promoting food environments that facilitate dialogue between food producers and consumers in order to boost physical and economic access to diversified and safe diets, as well as appropriate information to encourage healthy eating habits.

Examples of the above are public food supply systems, nutrition-sensitive social protection networks, the implementation of fiscal measures that promote the consumption of foods that contribute to healthy diets and discourage access to products that contain high levels of critical nutrients such as fats, sugar and sodium, as well as measures aimed at ensuring the quality and safety of food for all people. In addition, countries have reduced the asymmetry of information regarding the harmful effects that certain foods can have on long-term health through the regulation of advertising or the introduction of nutritional or front-of-package food labeling.

However, public action alone is insufficient. The transformation of food systems requires the active involvement of the private sector, parliaments, academia, civil society and consumers. When it comes down to it, creating healthy environments that address all forms of malnutrition and hunger is a task for everyone.

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