Chapter 23

LATIN AMERICA AND THE CARIBBEAN

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Over the past five decades, Latin America and the Caribbean (LAC) has experienced significant changes in its food systems, while also facing both long-standing and new challenges, including food insecurity, poverty, malnutrition, inequality, and problems related to environmental sustainability and agricultural productivity. As the world's largest net food-exporting region and one endowed with rich natural resources, LAC plays a key role in global food security and nutrition, with potential to contribute even more in the future. The region also plays a critical role in stabilizing the global climate and in conserving biodiversity. To continue making these contributions to global food security and environmental sustainability, however, the region must overcome the hurdles created by economic and political instability, climate change, and deep-rooted structural inequalities spanning social, economic, gender, and health dimensions.

Food policy research has played a crucial role in addressing these challenges, providing insights that have guided strategies and policies to shape the region's agrifood sector. This chapter draws on research by IFPRI and regional partners to outline the evolving food systems landscape in LAC and present evidence-based policy options and research priorities for the years ahead.

Evolution of food systems challenges

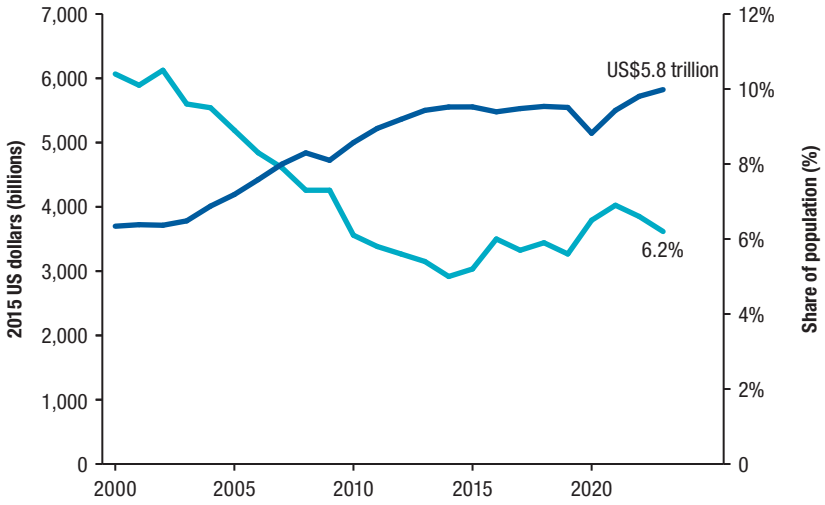
Food security, diets, and nutrition

The recent evolution of food systems challenges in the LAC region reflects a complex interplay of socioeconomic, environmental, and demographic factors. In the 1970s and 1980s, the region grappled with poverty-driven food insecurity, exacerbated by economic crises, political instability, and unequal land distribution. Rapid urbanization during this period strained rural food production systems and, in some countries, increased reliance on imported food. More than 82 percent of the LAC population now lives in urban areas, up from less than half in 1960 (Busso et al. 2023). While agricultural policies in the 1970s and early 1980s focused on increasing agricultural productivity, the policy focus shifted in the 1980s and 1990s toward addressing undernutrition (diets lacking essential nutrients and calorie deficits in some countries), particularly among children and rural populations.

The food security landscape has changed dramatically since the early 2000s. From 2000 to 2013, as gross domestic product (GDP) per capita rose steadily, undernourishment rates consistently fell. However, since then, an economic slowdown in the region, the COVID-19 pandemic, and geopolitical crises have led to increased rates of undernourishment. Despite some economic recovery in recent years, undernourishment remains elevated compared to its 2013 levels, suggesting that economic growth alone may not be sufficient to address hunger and food security (Figure 23.1).

Over the same period, rising incomes and dietary shifts contributed to an alarming increase in obesity and related noncommunicable diseases. Stalled progress in reducing undernutrition, combined with the rapid increase in overweight and obesity, has created a "double burden" of malnutrition (see Chapter 12). Deficiencies in zinc, iron, and vitamin B12 among children and women of childbearing age remain a persistent problem, as are high rates of chronic diseases such as anemia, although reliable data for the region have not been collected for nearly a decade (Soto-Méndez and Boy 2024). Figure 23.2 illustrates these nutrition challenges, showing rates of obesity and child stunting across different subregions of LAC. The double burden and micronutrient deficiencies are most acute in Mexico and Central American countries, where rates of both obesity and child stunting are above the regional average. In contrast, South America struggles with high rates of obesity, but the rate of child stunting is low, indicating that undernutrition is a less pressing concern.

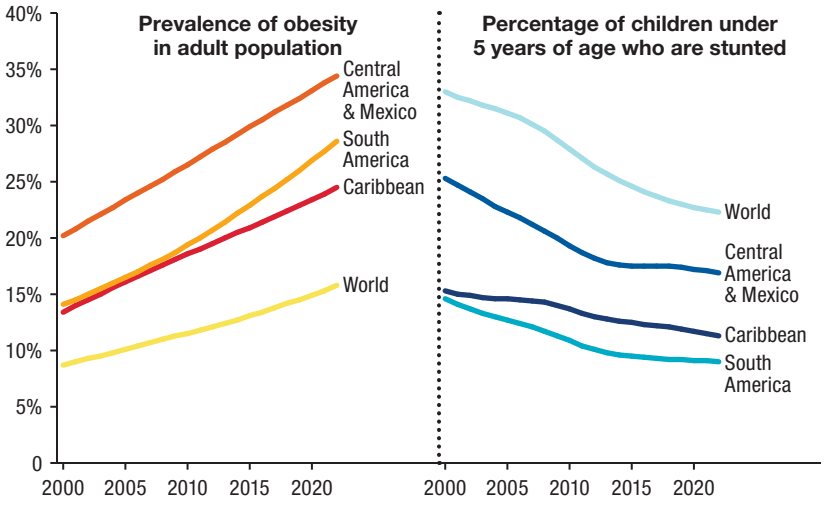
FIGURE 23.1 GDP and prevalence of undernourishment in LAC, 2000–2024



Source: Based on FAOSTAT data. www.fao.org/faostat/

Note: Undernourishment is an indicator of hunger and food insecurity developed by the Food and Agriculture Organization of the United Nations (FAO) and based on the Food Insecurity Experience Scale (FIES).

FIGURE 23.2 Prevalence of adult obesity and child stunting, 2000–2022



Source: Based on FAOSTAT data. www.fao.org/faostat/

Healthy diets are unaffordable for many people in the region (Figure 23.3). Despite the relatively moderate cost of healthy diets (under $3.00 PPP per person per day in some countries), persistent poverty and income disparities have put better diets out of reach for 182 million people in the region (FAO et al. 2025). Recent years, particularly 2021 and 2022, have seen rising healthy diet costs, reflecting post-pandemic economic strains and geopolitical developments.

LAC's agriculture sector

LAC's agriculture sector is a major global supplier that provides both food and employment for the region's population. Food exports from the region increased rapidly between 2000 and 2020, rising from US$35 billion to $156 billion (Piñeiro et al. 2023). Today, LAC supplies 50 percent of corn, 70 percent of soybean meal and oil, 60 percent of soybeans, and 36 percent of bovine and poultry meat exports globally, along with other critical food products. About 43 percent of global agricultural exports are projected to come from LAC by 2032, reflecting its pivotal role in international food security (Piñeiro et al. 2023). These exports stabilize global markets against shocks and support food security in other regions, as occurred at the beginning of the Russia–Ukraine war (Glauber et al. 2023).

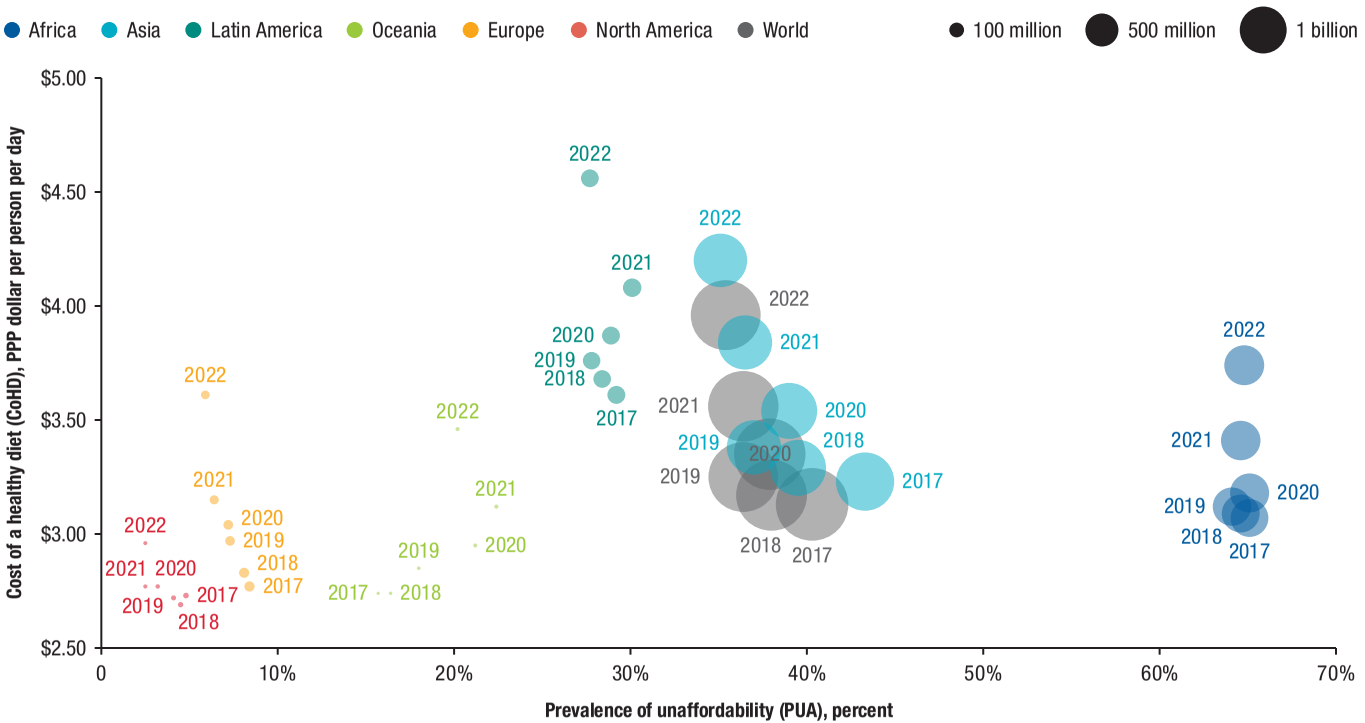
Production varies significantly across the LAC region. Figure 23.4 shows production divided by subregion for cereals, fruits, and vegetables. More than 75 percent of cereal production is in the Southern Cone,[1] led by Brazil and Argentina. This subregion is characterized by highly efficient large-scale agriculture, producing about 24 metric tons of cereals per hectare, that drives exports from the region. The Southern Cone also leads fruit and vegetable production, though other subregions play a large role. The Andean region[2] contributes about 20 percent of regional fruit production, while Mexico contributes 15 percent, and Central American countries such as Guatemala are leading exporters of bananas. Mexico has become one of the region's largest producers of vegetables, reaching some 16 million tons per year, about 9 percent of the total. Andean countries, with their cooler growing areas at higher altitudes, are also well suited to vegetable farming and contribute about 9 percent of production.

LAC's agriculture sector is also an important source of livelihoods, accounting for more than half of all employment in Ecuador, Guatemala, and Nicaragua and more than 40 percent in Honduras and Peru (FAO 2025). However, inequality in agricultural land distribution is greater in LAC

1 The Southern Cone countries are Argentina, Brazil, Chile, Paraguay, and Uruguay.

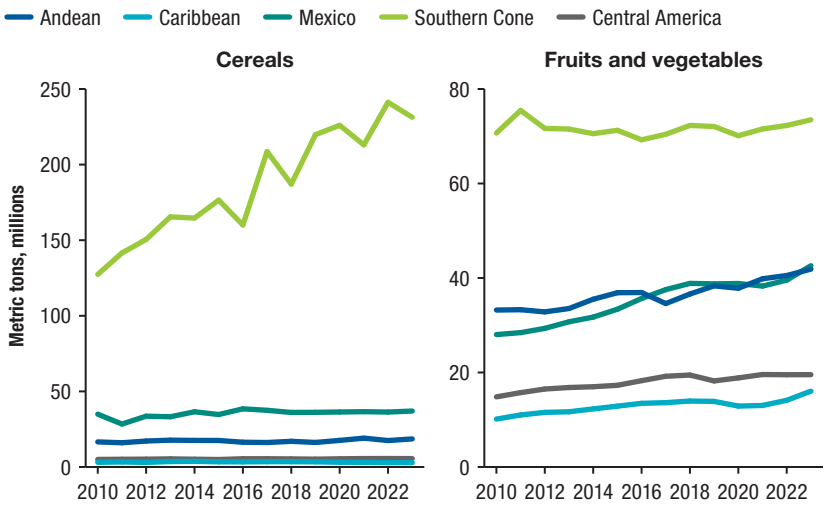
2 The Andean countries included here are Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela.

FIGURE 23.3 High cost of healthy diets



Source: Based on FAOSTAT data. www.fao.org/faostat/

FIGURE 23.4 Production of crops across subregions



Source: Based on FAOSTAT data. www.fao.org/faostat/

than any other region, with a predominance of small farms. In Guatemala, for example, 64 percent of farms are smaller than 1 hectare, while only 6.2 percent are larger than 5 hectares (Britos et al. 2022). This pattern of very small farms, common across Central America, Mexico, and much of the Andean region, limits labor productivity and the earning potential of smallholder farmers (Gáfaro et al. 2023). Smallholders also encounter barriers to accessing markets, finance, technology, and other resources (Berdegué and Fuentealba 2011).

Gender inequities are also stark. Recent analysis from Colombia showed that women in the agriculture sector earned 43 percent less than men on average. This disparity was significantly larger for higher skilled agricultural occupations and in rural areas, where women earn nearly 70 percent less (Rueda-Gallardo et al. 2025). Food and agricultural policy therefore has major implications for many households, and equity is a central concern.

Environmental services and sustainability

LAC is also the world's largest provider of ecosystem services, with significant shares of global renewable water reserves, forest carbon stocks, and plant and animal species (Pan et al. 2024). These provide key global and regional ecosystem services, such as regulating regional climates by maintaining hydrological

cycles and supporting biodiversity hotspots that are crucial for ecological balance and agricultural resilience.

However, as food production in the region has increased, environmental sustainability has become a greater concern. Increased production in LAC over the last few decades has been associated with relatively low increases in greenhouse gas emissions from agriculture, forestry, and other land use change (AFOLU) compared to other regions, but deforestation, soil degradation, and water scarcity have emerged as major threats to sustainability (Piñeiro et al. 2023). Expansion of cropland and pastures has driven deforestation, and intensive farming practices have contributed to soil erosion and nutrient depletion in key agricultural areas (FAO 2024). In addition, climate change impacts—including rising temperatures, water scarcity, extreme weather events, and reduced agricultural yields—will exacerbate these threats. For example, coastal regions, which are home to large populations, will have to contend with the dual pressures of sea-level rise and saltwater intrusion, which will affect both food production and food systems livelihoods.

These challenges highlight the need for comprehensive rural development strategies that account for the environmental dimension of food systems. While the LAC region must continue to increase food production to meet the needs of a growing global population, it also needs to address deforestation, soil degradation, and water management for the sustainability of its food systems and the health of the planet (Piñeiro et al. 2023).

Innovations in food policy from LAC

The LAC region has shown leadership in pioneering innovative policies, backed by research, to address food systems challenges. In nutrition, for example, Guatemala's PROCOMIDA food-assisted maternal and child health and nutrition program reduced child stunting and led to changes in household diet decisions (Jensen et al. 2016; Olney et al. 2018). IFPRI researchers evaluated the program, providing evidence-based adjustments that enhanced its impact. Other policies have also promoted healthier diets. Chile introduced a comprehensive policy requiring front-of-package health labeling and marketing restrictions for unhealthy foods, while also removing junk food from schools. This policy was shown to contribute to a decline in consumption of sugary drinks and processed snacks among children, contributing to improved dietary patterns and public health outcomes (Fretes et al. 2025). Mexico overcame significant political hurdles to introduce a similar strategy in 2019 that required front-of-package labeling for food and beverages with high levels of

calories, sugar, saturated fat, trans fat, and sodium, as well as those containing noncaloric sweeteners, in an attempt to promote healthy food choices among consumers (White and Barquera 2020).

In response to environmental challenges, LAC countries have adopted policies to promote sustainable intensification. For example, the Low-Carbon Agriculture Plan and the National Program for Strengthening Family Farming in Brazil use credit instruments, extension services, and social support to promote no-till planting, integrated crop-livestock-forest systems, reforestation, and other more sustainable land management strategies (Harfuch et al. 2024). The program had been implemented on more than 54 million hectares of agricultural land by 2024 (MAPA 2023). These and other examples can provide valuable ideas and lessons for countries and regions around the world facing similar challenges.

Future food systems challenges

The LAC region's food systems will face a range of complex challenges as 2050 approaches. Global demand for LAC's agricultural output and environmental services will continue to grow. Continuing urbanization within LAC is expected to intensify the demand for food, particularly processed and convenience foods, which could exacerbate dietary shifts and heighten the risk of health crises related to obesity and noncommunicable diseases (Fretes et al. 2024). At the same time, climate change, biodiversity loss, and environmental degradation, combined with unsustainable agricultural practices and deforestation, threaten long-term food security, both in the region and globally. Persistent inequalities in access to land, resources, and markets will likely continue to constrain the productivity of smallholder farmers, necessitating targeted investments in rural infrastructure, education, and technology to improve agricultural production and rural livelihoods. Ensuring access to technologies for all producers will be crucial to increasing opportunities and preventing the amplification of existing inequalities.

To address these challenges, food policy research must become more forward-looking, inclusive, and adaptable. Several key research priorities are outlined here.

Climate-smart and sustainable agriculture. Strengthening climate-smart and sustainable agriculture should be a priority, with research focusing on identifying climate-resilient crop varieties, promoting soil health, and scaling up agroecological approaches. This focus would leverage the region's abundant natural resources and role as a major global exporter, while building on recent

successes in sustainable intensification. Research can identify and inform policies that incentivize farmers to adopt sustainable practices, which is crucial for long-term food security (see Chapters 5, 9, and 17) (Piñeiro et al. 2020).

Equitable access. Ensuring equitable access to resources, markets, and technologies for smallholders and women will be critical (IFPRI 2020). As a region with strong historic agricultural productivity growth but also high levels of inequality in income and asset ownership, policies to promote equitable growth can increase incomes, resilience, and affordability of healthy diets for the most vulnerable. Research can identify strategies to close opportunity gaps for smallholders and promote gender equity, thereby enhancing the overall resilience of food systems (see Chapters 6, 11, and 14).

Technology and innovation. Leveraging technology and innovation holds potential to revolutionize food systems through advances in digital tools, precision agriculture, and biotechnology. LAC has high rates of digital literacy and access to digital tools, along with many examples of programs that promote the adoption of technologies and practices (Shanahan and Bahia 2024). These strengths can be leveraged to expand access to and adoption of recent food systems innovations and develop lessons for other regions. For example, a review of technologies in the LAC livestock sector identified numerous existing innovations in silvopastoral practices,[3] and strategies for improved feeding and better data tracking, among others, which have been shown to produce multiple economic, social, and environmental benefits (Elverdin et al. 2025). Enabling policies should be implemented to scale up such innovations and maximize their benefits. Food policy research must ensure these technologies are accessible to smallholder farmers and contribute to inclusive development (see Chapters 11, 14, and 17).

Diets and nutrition. Addressing the double burden of malnutrition requires a focus on food environments, education, and consumer behavior. To confront these challenges, LAC has adopted a range of innovative approaches, including taxes on unhealthy foods, nutrition labeling, and regulations on the marketing of unhealthy foods to children, which should be further studied and implemented in other countries. Nutrition-sensitive social protection programs are another policy tool with potential to improve access to healthy diets and elicit dietary behavior change. Research can build on efforts in many LAC countries to identify policies that promote affordable, nutritious, and sustainably produced foods while addressing the drivers of unhealthy diets (see Chapter 12).

3 Silvopastoral practices are land management systems that integrate trees, forage crops, and livestock on the same land to enhance biodiversity, productivity, and sustainability.

Regional cooperation. Regional cooperation will be crucial for addressing global challenges such as climate change and food trade. Food policy research should support platforms that foster knowledge-sharing, harmonize policies, and improve trade efficiency across LAC (see Chapter 16). Institutions such as the Inter-American Institute for Cooperation on Agriculture have partnered with IFPRI to advance this agenda by launching a network of agricultural trade negotiators to align priorities and foster cooperation across the region (IICA 2023).

Financing. Resources must also be allocated effectively across sectors and actors to have the largest impact. While there is limited research on the financial requirements to transform food systems in LAC, one estimate suggests 0.52 percent of the region's GDP would need to be allocated annually to end hunger and malnutrition (FAO et al. 2024). More generally, the same authors observe that many plans have been proposed to achieve economic, social, and environmental goals in LAC food systems, but they often lack clear financing strategies. IFPRI researchers have noted several analytical challenges, including the need to take a holistic view of all financial flows, both internal and external to food systems (Díaz-Bonilla 2021). This comprehensive analysis is needed to make financing more accessible to small and medium producers to support their adoption of sustainable intensification technologies (see Chapter 18).

Foresight and impact evaluation. Research can inform policymakers and other actors about the most effective interventions for responding to economic shocks, climate risks, and crises. IFPRI, under the CGIAR Research Initiative on Foresight, has partnered with Brazil's Embrapa, the Grain Exchange, and the Institute for International Agricultural Negotiations to conduct frequent model-based analysis, build capacities among regional researchers, and provide policy guidance to MERCOSUR, the regional trade bloc (Gianatiempo and McNamara 2024). Economic and climate modeling is critical for anticipating future challenges and taking preemptive actions (see Chapters 3 and 4). Impact evaluations and literature syntheses can complement these efforts by identifying effective strategies for responding to anticipated challenges and improving resilience.

In sum, LAC has made significant strides in addressing food systems challenges over the past 50 years, with food policy research playing a central role in driving evidence-based solutions. Although the region faces a complex set of challenges as it looks toward 2050, including climate change, urbanization, inequality, and technological disruptions, the next 25 years present an opportunity to build on past successes, address persistent challenges, and ensure a more food-secure and sustainable future for the region.

IFPRI has already contributed significantly to all these areas through evidence-based solutions, analysis of drivers and trends, and development of innovations. Together with other research organizations and regional and national partners, IFPRI will continue to play a pivotal role in generating the knowledge and solutions needed to transform food systems in the LAC region.

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