

# Building Food Security and Resilience through Intraregional Trade in Latin American and the Caribbean

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Intraregional agrifood trade in Latin America and the Caribbean (LAC) offers untapped opportunities for expansion. Comparative advantages in food production as well as variation in consumption patterns create a high degree of complementarity across many LAC countries. Making use of this variation to expand trade within the region could improve access to, availability, and diversity of food, as well as ensure more stable food supplies. Stable supplies are particularly important for food security given the likelihood of continued shocks, such as conflicts, epidemics, economic crises, and extreme weather events.

Although trade between countries in the region plays an important role as a source of imports, more than 60 percent of LAC's food purchases come from extraregional suppliers. However, the shares of intra- and extraregional imports vary by subregion. About 60 percent of South American food imports come from regional suppliers, but only 20 percent of Mexican and Central American imports come from LAC suppliers. In the Caribbean, the share of regional suppliers in food imports has increased over the past five years but is currently only 29 percent (UN Statistics Division, UN Comtrade 2022). Most intraregional trade takes place within subregions, meaning that trade between countries from different LAC subregions is less common and thus presents the greatest opportunities for expansion.

In this analysis of trade opportunities and challenges,<sup>1</sup> the authors show there is potential to expand intraregional agrifood trade in major products such as corn, soybeans, soybean meal, wheat, poultry meat, milk, and concentrated cream. Facilitating intraregional trade and establishing new trade relations between LAC countries (the extensive margin of trade) where complementarities have been identified would provide opportunities for growth in the agrifood sectors of these countries, make LAC food systems more resilient to supply shocks, and reduce food insecurity by ensuring efficient and reliable food supplies for consumers. However,

despite progress in recent years, a number of factors – including high tariff rates, nontariff measures, origin requirements, government procurement rules, government support, and high transportation costs – continue to hamper the expansion of intraregional trade.

This analysis focuses exclusively on intraregional trade; it does not examine opportunities for trade with partners outside the LAC region or compare opportunities for intraregional trade to extraregional trade. While such analysis could be valuable for informing trade policy, one of our primary objectives is to encourage stronger linkages between the economies of LAC countries regardless of trade opportunities outside the region. This goal reflects the expectation that improving these linkages among neighboring countries will have positive spillovers in the form of improved resilience to shocks, stronger political cohesion, and broader cooperation across these economies.

To accurately contextualize this analysis, it is necessary to highlight the diversity of food systems within LAC. While “LAC” is a standard regional classification and our analysis includes all LAC countries, the agrifood sectors, and especially agrifood trade, in the various LAC subregions face diverse challenges and opportunities. For example, these challenges and opportunities differ markedly between the Caribbean island countries and the larger Latin American countries, most notably Brazil and Argentina. These distinctions should inform the interpretation and implementation of our findings.

## RELATIVE COMPETITIVENESS OF LAC IN AGRIFOOD PRODUCTION

To identify opportunities for intraregional trade, the FAO-IFPRI report (2023) that informs this brief analyzes and describes the revealed comparative advantage of each LAC country's agrifood trade using an extension of the revealed competitiveness index (Vollrath 1991). This measure

compares the adjusted value of exports and imports to characterize trade flows and GDP per capita to measure underlying factor endowments within a set of countries and commodities, generating a value for each country between -1 and 1 where values from -1 to 0 indicate a competitive disadvantage in exporting agrifood products, while values from 0 to 1 indicate a comparative advantage in exporting these products (Danna-Buitrago and Stellian 2021).

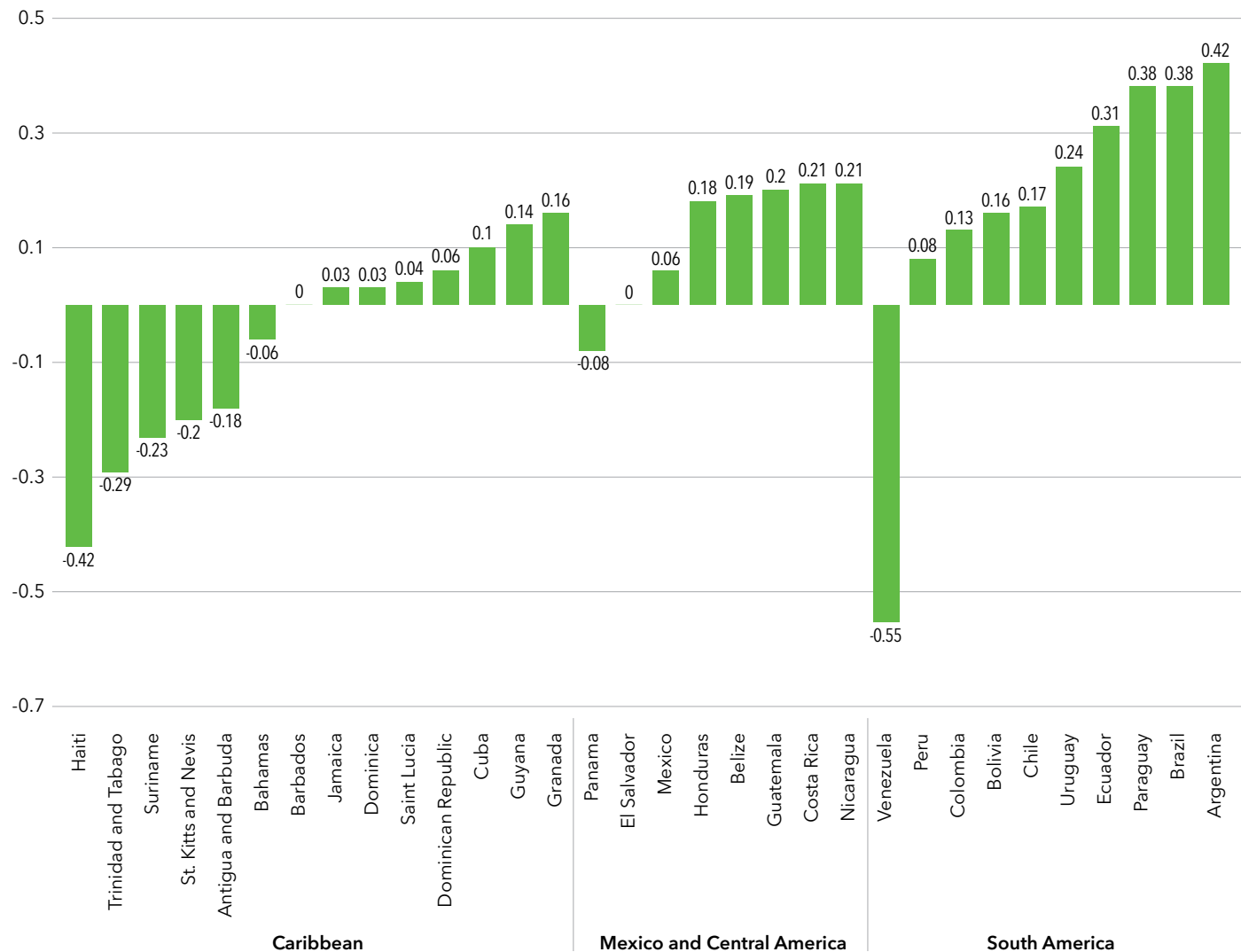
Many LAC countries show relative competitiveness in the production and export of agrifood products. The most competitive countries are, in decreasing order, Argentina, Brazil, Paraguay, Ecuador, Uruguay, Costa Rica, and Nicaragua. Conversely, many countries in the Caribbean and some in Central America have a relative competitive disadvantage in exporting agrifood products. This contrast indicates there may be benefits from promoting intraregional trade between these sets of countries.

## OPPORTUNITIES FOR INTRAREGIONAL TRADE IN LAC

Using the trade complementarity index (Michaely 1996), the FAO-IFPRI report authors are able to examine bilateral agrifood trade between LAC countries, including comparing the composition of each country’s imports and exports with those of their counterparts. Essentially, this analysis answers the question: How well does the exporter’s supply match the importer’s demand?

Many LAC countries have high complementarity indexes, indicating opportunities for intraregional trade. For example, there is a high degree of complementarity between Argentina as an exporter and Peru as an importer, and to a lesser extent between Argentina as an exporter and Colombia, Venezuela, Mexico, and Ecuador as importers. Argentina also has a high degree of complementarity as an importer with Brazil and

**FIGURE 1** Relative competitiveness in agrifood products for LAC countries



Source: FAO and IFPRI (2023).

Paraguay as exporters, which is explained by Argentina's large imports of soybeans for local processing and later export as oil and meal, and by the fact that both Brazil and Paraguay are large producers of soybeans and oilseed.

Other exporter-importer pairs that demonstrate a high level of complementarity, ranked from most to least compatible, include Mexico and the Bahamas, the Dominican Republic and Belize, Brazil and Saint Kitts and Nevis, and Argentina and Ecuador.

An alternative measure identifies combinations of exporters, importers, and tariff lines that represent trade opportunities between LAC countries, including some opportunities for extensive margin trade growth. First, the authors compiled a list of four-digit products in which each country has an apparent comparative advantage in exports and then compared these with the tariff positions where countries have a comparative advantage in imports. From this analysis, it is

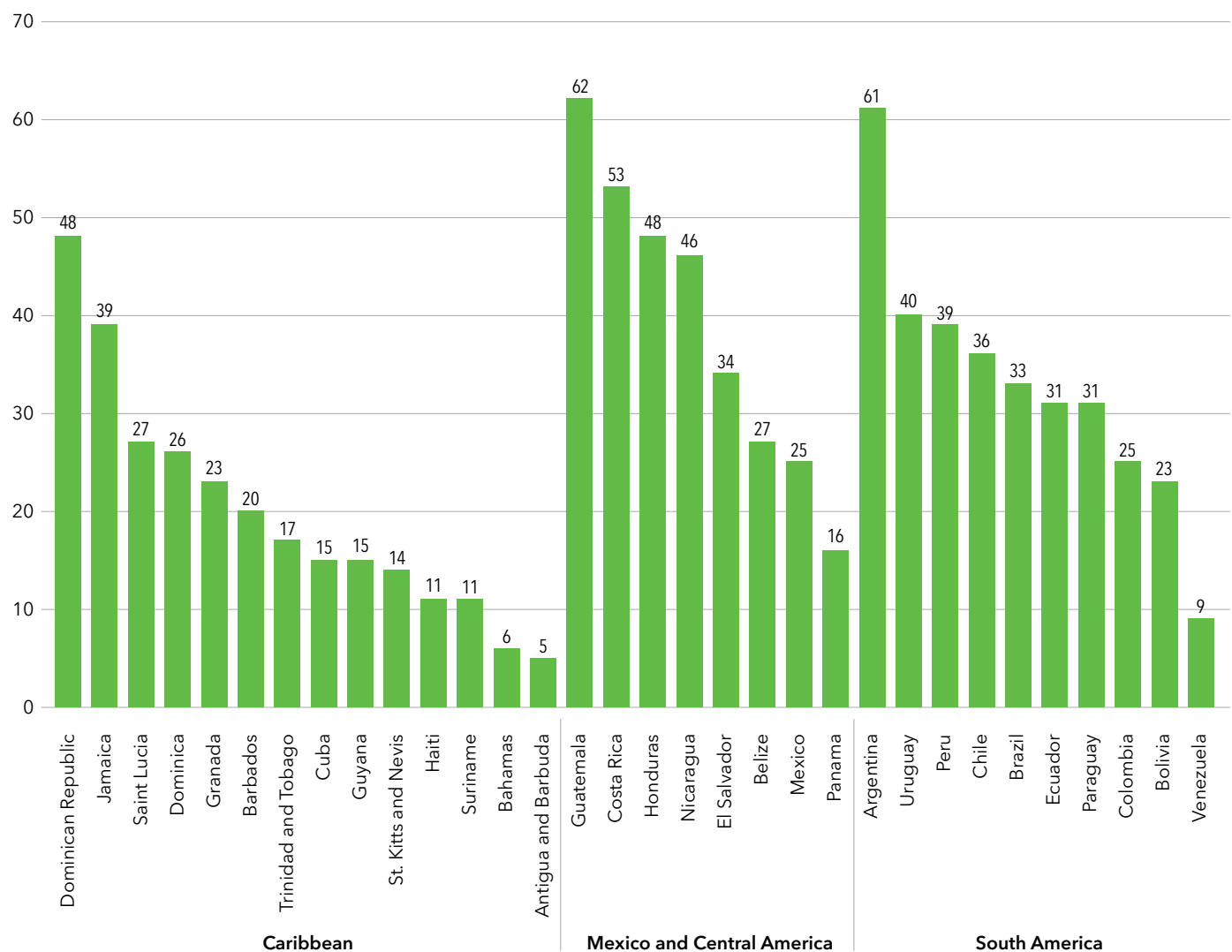
possible to identify trade opportunities that could be pursued. The number of unexploited regional trading relationships (at the four-digit product level) identified for each exporter is summarized in Figure 2. (More detailed analysis can be found in Annex III of the FAO-IFPRI report).

As Figure 2 shows, Guatemala has 62 items it could use to increase its trade within the region, Argentina has 61, and Costa Rica has 53. The products with the greatest potential for increasing trade within LAC are corn, soybeans, soybean meal, wheat, poultry meat, milk, and concentrated cream.

## POTENTIAL FOR GROWTH IN INTRAREGIONAL TRADE

In cases where LAC countries have existing trade relationships, there is potential to make intraregional trade more efficient and increase the ability of regional trade partners

**FIGURE 2** Number of four-digit products with unexploited potential for increased intraregional exports in LAC



**TABLE 1** Potential growth in intraregional agrifood trade in LAC, by product group

|                       | Value of trade (US\$ billions) |              |              |             |             |             |
|-----------------------|--------------------------------|--------------|--------------|-------------|-------------|-------------|
|                       | Exports                        |              |              | Imports     |             |             |
|                       | LAC                            | Other        | Total        | LAC         | Other       | Total       |
| Meat and fish         | 6.7                            | 47.5         | 54.3         | 5.3         | 9.1         | 14.4        |
| Dairy and eggs        | 1.6                            | 1.8          | 3.4          | 1.4         | 3.6         | 5.0         |
| Fruits and vegetables | 2.7                            | 40.7         | 43.4         | 2.5         | 3.3         | 5.8         |
| Cereals               | 9.3                            | 48.7         | 58.0         | 9.4         | 15.6        | 25.0        |
| Sugar and cacao       | 2.7                            | 14.1         | 16.8         | 2.0         | 2.2         | 4.2         |
| Processed foods       | 7.5                            | 22.0         | 29.5         | 8.0         | 11.9        | 19.9        |
| Coffee and tea        | 0.6                            | 13.9         | 14.6         | 0.5         | 0.7         | 1.2         |
| Fats and oils         | 3.6                            | 7.6          | 11.3         | 3.1         | 3.0         | 6.1         |
| Other                 | 3.8                            | 26.9         | 30.7         | 3.7         | 6.5         | 10.2        |
| <b>Total</b>          | <b>38.6</b>                    | <b>223.4</b> | <b>261.9</b> | <b>35.9</b> | <b>56.0</b> | <b>91.8</b> |

Source: Derived from UN Statistics Division, Comtrade data, April 2023.

to compete with extraregional trade partners. Table 1 presents such opportunities by product group. For example, in the case of meat and fish, the region exports more than US\$47 billion to the rest of the world, while it purchases only about \$9 billion from outside the region. Thus, improving the competitiveness of intraregional alternatives could yield billions of dollars in trade opportunities for LAC countries. Similarly, significant potential increases are observed for all agricultural and food products.

Analyzing the data by country reveals other opportunities. Countries like Mexico, which imports more than \$24 billion from outside the region, have potential to build stronger intraregional trade networks, potentially creating more attractive opportunities to import from within the region. Other countries with strong potential include Brazil (\$5.4 billion), Chile (\$3.1 billion), Colombia (\$2.8 billion), Peru (\$2.4 billion), and the Dominican Republic (\$2.0 billion), although the potential of even the largest of these (Brazil) is only 22 percent of the potential Mexican market (\$24.4 billion).

## PRIMARY BARRIERS TO TRADE EXPANSION

Intraregional trade in LAC makes up a smaller share of total trade than it does in other regions around the world, and its share has remained mostly unchanged in recent years. One estimate suggests that less than 20 percent of LAC trade is intraregional, which is about a third of the level in East Asia and half the level in Central Asia and Eastern Europe (IMF 2023). This gap has been attributed to high trade costs and inefficient policies.

In a 2015 study, the Food and Agriculture Organization of the United Nations (FAO) and the Latin American Integration

Association (ALADI) identified a set of factors that affect the development of intraregional food trade and supply, making recommendations for reforms to better foster the use of the region's productive and commercial capacities through trade. Ultimately, the report suggests that countries in the LAC region utilize policy instruments to facilitate trade and develop an integrated regional commerce system. This requires a process of harmonizing regulations including tariffs, origin requirements, and sanitary standards to align with international practices and minimize barriers to trade. Similarly, policymakers can invest in physical and institutional infrastructure that facilitates the development of trading partnerships. Here we present an analysis of the barriers to trade and what efforts have been made to address them in recent years.

## Tariffs

Although the LAC region has made significant progress in reducing tariffs in recent decades, the level of protection applied to agricultural products is still higher than that applied to other product types (CEPAL 2016). For example, in 15 countries in LAC, the average most favored nation (MFN) tariff applicable to agricultural products is 15 percent or higher, and in 13 countries the maximum MFN tariff applicable to this sector is 100 percent or higher. The products with the highest levels of protection tend to be meat, dairy, sugar, rice, and some legumes. Removing many of these remaining tariffs would reduce market distortions, promote greater efficiency and affordability in the supply of food, and allow countries to take advantage of trade opportunities inside and outside the region.

Free trade agreements constitute 186 of the 528 bilateral agreements between LAC countries, or 35 percent of the total (CEPAL 2015). However, only 33 of the 349 bilateral relations between LAC countries from different subregions are covered by such comprehensive tariff reduction agreements, representing 9 percent of the total. Notably, no CARICOM (Caribbean Community) countries<sup>2</sup> have preferential trade agreements with Mexico, South American countries, or Central American countries. In South America, only Chile, Colombia, and Peru have comprehensive preferential agreements with Central American countries and Mexico (the latter being part of the Pacific Alliance).<sup>3</sup>

## Origin requirements

ALADI launched the digital certificate of origin (COD) initiative in 2011 to facilitate the management and transmission of certificates used in customs procedures. The COD is an electronic procedure that facilitates the issuance, signature, transmission, and receipt of certificates of origin without the use of paper. Its purpose is to reduce the costs, risks, and delays associated with processing foreign trade transactions. Entities and authorized traders can process certificates of origin virtually, eliminating the need for in-person procedures and physical travel. Progress in implementation has been uneven, with some countries fully digitized and operational in bilateral systems, such as Argentina, Brazil, Chile, Paraguay, and Uruguay. However, other countries are still developing standardized platforms.

## Nontariff measures

Global tariff reductions have led to the emergence of nontariff measures in international trade. Nontariff measures are policies other than ordinary tariffs that can affect trade in goods by changing the volume of transactions, prices, or both (UNCTAD 2015). Examples include standards, technical barriers to trade, and quotas. These measures are increasingly justified based on health and environmental concerns, but, if poorly designed, can pose unnecessary burdens on trade.

## Sanitary and phytosanitary standards

Sanitary and phytosanitary standards are a type of nontariff measure that can improve product safety but also can act as a barrier to trade. Reyes and Kelleher (2015) estimated the ad valorem equivalent (AVE) of sanitary and phytosanitary standards in five Central American countries and found that they added 11 percent to the cost of imported Central American products. Particularly high costs were observed for imports from Guatemala, with the AVE reaching 68 percent of the value of some products (Martínez Piva 2019).

New innovations can minimize barriers while ensuring product quality. For example, ePhyto, an electronic equivalent to paper phytosanitary certificates, can reduce the potential for fraud, improve efficiency, and speed up the release of goods. Other benefits include global standardization, elimination of the need for bilateral agreements, and potential linkage to other electronic systems.

In South America, Argentina, Brazil, Chile, and Colombia are in the process of exchanging ePhyto certificates, while Paraguay and Peru are in the preliminary testing phase. In Central America, Costa Rica, the Dominican Republic, Guatemala, and Panama are also implementing ePhyto along with Mexico. In the Caribbean, implementing countries include the Bahamas, Jamaica, and Saint Lucia. Coordinating the implementation of these certificates across LAC can make intraregional trade opportunities more attractive.

## Restrictive trade policies in response to crises

During global crises that affect trade flows and product prices, countries often adopt trade-restrictive measures to protect their domestic markets. For example, in response to the war in Ukraine, some Latin American countries adopted restrictive measures on trade in food, fertilizers, and energy, which can affect intraregional trade. Imposing such restrictions or bans on exports in one country can prompt similar actions in other countries, which increases potential risks of market disruptions, especially amid uncertainty around international prices.

## Agricultural supports

Governments support the food and agriculture sector through a variety of policies, including trade and market interventions (such as tariffs and market price controls), which create price incentives or disincentives, provide fiscal subsidies to producers and consumers, and offer general service-related support. In the 54 countries globally covered by the OECD's 2022 annual report on agricultural policies, total support to the sector reached more than \$817 billion per year in 2019–2021 as governments attempted to protect producers and consumers from the economic impacts of the COVID-19 pandemic and other crises (OECD 2022).

The main exporting countries of South America have relatively low levels of protection for agriculture (based on the OECD's total support estimates) – those of Brazil, Chile, Paraguay, and Uruguay are low, while Argentina's rates are negative. Conversely, the countries of Central America and the Caribbean have the highest rates (especially Barbados, the Dominican Republic, El Salvador, Haiti, Jamaica, and Trinidad and Tobago). While policy supports are often intended to protect the livelihoods of producers and ensure affordable prices for consumers, they can distort markets

and create inefficiencies in global trade systems (Gautam et al. 2022).

## Government purchases

Government procurement can influence food prices and distort international markets. Unlike other regions, LAC does not have a binding framework instrument on public procurement. However, there have been recent changes in the different subregional integration systems, such as ALBA-TCP (Bolivarian Alliance for the Peoples of Our America), the Pacific Alliance, OECS (Organization of Eastern Caribbean States), MERCOSUR (Southern Common Market), and SICA (Central American Integration System), which are modernizing their public procurement systems based on current international parameters (Jiménez and Roca 2017). The issue of public procurement has also been included in free trade agreements by several countries in the region, though mainly with extraregional partners.

In addition to these factors, high transportation costs are a commonly cited barrier to trade in LAC. A World Bank report (Araya et al. 2013) examined transportation in Central America and identified five drivers of high costs: (1) High fuel prices (between 40 and 60 percent of variable costs) can make intraregional trade expensive, especially for smaller producers. (2) High crime in the subregion requires traders to spend 3–4 percent of transportation costs on security to prevent theft. (3) Around 77 percent of containers are returned empty, which highlights serious logistical inefficiencies. (4) Slow border crossings and cumbersome customs procedures delay delivery of products. (5) Lack of credit and investment reduces expansion and maintenance of transportation fleets. Many of these issues can be found across the LAC region and indicate a need for significant investment in physical and institutional infrastructure.

## POLICY RECOMMENDATIONS

### Study and reform existing trade relationships for continued engagement between LAC countries

Intraregional flows of agrifood products are relatively low across LAC, meaning that a significant share of agrifood imports come from countries outside the region. Further analysis is needed to understand bilateral trade opportunities that could result from reducing tariffs on the region's agrifood products. To help promote regional development, researchers and policymakers should review and analyze the agreements signed by each of the region's countries with extraregional third parties, as well as the conditions attached to such agreements, to determine the level of preference erosion<sup>4</sup> between LAC countries and the potential for improving regulatory standardization and convergence.

Policymakers can also negotiate sectoral agreements to liberalize trade in agriculture and fisheries, based on the preferences granted to extraregional countries, especially between the net-exporting countries of South America and the countries of Central America and the Caribbean and Mexico. Finally, a regional consensus should be established in multilateral negotiations, mainly about the World Trade Organization, but also related to conferences on climate change, biodiversity, and food systems, among others. It is important for countries in the region to have a common position to strengthen multilateralism and promote global solutions to major challenges. These should prioritize food security and encourage the contributions that international trade and technological adoption can make. A rules-based system is especially beneficial for smaller countries like those in LAC when confronting the surge in unilateral measures that distort trade.

### Reduce bureaucracy and costs

In addition to tariff reduction, it is also essential to make progress on trade facilitation measures that reduce trade costs and expand trade flows. LAC countries should establish trade facilitation agreements with each other. Policymakers can also promote the implementation of ePhyto certification for intraregional trade in products of plant origin. Similarly, they can promote intraregional digital certificates of origin, building on the experience of ALADI.

### Advance policy coherence

Working together to improve sanitary, phytosanitary, and technical procedures in the short term would not only promote intraregional trade but could also be a starting point for regulatory cooperation in LAC. Action should be taken to exchange information and experiences through workshops and similar forums, which would facilitate the harmonization of standards and procedures among countries. Regional integration systems such as ALADI, SICA, and CARICOM could also be leveraged to help implement cooperative intraregional action in regulatory policy.

### Invest in logistics and infrastructure

There are often high costs to trade in Latin America and the Caribbean, largely stemming from deficiencies in infrastructure and logistics within countries. Investments in roads, ports, and logistics in addition to finding ways to better coordinate these systems across countries would create new opportunities for trade and promote growth.

### Open public purchases to other actors

Agrifood products are often excluded from government procurement provisions established in intraregional trade

agreements. Along with insufficient communication about demand for government procurement in different LAC countries and the lack of regulatory harmonization, this exclusion penalizes potential intraregional suppliers, especially small and medium enterprises and family farms. Intraregional trade agreements should incorporate government procurement, foster communication about procurement needs between governments, and standardize procurement processes to facilitate these activities at the regional level.

## Develop an agenda for future research

Several lines of research could deepen both the current and potential contributions of intraregional trade to regional food security. Recommendations from this research could help decision-makers take advantage of existing opportunities and promote trade.

- Further qualitative analysis could provide important insights on the current state of food quality and nutrition, as well as potential challenges. The contribution of trade to more nutritious diets could also be explored.
- Although the FAO-IFPRI report identifies pairs of countries and tariff positions where trade could be higher, it does not specifically examine why this potential has not been realized. Doing so could provide useful lessons for negotiating processes and regional development plans.

Future work could expand on that of the United Nations Conference on Trade and Development (UNCTAD 2017), which uses econometric techniques to investigate the role of nontariff measures and their impact on trade within MERCOSUR.

- Additional analysis could offer insight on infrastructure and logistics constraints in the region, and on the incidence of related costs on the value of traded products, as compared with international experience, to assess their impacts on trade and possibilities for improvement.
- Research could shed light on LAC's current and potential contributions to global food security and how LAC countries could prepare for future challenges. It would also provide information on the opportunities and capabilities already available for such responses to challenges, as well as tools for discussion and cooperation for the development of other new capabilities.
- Assessing current institutional constraints on regional development and their impacts on regional and global food security could support progress toward institutional strengthening in LAC as an investment in future stability.

## Endnotes

<sup>1</sup> This brief is based on trade analysis from the 2023 FAO-IFPRI report, *La Seguridad Alimentaria y el Comercio Agroalimentario en América Latina y el Caribe* (Food Security and Agrifood Trade in Latin America and the Caribbean), which examines the potential for expanding intraregional trade in Latin America and the Caribbean and offers policy recommendations (<https://www.fao.org/documents/card/es/c/cc8592es>). A synopsis of the report is also available (<https://doi.org/10.2499/9780896294615>).

<sup>2</sup> Countries in CARICOM include 15 Caribbean nations and dependencies: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and

Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago. CARICOM was founded by Barbados, Jamaica, Guyana, and Trinidad and Tobago to promote economic integration and cooperation.

<sup>3</sup> The Pacific Alliance is an initiative for regional trade integration; it includes Chile, Colombia, Mexico, and Peru.

<sup>4</sup> The International Monetary Fund defines preference erosion as a decline in the competitive advantage that some exporters enjoy in foreign markets as a result of preferential trade treatment to a third party.

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