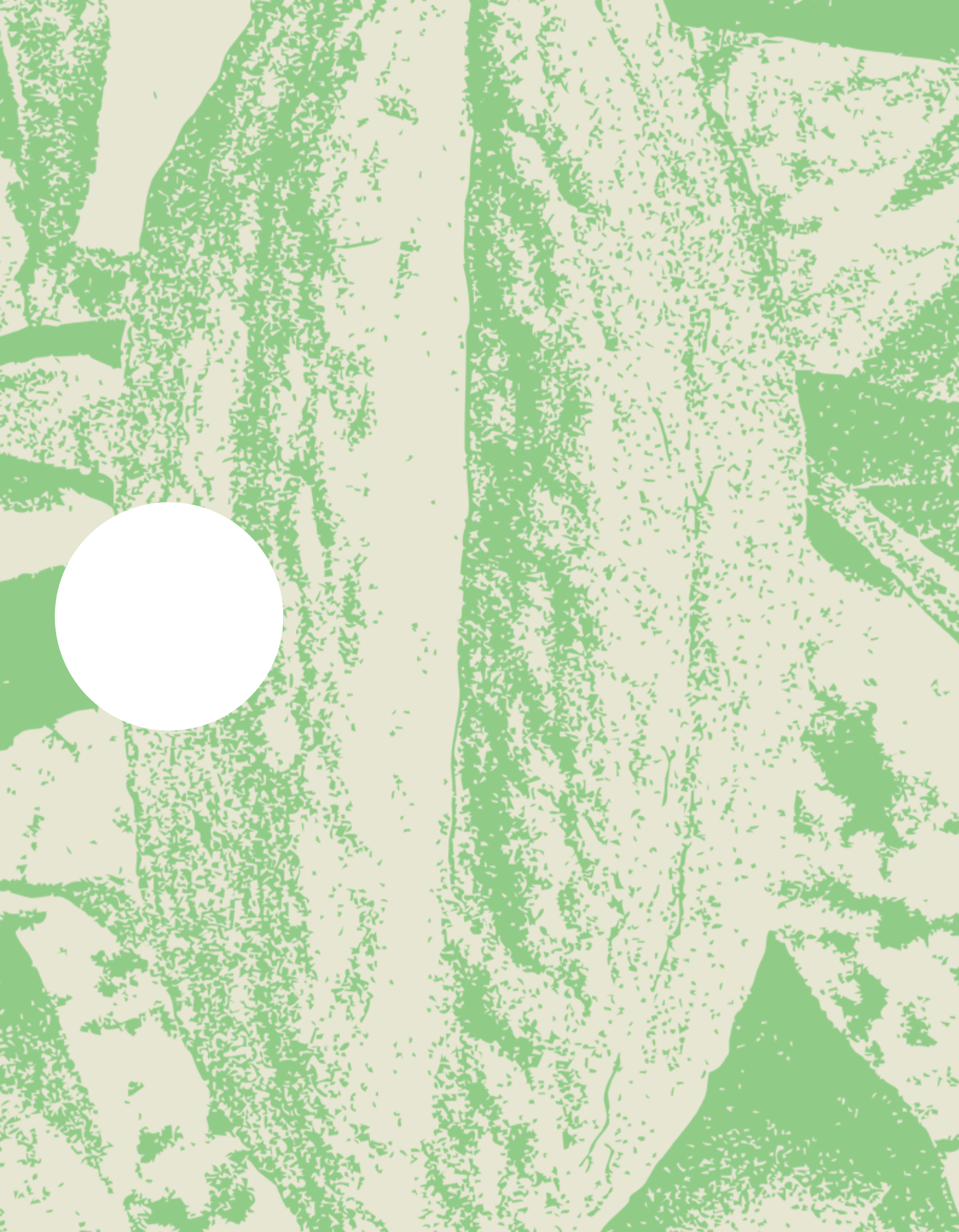
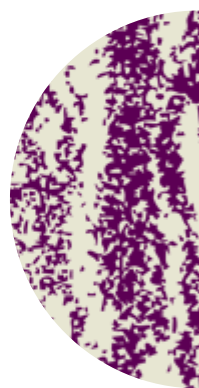




2

**The agricultural
sector in
Latin America
and the Caribbean**



Key messages

The agricultural sector in Latin America and the Caribbean (LAC) continues to account for a substantial share of the region's value added, contributing close to 6% of total value added—and nearly 10% when agro-industry is included—well above the levels observed in OECD countries.

The gap between agricultural yields in LAC and those of higher-income countries is largely explained by differences in the use and allocation of inputs and production factors.

The size distribution of farms in LAC is markedly diverse. Central American and Caribbean countries are dominated by very small farms (under 2 hectares), while most Southern Cone countries have more developed agricultural sectors with a greater prevalence of large farms (100 hectares or more).

Farm size is partly driven by the composition of crops and livestock. Oilseed-producing farms tend to be the largest, followed by grain producers, and then fruit producers. Significant size variation remains across the region and worldwide, even within the same type of activity.

This heterogeneity is also reflected in capital stocks and agricultural employment across regions and among LAC countries. Countries with larger average farms generally show declining agricultural employment and higher capital stocks per worker and per hectare.

Agriculture contributes to GDP not only through direct production but also through its linkages with other sectors. It supplies inputs to agro-industry and hospitality, while demanding inputs from sectors such as chemicals.



Agriculture and agro-industry are also key drivers of LAC's exports. Agriculture alone accounts for 17% of regional exports; when agro-industry is included, the share is 22%.



A broad integration agenda remains to reduce agricultural trade costs, particularly through the harmonization of regulations—such as sanitary and phytosanitary measures—to facilitate access to new markets.



The environmental agenda's requirements to meet new regulations and certifications may pose challenges for the region, but they also create opportunities to differentiate products and add value along the export chain.

The agricultural sector in Latin America and the Caribbean¹

Introduction

The agriculture and livestock sectors play a major role in Latin America and the Caribbean (LAC), where they account for close to 6% of value added (VA), 15% of employment,² and 17% of exports. When the broader agro-industrial complex³ is included, the contribution to value added rises to nearly 10%—well above the 3% recorded in OECD countries. Moreover, the agricultural sector represents roughly 45% of rural employment. Understanding the dynamics and productive challenges of these sectors is therefore essential for designing a rural development strategy that reflects both the opportunities and the constraints facing the region.

This chapter provides a conceptual framework for the factors that drive agricultural production and explains the sector's importance for LAC—not only

through its direct contribution, but also through its linkages across production chains. It presents an overview of the agricultural sector,⁴ starting with recent trends in output and the contributions of key inputs—land, labor, and machinery—to observed changes. The chapter also describes how the sector is composed along multiple dimensions, including the size distribution of farms, the types of crops and livestock involved, the productive linkages in which they participate, and their contribution to exports.

The analysis presented here highlights the considerable diversity that exists across agricultural sectors, both across regions and within countries, as well as their varying roles within national production systems. This assessment, however, abstracts from a crucial determinant of agricultural

1 This chapter was written by Lian Allub with research assistance from María Pía Brugiafreddo.

2 Employment figures include forestry and fishing, as the necessary disaggregation to exclude them is not available.

3 The agro-industrial complex includes the following sectors: cattle meat products; other meat products; vegetable oils and fats; dairy products; processed rice; sugar; and other food products.

4 The chapter focuses on agriculture and livestock and, in some sections, on the agro-industrial complex. Forestry and fishing are examined in greater detail in Chapter 5.

output: the productivity with which the sector operates. The discussion offered in this chapter serves as a starting point for examining agricultural productivity and the policies needed to enhance

it—topics that are explored in depth in Chapter 3, which analyzes the sector's productivity levels and trends, their main drivers, and the policies essential for sustainable development.

Conceptual framework for analyzing agricultural production and productivity

The first step in understanding the agricultural sector is to identify the factors that determine its output and influence its productivity. Figure 2.1 presents a concise conceptual framework highlighting the main determinants of agricultural production. These driving factors fall into three broad categories: the inputs used—both their quantity and quality; total factor productivity (TFP); and short-term shocks, such as climate events or pests, which can significantly affect output. For example, the 2022 drought caused losses equivalent to between 2% and 5% of GDP in Argentina, Brazil, Paraguay, and Uruguay (Perelmuter et al., 2023).



Agricultural output is determined by the inputs used, how productively those inputs are applied, and the short-term shocks that affect the sector

Three of the sector's core production factors are land, labor, and machinery, which represents a major component of physical capital in agriculture.⁵ Perhaps the most distinctive feature of agriculture compared to other economic activities is that land—a critical input for production—is largely

determined by a country's geographic conditions. This does not mean that land productivity cannot be improved. Interventions such as fertilizer application or irrigation can enhance soil quality.⁶ Adamopoulos (2025) finds that current yields—which incorporate the use of inputs such as irrigation and fertilizers—are, on average, 117% higher than under low-input, rainfed conditions.

In addition to land, agricultural production depends on labor, capital, and other inputs such as seeds and fertilizers. Greater and better-quality availability of these production factors makes it possible to achieve higher yields per unit of land.⁷

The quality of inputs and the use of disembodied technology can also affect TFP and, in turn, agricultural output and profitability. Disembodied technology refers to efficiency gains that stem from knowledge and know-how rather than from a particular input—for example, the adoption of agricultural practices, the organization of farms, the use of software, or the incorporation of new skills.

Three cross-cutting elements further influence input quality and TFP levels: 1) innovation, driven by public and private investment in research and development (R&D); 2) the availability of and access to extension services, which facilitate the transfer of knowledge and technology to producers and among them; and 3) infrastructure, which can

⁵ The use of fertilizers, seeds, and irrigation is discussed in detail in Chapter 3, along with other technologies used in agricultural production.

⁶ These topics are covered in Chapter 3.

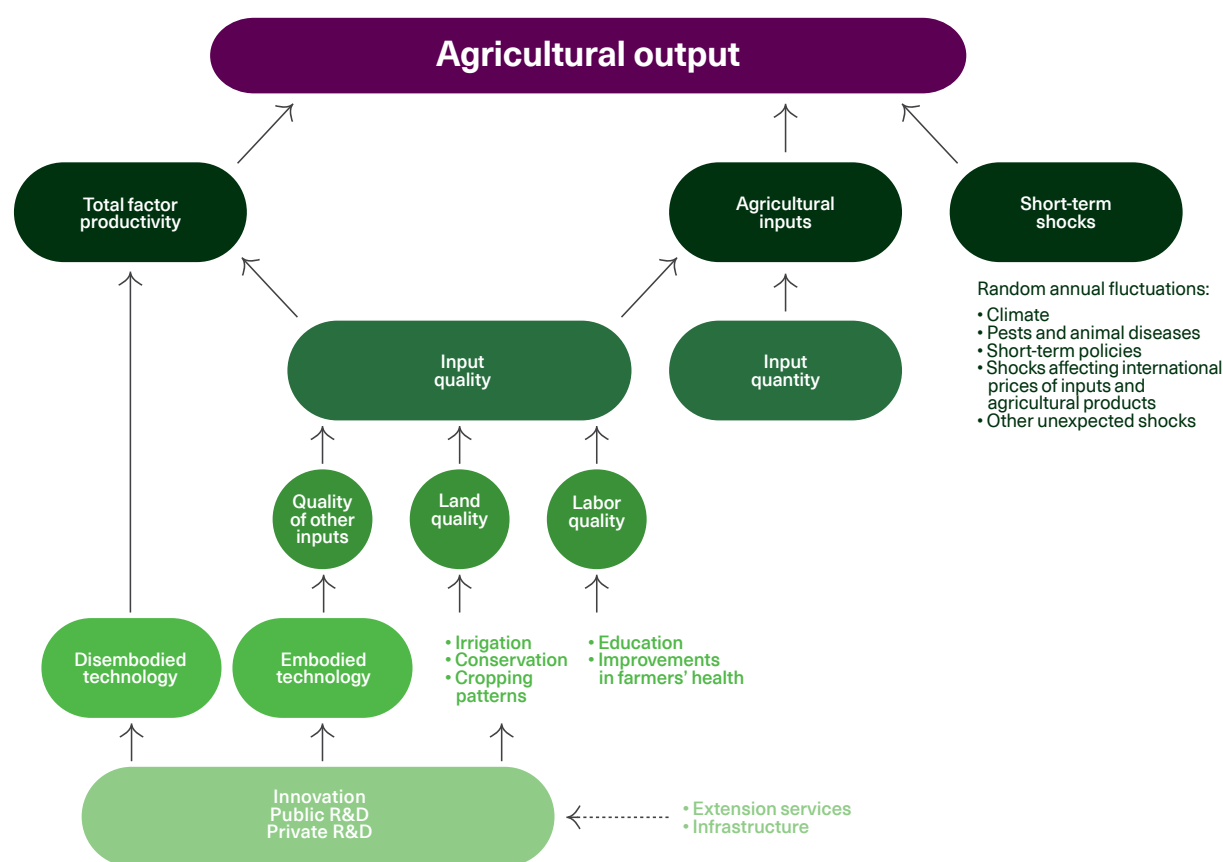
⁷ Embodied technology refers to technical improvements that are physically integrated into inputs or equipment—for example, tractors with more efficient engines, genetically improved seeds, or upgraded irrigation systems.

either support or hinder knowledge diffusion and reinforce productivity gains.⁸

Finally, agricultural performance depends not only on land endowments and factor accumulation, but also on how these resources are distributed among producers. The way production factors are used or combined, the potential to benefit from economies of scale, and the exposure to and response to shocks can all differ across farms of different sizes.⁹

The following sections examine how agricultural production in the region has evolved—measured by its contribution to value added—and describe the characteristics of three key inputs: land, labor, and capital. The role of fertilizers, irrigation, and seeds, as well as the drivers of TFP and the policies needed to strengthen it, are explored in greater depth in Chapter 3.

Figure 2.1
Key drivers of agricultural output



Source: Authors based on Wang et al. (2015)

⁸ Infrastructure can be a determinant of productivity, but productivity improvements can also increase the returns on infrastructure investment, creating incentives to expand it.

⁹ Regulatory frameworks governing access to land also play a central role in determining the existence and operation of land markets and their potential constraints.

Agriculture's contribution to GDP

Across LAC as a whole, the agricultural sector plays a very important role—especially when the agro-industrial complex is included.¹⁰ Panel A of Graph 2.1 shows that the combined contribution of the crop and livestock sectors accounts for more than 5% of value added in LAC, compared with barely 1% in OECD countries. When the agro-industrial complex is added, the figure rises to more than 9% in LAC and to less than 3% in OECD economies. However, despite all LAC countries exceeding the OECD average, the region displays substantial diversity (Panel B of Graph 2.1). In countries such as Paraguay and Guatemala, these sectors contribute more than 20% of value added, whereas in Mexico, Panama, or Trinidad and Tobago, the share falls below 7%. For the most part, the

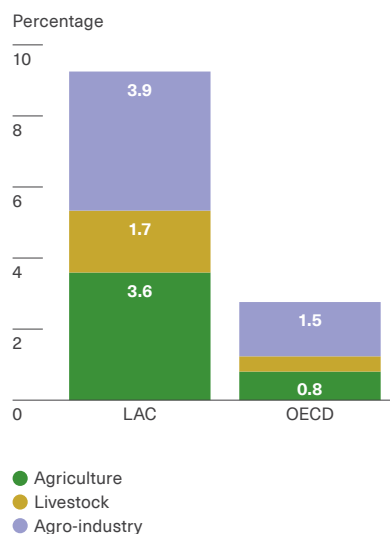
agro-industrial sector is an important contributor across the region. In several countries—such as El Salvador, Mexico, Panama, Paraguay, and Trinidad and Tobago—the agro-industrial sector accounts for a larger share of value added than agriculture itself.

● ●
The agricultural sector accounts for more than 5% of value added in LAC—and over 9% when agro-industry is included—significantly higher than the 1% and 3% observed in OECD countries

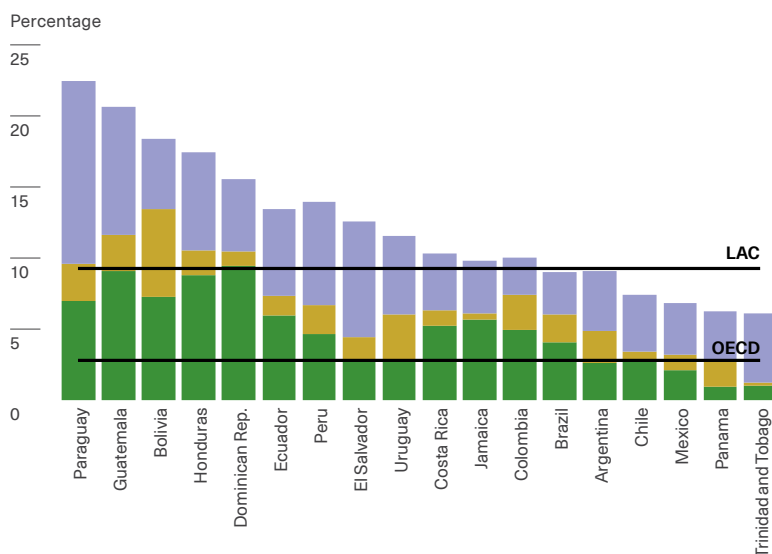
Graph 2.1

Contribution of the agricultural and agro-industrial sectors to value added, 2017

**Panel A.
By region**



**Panel B.
Selected LAC countries**



Source: Authors based on Aguiar et al. (2022).

¹⁰ To analyze contributions to value added, this section uses data from the Global Trade Analysis Project (GTAP), which provides disaggregated information for 65 sectors across 160 countries.

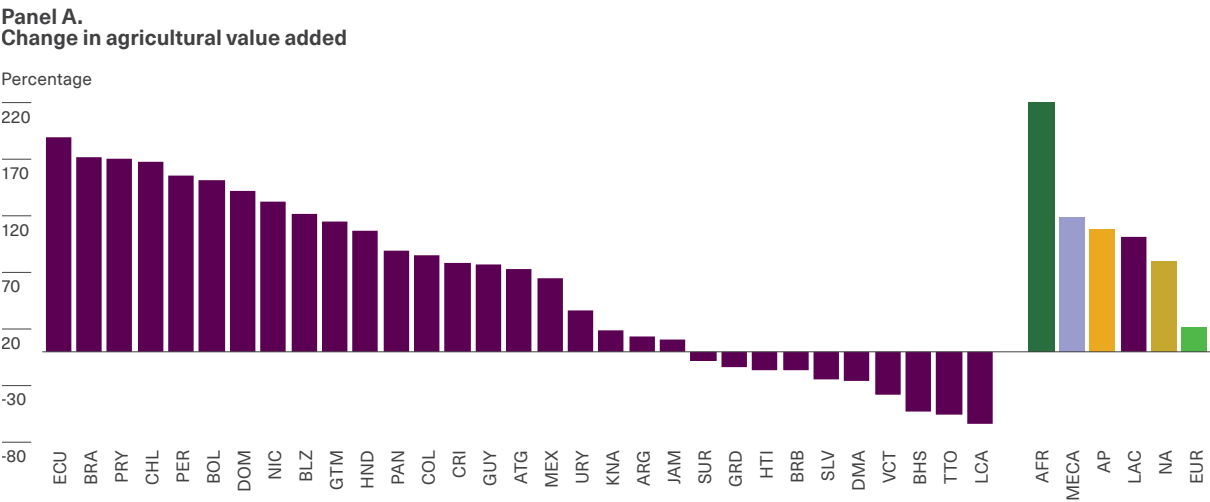
Trends in agricultural value added and its share in GDP¹¹

Agricultural value added in LAC increased by 102% between 1995 and 2023, with growth of 105% in Latin America and 36% in the Caribbean (Panel A of Graph 2.2). This regional diversity is also reflected within each subregion. In Latin America, most countries recorded increases, with Chile, Ecuador, and Peru standing out at over 150%. However, two countries—Suriname and El Salvador—showed declines of 9% and 25%, respectively. In the Caribbean, the pattern is the opposite: most countries experienced decreases, reaching 64% in Saint Lucia, 56% in Trinidad and Tobago, and 53% in The Bahamas. Only four Caribbean countries recorded growth: the Dominican Republic (143%), Guyana (76%), Antigua and Barbuda (73%), and Saint Kitts and Nevis (19%).

● ●
Although agricultural value added increased in nearly all countries in the region, the sector's share in GDP declined in most of them

To understand whether changes in agricultural value added kept pace with developments in the rest of the economy, these trends must be compared with each country's overall GDP. Panel B of Graph 2.2 illustrates the structural transformation underway in LAC (see Chapter 1), showing that agriculture's share of GDP fell from 11.4% in 1995 to 6.6% in 2023—nearly a 5-percentage-point drop. This decline occurred in the vast majority of LAC countries and was widespread across subregions.

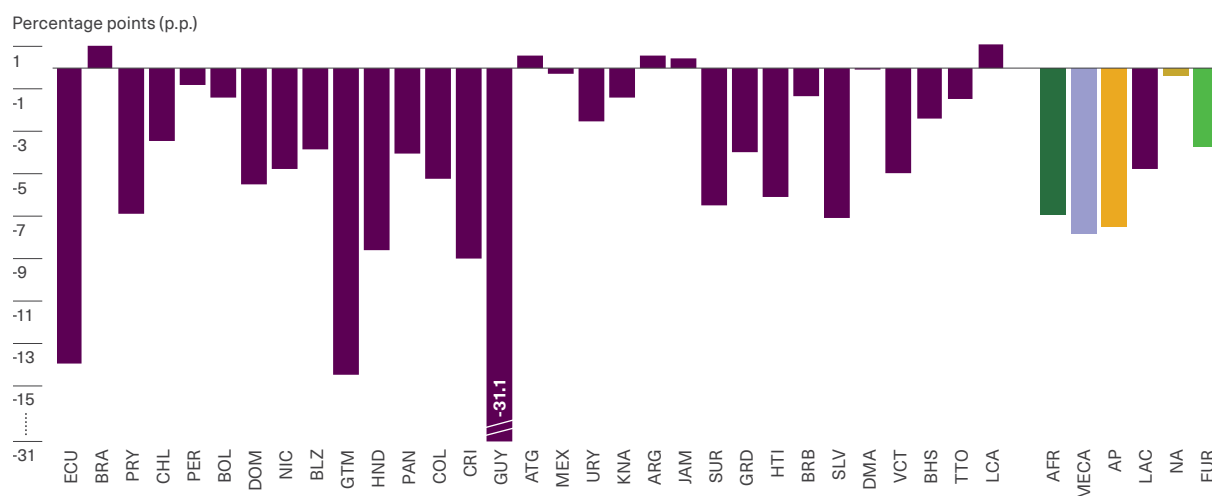
Graph 2.2
Change in agricultural value added and its share in GDP, 1995-2023



Continued on the next page →

11 This section uses value added and GDP data from the World Bank, as they provide longer time coverage than GTAP. The analysis begins in 1995, the first year for which these variables are broadly available.

Panel B.
Change in the share of agricultural value added in GDP



Note: The agricultural sector includes forestry and fishing, as disaggregated subsector data are not available for all countries. Regional value added is calculated as the sum of country-level value added, while the sector's share in GDP is computed as the simple average of the country shares. The regions included are: Africa (AFR), the Middle East and Central Asia (MECA), Asia and the Pacific (AP), Latin America and the Caribbean (LAC), North America (NA), and Europe (EUR).

Source: Authors based on the World Bank (2025b, 2025d).

Actual and potential yields

As noted earlier, land is a critical factor in agricultural production. A country's geographic conditions and land endowments largely shape its productive capacity. One way to assess the extent to which these conditions translate into higher production levels is to compare observed agricultural yields—understood as actual output per unit of land—with estimated potential yields and with selected international benchmarks. This comparison helps determine whether the region is making full use of its land resources or whether substantial room for improvement remains.

In a study conducted specifically for this report, Adamopoulos (2025) estimates effective yields and

potential yields (based on agronomic modeling) for countries in the region and compares them with those of high- and low-income countries.¹² The results show, first, that effective yields in most cases exceed potential yields under a rainfed scenario (that is, one with low investment), underscoring the importance of input use in boosting agricultural production. Second, yields in LAC countries generally lie about 20% below those of high-income countries. This gap can be attributed both to differences in natural resource endowments and to the more intensive and efficient use of production factors and agricultural inputs in high-income economies. To isolate the role of climate and soil conditions,

¹² The "high-income countries" group consists of the 10% of countries with the highest per capita income, and the "low-income countries" group consists of the 10% with the lowest.

the analysis focuses on potential yields under the low-investment scenario. In that case, the region's average potential yield is 20% higher than that of high-income countries, highlighting LAC's comparative advantages in this area.

The observed gaps in effective yields are therefore mainly explained by the use of inputs—such as fertilizers, irrigation, and improved agricultural

practices—and by the sector's productivity levels. The next section describes the main production inputs in agriculture (land, labor, and capital), while Chapter 3 delves deeper into the factors that determine productivity, including the use of fertilizers, irrigation, and seeds; the evolution of productivity in the sector; and the opportunities and risks posed by digitalization and climate change.

The role of land and the distribution of farms by size

The way land is used, the type of production carried out, and agricultural yields are all closely shaped by producers' decisions. Farm size plays a key role in these decisions. How the total area of land devoted to agricultural production is distributed across farms is fundamental for understanding capital intensity,

fertilizer use, irrigation, and labor use, among other conditions that affect production levels. Box 2.1 describes the different ways land can be used, while the following sections examine how farms are distributed by size, crop type, and land tenure.

Distribution of farms by size

The agricultural sector is highly diverse across the region and the world, both in how farms are organized and how production is structured.¹³ Understanding the size distribution of farms offers important clues about productivity and inequality within the agricultural sectors of different countries and regions.

Graph 2.3 illustrates the distribution of farms and their land area in different regions and worldwide. A first point to highlight is that, globally, more than 70% of farms are smaller than two hectares (ha). This pattern is largely driven by the distribution

observed in Asia and the Pacific, where more than 80% of farms fall into this category, and in Africa, where nearly 60% are smaller than 1 ha. By contrast, regions with highly developed agricultural sectors—such as North America¹⁴—show a substantial share of medium and large holdings (over 20 ha and over 50 ha, respectively). LAC occupies an intermediate position: while it has a significant share of small farms (under 2 ha), this share is lower than in Africa or Asia and the Pacific, and the region also has a meaningful presence of large farms.¹⁵

13 Gáfaró et al. (2025) show that the size of farms is positively associated with value added per worker, and that value added per worker is, in turn, inversely associated with the poverty rate—although this does not imply a causal relationship between the variables.

14 Throughout the chapter, North America refers to the United States and Canada.

15 Chapter 3 shows that this distribution of farms is also reflected in agricultural productivity, which lies between that of more and less developed countries, underscoring the relationship between farm size and distribution and sector productivity.

Box 2.1

Classification of agricultural land by use

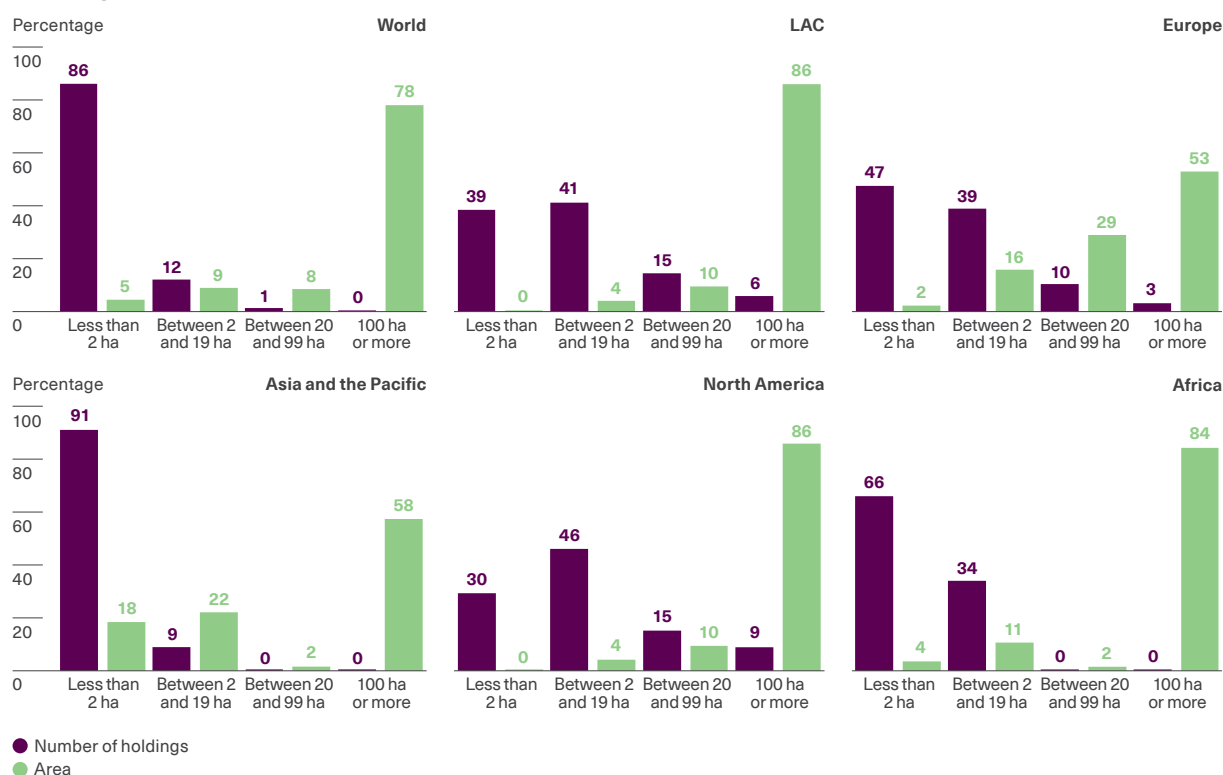
Agricultural land can be classified as follows:

- **Agricultural land.** Land used for agricultural production. This category corresponds to the sum of areas classified as *cropland* and *permanent meadows and pastures*.
- **Cropland.** Land used for crop production. It corresponds to the sum of areas classified as *arable land* and *permanent crops*.
- **Arable land.** Land used for crops grown in rotation with fallow, meadows, and pastures in cycles of up to five years. This category includes *temporary crops*, *temporary meadows and pastures*, and *temporary fallow*. However, it excludes land that is potentially cultivable but not currently cultivated.
- **Temporary crops.** Land used for crops with growing cycles of less than one year, which must be replanted after harvest to continue producing. Some crops that remain in the field for more than a year may also be considered temporary—for example, asparagus, strawberries, pineapples, bananas, and sugarcane. Land cultivated more than once per year is counted only once.
- **Temporary meadows and pastures.** Land used for temporary forage crops of herbaceous species for mowing or grazing, as part of crop-rotation periods of less than five years.
- **Temporary fallow.** Agricultural land left uncultivated for one or more growing seasons. In general, the maximum fallow period is less than five years. Such land may be sown exclusively for green manure. Land left fallow for too long may acquire characteristics that require reclassification—for example, as *permanent meadows and pastures* if used for that purpose.
- **Permanent crops.** Land used for long-term crops that do not require replanting for several years (such as cacao and coffee).
- **Permanent meadows and pastures.** Land used for forage grasses on a permanent basis (five years or more), whether natural (grazing lands or wild grasslands) or cultivated. Permanent meadows and pastures with trees or shrubs should be recorded in this category only if forage production is the primary use of the land. This category includes:
 - pastures in wooded areas (e.g., agroforestry areas);
 - pastures in shrubland areas (grazing land, scrub, thickets);
 - pastures in plains or low mountain regions used for grazing and traversed by transhumant herds, where animals spend part of the year (approximately 100 days) without returning to a corral overnight.
- **Other land.** Land not classified as *agriculture* or *forestry*. It includes the following categories from the System of Environmental-Economic Accounting (SEEA): *land used for aquaculture*, *urban and related land*, *other land not elsewhere classified*, and *land not in use*.

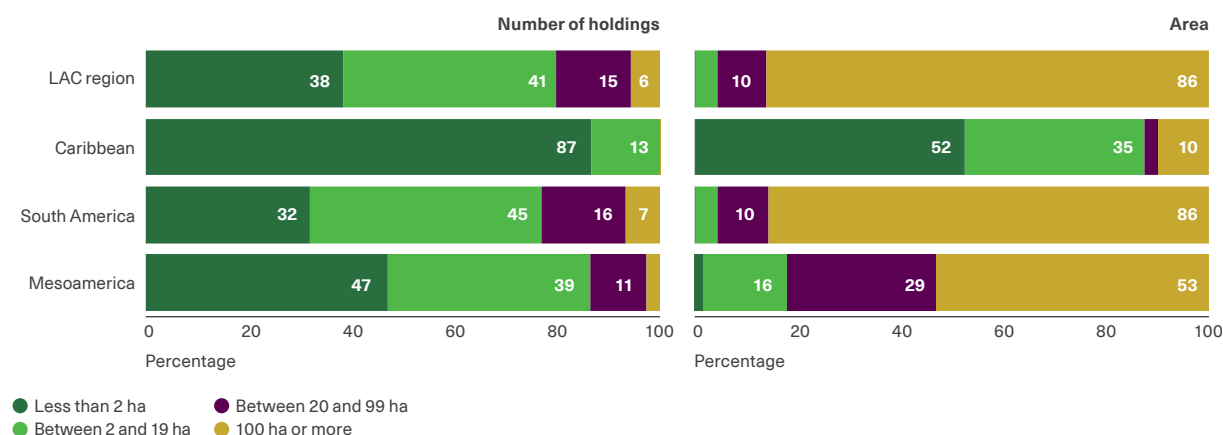
Source: Authors adapted from FAO (2025d).

Graph 2.3
Distribution of farms and total land area by farm size

Panel A.
World regions



Panel B.
Latin America and the Caribbean and their subregions



Note: Values correspond to the latest year with available data for each country from the two most recent rounds of the World Census of Agriculture (2010 and 2020). Appendix Graph A.2.1, available in the online edition of the RED, presents the country-level information shown in Panel B.

Source: Authors based on FAO (2025c).

Panel B of Graph 2.3 shows the distribution of farms and their land area across LAC subregions, which differ markedly from one another. South American countries have a distribution similar to that of North America, with a considerable share of medium and large farms, and a relatively smaller share of farms under 2 ha. In Mesoamerica,¹⁶ farms under 2 ha represent a larger share than in South America—reflecting the greater prevalence of subsistence agriculture—yet the number of medium and large farms is also substantial. In the Caribbean, small farms dominate, while the presence of farms above 20 ha (including those over 100 ha) is nearly insignificant.

Land area, in general, is concentrated in large farms (over 100 ha), even in subregions where farms under 2 ha account for a large share of total farms. Only in the Caribbean is the distribution of land across different farm sizes more even.¹⁷



The size distribution of farms in LAC shows a substantial share of small farms (under 2 ha). Yet the region displays wide variation: the Caribbean has the highest concentration of these farms, while South America has the lowest

This highly diverse size distribution results in very different average farm sizes.¹⁸ Average sizes exceed 100 ha per farm in high-income countries with major agricultural sectors—such as those in North America, Australia, and New Zealand—as well as in middle- and low-income countries with strong comparative advantages in agriculture, such as South Africa or several in Latin America. By contrast, average farm sizes in the Middle East, Central Asia, much of Africa, and the Caribbean are very small, typically below 6 ha per unit. Altogether, these patterns suggest that the size distribution of farms may pose a barrier to expanding agricultural production and productivity.¹⁹

Composition of the agricultural sector by type of crop and livestock

Part of the variation in average farm size can be explained by the type of crops and livestock produced on them. Regarding crops, Panel A of Graph 2.4 shows that, in the Southern Cone (with the exception of Chile), the dominant crops—measured by harvested area—are oilseeds.²⁰ Although oilseeds are also present in other South American and Mesoamerican countries, their relative importance is considerably lower. Cereals

and grains are also highly relevant in these two subregions, while fruits account for a significant share in the Caribbean islands. Finally, vegetables and tubers have a notable presence in the Caribbean islands and in some Mesoamerican and South American countries.²¹

16 Throughout the chapter, Mesoamerica refers to Mexico and the countries of Central America..

17 Graph A.2.1, in the Appendix available in the online edition of the RED, shows the distribution of farms and land area by LAC country.

18 See Table A.2.1 in the chapter appendix of the online edition of RED.

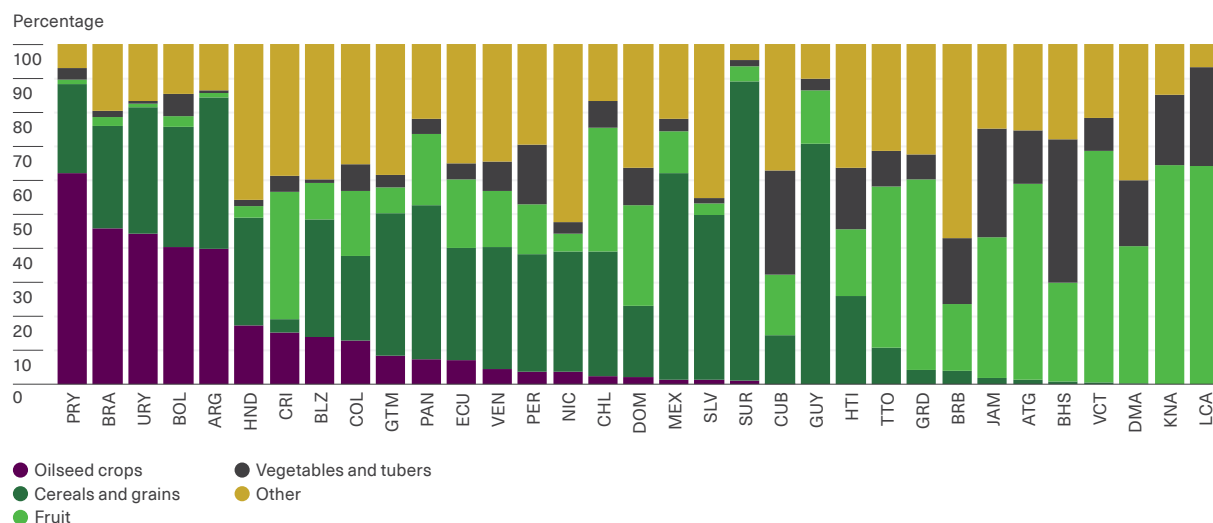
19 While the size distribution of farms may act as a barrier to productivity gains, the causal relationship may also run in the opposite direction, whereby low agricultural productivity results in smaller farm sizes.

20 These are the main crops in terms of the land area used for production and the number of farms engaged in the activity; they are not necessarily the most important in terms of their contribution to economic output.

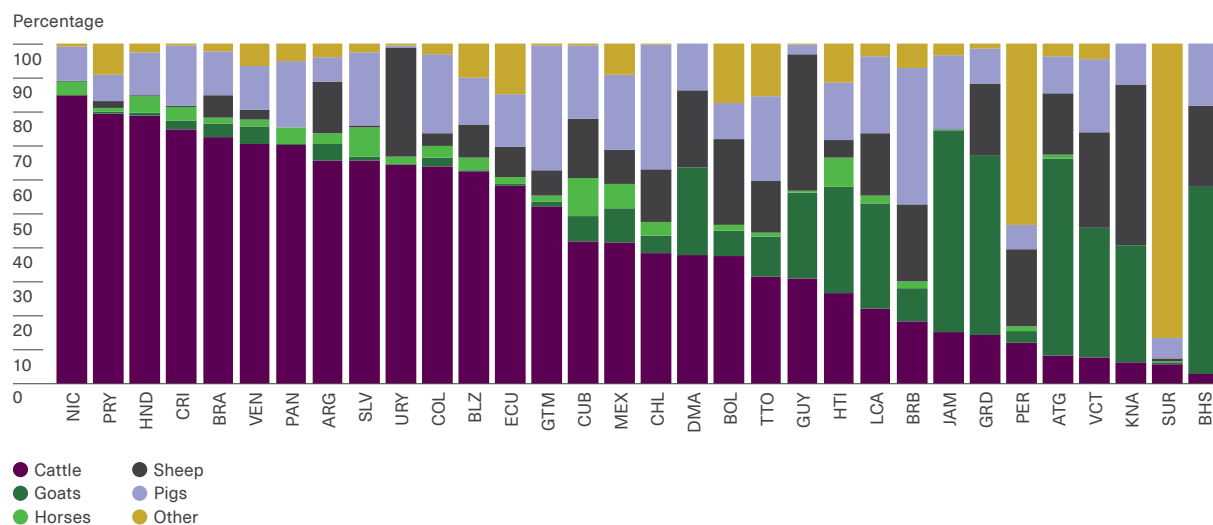
21 The two main crops in LAC as a whole are soybeans and maize. Soybeans are produced primarily in Southern Cone countries—with the exception of Chile—namely Argentina, Bolivia, Brazil, Paraguay, and Uruguay, while maize is the dominant crop in Mesoamerican countries such as Honduras, Guatemala, and Mexico. Coffee production is also notable in Colombia, Guatemala, Honduras, Peru, and Venezuela. Crops such as wheat and rice are present in many countries. Other crops are important only in a smaller group of countries—for example, sorghum in Bolivia and Mexico; grapes in Chile; cacao in Ecuador, Peru, Colombia, and Venezuela; or potatoes in Peru.

Graph 2.4
Composition of the agricultural sector in LAC countries, 2023

Panel A.
Composition of harvested area by crop group



Panel B.
Composition of livestock inventories by type of animal



Note: In Panel A, the category "other" includes legumes, crops for industrial materials (such as sugarcane), plant-based fibers, spices, stimulants (coffee, tea, yerba mate, and tobacco), nuts and seeds, and other unclassified products. Countries are ordered in descending order according to the share of oilseeds, and then by the share of cereals and grains. In Panel B, "other" includes camelids, mules and hinnies; rabbits and hares; geese and ducks; and other rodents used mainly for meat, such as guinea pigs. Countries are shown in descending order according to the share of cattle.

Source: Authors based on FAO (2025b).

Turning to livestock (Panel B of Graph 2.4), and excluding poultry (chickens and turkeys),²² cattle are the predominant type in most countries of the region, especially in continental ones. In several Caribbean islands—such as Antigua and Barbuda, The Bahamas, or Grenada—goats constitute the main livestock category, while sheep and pigs are present in most countries with a meaningful share, although they rarely constitute the dominant category (with the exception of Saint Kitts and Nevis). Equine production is also present across much of the region, though to a more limited extent.

This raises an important question: Are differences in average farm size driven primarily by differences in the composition of crops and livestock?

Globally, although average farm sizes differ somewhat across crops, Table 2.1 shows that there are large cross-country disparities in farm size even for the same activity. The table groups countries into quintiles based on agricultural value added per worker. A generally positive relationship emerges between agricultural value added per worker and average farm size—both for crops and for livestock production.²³ The differences are especially pronounced for grains, oilseeds, and livestock, and smaller for fruits, cocoa, and coffee. Panel B of Table 2.1 presents average farm sizes by activity for LAC countries with available data, sorted in the same way—from lowest to highest agricultural value added per worker. Southern Cone countries display larger average sizes, and this pattern cannot be explained solely by the type of activity undertaken; it appears across most activities.

The way production is organized in lower-income countries—where family farming, particularly subsistence farming, is more prevalent—may contribute to a farm-size distribution skewed toward very small farms. Family farming is widespread across the region: in all countries with available data, it represents more than 75% of farms, and in most cases more than 98% (see Box 2.2). Countries with a smaller share of family farming include Argentina, Brazil, and Uruguay—all of which have highly developed agricultural sectors and large areas of farmland—as well as Costa Rica.



While differences in the size distribution of farms can be explained in part by crop and livestock composition, large disparities remain even within the same activity

The concept of family farming, while useful for classification and analysis, encompasses a broad range of farms that differ along many dimensions: the assets they manage (land size and quality, access to water, livestock, infrastructure, mechanization), the resources available to them (natural, human, and financial), the share of family vs. hired labor, land tenure arrangements, production scale, whether they generate surplus production, and their degree of market integration, among others. Box 2.2 describes what is meant by family farming.²⁴

22 Because chickens and turkeys have stock levels that are significantly higher than those of other types of livestock, they are excluded from the graph to avoid distorting the representation of the livestock structure.

23 Adamopoulos and Restuccia (2014) offer similar evidence using data from the 1990 World Agricultural Census, with countries sorted by GDP per capita.

24 In light of this heterogeneity, the chapter prioritizes the use of farm size as the main unit of analysis rather than classifying farms based on the concept of family farming.

Table 2.1
Average size by crop and livestock type

Panel A. Global

Quintile	Average crop size (ha)								Livestock per holding (head)			
	Total	Wheat	Rice	Maize	Soybeans	Coffee	Cocoa	Fruit	Cattle	Chicken	Sheep	Pigs
Q1	2.1	17.7	1.2	1.7	8.6	1.0	0.5	0.4	10.3	218.6	46.5	113.2
Q2	28.0	12.7	2.1	1.5	8.7	2.5	3.4	0.6	20.3	52.1	23.1	33.4
Q3	45.8	18.8	48.3	3.7	0.1	1.4	1.6	1.5	52.7	182.5	91.5	108.5
Q4	49.6	10.7	25.4	5.6	5.9			6.1	41.0	681.7	87.3	453.6
Q5	438.4	60.2	86.9	32.9	44.0			5.6	119.3	25.433.0	393.1	501.2

Panel B. Selected LAC countries

Country	Average crop size (ha)								Livestock per holding (head)			
	Total	Wheat	Rice	Maize	Soybeans	Coffee	Cocoa	Fruit	Cattle	Chicken	Sheep	Pigs
Guatemala	4.5	0.3	1.7	0.8	1.2	1.6	0.3	0.2	15.2	93.8	8.0	3.8
Ecuador	14.7		0.5	1.7	12.9	2.7	4.2		10.5	15.7	6.3	3.5
Mexico	14.7	2.5	3.9	0.0	15.6	1.6			16.9	69.2	9.5	5.4
Panama	11.7		2.3	1.2	0.1	1.0	0.1		39.1	93.7		11.1
Brazil	72.8	17.6	3.1	3.5		4.8	5.8	0.6	48.1	117.5	36.6	11.2
Chile	83.7	4.5	10.1	3.3				7.2	25.6	200.4	40.7	16.2
Uruguay	287.4	101.1	275.6	11.3					212.4	325.5	448.0	15.5

Note: The table reports the average size of farms—measured as cultivated area per farm in the case of crops, and as the number of animals per ranch in the case of livestock. Countries are shown in ascending order of agricultural value added per worker in 2023 (in constant 2015 dollars) and, in the case of the global sample, grouped into quintiles (Q1: Guatemala, India, Indonesia, Lao PDR, Pakistan, South Africa, Thailand, and Tanzania; Q2: Brazil, China, Comoros, Ecuador, Egypt, Greece, Mexico, and Panama; Q3: Algeria, Chile, Korea, Estonia, Iran, Japan, Malaysia, Türkiye, and Uruguay; Q4: Saudi Arabia, Austria, Denmark, Spain, France, Ireland, Italy, New Zealand, and Portugal; Q5: Germany, Australia, Belgium, Canada, the United States, Israel, the Netherlands, the United Kingdom, and Sweden). The data correspond to the 1990 and 2000 rounds of the World Census of Agriculture, which are the only rounds that report the number of farms by crop or livestock type.

Source: Authors based on the World Bank (2025c) and FAO (2025b, 2025c).

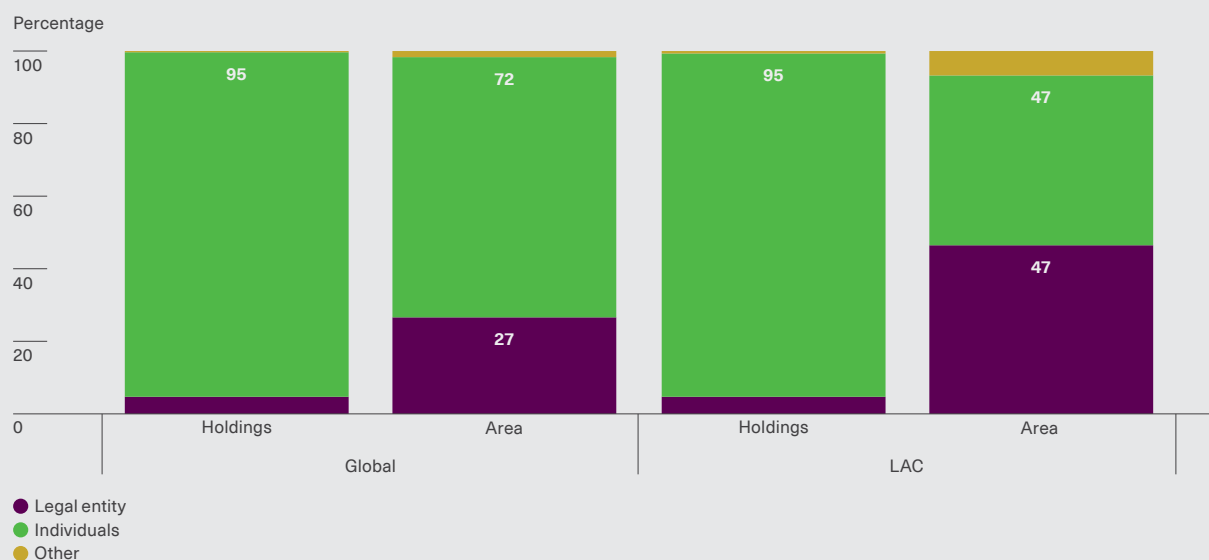
Box 2.2

Family farming

Family farming or family agriculture refers to a way of organizing agricultural, forestry, fisheries, livestock, and aquaculture production that is managed and operated by a family and relies primarily on the labor of its members. The family and the farm^a are closely linked, evolve together, and combine economic, environmental, reproductive, social, and cultural functions.

Although this is the general FAO definition, countries also have their own specific definitions of family farming,^b which reflect their particular social, historical, and political contexts. This is important because the agroecological and territorial characteristics of a region or country—as well as its infrastructure, regulatory environment, sociocultural context, and national conditions (cultural, social, demographic)—shape the activities and functions of agriculture in general, and of family farming in particular. For example, in many countries in the region, labor in family farming is carried out largely by women. Women sustain diverse, resilient, and territorially rooted agrifood systems (Nobre and Hora, 2017; Quesada et al., 2023). In these small-scale and family farming systems, rural women play central roles throughout the entire production process—from land preparation to commercialization. Their work also includes the raising of small and farm animals, which contributes to self-consumption and complementary income generation, alongside agroecological knowledge and skills passed down across generations, which are essential for the sustainability of territories.

Graph 1
Incidence of family farming



Note: Values correspond to the latest year with available data for each country from the two most recent rounds of the World Census of Agriculture (2010 and 2020). The global aggregate includes 81 countries, and the LAC aggregate includes 15. The category "other" includes unregistered partnerships or unspecified tenure types.

Source: Authors based on FAO (2025c).

To measure the incidence of family farming, FAO estimates rely on two core features that are common to all definitions: the type of land management or ownership, and the availability of labor on the farm. Based on information on the legal status of agricultural producers, around 95% of farms worldwide are managed by an individual, a group of individuals, or a family unit—with or without a formal contract—and therefore fall within the definition of family farming. These units account for 72% of agricultural land, since non-family farms tend to be larger.

At the regional level, the share of farms managed by individuals shows a pattern similar to the global one, but these farms represent a much smaller share of total land area—47%.

Table 1 shows the share of family farming holdings in total farms in 15 countries in the region. Family farming is widespread across all of them.

Table 1
Family farms in Latin American and Caribbean countries

Country	N° of family agricultural holdings	Percentage of family holdings over total agricultural holdings
Argentina	210,664	84.4
Bolivia	855,356	98.1
Brazil	5,056,525	77.0
Chile	129,607	93.5
Costa Rica	80,987	87.1
Granada	9,306	99.6
Jamaica	210,853	92.2
Nicaragua	261,791	99.7
Panama	246,820	99.3
Paraguay	286,807	98.6
Peru	2,246,702	99.4
Saint Lucia	9,956	99.8
Suriname	10,188	99.6
Uruguay	37,272	83.2

Source: Authors based on FAO (2025c).



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Scan this QR code to learn more about
CAF's support for family farming.

However, not all family farming is the same. According to FAO (2015b), three segments can be identified within family farming:

- **Large family farms**, which operate essentially as large commercial enterprises, although they are managed by a family and rely primarily on family labor. This segment generally has access to higher-potential land, to markets (technology, capital, and product markets), and generates surpluses that can be reinvested in the farm.
- **Medium or small market-oriented farms**, which are oriented toward markets or have the potential to do so if adequate incentives are in place.
- **Small subsistence farms**, which produce mainly for self-consumption and have little or no potential to generate marketable surpluses.^c

The structural diversity inherent to family farming—ranging from subsistence units to commercially scaled agricultural enterprises—means that broad, one-size-fits-all policies and programs face significant limitations in effectively addressing the differing needs of each segment.

a. An economic unit of agricultural production (farm) under single management. Management may be exercised by one or several individuals or families, by a clan or tribe, or by a legal entity (FAO, 2005).

b. Table A.2.2 in the appendix to this chapter, available in the online edition of the RED, presents each country's national definition of family farming.

c. According to FAO (2014), another commonly used classification to reflect heterogeneity within family farming distinguishes among subsistence farming (focused on self-consumption, with insufficient resources and income for household reproduction), transitional farming (combining self-consumption and sales, with difficulty generating surpluses), and consolidated family farming (with greater access to resources, markets, and capital-building capacity).

Distribution by type of tenure

One of the potential explanations for the prevalence of smaller farms is the type of land tenure, which provides insight into how land markets function. Table 2.2 shows that, across all regions, the main tenure arrangement for farms is “owned or has owner-like possession.” The category “other forms of tenure” has a meaningful presence in some LAC countries and in other parts of the world. In the region, this category includes informal tenure arrangements, which may pose risks for the development of more modern land markets or

limit productive investment due to the uncertainty associated with the absence of formal title.²⁵

Table 2.2 also shows that the share of rented land in LAC is much lower than in North American or European countries. Renting can enable land to be allocated to more efficient agricultural operators, thereby increasing farm size.

25 In developed countries, “other forms of tenure” may include formal arrangements other than leasing or ownership—such as *teeltpacht* (crop-share tenancy) or *erfpacht* (long-term surface rights) in the Netherlands, which are legal agreements but fall outside conventional regulated leases (*pacht*); or life estate, common land, and temporary use contracts for public lands in the United Kingdom, all of which have legal standing.

Table 2.2
Composition of farms by type of land tenure

Country/Region	Agricultural holdings by type of tenure (percentage)			
	Owned or has owner-like possession	Renting	Other forms of tenure	More than one form of tenure
North America				
Canada	63.8	29.0	7.2	
United States	75.7	24.3		
Latin America				
Argentina	55.8	10.4	10.5	23.3
Bolivia	91.5		8.5	
Brazil	77.0	15.5	7.5	
Chile	78.3	8.0	3.5	10.2
Mexico	85.8	6.3	2.5	5.4
Panama	94.1	0.9		5.0
Paraguay	90.7	2.7		6.7
Peru	84.4	4.3	2.3	9.1
Uruguay	61.2	13.6	13.5	11.7
Europe				
Austria	51.7	37.5	10.9	
Belgium	51.2	46.9	1.9	
Bulgaria	42.1	30.1	27.7	
Croatia	79.1	19.8	1.1	
Czech Republic	57.5	42.5		
Denmark	67.0	33.0		
Estonia	52.6	38.8	8.6	
Finland	62.9	37.1		
Germany	50.8	42.5	6.7	
Greece		87.9	12.1	
Hungary		63.9	36.1	
Ireland		100.0		
Italy		59.1	40.9	
Netherlands	48.3	29.2	22.5	
Norway	64.4	35.6		
Poland	79.8	18.3	1.9	
Portugal		44.0	56.0	
Slovakia	72.3	27.7		
Slovenia	65.8	32.7	1.5	
Spain	65.9	23.4	10.7	
Sweden	67.9	32.1		
Switzerland	50.4	46.1	3.6	
United Kingdom		99.8	0.2	
Asia and the Pacific				
Australia	74.8	23.6	1.6	
India	99.2	0.4	0.5	
South Korea	72.8	5.8		21.3

Note: The category "owned or has owner-like possession" refers to the legal possession of land, which grants the owner the right to decide how the land is used (within certain limits) and to sell or rent it. "Rented land" refers to land operated by someone other than the owner. Rental agreements can take various forms: a fixed monetary payment, a share of production, specific products, or even payment in services. In some cases, land may be provided free of charge. "Other forms of tenure" include land operated without a title and without the owner's consent (informal occupation), as well as temporary tenure arrangements such as trusts or other non-permanent modalities. Values correspond to the latest year with available data for each country from the two most recent rounds of the World Census of Agriculture (2010 and 2020).

Source: Authors based on FAO (2025c).



Quinoa harvest in the Urubamba River Valley, Peru.

Agricultural employment

The share of agricultural employment in total employment varies widely across regions and is directly related to income levels. In lower-income countries or regions—such as Africa or India—agricultural employment accounts for more than 40% of total employment, whereas in higher-income regions, such as Europe or North America, it represents less than 10%. In LAC, agricultural employment represents 15% of total employment, placing the region closer to the values observed in higher-income regions than to those of Africa or India.²⁶

From 1995 to 2023, agricultural employment declined significantly in higher-income regions such as North America and Europe, as well as in Asia and the Pacific, as shown in Table 2.3. In contrast, agricultural employment increased substantially in lower-income regions such as Africa, the Middle East, and Central Asia. LAC shows a slight increase overall, though with considerable heterogeneity across countries. However, an analysis of the share of agricultural employment in total employment shows that all regions experienced declines—an evolution consistent with the expected structural transformation process described in Chapter 1, particularly among low- and middle-income countries.



The decline in the share of agricultural employment in total employment is consistent with the structural transformation underway in many countries

In LAC, countries with more developed agricultural sectors and larger average farm sizes—such as Argentina or Brazil—generally experienced declines in agricultural employment levels and in the sector's share of total employment. Countries with less developed agricultural sectors and smaller average farm sizes—such as many Caribbean islands or some Central American countries—show increases in agricultural employment, although most still register a decline in the sector's share of total employment.

Finally, in terms of gender composition, the agricultural sector continues to employ more men (62% on average worldwide) than women (38%). In LAC, this gap is even wider: men account for 77% of agricultural employment.

Agricultural capital

At the global level, between 1995 and 2023, the stock of net capital in the agricultural sector increased. The regions with the largest increases are Asia and the Pacific, followed by Africa, where growth reached around 200% over the period. Among higher-income regions, growth was uneven—significant in North America (107%) and very moderate in Europe (17%). In LAC, increases were closer to the European experience than the North American one, although

with substantial heterogeneity. Countries such as Argentina, Guyana, Paraguay, Peru, and Uruguay, among others, recorded very large increases of more than 100%, with values exceeding 400% in Uruguay and 500% in Guyana. However, the moderate increase for the region as a whole can largely be explained by the lack of growth—or even decline—observed in Brazil and Mexico, two of the region's main countries.

²⁶ Chapter 7 provides a detailed description of employment in rural areas. Employment in the agricultural sector has shown a sustained decline over the past decades and currently accounts for 43% of total rural employment.

Table 2.3

Agricultural employment and its share of total employment, 1995 and 2023

Region/Country	Agricultural employment (thousands of people)			Share of total employment (percentage)		
	1995	2023	Variation (percentage)	1995	2023	Variation (p.p.)
Africa	128,958	219,466	70.2	57.4	42.4	-15.0
North America	3,274	2,606	-20.4	3.0	1.4	-1.5
Asia and the Pacific	705,241	535,635	-24.0	42.3	27.9	-14.4
Europe	26,215	12,393	-52.7	13.8	5.9	-7.9
Middle East and Central Asia	48,388	58,051	20.0	28.8	17.9	-10.9
Latin America and the Caribbean	36,452	37,851	3.8	23.8	15.5	-8.3
Latin America	34,115	35,201	3.2	23.7	16.0	-7.7
Argentina	1,597	1,422	-10.9	1.2	0.6	-0.6
Belize	16	28	79.5	27.2	15.6	-11.5
Bolivia	1,360	1,541	13.3	42.3	24.4	-17.9
Brazil	11,151	8,619	-22.7	17.0	8.2	-8.8
Chile	862	558	-35.3	15.7	6.2	-9.5
Colombia	2,686	3,233	20.3	18.4	14.4	-4.0
Costa Rica	252	299	18.4	18.3	13.4	-4.9
Ecuador	1,204	2,675	122.2	27.7	30.0	2.3
El Salvador	515	412	-20.1	26.8	14.8	-12.0
Guatemala	1,216	1,912	57.3	35.0	26.7	-8.4
Honduras	765	1,028	34.5	37.3	22.6	-14.7
Mexico	7,516	7,128	-5.2	23.5	12.0	-11.5
Nicaragua	494	839	69.8	34.0	27.7	-6.4
Panama	214	288	34.3	20.8	14.7	-6.1
Paraguay	518	553	6.7	28.1	17.2	-11.0
Peru	3,643	4,514	23.9	39.2	24.0	-15.2
Suriname	9	17	93.1	7.3	7.4	0.1
Uruguay	97	135	39.5	7.6	8.7	1.1
Caribbean	2,337	2,650	13.4	24.0	14.0	-10.0
Dominican Republic	542	377	-30.5	20.4	7.4	-13.0
Guyana	78	30	-61.6	31.1	11.3	-19.8
Haiti	1,418	1,998	40.9	54.1	44.7	-9.4
Jamaica	244	219	-10.3	23.2	14.6	-8.6
The Bahamas	6	7	10.2	4.3	2.9	-1.4
Trinidad and Tobago	48	20	-59.3	10.6	2.9	-7.7

Note: The agricultural sector includes forestry and fishing activities, as disaggregated subsector data are not available for all countries. The data correspond to 2023 and cover 153 countries. The percentage share of agricultural employment in total employment is calculated as the simple average of country-level shares.

Source: Authors based on the World Bank (2025e) and FAO (2025f).

Table 2.4
Stock of net agricultural capital, 1995 and 2023

Region/Country	USD millions		Variation (percentage)
	1995	2023	
Africa	132,793	377,875	184.6
North America	406,410	840,211	106.7
Asia and the Pacific	1,087,646	3,405,205	213.1
Europe	1,009,483	1,182,721	17.2
Middle East and Central Asia	232,907	497,021	113.4
Latin America and the Caribbean	248,457	330,559	33.0
Latin America	243,113	323,106	32.9
Argentina	38,492	77,308	100.8
Belize	85	147	72.0
Bolivia	2,324	6,461	178.0
Brazil	84,727	84,760	0.0
Chile	8,191	17,215	110.2
Colombia	10,859	20,645	90.1
Costa Rica	3,330	7,423	122.9
Ecuador	6,076	6,188	1.8
El Salvador	3,565	3,281	-8.0
Guatemala	6,253	10,938	74.9
Honduras	5,506	12,637	129.5
Mexico	54,858	29,291	-46.6
Nicaragua	1,303	2,936	125.3
Panama	1,051	2,318	120.5
Paraguay	3,466	8,495	145.1
Peru	11,207	24,289	116.7
Suriname	228	619	171.3
Uruguay	1,592	8,155	412.1
Caribbean	5,344	7,453	39.5
Dominican Republic	1,891	2,626	38.9
Guyana	136	929	585.1
Haiti	2,586	2,942	13.8
Jamaica	541	706	30.4
The Bahamas	111	190	71.8
Trinidad and Tobago	80	61	-24.0

Note: The stock of net capital measures the value of fixed agricultural capital after deducting depreciation due to use and obsolescence. Fixed capital includes all produced assets used repeatedly in the agricultural production process for more than one year, excluding land. Net agricultural capital per worker is measured in millions of U.S. dollars (USD) at constant 2015 prices, and the value for each region was calculated as the weighted average of the countries it comprises. The data cover 143 countries.

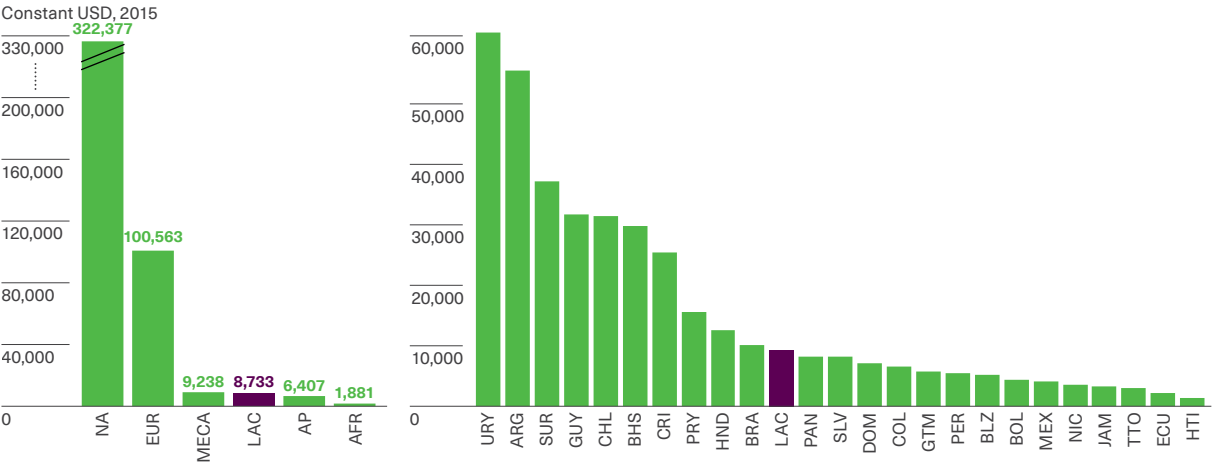
Source: Authors based on FAO (2025i).

Yet this change in the stock of net capital is not very informative without additional context. Panel A of Graph 2.5 presents net capital per worker. In this case, a clear relationship with income levels

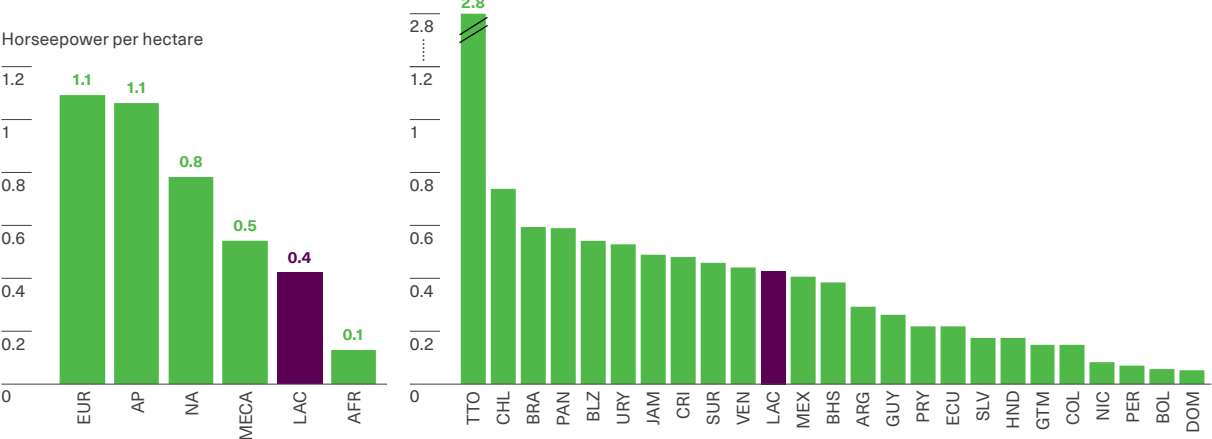
emerges: North America and Europe are the regions with the highest capital per worker and the highest per capita income, with values an order of magnitude higher than in other regions.

Graph 2.5
Agricultural capital

Panel A.
Net agricultural capital stock per worker, 2023



Panel B.
Agricultural machinery per unit of agricultural land, 2019



Note: The regions included are: Africa (AFR), Asia and the Pacific (AP), Latin America and the Caribbean (LAC), Middle East and Central Asia (MECA), North America (NA), and Europe (EUR).
Source: Authors based on FAO (2025f, 2025i) and United States Department of Agriculture data processed by Our World in Data (USDA, n.d.b).

These differences in the stock of net capital are also reflected in agricultural machinery per unit of agricultural land. As shown in Panel B of Graph 2.5, machinery per unit of agricultural land varies significantly across regions and is directly related to their level of wealth and that of their countries. Europe and Asia and the Pacific are the two regions with the highest horsepower per unit of land. North America, although below these two regions, registers levels well above those of LAC. For its part, LAC shows values higher than Africa's, but still low compared with Europe or Asia and the Pacific. There is also substantial heterogeneity within LAC: machinery per unit of land is very low in Nicaragua,

Peru, Bolivia, the Dominican Republic, and Haiti (in descending order), while values closer to the North American average are observed in Chile, Brazil, and Panama.

The level of machinery use is closely related to the distribution of agricultural holdings, as farms must reach a minimum size for certain types of equipment to be economically viable. Machinery per hectare shows a negative relationship with the share of farms under 5 ha—that is, the smaller the proportion of farms under 5 ha, the greater the amount of machinery available per hectare.

Productive linkages between the agricultural sector and other sectors

The contribution of each sector to value added is a relevant indicator, but it does not fully capture its importance to the economy. Agricultural sectors not only produce final consumption goods—they also provide essential inputs for other productive activities. For example, soybeans are a key input in the production of soybean oil.

One way to estimate the broader economic contribution of these sectors is through the productive linkages they generate, which can be reconstructed using input–output matrices. Producing one unit of any good requires inputs that drive production in the supplying sectors. In turn, many products are used as inputs in other processes, driving production in those downstream sectors. These are known respectively as backward linkages (a sector's demand for inputs) and forward linkages (the sectors that use its output as input). Table 2.5 summarizes the main backward and forward linkages of agriculture, livestock, and agro-industry.

Agriculture's main input supplier is the chemical products sector, which accounts for 29% of total inputs used, followed by commerce (17%) and agriculture itself (14%). In terms of forward linkages, agriculture supplies inputs mainly to agro-industry, which absorbs 54% of the value added generated by agriculture, followed by agriculture itself (9%) and beverages and tobacco (9%).

Livestock sources inputs from agro-industry (33%), the livestock sector (19%), and commerce (11%). Its output is used primarily by agro-industry (68%), livestock itself (10%), and the accommodation and food sector (2%).

Finally, the main input suppliers for agro-industry are livestock (28%), agro-industry itself (17%), and agriculture (13%), while its output is used as an input by agro-industry (49%), accommodation and food (27%), and livestock (20%).

Table 2.5

Productive linkages of the agriculture, livestock, and agro-industry sectors in Latin America and the Caribbean, 2017

Sector	Forward linkages	Backward linkages
Agriculture	Agro-industry (54%)	Chemical products (29%)
	Agriculture (9%)	Trade (17%)
	Beverages and tobacco (9%)	Agriculture (14%)
Livestock	Agro-industry (68%)	Agro-industry (33%)
	Livestock (10%)	Livestock (19%)
	Accommodation and food services (2%)	Trade (11%)
Agro-industry	Agro-industry (49%)	Livestock (28%)
	Accommodation and food services (27%)	Agro-industry (17%)
	Livestock (20%)	Agriculture (13%)

Note: The table shows, for each sector analyzed, the three main sectors with which it has forward linkages (the sectors that use it as input) and backward linkages (its input suppliers). Percentages in parentheses indicate each connected sector's share in intermediate consumption: for backward linkages, the share in total input demand of the sector analyzed; for forward linkages, the share of the connected sector as a destination for the sector's output.

Source: Authors based on Aguiar et al. (2022).

These sectors are highly interconnected. For example, livestock relies on certain crops as feed, but it also serves as an input in the production of certain crops.



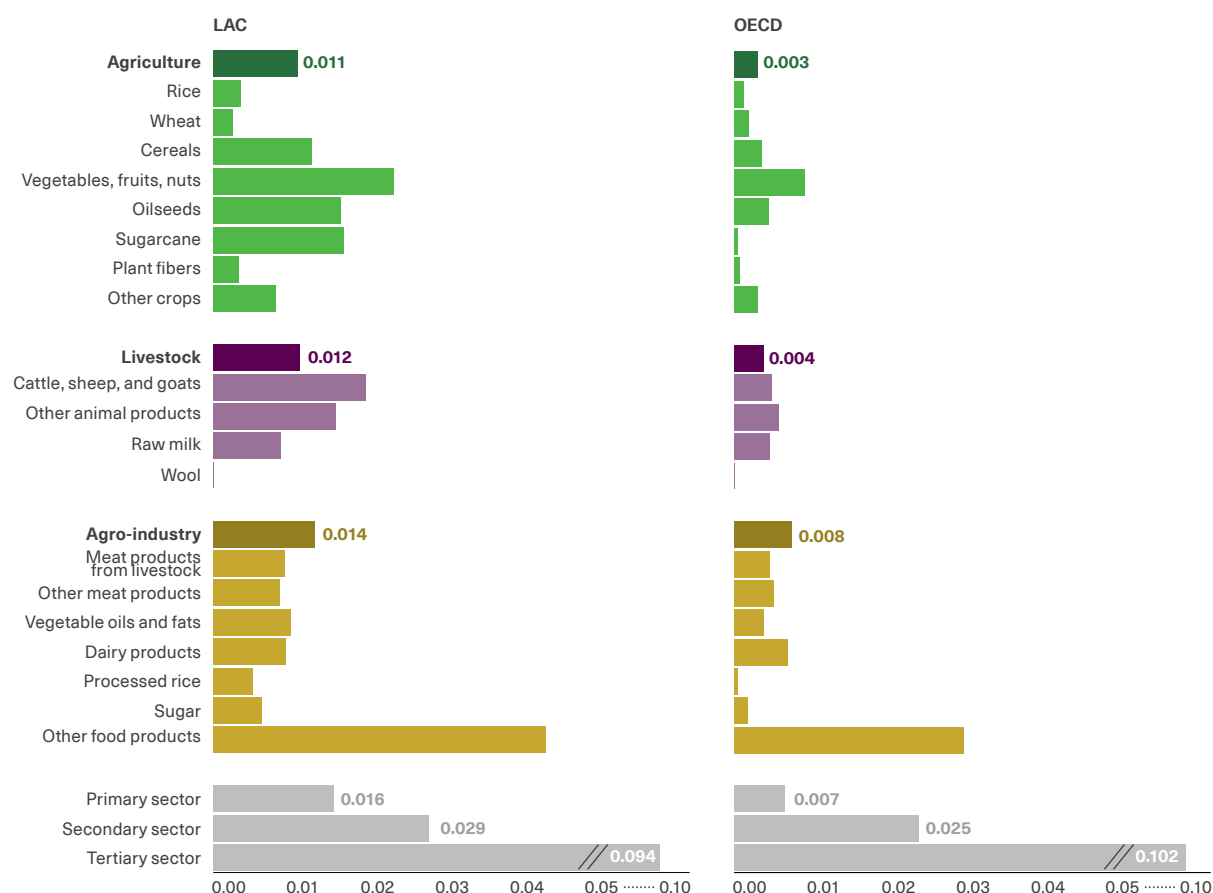
The importance of agricultural sectors—measured by their degree of influence—is considerably higher in LAC than in the OECD

A way to measure the importance of these sectors in the economy is through the degree of influence, which considers the linkages generated by each sector but weights them by the value added of the sector to which they are connected.²⁷ Graph 2.6 shows the degrees of influence of the agriculture, livestock, and agro-industry sectors in LAC and the OECD. The degree of influence is clearly higher in LAC, underscoring the greater importance of these sectors for the region.

²⁷ For a more precise definition of the degree of influence, see Box 4.5 in RED 2018 (Álvarez et al., 2018).

Graph 2.6

Degrees of influence of the agriculture, livestock, and agro-industry sectors in the economy, 2017



Note: Regional values are calculated as the simple average of the countries within each region.

Source: Authors based on Aguiar et al. (2022).

Relationship between the sector, related industries, and international trade

The agricultural and agro-industrial sectors are significant not only because of their contribution to value added and GDP, but also because, for many countries, they constitute one of the main sources of foreign exchange.

Panel A of Graph 2.7 shows the share of agricultural exports in total exports for LAC and the world,

while Panel B presents the region's share of global agricultural exports. Looking at the share of agricultural exports in LAC as a whole, in 2023 it stood at 17%, far above the global average of 5%. This regional average conceals wide differences, with a high share in Latin America (17%) and a much lower one in the Caribbean (4%).



Agriculture accounts for 17% of exports in Latin America and represents 21% of global agricultural exports

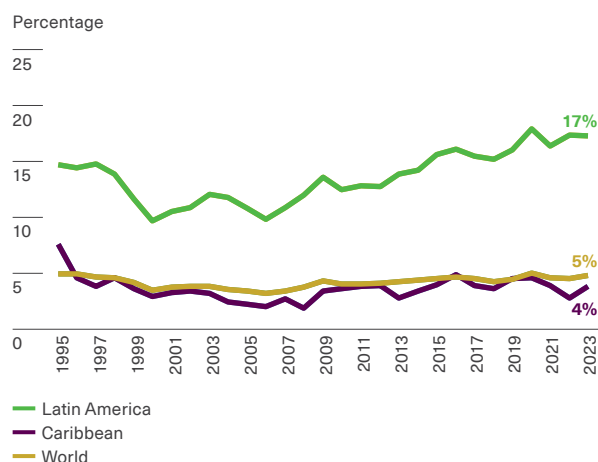
Examining the trend since the mid-1990s, there is an initial decline—to a low of around 9% in 2006—followed by a substantial increase driven by the commodity price boom from that point until 2020. Looking at the region's share of global agricultural exports, Latin America shows a steady rise—from 13% to nearly 21%—while the Caribbean exhibits a continuous decline, from 0.4% to 0.1% between 1995 and 2023. These trends underscore Latin America's role as a global supplier of food.

Turning to the composition of exports from these sectors, there is considerable heterogeneity within the region (see Graph A.2.2 in the appendix to this chapter, available in the online edition of the RED). In Belize, Paraguay, and Uruguay, agricultural, livestock, and agro-industrial products account for more than 60% of total goods exports. These are followed by countries where the sector represents between 40% and 50% of goods exports, including Argentina, Brazil, and several Central American countries such as Costa Rica, Guatemala, Honduras, and Nicaragua. In many other countries in the region, these sectors account for 10% to 40% of exports. Finally, in hydrocarbon-exporting economies (such as Trinidad and Tobago or Venezuela) and in countries highly integrated into global value chains—such as Mexico—these sectors account for less than 10% of goods exports.

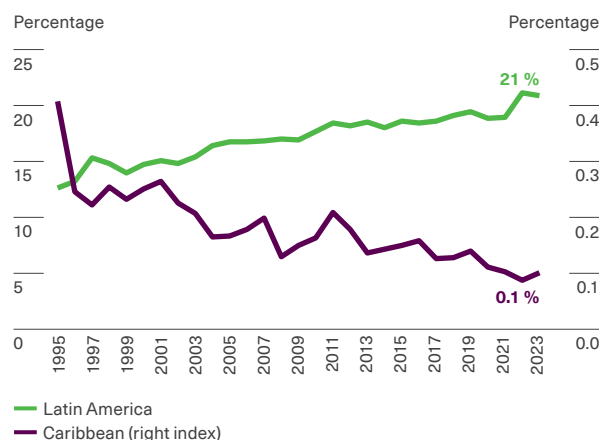
Graph 2.7

Share of agricultural exports in Latin America and the Caribbean, 1995-2023

Panel A.
Share of agricultural exports
in total exports



Panel B.
Share of LAC's agricultural exports
in global agricultural exports



Source: Authors based on UNCTAD (2025a).



Cattle in Uruguay.

Applied tariffs and trade policy

Agricultural goods typically face high trading costs. On one hand, these are low-value-per-weight goods, many of which require special handling during transport and have limited shelf life. For example, many fruits require cold-chain logistics and must be consumed within a short time frame to avoid losing quality. All of this means that transport costs often represent a significant share of the product's value at port.

On the other hand, these goods are often subject to protectionist measures for two reasons. First, food is commonly treated as a strategic good, leading countries to seek some degree of food sovereignty—frequently through restrictive tariff or non-tariff measures. Second, beyond food sovereignty considerations, many countries have long-standing agricultural sectors that they seek to preserve through protectionist policies. All of this negatively affects countries with comparative advantages in food production, as is the case for much of LAC. In addition to these measures, some governments introduce non-tariff regulations for safety reasons, both to protect the population and to safeguard local flora and fauna.

Graph 2.8 presents the average applied tariffs for regional trade agreements in LAC and for selected reference agreements in the rest of the world. In South American trade agreements, applied tariffs on primary goods tend to be lower than those applied to manufactured goods. In contrast, Central American and Caribbean Community (CARICOM) countries apply higher tariffs to primary goods than to manufactures. In reference regions such as the European Union (EU), USMCA countries (United States, Mexico and Canada), and ASEAN+3 (ASEAN plus China, Japan, and Korea), lower protection is also observed for manufactured goods relative to primary goods—consistent with the hypothesis introduced earlier in this section: countries seek to protect their agricultural sectors for reasons related to food sovereignty and local producer protection.

Beyond average tariffs, it is useful to examine bilateral tariffs across regions (see Table A.2.3 in the appendix of this chapter, available in the online edition of the RED). A first observation is that the three major trade agreements among South American countries establish trade that is virtually tariff-free for primary goods, as tariffs never exceed 2%. In contrast, Central American and Caribbean countries apply low tariffs only to members of their intraregional agreements. Particularly notable is CARICOM: while tariffs among its members are around 2%, it applies tariffs of approximately 18% to non-members—with the exception of the EU, to which it applies tariffs of around 13%. Among LAC's external trade partners, ASEAN+3 exhibits a tariff structure similar to CARICOM's, offering low tariffs only to member countries, while tariffs for non-members hover around 10%. The EU is a special case: its tariffs are low both for its own members and for other LAC blocs with which it has agreements—with the exception of Mercosur, to which it applies a tariff close to 6%.²⁸

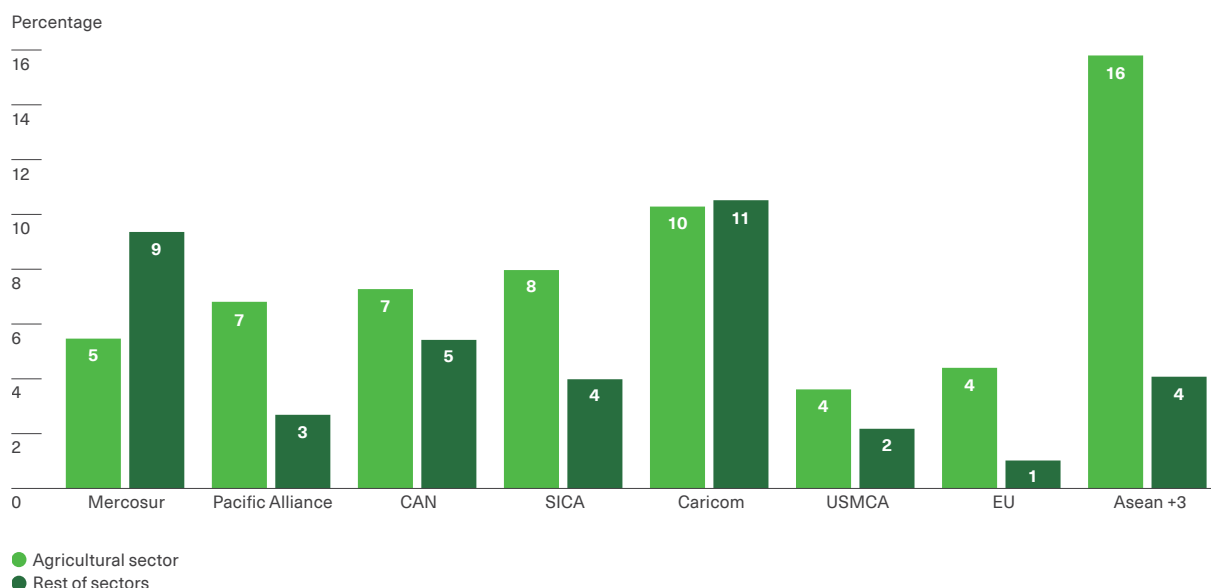


The agricultural sector faces higher non-tariff barriers than other sectors—and these barriers correspond to tariff equivalents far above the applied tariff levels

28 The agricultural chapter of the agreement is one of the most contentious areas in the trade negotiations between the EU and Mercosur.

Graph 2.8

Average applied tariffs by sector and region



Note: The graph shows average tariffs applied by each trade bloc to primary goods and to the rest of the economy. Values represent the average of the last three available years (2021–2023). Mercosur: Southern Common Market; CAN: Andean Community; SICA: Central American Integration System; CARICOM: Caribbean Community; USMCA: United States–Mexico–Canada Agreement; ASEAN+3: Association of Southeast Asian Nations plus China, Japan, and Korea.

Source: Authors based on UNCTAD's Trade Analysis and Information System (TRAINS) using WITS (2025).

Trade policy involves more than tariffs; it also includes non-tariff measures (NTMs). These may be technical—for example, sanitary and phytosanitary standards—which are justified from a trade-policy perspective because they aim to protect local flora and fauna, ensure consumer safety, or guarantee that imported products meet minimum quality standards. Other measures are non-technical, such as quotas or price controls. These measures lack a trade-policy justification and are purely protectionist. In many cases, this latter group of measures can impose barriers or costs greater than tariffs themselves.

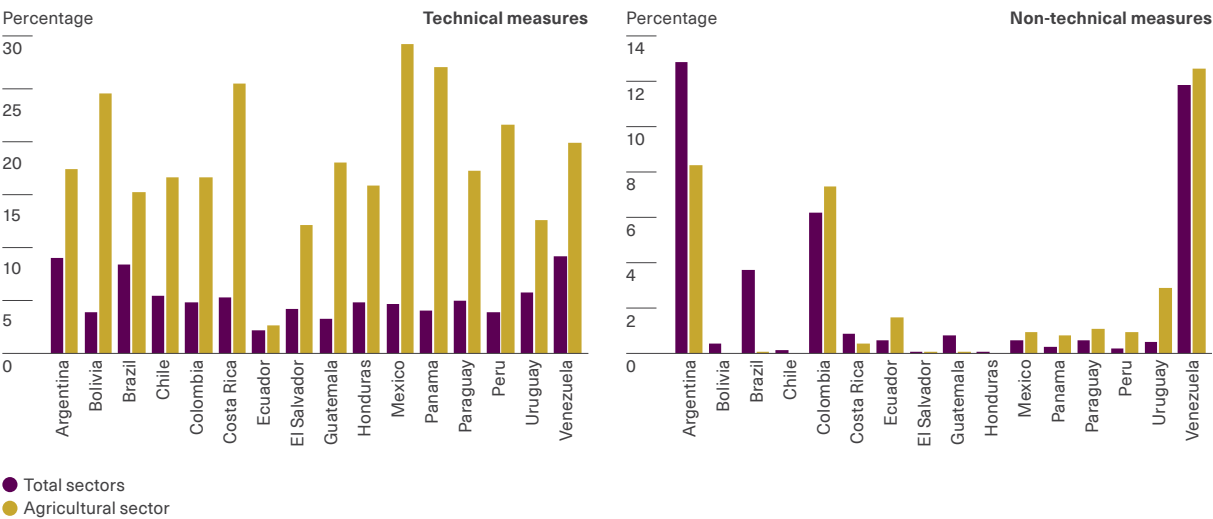
The World Bank estimates the tariff equivalent of both types of measures for each country. Panel A of Graph 2.9 illustrates the tariff-equivalent level represented by technical and non-technical barriers to trade for the primary sector and for the economy as a whole. Panel B shows the tariff equivalents

implied by these non-tariff measures for the primary sector, as well as the level of applied tariffs on agricultural products for a set of countries in the region.

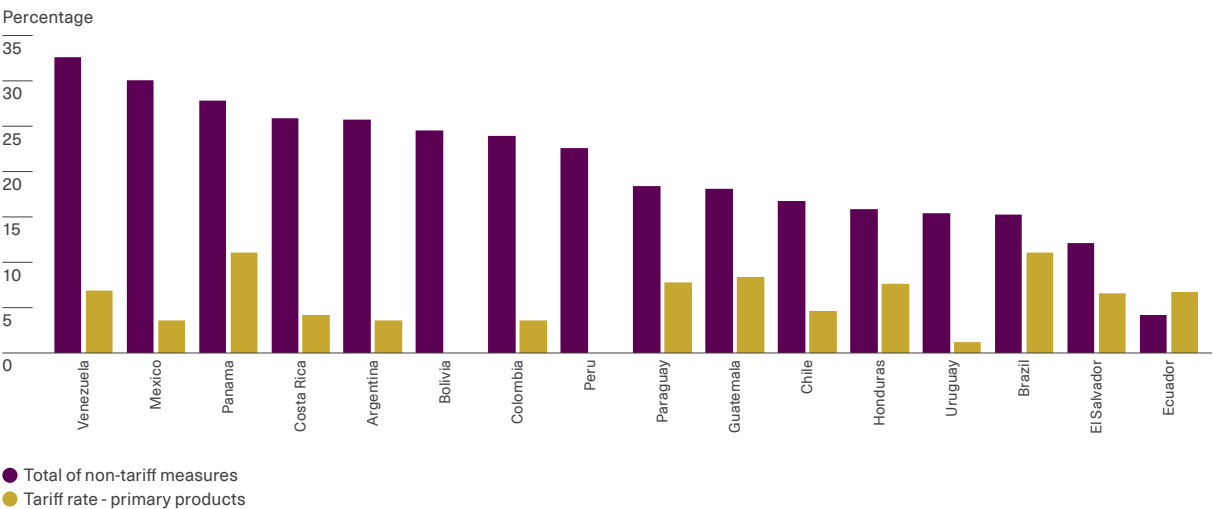
First, tariff equivalents associated with technical measures affecting trade in the primary sector are much higher than those for the economy as a whole. This is unsurprising given their ecological and sanitary protection objectives. Non-technical measures are used to a lesser extent, although some countries—such as Argentina, Colombia, and Venezuela—continue to make significant use of them for both primary goods and the broader economy. Second, the level of tariff equivalents associated with these non-tariff measures is generally much higher than applied tariff levels in LAC (Panel B of Graph 2.9).

Graph 2.9
Tariff equivalent of non-tariff barriers in the agricultural sector

Panel A.
Comparison of the agricultural sector with the rest of the economy



Panel B.
Comparison of non-tariff measures with applied tariff rates in the agricultural sector



Note: The graph presents average estimates for 2012–2016 of the ad-valorem equivalent of non-tariff measures (NTM) for all sectors of the economy and for the agricultural sector. These are calculated as the equivalent tariff that would generate the same change in import quantities as the observed non-tariff barrier. Total ad-valorem equivalents and their breakdown into technical measures (sanitary and phytosanitary measures, labeling requirements, etc.) and non-technical measures (trade measures, quantitative restrictions, price controls, financial measures, etc.) are shown. Applied tariffs on primary products in 2022 are also included.

Source: Authors based on the World Bank (2025a).

Impacts of the EU's CBAM and EUDR mechanisms on agricultural and agro-industrial exports from Latin America and the Caribbean

In its efforts to combat climate change and reduce global greenhouse gas emissions, the EU is implementing two regulatory mechanisms that will significantly affect exports from LAC: the Carbon Border Adjustment Mechanism (CBAM) and the EU Regulation on Deforestation-Free Products (EUDR). Although these instruments differ in scope and design, both require greater traceability and sustainability, reshaping the criteria for access to the European market. Their impact, however, will not be uniform and will vary across countries and

industries. The following sections describe each regulation in greater detail.²⁹



The region's agricultural exports will need to adjust to new regulations introduced by high-income countries to combat climate change—such as the EU's Carbon Border Adjustment Mechanism and the EU Regulation on Deforestation-Free Products

Carbon Border Adjustment Mechanism

CBAM aims to ensure that goods imported into the European market internalize a cost equivalent to the carbon emissions embedded in their production—similar to what they would pay if they had been produced under EU regulations. The measure's main objective is to prevent “carbon leakage,” meaning the relocation of production toward countries with laxer environmental standards in order to avoid stricter regulations. This type of policy is designed to safeguard the broader goal of reducing global emissions by preventing a shift in where those emissions are generated. During its transitional phase (2023–2025), importers had to report the embedded emissions of the goods they brought into the EU. Beginning in 2026, the regime becomes fully operational, and importers will need to purchase CBAM certificates aligned with the carbon price under the EU Emissions Trading System (EU ETS),

the European emissions market in which firms must buy allowances for each ton of CO₂ they emit. CBAM currently covers sectors such as steel, iron, aluminum, cement, fertilizers, electricity, and hydrogen.

Although CBAM does not currently regulate agricultural products directly, it may generate indirect impacts on the agricultural and agro-industrial sectors in LAC. The main ones include:

- Higher costs for critical inputs, such as fertilizers and electricity, which are covered by the mechanism.
- Greater pressure to adopt cleaner and more efficient production processes to reduce carbon footprints and maintain access to demanding markets.

²⁹ In addition, certifications that recognize good gender practices (such as fair trade labels with a gender focus) can be promoted, and women-led products can be positioned as differentiators in international markets.



Yellow, green, and red bananas hanging on the tree
in Punta Arenas, Costa Rica.

- New reporting and certification costs related to emissions along the value chain.
- A potential loss of competitiveness vis-à-vis international suppliers whose products have lower embedded emissions.
- The possibility of CBAM being extended to agricultural products in the future, which would have direct implications for LAC by increasing the cost of agricultural exports to the EU and requiring more stringent sustainability standards, with consequences for production costs as well as preferential market access.

EU Regulation on Deforestation-Free Products

The EUDR prohibits certain goods from entering the European market if they are linked to areas that were deforested after December 2020. It aims to ensure that European demand does not contribute to global deforestation, granting market access only to verifiably deforestation-free products. The regulation covers raw materials such as cattle, cocoa, coffee, palm oil, rubber, soy, and timber and timber-based products. Exporters must demonstrate due diligence to ensure that products originate from land not subject to recent deforestation, supported by traceability, geolocation, and full documentation of the supply chain.³⁰ In September 2025, the European Commission announced that implementation would be postponed until December 2026.

The regulation has a more direct impact on LAC's agricultural exports—particularly soy, beef, coffee, cocoa, palm oil, timber, and related products. In Argentina, for example, De la Vega (2025) estimates that EUDR would significantly affect the soy and beef value chains, with an average GDP impact ranging between –0.1% and –0.5% over 2025–2030. This reduction in output would be accompanied by a decrease in deforested hectares (–6.6%) and a decline in GHG emissions (–0.4%).

The regulation raises compliance costs related to traceability, geolocation of plots, and auditing requirements. It may also create risks of exclusion—particularly for small producers—who often face greater challenges in adapting to the new standards.

The combined effect of these mechanisms generates both challenges and opportunities, which will differ across LAC countries depending on their production structures and export specialization. Although these mechanisms impose significant demands, they also encourage a transition toward more sustainable production systems, strengthening comparative advantages for those countries able to adapt and capitalize on these changes. This underscores the importance of acting swiftly to prepare the sector for the new requirements—both to lead the transition and to avoid being sidelined from these markets.

Under the broader framework of the European Green Deal, further requirements are expected to increase gradually—such as reporting on the absence of child labor and maximum pesticide residue thresholds, among others. Additionally, other major markets and trading blocs relevant to LAC may align their regulations with these measures or adopt similar frameworks. It is therefore important to consider the progress made by some countries—such as Uruguay, which has robust traceability systems in place. Others, including Colombia, Ecuador, and Peru, which have been advancing in georeferencing and digital traceability systems since the EUDR was announced in 2023, may be better positioned to incorporate new requirements and prepare their productive sectors proactively to comply with these standards.

30 Chapter 3 examines how technological progress, especially digitalization, can contribute to lowering certification and traceability costs.