Policy Brief on Trade and Environmental Sustainability

How can trade support green transition and help meet climate Nationally Determined Contributions (NDCs) commitments in LAC?

Key highlights

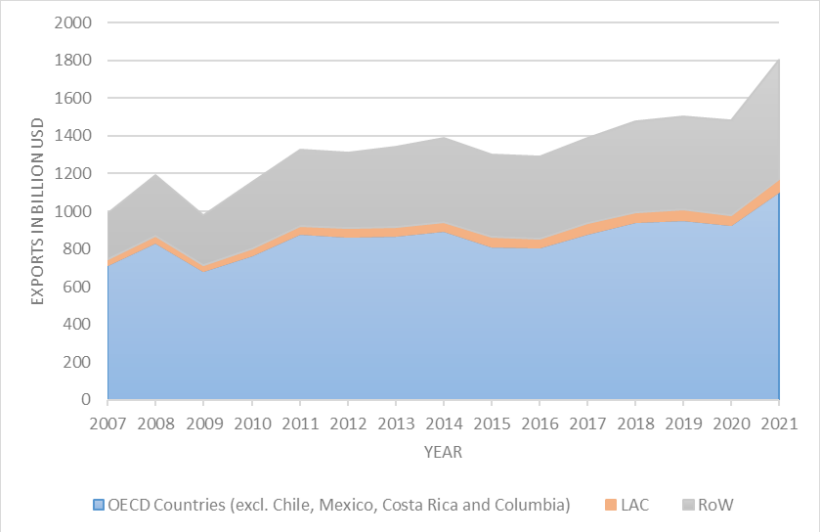
- Trade supports the path toward an environmentally sustainable economy, including through the wider dissemination of environmental goods and services and by enabling the circular economy, but the achievement of these goals depends on well-designed and tailored public policies.
- Trade can support sustainability not only through the diffusion of environmental technologies, but also through wider availability of environmental goods, including equipment, and services at competitive prices. Trade in secondary materials can also improve the security of supply of key inputs for the green energy transition and enable the economies of scale to support the decarbonisation of energy systems.
- Services are crucial inputs for the development of innovations for environmental sustainability, as well as for their adoption as industrial and commercial applications, the transport and distribution of environmental goods and critical materials, and the design and installation of infrastructure for the green transition.
- Transitioning towards resource-efficient, circular supply chains can also help address the environmental pressures created by natural resource and materials use and related waste generation. Trade can support a circular economy transition by helping achieve economies of scale, and promoting production where materials re-use is most efficient and harmful environmental consequences are lowest.

What's the issue?

A path towards an environmentally sustainable economy requires innovation, technology diffusion and incentives to make green choices in production and consumption, all of which can be supported by sound trade policies. The Paris Climate Agreement and the 2030 Agenda for Sustainable Development have shaped a new multilateral context with ambitious environmental targets, leading to more stringent environmental requirements and regulations imposed on firms and households at national level.

Adjustments to address the compliance costs of these requirements have driven increased demand for environmental goods. Global trade in environmental goods increased by 82.3% between 2007 and 2021 – from USD 990.91 billion to USD 1,806.22 billion – representing an average annual growth of just under 5%. Within this increase, the share of non-LAC OECD countries has been continuously decreasing (Figure 1), accounting for just over 72% of environmental goods exports in 2007 against just over 61% in 2021. Over the same period, LAC's share of total exports in environmental goods remained essentially the same, at 3.2% of environmental goods exports in 2007 and 3.6% in 2021. While environmental goods exports from LAC grew at a faster rate than OECD countries – 5.8% against 3.7% on an annual basis - they were still below environmental goods export growth in the rest of the world – almost 8% on an annual basis.

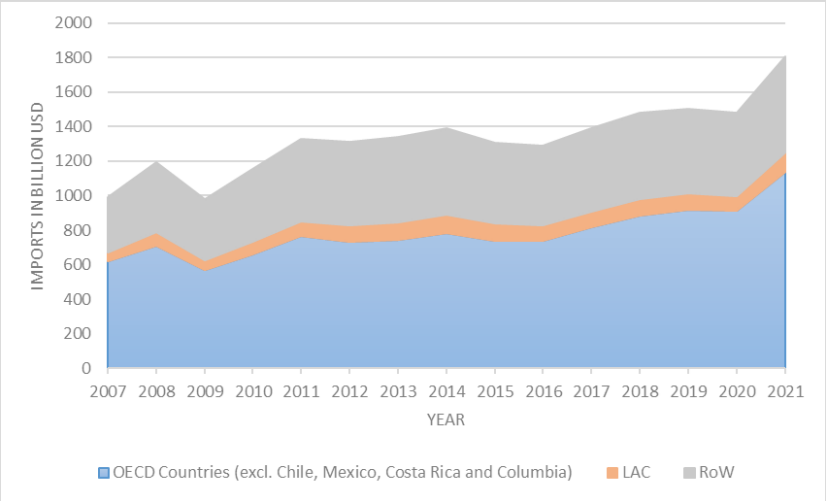
Figure 1. Exports of environmental goods, 2007-2021 (OECD non-LAC, LAC, RoW)



Note: Environmental goods are defined according to the Combined List of Environmental Goods (CLEG).
LAC defined according to OECD definition.
Source: BACI International Trade database.

At the same time, non-LAC OECD countries' share of global imports in environmental goods remained almost constant – around 62% in 2007 against around 63% in 2021 (Figure 2). LAC's share of environmental goods imports also remained almost the same – at around 5.4% in 2007 against around 6.% in 2021. However, LAC imports of environmental goods increased in value terms, from just over USD 53 billion to just over USD 109 billion – an almost 6.4% growth rate on an annual basis against around 5% for OECD countries and 4.6% for RoW.

Figure 2. Imports of environmental goods, 2007-2021 (OECD vs LAC vs RoW)



Note: Environmental goods are defined according to the Combined List of Environmental Goods (CLEG).
LAC defined according to OECD definition.
Source: BACI International Trade database.

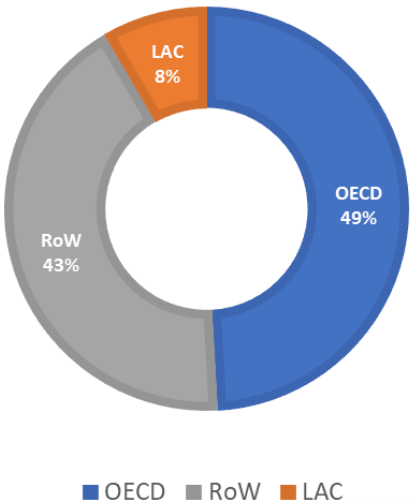
Removing barriers to trade in environmental goods facilitates the diffusion of technologies and equipment necessary to abate or avoid environmental damage, and improves access at competitive prices to the goods and materials critical for the green transition. This is the case, for example, for wind technologies, the production of which is based on continuous accumulation of sophisticated knowledge and know-how, leading to its concentration in relatively few companies and countries. Trade in wind turbines allows for the access of those technologies by a wide range of countries, increasing efficient wind power generation worldwide.

For services, beyond those formally identified as "environmental", a broad range of services can also act as key drivers of the green transition and support green economy innovation - be it for enabling the circular economy or development of environmental goods. Engineering, computer and telecommunication services are crucial inputs for the development of innovations for environmental sustainability, as well as for their adoption as industrial and commercial applications. The reuse and recycling of materials in circular supply chains also involves distribution, transport and logistics services, while architecture and construction services are crucial for the design and installation of infrastructure for the green transition.

The OECD identifies and maps the trade-related regulations that can prevent services from playing their role as drivers of the green transition. Preliminary evidence shows that regulatory restrictions imposed by countries on certain services that underpin environmental innovation and the green transition, in particular engineering, architecture, computer, and related services, and, to a lesser extent, construction services, negatively impact their firms' export performance in relation to core environmental services. Moreover, restrictions on environmental consulting and engineering services make the diffusion of cleaner technologies and practices unnecessarily costly. Efforts to remove remaining obstacles to trade in environmentally related services could also have important implications for sector-wide productivity, skills, and earnings.

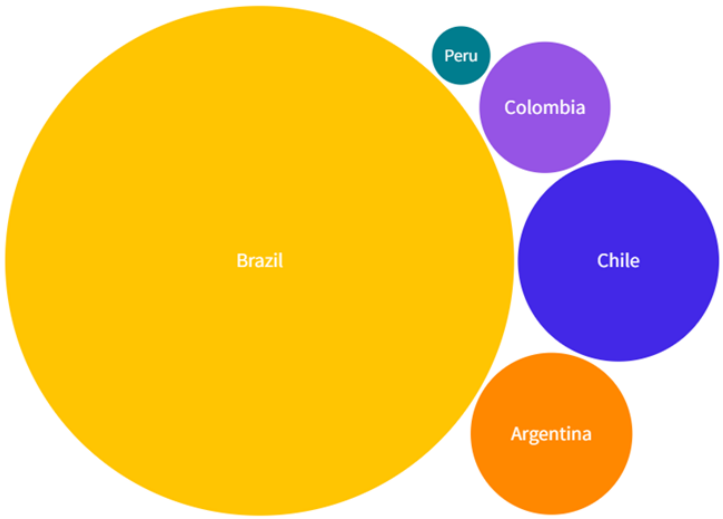
Finally, innovation, technology diffusion and incentives supported by sound trade policies are particularly important for the transition towards resource-efficient, circular supply chains that can help to alleviate some of the environmental pressures from natural resource and materials use and related waste generation. OECD analysis suggests scope for further action in the region in this regard; the OECD's Global Plastics Outlook (GPO), for example, shows that the LAC region is below the OECD average in terms of plastic waste collected for recycling (Figure 3).

Figure 3. Total plastic waste collected for recycling, average over 2009-2019



That said, patent data for the region demonstrate the potential for circular economy innovation in the region, with environmentally relevant patents in technologies related to plastics filed in Brazil, Chile, Argentina, Colombia and Peru (Figure 4).

Figure 4. Average number of environmentally related patents in plastics filed at IP5 offices (average 2000-2019)



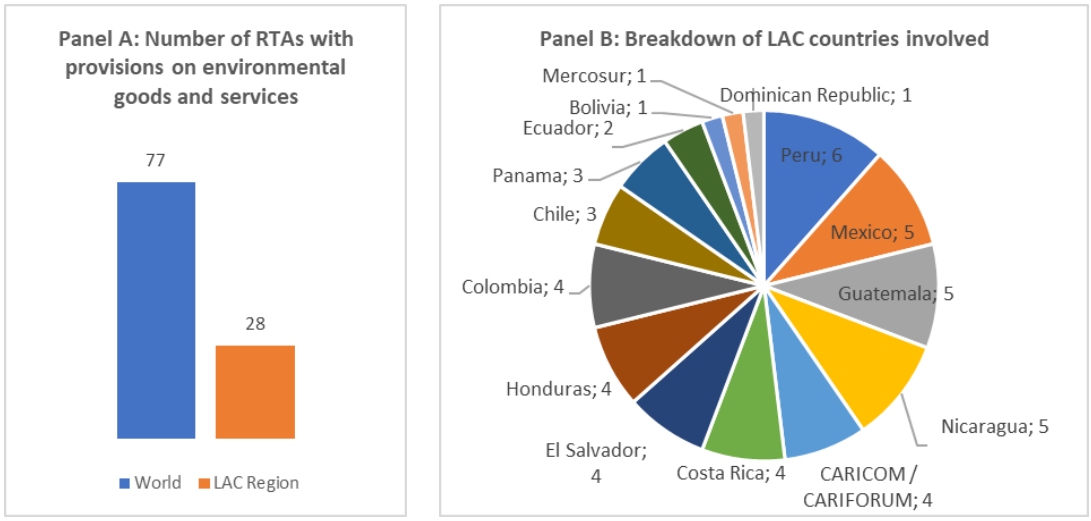
Note: Calculated as the average number of patents per country over the period 2000-2019.
Source: Compilation based on data from OECD, STI Micro-data Lab: Intellectual Property Database, http://oe.cd/ipstats.

Regional Trade agreements (RTAs)

RTAs are increasingly used as a vehicle to regulate and foster international trade in environmental goods and services. According to the TRENDS database, among 775 RTAs recorded between 1947 and 2021, 671 included at least one type of environmental provision as a part of the agreement (Figure 5). Among these, 77 RTAs included environmental provisions to co-operate on trade in environmental goods and services, and 28 of these agreements were signed by at least one country in LAC (Figure 5). Notable agreements with this provision include the Dominican Republic-Central America FTA (CAFTA-DR), the EU-Central America Association Agreement, the United States-Mexico-Canada Agreement (USMCA), and the Comprehensive and Progressive Agreement for Transpacific Partnership (CPTPP).

While the implementation and effectiveness of environmental provisions remains largely unknown due to limited data and analysis, there is some anecdotal evidence that environmental provisions have led to positive environmental outcomes by helping encourage the introduction of environmental laws and regulations, establishing institutional arrangements, facilitating environmental co-operation, and improving environmental awareness among trading partners (see, for example, CAFTA-DR, US-Peru FTA).

Figure 5: RTAs with co-operation provisions on environmental goods and services



Note: CARICOM / CARIFORUM includes: Antigua and Barbuda, Bahama, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St Kitts and Nevis, St Vincent and the Grenadines, Suriname, Trinidad and Tobago
Source: OECD based on TRENDS database: https://www.chaire-epi.ulaval.ca/en/trend.

OECD tools and analysis to support LAC with trade and the green transition

Environmental Goods

The OECD has analysed trade as a channel for the diffusion of environmental technologies, focusing on wind turbine manufacturing. Expertise in this sector is concentrated and is a significant driver of trade, with countries' wind power generation efficiency shown to depend on access to higher quality wind turbines available in international markets. Trade in wind turbines is thus key in providing access to technologies with a level of efficiency that cannot be replicated domestically in importing countries. OECD analysis shows that barriers to trade in wind turbines are also barriers to the dissemination of key environmental technologies and, moreover; that trade-discriminatory measures can also negatively impact non-manufacturing job creation in the renewable sector, as this relies on the continuous deployment of wind energy, which in turn depends on access to high quality turbines from international markets. Finally, analysis suggests that countries gain more, not from focusing on the creation of national champions, but rather from ensuring that domestic firms can apply their specific capabilities to new opportunities in the global supply chains for renewables industries.

In addition, ongoing work to assess non-tariff measures (NTMs) affecting trade in environmental goods aims to improve understanding of the significance of these measures to inform mutually supportive trade and environment policies. OECD work reviews the design and scope of NTMs affecting environmental goods, and quantifies their frequency, coverage and sectoral heterogeneity. This work aims to inform efforts, including in the context of the WTO Trade tand Environmental Sustainability

Structured Discussions (TESSD) to reach a common understanding of environmental goods warranting trade liberalisation and facilitation.

Services Trade regulations

The OECD Services trade Restrictiveness Index (STRI) Database provides comparable information across countries on regulations affecting trade in services. The STRI covers limitations on market access and national treatment of foreign services suppliers, as well as behind-the-border regulations that impede the establishment and operation of foreign services suppliers. The STRI covers 50 countries and 22 major services sectors representing approximately 80% of global services trade. Brazil, Chile, Colombia, Costa Rica, and Peru are the LAC countries currently included in the STRI.

For these six LAC countries, the OECD STRI (Figure 6) shows that average trade restrictiveness is low relative to the OECD average in many of the sectors important for the green transition (such as distribution, architecture, engineering and construction services). However, barriers remain relatively high in logistics (freight-forwarding, storage and warehouse, cargo-handling, and custom brokerage) and financial services (insurance and commercial banking). Across all sectors in the STRI, the average restrictiveness for the six LAC countries is higher than the lowest level of restrictiveness among countries covered by the STRI sample.

Services as intermediate inputs to agriculture and manufacturing

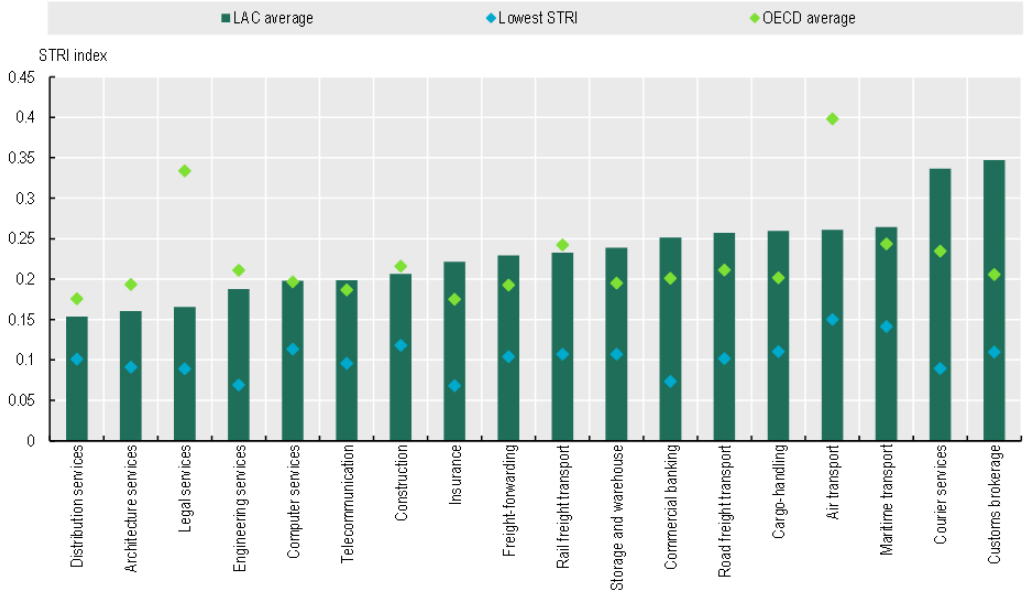
Services are fundamental intermediate inputs in virtually all production processes, across agriculture and manufacturing, accounting for significant shares of the value added embedded in gross exports of other sectors. According to the OECD Trade in Value Added (TiVA) database, services account for just over 32% of total manufacturing gross exports in South and Central America (just over 25% from domestic services and around 7% from foreign services).

Well-designed services trade policies can not only support the green transition directly, but also indirectly by underpinning overall economic efficiency. Recent OECD work shows that, on average across downstream manufacturing industries, ambitious reform scenarios that reduce trade barriers in certain services sectors are estimated to increase downstream manufacturing productivity by 8.4% (for a simulated reform targeting the air transport sector), 6.5% (telecommunications), and 2.3% (financial services).

Future work: the Green Services Trade Restrictiveness Index

To better assess the role of services trade policy for the green transition, the OECD is expanding the STRI with new policy measures and indicators that identify, map and quantify the trade policy barriers that can reduce the contribution of services to key environmental objectives, including climate change mitigation, promotion of the circular economy, and protection of biodiversity. The “Green STRI” will include the six STRI countries in the LAC region: Brazil, Mexico, Chile, Colombia, Costa Rica, and Peru.

Figure 6: Services Trade Restrictiveness Index in LAC countries compared to the OECD average and the country with lowest restrictiveness



Note: The STRI indices take values between zero and one, one being the most restrictive. The STRI database records measures on a Most Favoured Nations basis. Air transport and road freight cover only commercial establishment (with accompanying movement of people). The indices are based on laws and regulations in force on 31 October 2022. LAC averages are computed on sectoral STRI for Brazil, Chile, Colombia, Costa Rica, and Peru. Lowest STRI corresponds to the lowest score within the whole STRI sample of 50 countries.
Source: OECD STRI 2022.

Circular Economy

OECD work highlights that trade can help support a transition to a circular economy by establishing economies of scale for recycling, recovery and refurbishment and remanufacturing operations. Opportunities to align trade and circular economy policies include promoting trade in circular goods and services, scaling up reverse supply chains, harmonising circular economy standards such as those for secondary materials, and preventing illegal waste trade.

Forthcoming OECD work on Trade Policies to Promote the Circular Economy of Plastics seeks to better understand the effects on third countries of domestic regulatory measures to tackle plastic pollution, and of the harmonization of such requirements at the border. It shows that enhanced international cooperation to promote trade-related circular economy objectives would reduce the costs of policy heterogeneity, provide incentives for scaling up circular solutions and encourage the adoption of circular economy solutions by more countries. This would facilitate initiatives such as UNEP's Intergovernmental Negotiating Committee (INC) work to develop an international legally binding instrument on plastic pollution, including in the marine environment, the High Ambition Coalition to End Plastic Pollution, and the WTO Informal Dialogue on Plastic Pollution and Environmentally Sustainable Plastics Trade (IDP).

Suggested policy actions

Reducing barriers to trade in environmental goods can help improve access to key environmental technologies, including cutting edge technologies. By bringing new technologies to replace older and less clean ones, trade is an essential means of supporting improved environmental outcomes. Improved market access should focus not just on finished products, but also on trade in the components and capital goods necessary for the production of environmental goods, which are heavily impacted by tariffs and NTMs as they cross borders multiple times in global supply chains. Enhanced market access for environmental goods can also help facilitate and support positive changes in consumption patterns and individual behaviours.

Open and well-regulated service markets are also essential to promote the green transition. Efforts should focus on minimising barriers that increase costs in the backbone services that underpin the performance of the whole economy, from agriculture to manufacturing.

RTAs also offer opportunities to **explore liberalisation of environmental goods and services within the region.** Such efforts can take a holistic approach by addressing tariffs and non-tariff measures for environmental goods, revisiting services schedules for environmental services, and promoting regulatory co-operation in this area.

The viability of circular supply chains is shaped by trade policies, including for the diffusion of goods, services and technologies for collection, waste management, recycling and clean-up; the viability of repair and remanufacturing operations; and, in the case of plastics, markets for environmentally sound and effective substitutes. **Promotion of greener supply chains and the circular economy** can be facilitated **by transparent, automated, and streamlined border procedures targeting environmentally friendly alternatives, and waste and scrap intended for certified environmentally sound waste management facilities, or, through internationally agreed environmental labels, goods made from recycled or recyclable materials.**

Further reading and links

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Services Trade - OECD
STRI Trends Note 2023
Trade in Value Added - OECD