

Latin America & Caribbean

Green finance state of the market 2019



Introduction

Green bond issuance is low in Latin America, but there is significant growth potential across the region

Global green bond issuance started with multilateral development banks raising funds for climate-related projects in 2007/08. The first issuer from Latin America and the Caribbean (LAC) entered the market in 2014. LAC issuers have contributed 2% of global green bond issuance volume to date; 41% of this is from Brazil.

LAC has a combined population of 628m and land area of 20m km², which respectively amount to 8% and 15% of global totals.^{1,2} Despite only representing 6% of global GDP, it contributes about 12% of global GHG emissions.³ It is among the most biodiverse but also vulnerable regions when it comes to climate change, not only because of direct exposure to climate risks, but also due to a high sensitivity to such risks and relatively low adaptive capacity.⁴

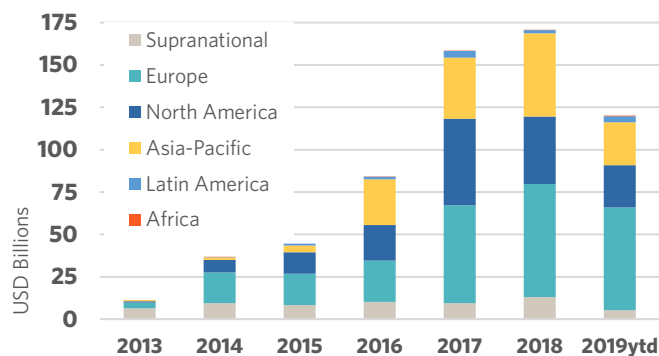
Transitioning to a green and climate-resilient economy is thus crucial to ensure that LAC can reduce its GHG emissions, better hedge against climate risks and thrive in the long run. Green bonds could be an important instrument to support this transition.

This report explores the progress that has been made and the opportunities for LAC countries. It looks at regional themes in green bond issuance as well as issuance from companies that operate in climate-aligned sectors and potential green bond issuance from public sector entities.

It also provides country-level overviews for Argentina, Brazil, Chile, Colombia, Mexico and Peru, as well as for Central America.

Note: Unless stated otherwise, all analysis in this report refers to the amount issued (not number of bonds or issuers). The cut-off date for data and charts is 2 July 2019 (H1+2 to capture the second Chile Sovereign), except for post-issuance reporting (cut-off for bond issue date: 30 October 2017, for reports: 30 October 2018) and climate-aligned (30 June 2019), as they are based on previous CBI research.

LAC issuance represents 2% of global total



Note: Total global issuance (2007 – H1 2019): USD635bn

LAC issuance (since first bond in 2014): USD12.6bn

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Understanding green bonds

Green bonds

Green bonds are issued in order to raise finance for climate change solutions. They can be issued by governments, banks, municipalities or corporations.

The green bond label can be applied to any debt format, including private placement, securitisation, covered bond, and sukuk. Labelled green loans need to comply with the Green Bond Principles or Green Loan Principles.^{5,6} The key is for the proceeds to go to “green” assets.

Green definitions

The Climate Bonds Initiative (CBI) uses the Climate Bonds Taxonomy, which features eight sectors: Energy, Buildings, Transport, Water, Waste, Land use, Industry and ICT.⁷

CBI also develops sector criteria with expert input from the international science community and industry professionals.⁸ Issuers can certify their green issuance under the Climate Bonds Standard and Sector Criteria.⁹ Independent approved verifiers provide a third party assessment that the use of proceeds complies with the objective of capping global warming at 2°C.

Inclusion in the CBI green bond database

Only bonds with at least 95% proceeds dedicated to green assets and projects that are aligned with the Climate Bonds Taxonomy are included in our green bond database and figures. If there is insufficient information on allocations, a bond may be excluded.

Other terminology used in this report

Fully-aligned climate issuers: Bond issuers that derive >95% of revenues from climate-aligned assets and green business lines. These are also referred to as ‘pureplay’ issuers.

Strongly-aligned climate issuers: Bond issuers where 75%-95% of revenues are derived from climate-aligned assets and green business lines.

For strongly-aligned issuers, we used a pro rata amount outstanding that corresponds to the percentage of ‘green’ revenues. For example, if 80% of the revenue is climate-aligned, we used 80% of the amount outstanding for each bond.

Climate-aligned bond universe: the term is used to describe the full universe of aligned outstanding bonds, i.e. green bond issuers, fully-aligned issuers and strongly-aligned issuers.

The term “aligned outstanding bonds” underscores the fact that climate-aligned bond analysis does not analyse the *full* outstanding volume of bonds from strongly-aligned issuers, but only a portion (see definition above). For simplicity, *aligned outstanding bonds* is implied throughout the report in connection with bonds from climate-aligned issuers, although the term is not always used in full.

Executive summary



Market snapshot

LAC green bond issuance has picked up strongly in 2019, driven by Chile's two green Sovereigns. Still, only 9 of LAC's 33 countries have seen green bond deals, including Barbados (the first green bond was Certified after the cut-off date).

H1 2019 issuance at USD3.7bn is three times higher than H1 2018; 40% higher than H1 2017. This has compensated for slower growth in 2018. A few more deals closed after the end of H1, have already made 2019 a record year for LAC.

There are significant differences in issuer types between countries. For example, Brazil is dominated by non-financial corporates, Chile by the sovereign deals, Mexico by development banks, and Argentina by local governments. More diversity in each market and the region overall would be a welcome development. Peru and Colombia have already indicated potential Sovereign issuances.^{10,11}

Proceeds allocations to Land use and industry are more common in LAC than elsewhere in the world. Energy allocations are high, similar to other markets. Land use and Industry represent a relatively high share compared to the global market, while Buildings and Water have a lower share. However, there are significant differences by country.

Over 80% of issuance is in hard currency, mainly USD.

However, this varies by country: e.g. all deals from Colombian issuers are denominated in COP.

There is a high share of private placements. As elsewhere globally, this is particularly true of local financial institutions.

The vast majority of volumes benefit from an external review: mostly SPOs but also Certified Climate Bonds, including Chile's green Sovereigns.

Looking ahead

Green bond growth is expected across the region, driven by much needed investments in green infrastructure. Sustainable agriculture and blue (ocean-based) activities also present opportunities. Our analysis of climate-aligned issuers has revealed greatest potential for green bond issuance among energy and water companies. Several potential public sector issuers were also identified across the region. More issuance from sovereigns and financial corporates could boost the market, especially if combined with supportive policy and further stock exchange initiatives.

Climate policy in the region

The introduction of climate policies and related initiatives, especially around green finance, has grown rapidly in LAC in the last two years. Governments and industry groups are increasingly aware of the urgent need to invest in green infrastructure and promote sustainable development, and are becoming more active. A summary of key policies and initiatives (not limited to green finance) is shown on the next page.

Nationally Determined Contribution (NDC) targets under the Paris Agreement typically range between 20-30% in terms of GHG reduction by 2025-2030 versus baseline levels for LAC countries, and most have declared NDCs.¹² Among the most ambitious countries is **Brazil**, which has a 37% reduction target by 2025 and 43% by 2030 compared to 2005 levels.

In order for these to be met, green finance needs to scale up significantly. Much more needs to be done on the policy front to achieve this, especially considering the differences by country. Governments should be bold in encouraging investments in green projects.

Cancellation of Mexico City Airport concession

In late 2018, the Mexican Government announced the cancellation of Mexico City's New International Airport (NAICM), for which USD6bn had already been issued via four green bonds between 2016-17. The Government has bought back USD1.8bn from investors, but there is still no update about what will happen to the remainder of the proceeds. Due to this, the bonds are not currently considered green, and are excluded from our database until further notice. **They are, therefore, also excluded from the figures for this report.**

If included, they would add four bonds and USD6bn (USD2bn in 2016 and USD4bn in 2017) to the numbers for **Mexico**. It would impact the figures for government-backed entities (issuer type) and Buildings, Energy, Water, Waste and Land use (allocations).

Key policies and initiatives across LAC in support of green finance

2012



Mexico passes General Law on Climate Change. **Brazil's** B3 stock exchange recommends that listed companies should provide ESG reporting, or if not explain why.

2014



Chile releases a National Green Growth Plan for the 2014-22 period, which also includes social considerations.

2015



Peru requires all listed companies and issuers to provide ESG reporting.

2016



Colombia approves a National Climate Change Decree (SISCLIMA). Its main aim is to coordinate public sector actions on the environment and develop a plan for sustainable development.

2017



Colombia releases a Road Map for Setting a Green Bond Market to support the government in developing a successful GB market in the context of SISCLIMA.

Mexico's Central Bank joins nine others from around the world to form the Network for Greening the Financial System (NGFS), as a Steering Committee member.



In **Brazil**, investors representing almost USD500bn in assets under management sign a Green Bonds Statement, showing their support for the market.

Mexican investors representing USD214bn also sign a Green Bonds Statement.



Green Finance Initiative is launched in **Brazil**, bringing together various players from industry and finance. IDB launches the Financial Innovation Laboratory (LAB), with the aim of finding and promoting instruments that channel investment into green projects.



Brazil publishes Green Bond Guidelines to support potential issuers and the development of the green bond market.

Mexico forms a Climate Finance Advisory Council (CCFC), bringing together private sector players to facilitate dialogue and reach solutions for increasing green finance.

2018



Mexico, Chile, Peru and Costa Rica release Green Bond Guidelines.



Colombia approves a Long-Term Green Growth Policy, a long-term approach to achieving green growth while meeting SDGs and NDC targets by 2030.



Mexican investors representing USD225bn in assets sign a declaration in favour of ESG disclosure on their part.



Costa Rica announces plan to become carbon neutral (i.e. including offsets) by 2021. Its stock exchange offers financial incentives and a range of support services for green bond issuers.

2019



Chile to host the United Nations' COP 25 in December. Previous LAC hosts include Argentina (1998 and 2004), Mexico (2010) and Peru (2014).



Mexico's CCFC joins the Financial Centres for Sustainability (FC4S) network and announces plans to turn Mexico into a regional leader in green finance. **Colombia's** financial markets regulator (SFC) joins the NGFS.



Argentina releases Green and Social Bond Guidelines. 18 Argentinian banks sign a Sustainable Finance Protocol with the aim of building a strategy of sustainable finance in the banking industry.



Chile becomes the first country in LAC to issue a sovereign green bond, with intentions to issue more in the future. **Colombia, Mexico and Peru** announce they may also issue sovereign green bonds.



Collaboration / Network



Guidelines / Frameworks



Efforts to increase green bonds



National Laws / Plans



Reporting / Disclosure

The Latin America & Caribbean green bond market

Regional green bond market growth picks up in 2019 with Chile Sovereign

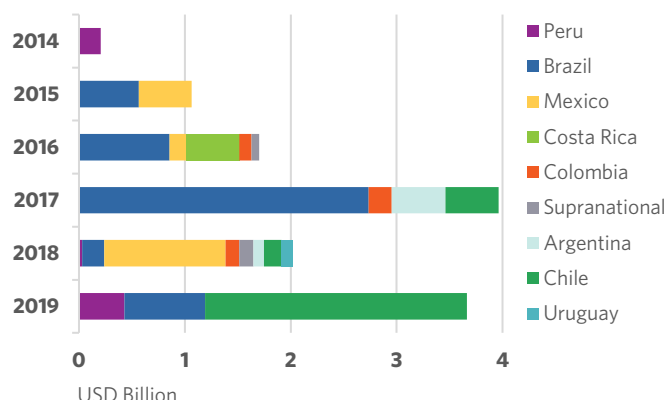
Peruvian **Energia Eolica** became the first regional green bond issuer in December 2014. Its USD204m deal financed the construction of two wind farms in north-western Peru.

Brazil and **Mexico** entered the green bond market the following year, the first thanks to non-financial corporate BRF S.A. and the latter with development bank Nafin. Global food producer **BRF** issued a EUR500m bond, which financed various projects and was one of the first globally to fund Industry more than any other sector. It was also the first benchmark-sized deal from LAC. **Nafin's** USD500m deal financed renewable energy projects.

Issuance picked up in 2016, with eight bonds from seven issuers in five countries coming to market. The year saw debuts from **Costa Rica (Banco Nacional de Costa Rica)**, **Colombia (Bancolombia)** and a **Supranational (CABEI)**, as well as the first financial corporate (Bancolombia) and first ABS (**Suzano Papel e Celulose**, Brazil) deals.

LAC's green bond market continued to grow strongly in 2017 (+133%) driven by Brazilian issuers, which accounted for 69% of annual volume. A large part of Brazil's contribution came from a USD1bn deal by development bank **BNDES**, which financed eight wind farms. 2017 also saw the first Argentinian and Chilean issuers, respectively **Province of La Rioja** and **CMPC**, coming to market.

2018 - country diversity rises 2019 - already a record year



Note: 2019 data as of 2 July 2019. There has been subsequent issuance in Q3.

There was a global slowdown in 2018 issuance, including for vanilla bonds. Nowhere was it felt more acutely than in LAC. This was likely a result of poor market conditions (especially in emerging markets), uncertainty around elections in Brazil and Mexico, Argentina's deepening economic crisis, and spill-over effects from political instability in Venezuela.¹³ Despite 12 deals (compared to 16 in 2017) and more country diversity than any other year (six, including Uruguay's debut), volumes dropped 56% in 2018 versus 2017.

Issuance has picked up strongly in 2019, however. Two-thirds of this is due to the **Republic of Chile's** Certified Climate Bonds (USD1.4bn issued in June and EUR861m from July), the only sovereign green bonds from the region so far.

Going forward, we expect LAC's GB market to expand considerably, in large part to fund the region's infrastructure gap. With a few new deals since the cut-off date for this report, mostly from Brazil, 2019 has already surpassed 2017 as LAC's record year. COP 25, to be hosted later this year by Chile, could also catalyse this growth. Chile's recent deals may spur further sovereign issuance.

Brazil, Chile and Mexico currently dominate issuance

The development of LAC's capital markets presents substantial opportunities to scale up investment in green projects. This is urgently needed, especially in the context of sustainable infrastructure development.

Only eight LAC countries have seen green bond issuance so far.

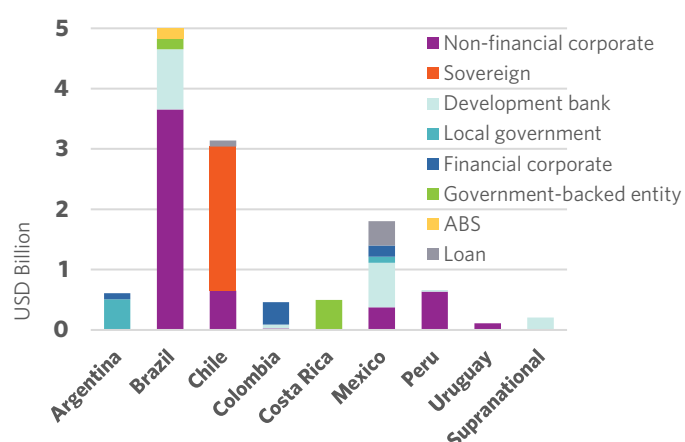
Brazil dominates the region, accounting for 41% of total regional issuance to date. **Chile** follows at 25%, and **Mexico** is third at 14%. The other five countries each represent 5% or less. The distribution is more fragmented by number of bonds, but Brazil (36%), Mexico (15%) and Chile (11%) still make up the top three.

Country	Issued (USD)	Bonds	Issuers
Brazil	5.1bn	19	13
Chile	3.1bn	6	4
Mexico*	1.8bn	8	6
Peru	664m	4	4
Argentina	610m	4	3
Costa Rica	500m	1	1
Colombia	459m	5	4
Uruguay**	108m	1	1
Supranational	206m	4	2
Total	12.6bn	52	38

Note: * Data includes a loan to Iberdrola Mexico. In global statistics, this deal is aggregated with Iberdrola (Spain). ** CBI's green bond database features one bond from an Uruguayan entity. US-based Invenergy has also issued two project finance private placements (USD201m in total) for solar and wind projects in Uruguay.^{14,15}

Non-financial corporates, sovereigns and development banks comprise 80% of overall issuance. While there is diversity in issuer types across LAC, the profile varies significantly by country. It is most diversified in Mexico, then Brazil, but still heavily concentrated in most markets as a result of the limited number of deals.

There are significant differences in issuer type profiles across countries



There is a clear prevalence of private sector issuers in some countries, versus public sector ones in others. **Chile** is the only country to have issued sovereign green bonds to date, with intentions to issue more in the future. Elsewhere, **Peru** has announced plans to issue a sovereign green bond in 2020, while **Colombia** is contemplating an issuance.

There has been **no issuance from financial corporates in Brazil**, for instance, whilst the green bonds from Argentina were issued by two local governments (**Province of La Rioja** and **Province of Jujuy**) and a financial corporate (**Banco de Galicia**). The only other country with local government issuance is Mexico (two deals by **Mexico City**). Colombia is dominated by financial corporates.

Development banks make up 18% of the volume. Excluding supranational development banks **CAF (Corporación Andina de Fomento)** and **CABEI**, four of the eight countries have had green bonds issued by development banks: Brazil (**BNDES**), Mexico (**Nafin** and **FIRA**), Colombia (**Bancóldex**) and Peru (**Cofide**).

Finally, only two green bonds by government-backed entities (**Banco Nacional de Costa Rica**; and **ISA CTEEP**, Brazil), one green ABS (**Suzano**, Brazil) and two green loans (**Iberdrola**, Mexico; and **Agrosuper**, Chile) have been issued in the region.

CASE STUDY:

Chile's sovereign green bonds

The Republic of Chile issued two sovereign Certified Climate Bonds in June and July 2019, the first sovereign green bonds in LAC. They are part of a national strategy to finance projects that contribute towards Chile's NDC targets and were issued with assistance from the IDB.

The deals support transparency in the management and deployment of public expenses. They were heavily oversubscribed and allowed the Government to diversify its investor base considerably. Overall, about 50% was bought by socially responsible investors (35% for the USD deal and 76% for the EUR deal).

Most of the proceeds will finance public transport, with a smaller portion going towards water and energy projects. The impacts are predominantly expressed in emissions avoided (in tonnes of CO_{2e} and/or particulate matter).

Some project examples include:

- Construction of **Santiago's new metro line 7** (26km) and extensions to lines 3 (4km) and 5 (5km), as well as refinancing the construction of line 3 (22km);
- **Electromobility** project involving the addition of 600 new electric buses, nine charging stations and more than 140 smart bus stops in Santiago. The Government's Electromobility Strategy aims to achieve a 40% share of private vehicles and 100% of public urban transport electric by 2040;
- **Sustainable design of a variety of public buildings**;
- **Installation of solar panels buildings**: on thousands of social housing units and public buildings;
- **Installation of PV systems for indigenous communities** in Isla Huapi;
- Monitoring, analysis and research on **water resource conservation strategies**, including for adaptation.

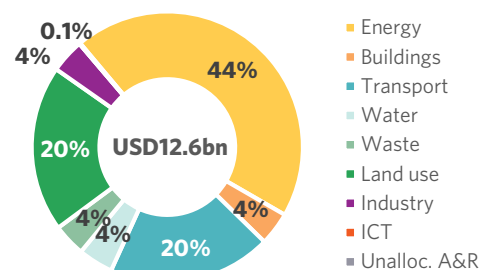
Given the eligible categories and the need for green infrastructure investments in other sectors, future issuances may focus more on energy efficiency (buildings and public spaces), land use, water and energy projects.

More information about Chile's Sovereigns is provided by the Ministry of Finance.¹⁶

LAC's use of proceeds is unique

Energy is the most funded sector, with half of LAC's green bond proceeds targeting renewable projects, especially wind and solar. This is in line with the global green bond market, where 35% funds Energy. For most other use of proceeds (UoP) categories, however, the picture in LAC is substantially different to the global market.

Energy dominates but Land use represents a large share of green bond allocations in LAC

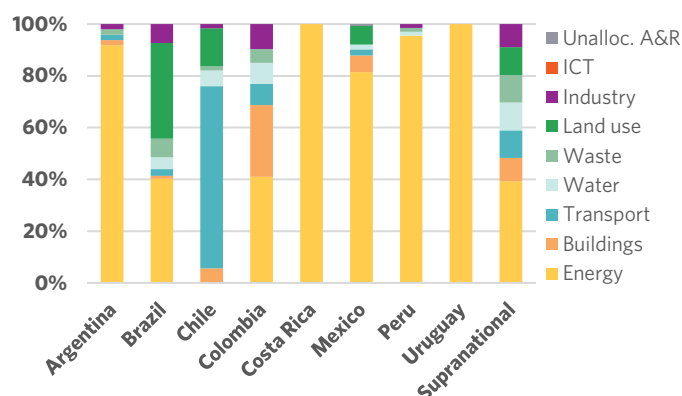


Note: Adaptation and resilience (A&R) measures are allocated to sectors as much as possible. Unalloc. A&R are the remaining unallocated amounts.

Land use and Industry – two significantly under-funded sectors globally – represent almost a quarter of LAC issuance. Land use industries are very important in many LAC countries, contributing heavily to the region's GDP. Despite most of this stemming from agriculture, the sector represents a very small share of Land use projects financed by green bonds. The majority consists of certified forestry and paper, especially from Brazil. The *Sustainable agriculture* section on pp. 16-19 explores this topic in more detail.

Buildings and Water – two of the most funded sectors globally – are among the least funded in LAC (4% each). Financial corporates (e.g. Mexico's BBVA Bancomer) and Chile's Sovereigns have the highest Buildings allocations. Water allocations mostly derive from non-financial corporates (e.g. Chile's Aguas Andinas and Brazil's BRF).

Energy most funded in all countries except Chile, where Transport is first

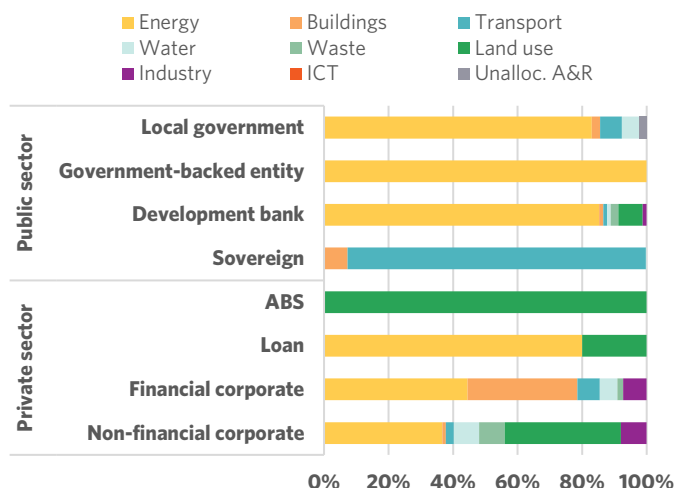


Energy is the most funded UoP category in almost all countries. The exception is Chile, which has a very different allocation mix: Transport ranks first (due to the country's sovereign issuances) followed by Land use, while Energy only represents 0.1%.

Green infrastructure investments are needed in the region. In cities, low carbon transport and sustainable water and waste management projects are required. Mexico City, for example, has invested heavily in these areas, with medium- to long-term programmes such as the **Green Plan** (Plan Verde) and **Climate Change Action Plan** (Programa de Acción Climática) aimed at greening the city.^{17,18} Our *Opportunities for Sustainable Infrastructure Investments at City Level in Brazil* report explores this topic in-depth in the Brazilian context.¹⁹

In terms of issuer types, corporates – financial and non-financial – display the greatest diversity of project types, but with differences. For example, non-financial corporates have financed practically no Buildings projects, while financial corporates have yet to finance Land use. Public sector issuers (including development banks) primarily fund renewable energy projects.

Most public sector issuers finance Energy; corporates fund a greater variety of projects



CASE STUDY:

Green bond financing multiple categories

Klabin, one of Brazil's largest pulp and paper producers, issued two USD500m green bonds (in 2017 and 2019). They received an SPO from Sustainalytics, confirming compliance with the Green Bond Principles, which promote best practice in transparency and disclosure.

Klabin has disclosed the use of proceeds and extensive impacts of its first green bond. Covering investments in a range of projects spanning many UoP categories, it is one of the most varied green bonds we have come across. Apart from sustainable forestry projects, these include:

- a 21km rail branch and acquisition of 306 railroad cars and seven locomotives, leading to CO₂ avoided of 50 tCO₂e per tonne transported;
- expansion and enhancement of an Ecological Park;
- installation of a new Technology Centre and investments in R&D and innovation, with an estimated mean productivity increment of 40-60 m³/ha/year.

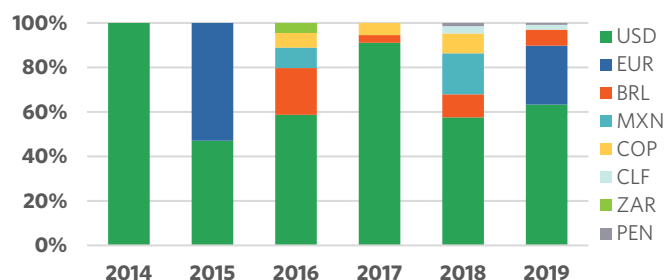
Klabin's green bond resources can be found on its website, as well as in its *Green Bond Report 2018*.²⁰

USD-denominated issuance dominates

82% of LAC green bond issuance is in hard currency. This compares with only 34% for LAC's overall bond market (i.e. including vanilla).

Due to high international demand, volatility in local currencies and close ties with the USA, 70% of LAC issuance is denominated in USD, more so than in any other region (excluding North America, with 89%). However, this is only true for 44% of bonds by count, i.e. the prevalence of USD applies especially to larger deals, which are more likely to appeal to international investors. Larger deals are much more likely to come from established bond issuers.

Most issuance is in hard currency



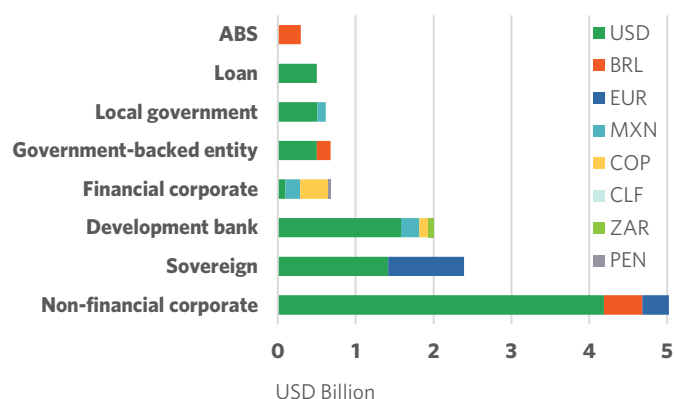
EUR-denomination is much less common. Only BRF's 2015 deal, and more recently Chile's second Sovereign, were in EUR, although their relatively large size translates into 12% of the market by amount.

Denominating in hard currency is conducive to selling bonds to international investors. Mechanisms that allow issuers with low credit ratings to access the debt capital market under better conditions, such as anchor investments, guarantees or technical assistance from MDBs, can also play an important role in emerging markets. Another supportive feature is good disclosure: already more common for green than vanilla bonds, it adds value in emerging markets, where transparency is more often an issue.

As LAC capital markets develop, more local currencies are being added to the mix. If interest rates remain supportive, domestic secondary markets keep growing, and the availability of local funding sources increases, issuers that generate most of their revenues in local currencies are expected to favour issuance in those same currencies, especially given the cost of foreign exchange hedging.²¹

Currency varies more by issuer type than country. USD issuance dominates across all countries, the clear exception being Colombia (five bonds, all in Colombian Peso).

The only issuer types not dominated by USD are financial corporates and ABS







Among issuer types, there is slightly more variation in currency denomination. While USD still accounts for the majority of issuance from most issuer types, it only represents 15% of the amount issued by financial corporates (one of six deals). This is likely due to the high domestic demand and associated liquidity for debt issued by banks, and/or the fact that they are lending locally.

Foreign issuance in local LAC currencies has fallen

International financial institutions (IFIs) can act as market facilitators, which is beneficial to increasing liquidity and issuance in local economies. Nine foreign entities – almost all IFIs – have issued green local currency bonds, demonstrating interest in these markets. The top five are shown below. None issued a green bond in a currency, in which they had not also issued a vanilla bond.

Most of these bonds – 49 of 72, and 88% of the amount – were issued by multilateral development banks. The World Bank (IBRD) alone has issued 25 bonds denominated in LAC currencies since 2010 for a total of USD1.3bn; 19 in Brazilian Real (USD947m), five in Mexican Peso (USD258m) and one in Colombian Peso (USD91m).

Many development banks have issued in LAC currencies

		WB	CA	IFC	EBRD	EIB
BRL 	Green bond	✓	✓	✓	✓	✓
	Vanilla bond	✓	✓	✓	✓	✓
MXN 	Green bond	✓	✓	✓		
	Vanilla bond	✓	✓	✓	✓	✓
COP 	Green bond	✓		✓		
	Vanilla bond	✓		✓		
PEN 	Green bond			✓		
	Vanilla bond	✓		✓	✓	

Source: Climate Bonds Initiative from Refinitiv data

Abbreviations: WB = World Bank (IBRD); CA = Crédit Agricole CIB

Note: The other issuers of green bonds denominated in local currencies are: Nordic Investment Bank (BRL), Asian Development Bank (BRL and MXN), African Development Bank (BRL), and Kommunalbanken Norway (BRL).

This space is not limited to development banks, however. **Crédit Agricole** issued 22 such bonds totalling USD297m between 2013 and 2017: five in Mexican Peso and 17 in Brazilian Real.

Issuance in local currency allows foreign issuers to tap domestic investors for capital. In the case of development banks, the deals also act as demonstration issuance to spur market growth and to showcase how climate solutions can be funded with green bonds. In LAC, issuance in local currencies by foreign entities seems to have slowed down, with 88% of the cumulative total issued before 2015. Since then, an increasing number of local issuers have started to issue green bonds themselves.

US banks dominate the lead manager league table

This section is based on lead manager / bookrunner data from Refinitiv, which covers 56% of bonds and 81% of the amount issued.

Three banks – JP Morgan, BAML and Santander CIB – have underwritten more than USD1bn each. Although it ranks third by amount, Santander comes first by number of deals. With three of the top five and 40% of the total amount, the USA's share is high.

Rank	Lead manager	Deals	Amount (USD)
1	JP Morgan	9	1.7bn
2	Bank of America Merrill Lynch	9	1.5bn
3	Santander CIB	13	1.0bn
4	Citi	5	853m
5	Crédit Agricole CIB	3	825m

Source: Refinitiv

Two Brazilian banks are in the top 10: in sixth place is **Itaú Unibanco** (nine deals, USD708m) and in ninth is **Banco do Brasil** (four deals, USD328m). Top 25 underwriters with more than one deal include **Banco Bradesco**, Daiwa Securities Group, Morgan Stanley, UBS, **Puente Inversiones y Servicios**, Mizuho Financial, and Scotiabank.

LAC financial sector pushing green finance

LAC's financial sector has started to actively push green finance initiatives in recent years, including joining global initiatives. Mexico's Central Bank and Colombia's financial system regulator (SFC) are members of the global **Network for Greening the Financial System**.²² Mexico's Climate Finance Advisory Board (CCFC), formed by the BMV (Bolsa Mexicana de Valores), recently joined the **Financial Centres for Sustainability (FC4S) network**, announcing it plans to turn Mexico into a regional leader in green finance.²³

Several stock exchanges have joined the **UN's Sustainable Stock Exchanges (SSE) initiative** and offer dedicated green bond segments. These include most countries with a green bond market (Argentina's BYMA and BCBA, Brazil's B3, Chile's BCS, Colombia's BVC, Costa Rica's BNV, Mexico's BMV, Peru's BVL) as well as Ecuador's BVQ and Panama's BVP.²⁴ Specific actions include launching **separate listings for green bonds** (Mexico's stock exchange was the first), releasing **green bond guidelines** (e.g. Lima and Santiago) and offering **training and reduced fees** for green bond issuers (e.g. Costa Rica²⁵). Some have yet to take more concrete steps.

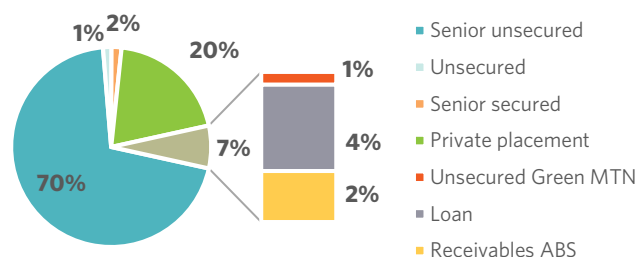
More on initiatives taken by financial sector players to grow green finance in their local markets is covered in the country overviews.

Popularity of private placements

In line with the global green bond market, senior unsecured deals are the most common bond type, representing 70% of the total amount and 60% by number of bonds.

Private placements (PPs) seem to be more popular in LAC than the rest of the world, accounting for 20% of the issuance amount and 27% of the bond count. They have been used by financial and non-financial corporates, development banks and local governments. During the writing of this report, another PP – by **Athon Energia** – was issued to finance solar energy projects in Brazil.

Senior unsecured deals and PPs account for the lion's share of LAC green bonds



The share of PPs is especially high in Colombia (86%), Mexico (49%) and Argentina (49%), but only 14% in Brazil, and none have been issued in Chile, Peru and Costa Rica. The only bond from an Uruguayan issuer was a PP: **Atlas Renewable Energy**. US-based **Invenergy** also used a PP to finance a solar and wind farm in Uruguay and structured the deal as B-Bonds with IDB Invest taking a stake.

One reason for the popularity of PPs in LAC is the concentration of investment by multilateral development banks (MDBs) in the region, especially the IFC and IDB. MDBs can support “market creation” by participating in first time issuances and helping new issuers get their names out to investors. Effectively, this establishes pricing points, the idea being that the issuer returns to market publicly. MDBs are often the sole investors in PPs but may also act as bond structurers.

For example, the **IFC** bought 100% of the COP350bn Bancolombia, COP433bn Davivienda and USD100m Banco Galicia green bonds. In

Argentina, **IDB Invest** fully subscribed to a USD30m sustainability bond issued by BICE (Bank of Investment and Foreign Trade) – the first of its kind in the country – in December 2018.²⁶

The growth in LAC financial institutions' debt capacity in the last decade or so is also supportive of PPs as it has made it easier for smaller issuers to obtain funding, while larger and/or more sophisticated entities raise finance in the public debt market. Among green bonds, the average deal size fell from USD270m in 2014-16 to USD235m in 2017-19. This coincided with the increase in deployment of private capital (e.g. private equity) in LAC in recent years, both from local and foreign sources.^{27,28}

In any case, issuers engaged in PPs should strive to provide as much reporting around their green bonds as possible, since public disclosure is often lacking among such deals.

Average deal size is USD243m; median USD112m

11 of LAC's 52 deals (21%), representing 61% of the total amount, are benchmark-sized, i.e. at least USD500m. They were issued by the Republic of Chile, one government-backed entity (Banco Nacional de Costa Rica), two development banks (BNDES and Nafin), and five non-financial corporates (Fibria, BRF, Suzano, CMPC and Klabin).²⁹ Even if not benchmark-sized, larger deals create more liquidity, providing investors with the ability to trade in the secondary market, which in turn can attract more investors.

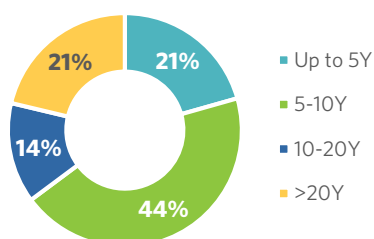
LAC's average deal size (USD243m) is considerably higher than the global average (USD134m), with the difference in medians being even more pronounced (USD112m versus USD25m). However, the global figures are somewhat biased due to small bonds from US Munis and Fannie Mae's many small securitized deals. Excluding these, the global average (USD291m) is higher than LAC's and the median (USD112m) is in line.

In any case, the relatively low number of small deals (nine bonds below USD50m versus 11 above USD500m) suggests that increasing access to capital markets and green issuance from smaller issuers could be an area of focus for the region.

5-10Y tenor strongly preferred

Almost half (44%) of LAC issuance has a medium original term to maturity, i.e. falls in the 5-10Y range, which is above the global average (37%). This contrasts with the range up to 5Y, where LAC's share is considerably lower (21% versus 35% globally).

Over 40% of LAC issuance has a 5-10Y tenor



The proportion of long-dated bonds is higher in LAC than the rest of the world, driven by the ">20Y" range. Chile's USD1.4bn Sovereign, which matures in 2050, significantly increased the share of deals with a long tenor.

Long-dated debt is particularly suitable for financing long-term, capital-intensive, large-scale projects such as transport and built infrastructure. These are also well suited to the long horizons of

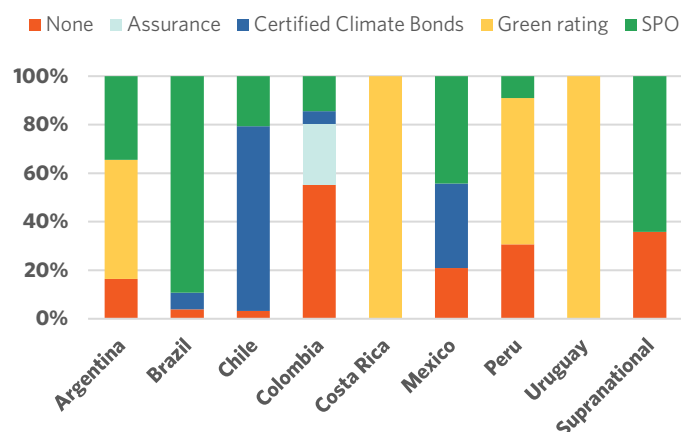
pension fund investors, and typically attract good investor demand as there are fewer long-term bonds offered than shorter-dated ones.

Finally, despite almost half of LAC issuance falling in the 5-10Y range, there are noticeable differences by country. 77% of Peruvian issuance, for example, has a 10-20Y tenor, whereas Uruguay's only bond has a 24-year duration.

Obtaining an external review is commonplace

Obtaining some form of external review is common in the LAC green bond market. 90% of the amount issued, and 85% of bonds, benefit from either a second party opinion (SPO), green bond rating, Certification under the Climate Bonds Standard, or assurance.

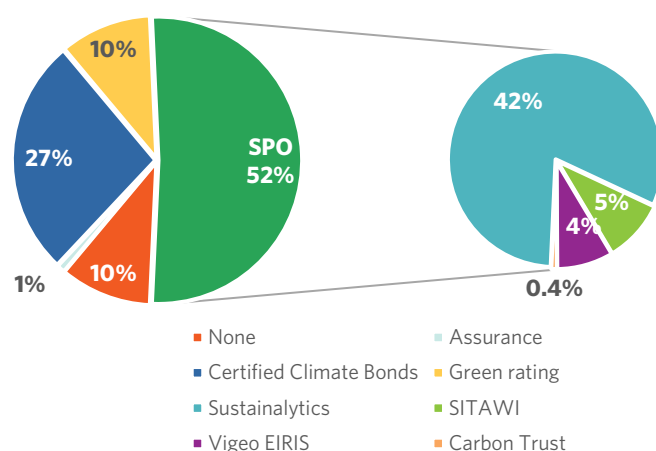
The profile of external reviews varies significantly between countries



Over half (57%) of external reviews, excluding verification under the Climate Bonds Standard, are in the form of SPOs. This is driven by high review levels in Brazil (89%). Sustainability is the lead provider, followed by Sitawi, Vigeo Eiris and the Carbon Trust.³⁰

Including verification (which is part of the Certification process under the Climate Bonds Standard) puts Vigeo Eiris ahead of Brazil's Sitawi as it has verified seven of the ten Certified Climate Bonds from LAC, including Chile's Sovereigns.³¹

Over half of issuance benefits from an SPO



Boosted by Chile's sovereign bonds, Certification under the Climate Bonds Standard represents 27% of external reviews at USD3.4bn. Excluding Chile's Sovereigns, most Certified deals are relatively small with an average size of USD125m. The largest is Nafin's USD500m bond from 2015. Williams Caribbean Capital (Barbados) Certified a BBD3m (USD1.5m) private placement after the report cut-off date.

Seven of the ten Certified Climate Bonds solely financed renewable energy projects (two solar, five wind). Among the others, two were Chile's Sovereigns, which mainly financed low carbon transport, and one (FIRA) funded protected agriculture. Five were issued by Brazilian entities, one from Colombia, two from Mexico, and of course two from Chile.

It is important to note that although the availability of external reviews varies substantially by country, this may be due to the size or types of deals. For example, 77% of issuance in Peru lacks a review despite two of its three deals having one, i.e. the one that doesn't is much larger than the other two. In Colombia, Mexico and Uruguay, the high share of deals without review may be explained by the abundance of PPs, where information is provided to the investor only.

Post-issuance reporting in LAC

Post-issuance reporting on the use of proceeds (UoP) is a core component of the Green Bond Principles and the Green Loan Principles.^{5,6} Reporting the environmental impacts of the funded projects is also recommended. Post-issuance disclosure provides transparency, ensures accountability and underpins the credibility of green bonds and loans. This is arguably even more important in developing regions, where transparency, reliability and disclosure are more often lacking or perceived to be lacking.

Based on the research CBI conducted for the *Post-issuance reporting in the green bond market* report published in March 2019, this section analyses the availability, and to some extent quality, of post-issuance reporting in LAC.³²

Definition and scope: Post-issuance reporting encompasses *publicly available* information on a green bond's UoP and environmental impacts after the bond has closed. Information sources include green bond reports, annual reports, emissions reports, etc. It is best practice to provide reporting within a year of issuance, so the research, which concluded in December 2018, covers green bonds issued prior to November 2017 and included in the CBI green bond database. It excludes bonds that matured before the end of 2018. Consequently, this analysis covers 22 of the 52 bonds issued in LAC markets. As the sample size is small, the results are indicative only.

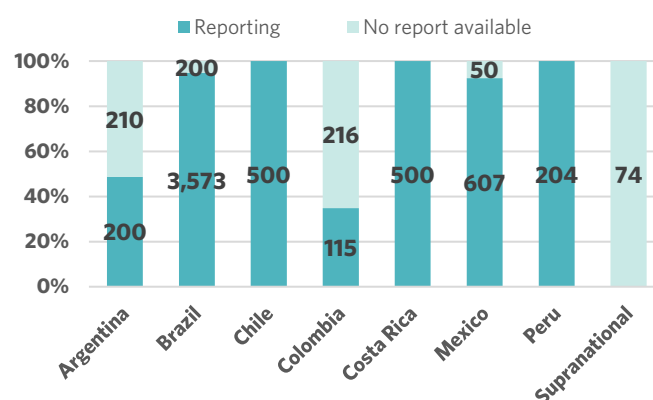
Limitations: The research does not capture privately-available reporting (e.g. under a private placement or loan), nor reports issued from November 2018 onward. We are aware, for example, that

Bancóldex (Colombia) issued a report in late 2018, which is not captured in the analysis as it was published after the cut-off date.³³ However, it is clear and comprehensive, i.e. a good quality report. It is also possible that some issuers did not report within 12 months of issuance but intend to (or have in the meantime) reported within the two-year timeframe recommended by the Green Bond Principles.

The results show that most LAC issuers provide post-issuance reporting, and many issuers provide reporting on allocations and impacts. This is particularly reassuring given that several deals in the region are private placements, which are typically less likely to disclose UoP and impacts publicly.

Larger issuers are more likely to report. In line with global trends, the share of reporting is higher by amount issued. Countries with larger green bond markets tend to have higher reporting levels. The four largest markets (according to this dataset) – Brazil, Mexico, Chile and Costa Rica – are all in the top five by level of reporting.

Post-issuance reporting levels are mostly high



Note: Figures show amount issued (in USDm) by country and reporting status.

Looking at the number of issuers, the conclusion is similar, but it also shows that all countries with multiple green bond issuers – Argentina, Brazil, Colombia and Mexico – have at least one that does not report.

Going forward, reporting levels could be supported by platforms providing standardised and transparent disclosure. IDB is currently developing a Green Bond Transparency Platform with the support of a consortium of market stakeholders.

Reporting scope		UoP reporting	Impact reporting	Both	At least one
Number of issuers	Reporting	13	10	10	13
	No report available	6	9	6	9
	% reporting	68%	53%	53%	68%
Number of bonds	Reporting	16	13	13	16
	No report available	6	9	6	9
	% reporting	72%	59%	59%	72%
Amount issued (USDbn)	Reporting	5.70	4.79	4.79	5.70
	No report available	0.75	1.65	0.75	1.65
	% reporting	88%	74%	74%	88%

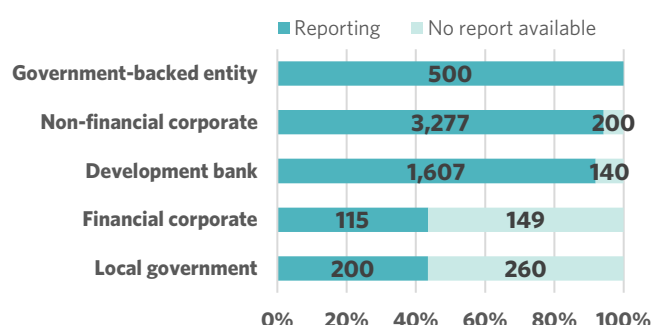
Note: "Reporting" figures reflect bonds and issuers, for which we were able to find a publicly available post-issuance report issued prior to the cut-off date (November 2018). "No report available" figures reflect bonds and issuers, for which we were unable to find a publicly available report issued prior to the cut off date. These issuers may have reported since then.

Unless stated otherwise, from here onwards this section on post-issuance reporting refers to UoP reporting only, since this is what determines conformance or non-conformance with the Green Bond Principles.

Corporates report more often than the public sector. Eight out of 10 corporates, most of them non-financial, provided UoP reporting. On the other hand, only four of eight public sector issuers did so. This includes two of four development banks, one of three local governments, and the single government-backed entity.

However, over 90% of volumes from non-financial corporates, development banks and government-backed entities had UoP reporting, whereas this drops to less than half for financial corporates (44%) and local governments (43%).

Reporting levels vary by issuer type



Note: Figures show amount issued in USDm by reporting status.

The difference is particularly noticeable for development banks, since the two reporting ones (BNDES and Nafin) issued a far larger amount than the two for which there was no reporting available as of the cut-off date (CABEI and Bancóldex). As noted above, it is possible that issuers reported after the cut-off date, and future statistics may well show higher reporting levels as these reports are captured in analysis.

Best practice case study: BNDES (Brazil)

BNDES' post-issuance reporting ticks all the key boxes. The development bank's Green Bond Report discloses UoP and environmental impacts at project level, both in a summary table and in pages dedicated to each project. It also gives the amount disbursed as of the report date, although this is not given by project. The report is very clear and easy to read.

BNDES obtained an SPO at issuance (Sustainalytics) and a post-issuance audit (KPMG). The information is clearly laid out in a section of its 'Global Bonds' webpage, except for the SPO; including it would be our only recommendation.³⁴

Best practice case study: Nafin (Mexico)

Development bank Nafin is also among LAC's best reporters. Dedicated pages on its website, one for each bond issued, give access to the relevant documents, which include the Green Bond Report, SPO and CBI Certification.³⁵ Although the information is easy to find for a Spanish speaker, it is trickier otherwise. Providing an English version of its website would thus be our only improvement.

The post-issuance report has information on allocations and environmental metrics for each project financed. As of 2016, Nafin includes Sustainalytics' post-issuance review in the reports, which have been produced on a yearly basis.

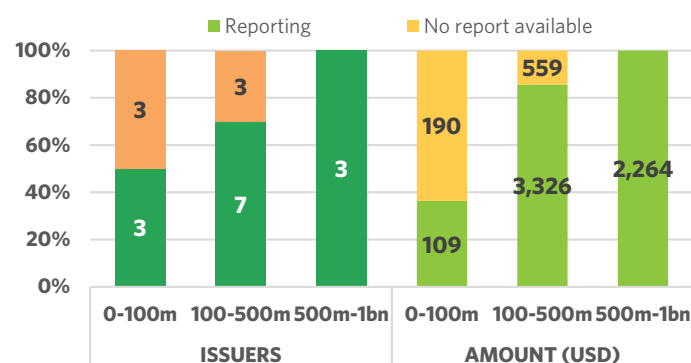
Best practice case study: CMPC (Chile)

CMPC stands out as one of LAC's best reporters, especially among non-financial corporates. It has an easy-to-find dedicated green bond webpage with the two Green Bond Reports produced so far.³⁶ The only improvement here would be to also provide the SPO on this page.

The reports are clear and concise while providing very detailed information. This includes the amount allocated to each project as well as a number of environmental impact indicators, although these are mostly at the portfolio level (except for a few project examples). The auditor's statement is included within the reports. CMPC's latest report is in English, while the first was in Spanish.

Bond size is a good predictor of reporting. The share of reporting increases significantly for benchmark-sized bonds, reaching 100% for the three deals above USD500m. Due to this, the effect is more evident by amount than by number of issuers.

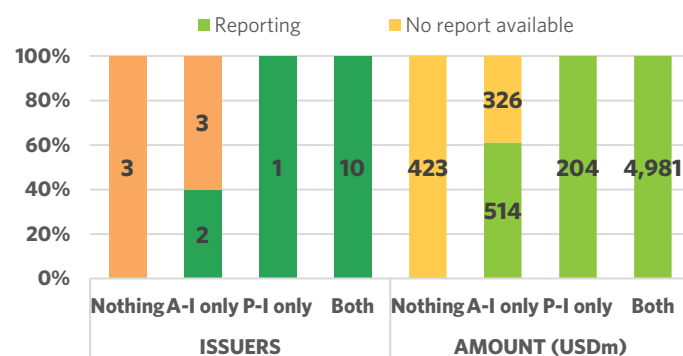
10 of 13 benchmark-sized bond issuers report



Note: Issuers - figures show the number of issuers by bond size bracket. Amount (USD) - figures show the amount issued by bond size bracket.

External reviews are an even better predictor of reporting. Issuers that obtain an external review are much more likely to report: 13 of 16 issuers with a review reported, while none of those without one did. Post-issuance reviews (such as an audit, post-issuance SPO report, or verification for Certified Climate Bonds) are a particularly strong predictor of reporting: more so than at-issuance reviews. All 11 issuers that obtained post-issuance reviews provided reporting.

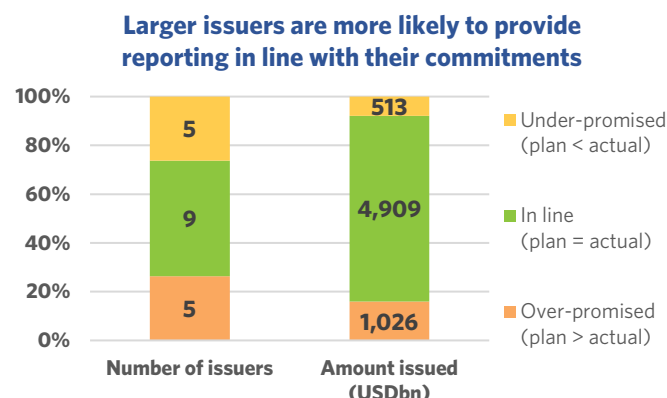
Post-issuance reviews are an excellent predictor of UoP reporting



Note: 'A-I' = at issuance; 'P-I' = post-issuance.

Several issuers failed to deliver on commitments. Providing post-issuance reporting is the single most important aspect of disclosure, but planning and communicating this effectively at issuance is too.

The ideal situation is that an issuer reports *in line* with the commitments made at issuance, e.g. promising to report UoP and impacts and delivering on that promise. The other possibilities are *over-promising* and *under-promising*. Over-promising includes failing to report, but also committing to report UoP and impacts and only reporting one of them. Under-promising is the opposite: delivering more than the initial commitment.



Larger issuers are more likely to deliver in line with their commitments. We found that 47% of issuers, accounting for 76% of amount, did as promised, i.e. the actual reporting matched the commitments made at issuance. This finding appears to be more pertinent in LAC than globally, as the difference between number of issuers and amount is higher in the former.

Smaller LAC issuers are more likely to under-promise than over-promise. The five that over-promised represent 16% of the amount, the five that under-promised only 8%. This may be due to smaller issuers typically providing no or more limited commentary on disclosure commitments at issuance (e.g. through frameworks, SPOs, press releases, etc.) and/or more limited resources available to produce post-issuance reporting.

Globally, over-promising issuers represent a relatively lower share than under-promising ones. The results for LAC may thus be unreliable at this stage and could change once we conduct the next post-issuance reporting study with a larger sample.

The wider labelled bond market in LAC:

Mexico, Colombia and Chile dominate social, sustainability and ESG issuance

Climate Bonds Initiative focuses on climate solutions. The bonds included in the CBI green bond database are those labelled as green bonds (or loans), where 95% or more of the proceeds are expected to go to climate change mitigation, adaptation or resilience projects.

In LAC, a green loan taken out by Itaú Argentina from the IFC was excluded from our database as the proceeds were not all intended for climate financing. A loan for a geothermal project in Honduras was aligned with Climate Bonds' Taxonomy but unlabelled and excluded for that reason. The remainder of bonds listed below were labelled as social, sustainability or ESG bonds. *This list is primarily intended to provide examples of issuers and projects funded under wider bond labels.* This market is expanding globally. A few more deals have come to market since the cut-off date for this report, with some examples covered in the country sections.

Country	Deals	Amount (USD)	Issuer name	Date	Comments
Argentina	2	80m	Itaú Argentina, Banco de Inversión y Comercio Exterior (BICE)	Dec 2018	Green loan not included in CBI's database as 30% of proceeds are expected to finance SME loans (i.e. not linked to environmental benefits) and sustainable bond to finance a range of green and social projects.
Chile	4	372m	BancoEstado, Caja de Compensación Los Héroes	Jun 2016 - Nov 2018	Social and ESG bonds raised to fund social housing, social inclusion, microfinance, female-led businesses.
Colombia	3	386m	Bancóldex, Findeter	May 2017 - Jun 2018	Social and orange bonds for projects linked to employment generation, inequality reduction, microfinance, education, healthcare and the 'orange economy', i.e. with a cultural and/or artistic focus.
Honduras	1	115m	Ormat Technologies Inc.	Oct 2018	Unlabelled project loan to finance a 35MW geothermal power plant. OPIC was the sole lender.
Mexico	7	1.0bn	Grupo Rotoplas, Vinte Viviendas Integrales, Nafin, Banobras, Mexico City	Jun 2017 - Aug 2018	Social, Sustainability and ESG bonds to finance projects related to access to water and sanitation, education, financial inclusion, gender equality, SME finance and social housing, among others.
Peru	1	70m	Ferreycorp	Nov 2018	ESG-linked loan whose terms depend on Ferreycorp's performance across ESG metrics.
Supranational	6	590m	Inter-American Development Bank (IDB)	Sep 2014 - Oct 2015	EYE (Education, Youth and Employment) bonds to provide childhood care, education and job access services for young people.

Climate-aligned bonds across LAC

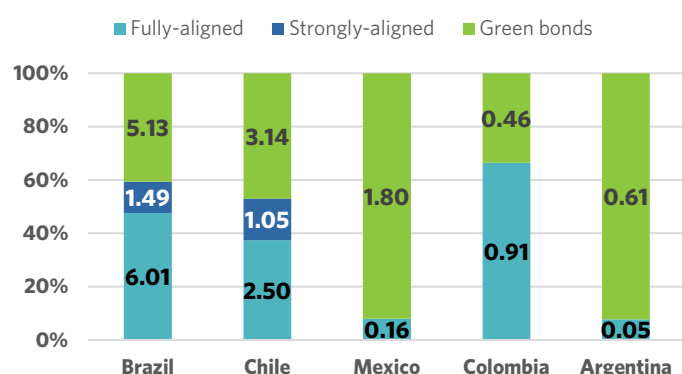
This section is based on the research CBI conducted for the *Bonds and Climate Change: State of the Market 2019* report. Only bonds maturing in 2020 or later are included.

A USD25bn outstanding climate-aligned universe

Labelled green bonds are part of what CBI calls the climate-aligned bond universe. The term “climate-aligned bond universe” includes bonds from fully- and strongly-aligned issuers and green bonds (see definitions on p.2).³⁷

39% of LAC's climate-aligned universe comprises outstanding bonds from fully-aligned issuers, i.e. companies that generate >95% of their revenues from climate-aligned sectors. Strongly-aligned issuers account for 10%. Green bonds represent 51%.

Colombia has the highest share of fully-aligned issuers



Note: Figures represent the aligned amount outstanding in USDbn.

The rest of this section focuses on outstanding bonds from fully- and strongly-aligned issuers only, i.e. it does not include green bond figures. These issuers can bring more visibility to their bonds by labelling them green and upcoming maturities could provide opportunities for climate-aligned issuers to label their bonds green. Ongoing reporting on allocation of proceeds and impact metrics can provide transparency, which is pivotal to international bond issuance.

Country	Amount (USD)	Share	Deals	Issuers	Sectors
Brazil	7.5bn	62%	88	21	Energy, Water, Land use, Transport
Chile	3.5bn	29%	39	6	Water, Transport, Land use
Colombia	909m	7%	10	1	Energy
Mexico	156m	1%	2	1	Water
Argentina	51m	0.4%	1	1	Land use
Total	12.2bn	100%	140	30	

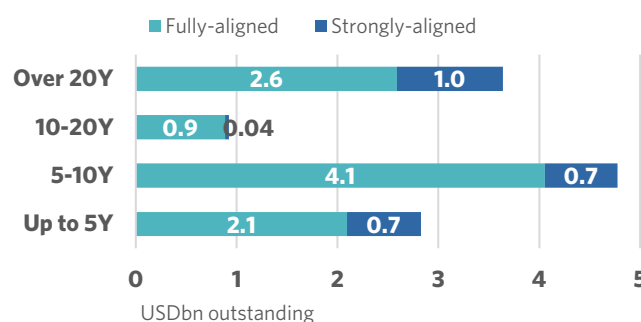
Driven by Brazil, fully-aligned issuers are by the largest category by far. Two fully-aligned issuers, both Brazilian, have more than USD1bn in outstanding bonds. The largest is **Suzano SA** (USD1.2bn), one of the world's largest pulp and paper companies and already a green bond issuer. It is followed by **Sabesp** (USD1.1bn), a water and waste management company owned by the State of São Paulo.

Those above USD500m include Colombia's **Isagen** (USD909m); Brazil's **Light Serviços de Eletricidade (SESA)** (USD827m); and Chile's **Aguas Andinas** (USD884m, already a GB issuer), **Esval** (USD716m) and **Essbio** (USD531m).

Only three strongly-aligned issuers, all relatively large, were identified. The largest is **Grupo EFE**, Chile's national railway, with USD1.05bn from nine bonds. Next is **Engie Brasil**, one of the largest private electricity producers in Brazil (and a subsidiary of France's Engie), with USD939m, followed by **AES Tietê**, a Brazilian utility company, which issued its debut GB in April, with USD551m.

Notably, it was not possible to retrieve data from Refinitiv or Bloomberg for Peru, Uruguay, Costa Rica and other LAC countries apart from the five listed markets. Whilst there probably are fully- or strongly-aligned entities in these countries, the fact that none have been picked up through our screening process could indicate that they are less visible, have not yet issued bonds, or have issued bonds that already matured. Green bond labelling can improve visibility and helps investors build diversified portfolios.

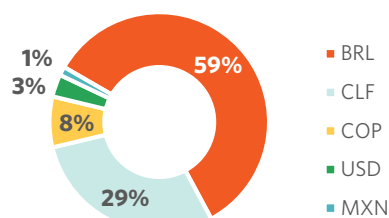
Climate-aligned issuers prefer terms of 5-10Y



Overall, medium-term bonds are the most preferred. 39% of the outstanding volume was issued with an original term falling in the 5-10Y range. This share is higher within the fully-aligned universe (42%), while strongly-aligned issuers show more preference for long- and short-dated bonds (41% over 20Y, 29% up to 5Y).

The differences between countries are quite interesting. Colombia is the only country with bonds falling in every tenor bracket. Brazil has no volume over 20Y, 92% being up to 10Y. By contrast, 97% of Chile's is over 20Y. 80% of Mexico's falls in the 5-10Y range, while Argentina's only bond had an original term of 3Y.

97% of the volume is denominated in local currencies



The vast majority of bonds from climate-aligned issuers are in local currency, except for two issued in USD. Almost all deals were issued in their respective country's currency. Only **Celulosa Argentina** and **Sabesp** have issued in USD. These are striking differences compared to the green bond market, where hard currency accounts for 82% of volume. This is at least partly due to the fact that bonds from climate-aligned issuers are smaller on average than green bonds and more likely to target domestic investors. Another potential reason is the lesser involvement of MDBs in the vanilla bond market.

Water is the most funded sector, almost entirely due to issuers from Chile and Brazil

Theme	Amount (USD)	Bonds	Issuers	Countries
Sustainable water infrastructure	4.4bn	58	12	7 from Brazil, 4 from Chile, 1 from Mexico
Renewable energy	3.6bn	38	8	7 from Brazil, 1 from Colombia
Sustainable land use	2.4bn	10	5	3 from Brazil, 1 from Argentina, 1 from Chile
Low carbon transport	1.8bn	19	5	4 from Brazil, 1 from Chile
Total	12.2bn	140	30	



Water ranks first across every metric

With USD4.4bn outstanding from 58 bonds from 12 issuers, Water is the largest category. All the issuers engage in water treatment, with some also providing supply services and waste treatment.

Four issuers have more than USD500m outstanding. The largest (**Sabesp**) is Brazilian, but the next three are Chilean (**Aguas Andinas**, **Esval** and **Essbio**). About half (47%) of the amount outstanding is long-dated (over 20Y). Half is in CLF, the majority of the rest in BRL.

Private companies dominate. In Chile, all four issuers are private, and **Essal** is majority-owned by Aguas Andinas. Mexico's **Grupo Rotoplas** is also a corporate. Four of the seven Brazilian issuers, representing 72% of the country's climate-aligned issuer volume, are municipal companies; the rest are private.



Energy ranks second, driven by Brazil

Almost 80% of the outstanding amount from the Energy sector comes from companies operating in hydropower generation and/or distribution. The sector is not far behind Water by volume, but it has two-thirds the number of issuers and bonds. Whilst this is driven by Brazil, the largest issuer is Colombian: **Isagen**.

Most issuers are fully-aligned, the exceptions being Brazil's strongly-aligned Engie Brasil and AES Tietê, which are also the largest issuers in the country. **SESA** and **CPFL Energia** are the largest fully-aligned issuers from Brazil.

Energy-related bonds have the shortest average term, with 84% maturing within ten years. They are only issued in BRL and COP.



Land use has highest average deal size

Land use, which captures certified forestry, pulp and paper products companies, is the third largest category and features the highest average deal size by amount outstanding (USD240m). Like Water, it features issuers from three countries, with three from Brazil.

Brazil's Suzano SA, LAC's biggest pulp and paper producer, is the largest issuer with USD1.2bn outstanding. It has already issued four green bonds, totalling USD1.2bn. The other issuers with more than USD300m outstanding are Brazil's **Klabin** (USD468m) and **Duratex** (USD312m), and Chile's **Masisa** (USD322m).

84% of the amount outstanding falls in the 5-10Y tenor bracket and is denominated in BRL. The remainder is either in CLF and over 20Y, or in USD and up to 5Y.



Transport is the fourth largest sector

The use of rail is limited in LAC, but all the issuers from the Transport sector are railway and/or metro operators. Investing in green transport is a key focus area in the region, and some countries (e.g. Chile) have ambitious plans to grow this space. Transport is the fourth theme by amount but third by number of bonds.

The largest issuer by far is Chile's Grupo EFE, the country's national railway operator. The next largest are two Brazilian freight/logistics companies: **MRS Logística**, which operates a 1,643km network between São Paulo, Rio de Janeiro, Santos and Belo Horizonte; and **Rumo Logística Operadora Multimodal**.

57% of Transport's amount outstanding falls in the over 20Y range.

Public sector bond issuance across the LAC region

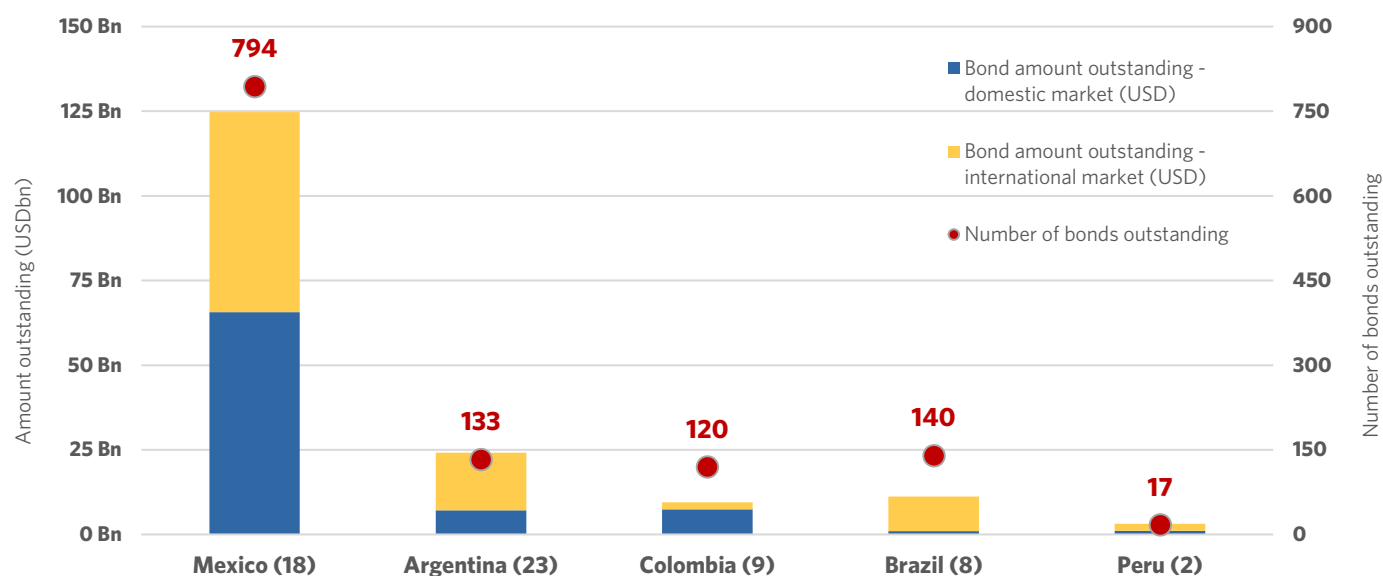
In a different scoping exercise, Climate Bonds identified existing bond issuers among local government (cities, municipalities, etc.), state-owned companies (including development banks) and funds, as well as Local Government Funding Agencies (LGFAs) from LAC. This exercise is meant to be indicative, not exhaustive, and, above all, to provide examples of potential green bond issuers.

Public sector entities are an important pillar of the green bond market. Local governments were the first entrants in many green bond markets and remain important contributors of climate investments in a range of sectors. We also note the potential for social and sustainability bond issuances by public sector entities, ideally increasing investment in social projects which are also 'green'.

Methodology: We identify issuers and their outstanding bonds based on Bloomberg and Refinitiv data. Most amounts were obtained from Bloomberg; Refinitiv was only used when the amount there was substantially higher than Bloomberg's. If a public sector issuer is classified as private by these sources – for instance, a state-owned bank classified as a commercial bank – it would do not be captured.

Entities focusing on fossil fuel-based activities have been excluded. For example, Brazil's Eletrobras was included as it derives most of its revenue from renewables, while Petrobras, which focuses on oil and gas and in August explicitly announced it will not invest in renewable energy, was excluded.³⁸ Among other large oil and gas producers, Mexico's Pemex and Colombia's Ecopetrol were also excluded.

Public sector entities have high potential for green bond issuance



The public sector – comprising development banks, government-backed entities, local governments and sovereigns – represents 46% of the global green bond market by issuance volume. In LAC, it currently represents 45%, almost half of which is due to Chile's two Sovereigns. There has been relatively little issuance from local government and government-backed entities.

60 public sector entities with 1,204 outstanding bonds worth USD173bn were identified in the region. These cover five countries with a green bond market. Eight issuers – five development banks and three local governments – have already issued green bonds. No issuers from Chile, Uruguay and Costa Rica were identified as part of this exercise, but this could be because their debt is not reflected on Bloomberg or Refinitiv or they haven't issued public debt.

Half (52%) of the amount outstanding relates to bonds issued in international markets. Most countries fall in the 50-70% range, the outliers being Brazil with 91% and Colombia with 22%. Access to international bond markets is indicative of more established bond issuers, which bodes well for expanding into the green bond market.

Each country exhibits different traits

The universe of public sector issuers is dominated by Mexican entities with 66% of the bonds and 72% of the amount outstanding. They form a diverse group of issuers, but most are local government funding authorities (LGFA) and development banks.

Several are potential green bond issuers. **Banobras**, which has USD41bn outstanding from 552 bonds, issued a sustainability bond in 2018. Most eligible categories were aligned with the Climate Bonds Taxonomy but also included social projects, e.g. affordable basic infrastructure for vulnerable segments of the population. State-owned export credit agency **Bancomext** is another example.

Argentina has the highest number of issuers (23) but only 11% of bonds and 14% of the amount. Apart from one state-owned entity (**Empresa Provincial de Energía de Córdoba**), all its issuers are local governments. This suggests that green bond issuance may continue to come from local governments, but we would hope to see more sector diversity, e.g. public transport infrastructure, water and waste management, adaptation and resilience measures, etc. Larger issuers such as the **Provinces of Buenos Aires** and **Córdoba** show particular potential in terms of scale of investment.

Colombia has a more diverse issuer base, which includes local governments (especially the **City of Bogotá**), government-backed entities and development banks. **Empresas Públicas de Medellín**, a state-owned public utilities company providing water, waste and energy services, emerges as a potential green bond issuer. Infrastructure-focused development bank **Findeter**, which issued a sustainability bond earlier this year, is another example.

Over half (53%) of Brazil's amount outstanding derives from three state-owned entities: Eletrobras (USD4.5bn), a major electric utility and one of the largest clean energy companies in the world; **Caixa Econômica Federal** (USD724m), LAC's largest fully state-owned bank; and **Banco do Brasil** (USD776m), also among the country's largest banks. All three could be potential green bond issuers. Another example is **CEDAE**, Rio de Janeiro's water and wastewater treatment company.

Notably, Brazilian local governments have been unable to access capital markets due to fiscal constraints and the need for federal guarantees, as predicted by Brazil's Law of Fiscal Responsibility.³⁹

Significant potential across LAC

Overall, we believe many LAC public sector entities could become green bond issuers and help to scale up the market. However, there are important differences by country. In Brazil, for example, it may make sense for the government to issue a Sovereign to fund projects at the municipal level, while in others markets, such as Argentina, local governments could do this directly.

Potential also exists elsewhere in the LAC region. In the Caribbean, for instance, issuers such as **Trinidad and Tobago's** Water and Sewerage Authority, its Housing Development Corp, or the **Virgin Islands' Public Finance Authority**, could issue green bonds to finance climate-friendly projects.

Public sector issuers may be able to obtain support from regional MDBs. For example, building on its NDC Invest programme, the IDB has launched a **Green Bond Programme for Public Sector Issuers** through which it provides technical assistance before and during the issuance process (e.g. preparing documents, identifying green budget lines, bond structuring, etc.).⁴⁰ Chile's Sovereigns were issued with support from this programme.

Financing sustainable agriculture



According to the United Nations, the world's population is projected to grow to 8.6bn in 2030, 9.8bn by 2050 and 11.2bn by 2100, with most of this increase coming from developing countries.⁴¹

FAO estimates that the supply of food and agricultural products must increase by 50% between 2012 and 2050 to meet rising demand.⁴² Crucially, changing dietary preferences among the growing middle class in emerging markets towards higher-value agricultural products is likely to put further strain on production.

This increase must be achieved through sustainable production.

Agriculture currently accounts for at least 12% of global GHG emissions,⁴³ and is also largely responsible for many other detrimental environmental impacts, from biodiversity loss and deforestation – up to 80% of deforestation is due to agricultural expansion – to water pollution and decreasing soil quality. Including these in emission figures yields significantly higher estimates (between 19% and 28% according to Vermeulen et al., 2012).⁴⁴

Agriculture is one of the most important sectors in LAC's economy.

Brazil is a major producer and exporter of many products: the largest for sugar, coffee and beef, and second in soy.⁴⁵ Argentina is also a major exporter, mainly of wheat, soy, maize and beef. In the Caribbean, agriculture employs between 20-30% of the region's workforce, whilst in some Central American countries, such as Honduras, Nicaragua and Guatemala, this rises to above 30%.⁴

The region's agricultural exports represent 23% of the global total, which the FAO estimates will increase to more than 25% in the next decade.⁴⁶ This will likely be supported by the recent EU-Mercosur free trade deal, which is expected to reduce trade barriers between the two regions.⁴⁷ This increase means the sustainable development of LAC's agriculture sector is even more of an imperative.

The need for sustainable agri-financing in LAC

As well as being highly important economically, the sector is particularly at risk from climate change. Agricultural productivity is heavily reliant on rainfall and vulnerable to extreme weather, especially for crop-growing under traditional farming methods. For example, following a 2010 drought in the Dominican Republic, banana production dropped nearly 45% year-on-year.⁴

Despite some projections showing increased productivity in some sub-sectors with increased rainfall, others will be greatly affected, which overall has dangerous effects on food security and access to water. Such impacts are likely to be especially felt in LAC, given the high proportion of the population working in agriculture.

28% of 2016 LAC emissions stemmed from agriculture production, compared to 12% globally.⁴³ The share varies widely between countries due to different levels of production and farming practices.

Sustainable agriculture has the potential to contribute significantly towards climate mitigation and countries' NDCs. Brazil's sector-specific targets, for example, include "strengthening the Low-Carbon Agriculture (ABC) programme, restoring an extra 15m hectares of degraded pastureland and enhancing 5m hectares of integrated cropland-livestock-forestry systems by 2030".⁴⁸

In most of LAC, the public sector has traditionally been heavily involved in agricultural planning and financing, mainly for small rural producers and more so than in other developing regions.

In Peru, state funding is restricted to public infrastructure investment and agriculture only. Business financing has become almost entirely private since the mid-1990s, with only agriculture bank Agrobanco not being privatised among financial institutions.

The share of state credit in some countries has fallen (e.g. Brazil), but there are still a myriad of government programmes supporting farmers, and production has continued to increase.

Financing the transition to sustainable agriculture requires investment over a longer time horizon. However, a lot of agri-finance products currently offered are short term, e.g. working capital or inventory finance. While the private sector has an important role to play, it is up to the public sector to introduce policies and incentives that drive real change.

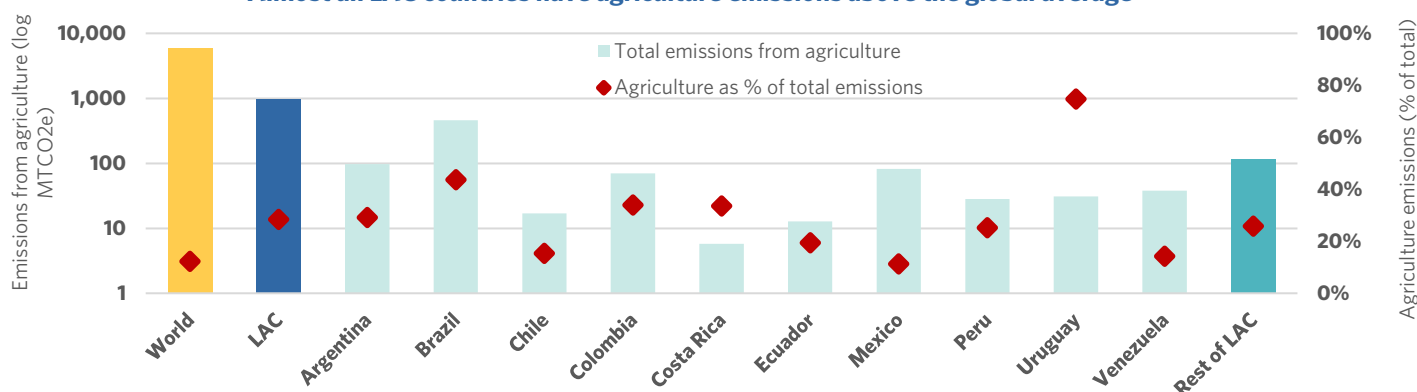
State of sustainable agri-finance in LAC

Few public sector financing instruments targeting sustainable agriculture exist in LAC. While the most developed are in Brazil (see box on next page), even they still do not have the ability to enact change at the scale required and/or do not provide strong enough long-term incentives – or disincentives for unsustainable production – for farmers to change their production practices. Furthermore, in Brazil there is a serious threat of regression in climate-friendly agricultural policy and increased deforestation, given the current administration's stance on environmental protection.⁴⁹

In July 2019, the Ministry of Agriculture in **Costa Rica** introduced a promising new **National Financing Programme for Adaptation** in agriculture.⁵⁰ It will support 12 key activities by providing short-, medium- and long-term financing to farms, disbursed through multiple banks. Once the projects are completed, farms will obtain up to 40% lower rates on insurance policies (as climate risks are lower).

Private financial institutions in developing countries often lend a disproportionately lower share of their loan portfolios to agriculture compared to the sector's share of GDP, and the same is true in LAC.⁵¹ This is mainly due to a lack of adequate policies, subsidised rates offered by public banks, high costs in reaching rural populations, and lack of expertise.

Almost all LAC countries have agriculture emissions above the global average



Sustainable agri-finance government programmes in Brazil

The Brazilian agriculture sector has typically relied on concessional Rural Credit, through the government's **Rural Credit National System (SNCR)**. One of its pillars is providing incentives for producers, especially small-scale ones, through targeted credit lines/programmes.

The **Low-Carbon Agriculture (ABC)** programme is the main one specifically funding sustainable agriculture. It is composed of seven sub-programmes:⁵²

- Recovery of Degraded Pastures
- Agricultural-Livestock-Forest Integration (iLPF) and Agroforestry Systems (SAFs)
- Direct Planting System (SPD)
- Biological Nitrogen Fixation (BNF)
- Planted Forests
- Treatment of Animal Waste
- Climate Change Adaptation

Inovagro is also relevant but smaller, targeting improvements in productivity and technology. There are, however, many other programmes. This has created a complex funding environment, making it difficult for borrowers to understand how they work, how much funding can be raised from each, and for what projects.

Since the creation of the ABC programme in 2010 through 2015, only 43% of available funds were disbursed on average, suggesting it is operating far below its potential.

Consolidating programmes and incorporating sustainable dimensions into others, as well as education about their structure and objectives, would likely increase the effectiveness of Brazil's agri-financing while supporting the adoption of low-carbon, sustainable agriculture practices.

Our *Can green bonds finance Brazil's agriculture?* paper contains more information on agri-financing in Brazil.⁵³

Mexico appears to be the most advanced in terms of private sector lending to agriculture, with new entrants such as **Bankaool** and **Finterra**, as well as existing banks such as **Banamex**, heavily engaged in this area.⁵⁴ Such banks capitalise on existing agricultural value chain financing arrangements by using medium and large producers as intermediaries for lending with their smaller suppliers. However, we note that most lending to agriculture in Mexico is still from public sources, namely through two government agencies: **FND** (Finance for National Agricultural, Rural, Forestry and Fishing Development) and **FIRA** (Trust Funds for Agricultural Development).

While a growing number of banks offer sustainable agri-finance products, these are still relatively uncommon and pale in comparison to their need. According to IFC's *Green Finance LatAm 2017* report, based on a survey of over 100 financial institutions in LAC, only 54% of banks with "green" products offer some for sustainable agriculture.⁵⁵ In addition, there is a fairly even split between primary producers, transformation companies, trading companies, and related companies receiving finance. This is at odds with the share of emissions mentioned earlier,⁵⁶ i.e. that primary producers account for the lion's share of emissions. Therefore, more financing needs to reach farmers.

Green bonds for agriculture

In light of the above, green – and social/sustainable – bonds could be a powerful mechanism to finance sustainable agriculture. On the private sector side, larger agricultural producers could issue green bonds, whilst financial institutions could aggregate smaller projects and fund them via green bonds. Agriculture-focused impact funds, such as the **Althelia Climate Fund**, **EcoBusiness Fund** or **Andgreen Fund**, also have the potential to be green bond issuers.

Sovereign bonds with an agricultural component, issuance from development banks, government-backed entities (if relevant ones exist), or local governments (if the institutional capabilities exist) could all form part of the public sector funding mix for agri-finance. This would enable the aggregation of funding for small producers, highly important in a region with an estimated 15m family farms.⁵⁷

Relative to its share of GHG emissions, agriculture is by far one of the least funded green bond sectors globally. Even combining agriculture with forestry, they still only represents about 1% of total green bonds issued, with forestry accounting for the majority.

However, sustainable land use represents an estimated 21% of sovereign issuance. It may make more sense for some activities, such as environmental conservation and afforestation, to be implemented directly by governments. Others, such as agriculture, are more likely to feature the private sector, albeit they can still be supported through subsidies, grants and other government financing programmes.

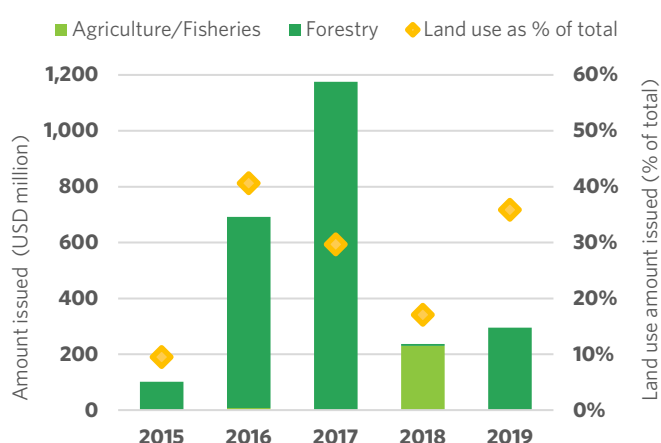
In LAC, Land use projects represent a much higher share of green bond allocations than globally, but agriculture continues to be a small minority of this. A mere 2% of total issuance, and 10% of Land use, is related to agriculture. This was concentrated in 2018.

Only two green products, both from October 2018, have explicitly been issued to finance agriculture/aquaculture projects in the region: **FIRA** (Mexico, MXN2.5bn/USD130m senior unsecured green bond) and **Agrosuper** (Chile, USD100m green loan). (See next page.)

In 2018, supranational development bank **CAF** issued three green bonds, with part of the proceeds expected to fund Land use projects, split into forestry and agriculture/fisheries; since the actual amounts have not been disclosed, we have estimated 50% in each.

Brazilian pulp and paper producer, **Suzano Papel e Celulose**, issued a green CRA (Agribusiness Receivables Certificate) ABS in 2016, but it was used to finance forestry projects.⁵⁸ **Fibria**, acquired by Suzano in late 2018, has also issued CRAs but they were not labelled green.⁵⁹

The small amount of agriculture-related issuance was concentrated in 2018



CASE STUDY:

Certified Climate Bond for protected agriculture

In October 2018, Mexican development bank **FIRA** (Trust Funds for Agricultural Development) issued a MXN2.5bn (USD130m) green bond. It was **the first Certified Climate Bond under the Protected Agriculture Criteria**, which was developed by CBI with the support of the IDB and FIRA.⁶⁰

The proceeds finance investments made by FEFA (Special Fund for Agriculture Financing) – one of the four trust funds that make up FIRA – for over 500 protected agriculture and water efficiency projects. These structures and systems emit less GHG than open-field agriculture, as well as being more water-efficient and requiring fewer chemical inputs.

Note: CBI expects to release its broader Agriculture Criteria in 2020.

CASE STUDY

Green loan financing aquaculture

Agrosuper, the largest producer of animal protein in Chile, issued the country's first green loan in late 2018. The 7-year USD100m loan was also the first to finance agriculture-related projects. It was arranged by Rabobank, which has a strong presence in agri-financing.

The company used the proceeds to finance a number of investments in its salmon business. Earlier in 2018, it had acquired two Chilean salmon producers, AquaChile and Salmones Friosur.⁶¹ The company will also continue to reduce the use of antibiotics in its salmon production and incorporate new centres under ASC (Aquaculture Stewardship Council) certification.⁶²

Chile is the second largest salmon producer in the world after Norway, but the industry has relied heavily on antibiotic use – according to one estimate, using 6,000 more antibiotics per tonne than Norway!⁶³ In the last couple of years, legislation has reduced this significantly and there is a target of at least 50% lower use by 2025.⁶⁴

Even if the use of antibiotics is solved, aquaculture remains a controversial topic. From other types of pollution and habitat destruction to escaped fish and disease transfer, there are a range of environmental problems associated with aquaculture, especially of salmon.⁶⁵

Marfrig, Brazil's second largest food processor and second largest beef producer globally, issued a "sustainable transition bond" in July 2019.⁶⁶ The proceeds will finance the sourcing of sustainable cattle, i.e. not from deforested, indigenous or other conservation areas.

Vigeo Eiris noted in its second party opinion of the issuer's bond framework that "in the absence of mandatory on-site audits throughout its supply chain, Vigeo Eiris has a moderate assurance on the ability of Marfrig to effectively manage and mitigate the environmental and social risks associated to the Eligible Project."⁶⁷

The bond is not considered a green bond. On the positive side, this is an example of an issuer influencing its broader supply chain, both directly by buying sustainable produce and indirectly by sending a signal to other suppliers and the wider market. However, cattle

farming is a controversial area due to the high land requirements for grazing and methane emissions from cattle. The concerns around Marfrig's ability to effectively monitor and ensure sustainable sourcing are echoed by investors and other market observers.⁶⁸

Examples of finance initiatives

Increasing both the availability and access to sustainable agri-finance tools, while considering local contexts, is crucial.

Tropical Landscapes Finance Facility (TLFF), Indonesia: TLFF was created as part of a collaboration between the Government of Indonesia and two provinces, United Nations Environment Programme (UNEP), World Agroforestry Centre, BNP Paribas and ADM Capital.⁶⁹ It aims to mobilise international capital from financial institutions, multilateral agencies and philanthropic donors for sustainable agriculture and renewable energy in Indonesia through a Sustainable Lending Platform as well as a Grants Fund.

The funding has various covenants, for example preventing beneficiaries from deforesting and requiring a portion of the proceeds to be spent on conservation and social projects, such as small-scale farming. TLFF I issued a green bond of USD95m in early 2018 as part of a wider funding program to finance a sustainable rubber plantation, smallholder plots for a variety of crops, rainforest protection and afforestation to improve wildlife corridors.

Responsible Commodities Facility (RCF), Brazil: RCF was launched in early 2019 to encourage sustainable production of commodities.⁷⁰ Starting with soy and corn, it will provide financial incentives for farming in existing cleared/degraded lands in order to discourage further land expansion in the Cerrado biome, a biodiversity hotspot.⁷¹ Designed by Sustainable Investment Management, the RCF will at least partly be financed by green bonds⁷² and has three key features:

- Attractive crop financing and loans for producers, combining lower interest rates and longer repayment terms than most existing alternatives;
- Commodities produced will be sold to international markets in a dedicated selling platform linked to a blockchain registry;
- Production and compliance with strict eligibility criteria will be constantly monitored by employing a range of traceability systems.

The UNDP-led **Biodiversity Finance Initiative (BIOFIN)**, which is closely tied to the **Convention on Biological Diversity**, could also be leveraged to channel financing in case of biodiversity benefits.⁷³ A financing strategy based on BIOFIN's **Finance for Nature** programme has already been developed in Costa Rica.⁷⁴

Considerations for growing green agri-finance

Such multi-stakeholder initiatives can and should be leveraged to scale up sustainable agri-financing in LAC. The following topics and schemes could also be explored in this context.

Small-scale producers

According to IDB, the largest barriers to finance for small and medium producers in LAC are the information asymmetries between them and lenders, the lack of acceptable collateral, and the lack of financial institution presence in rural areas. Smallholder farmers often have poor credit histories and tend to lack business plans and/or the ability to project cash flow realistically.

Strengthening small-scale farmers' access to credit and insurance through both private (i.e. financial institutions) and public entities could catalyse the growth and reach of sustainable agri-finance. One

fund focusing on this segment is the International Fund for Agricultural Development's (IFAD) **Adaptation for Smallholder Agriculture Programme** (ASAP), which channels climate and environmental finance to smallholder farmers.⁷⁵

Strong policies and incentives with a long-term focus are needed to shift farming practices to more sustainable methods and technology. Many small producers have been growing crops and grazing livestock in the same way for generations. Initiatives that encourage banks and bond investors to provide funding for this could build a path to longer-term finance.

Technical assistance

Pairing finance with technical assistance at co-operative and individual producer levels not only increases the adoption of sustainable techniques, but also increases repayment rates.⁵² Many social investors and donors take this approach, which could be adopted more widely.

For example, **Root Capital** provides training to members of many coffee co-operatives it finances. In Peru, **USAID** pairs loan guarantees with technical assistance to link producers with both financing and buyers for premium cacao.

Information

Access to information could be supported by the development of integrated decision support systems that compile and analyse weather, agronomic, and market information, delivering results to a range of stakeholders. Such systems enhance the identification of suitable adaptation and mitigation options, whilst providing platforms for exchange of information across the agricultural sector and possibly even countries. An example is Uruguay's **National Agricultural Information System** (SNIA), which integrates data from public and private sector organisations as an open source good.^{76,77}

More broadly, the use of digital technologies could deliver environmental benefits, for instance through precision agriculture.⁷⁸

Holistic approach

Whilst information is essential, the ability to use it effectively is just as important. As a complex issue that inherently relies on nature, sustainable agriculture requires a holistic approach to managing farmland, rangeland and natural ecosystems. This may involve techniques such as crop rotation and regenerative agriculture.

In LAC, land use changes over the past few decades and competition over resources mean that decisions at farm and policy level need to address interactions between diverse stakeholders as well as between forest, cropland and livestock. In addition to the TLFF and RCF examples highlighted above, several other exist in LAC and could be built upon, e.g. Mexico's **Sustainable Modernization of Traditional Agriculture** (MasAgro) programme,⁷⁹ the **Grassland Regeneration and Sustainability Standard** (GRASS) in Argentina^{80,81} and the work of the **Familia de la Tierra Association** in Colombia.⁸²

Other considerations

Several other opportunities to provide additional support for farmers to adopt climate-smart agriculture could be used creatively to decarbonise and green the sector. For instance, by extending emission trading schemes, building sustainable agriculture into wider programmes to support rural SMEs (i.e. including other sectors), and creating broader incentive structures (PES – Payment for Ecosystem Services), governments could mobilise green private sector investment and production.

Development banks can also be important players in this space by helping to tackle specific financing barriers and crowding-in private sector investment. They can develop and offer finance products that de-risk investments and increase capital flows, e.g. credit guarantees and other risk mitigation tools such as crop insurance and innovative bond structures.⁵¹ An example of this is IDB Invest's **B-bond (bridge bond) structure**. It seeks to share the investment risk and bring in institutional investor demand.

Development banks can also support policy and regulatory interventions and can strengthen institutional frameworks by providing technical assistance.

To some extent, local and regional development banks are better poised to achieve these objectives than larger MDBs. Firstly, many global MDBs, such as the World Bank, often support countries on short-term planning cycles (typically 3-5 years).⁸³ In order to properly fulfil their mandate of helping the poorest communities and supporting the transition to a sustainable economy, these banks must think longer-term and consider how their own projects are aligned with a pathway to net-zero emissions.

In addition, although large MDBs can aggregate bigger pools of capital, it is smaller, more focused institutions that are often more effective at the local level.⁵² Mexico's FIRA and FND, which offer loans, price guarantees and a range of other support services directly to farmers, are two good examples.

Looking ahead

It is clear that LAC presents many opportunities for sustainable agri-finance solutions, but a more concerted effort in promoting and supporting green financing is required. Governments must devise coherent and ambitious national strategies for greening the sector, in line with their NDC goals.

Incentives for sustainable production could be strengthened, either by introducing stronger incentives for sustainable methods, stronger disincentives for unsustainable ones, or both.

Building on international initiatives such as the TLFF or RCF, or others such as Costa Rica's NFP or Mexico's MasAgro, closer public-private partnerships could be developed to creatively eliminate barriers to sustainable production in specific agricultural industries.

There is certainly also potential for more green bonds. Larger producers, more likely to issue bonds, could receive incentives for doing so, whilst smaller ones could receive funding at preferential rates via green bonds issued by financial institutions or public sector entities. In this respect, aggregation of small loans and receivables can help the market scale up.

Owing to the history of public sector involvement in the agriculture sector, including through various finance mechanisms, there are already relatively strong institutional links between governments, financial institutions and producers in many LAC countries. Leveraging these links could increase the reach and effectiveness of green bond financing for climate-smart agriculture.

Sovereign green bonds could be particularly effective, sending an important signal to the market while aggregating enough capital to make a real difference. Apart from financing producers directly, they could also be used to establish new bodies or initiatives tasked with funding, educating and developing tools for the adoption of sustainable agriculture.

Financing the blue economy



The term 'blue economy' refers to the sustainable use of the ocean's resources for economic development. Its usage has increased with the growing understanding of human dependence on oceans: after all, every breath we take relies, in part, on oxygen produced by oceans.

Valuing ecosystem services is complex, but it is estimated that marine resources hold USD24tn in assets and generate USD2-3tn in annual revenue.⁸⁴ Many industries contribute towards this, such as fisheries and aquaculture, shipping, tourism, offshore energy, biotechnology and marine aggregates such as materials for construction.

Having absorbed at least one half of GHG emissions since the Industrial Revolution, oceans are also crucial for climate mitigation and adaptation. However, with 75% of the world's fishing resources in advanced decline, coastal deforestation rates (e.g. of mangroves) 3-5 times higher than of terrestrial forests, and 90% of coral reefs under threat of extinction by 2030 (not to mention the expected one tonne of plastic in the oceans for every three tonnes of fish by 2025), these benefits are rapidly vanishing.^{85,86}

With many coastal and island nations, the marine-based economy is important in LAC. More than a quarter of the region's population – almost 100% in the Caribbean – lives on the coast. Almost 275m people work in fishing/aquaculture, which contributes around USD20bn to GDP. Peru and Chile are among the world's largest fish-producing countries, with Brazil not far behind.⁸⁷

Coastal tourism provides an additional USD6-8bn in the Caribbean alone. The region holds 30% of global biodiversity and is home to six of the world's 17 mega-diverse countries.⁸⁸

As is happening in other regions, however, many drivers are harming LAC's marine resources. These include habitat loss, over-exploitation, invasive species, and climate change-related changes to sea level, currents, temperature, and water chemistry.

These challenges present huge opportunities for marine planning and conservation, with the aim to preserve, and possibly increase, the value of natural ecosystems. For that reason, Chile intends to use this year's COP, which it is hosting, to focus attention on oceans and their sustainable use.⁸⁹

Sustainable solutions

The degradation of marine ecosystems poses enormous threats to ocean health. A successful blue economy approach, that accounts for all ocean-based industries and human impacts, is beyond urgent. This also means recognising the real long-term value of marine resources and biodiversity.

Investing in coral reef health in Central America through protected areas could provide returns on investment of 44:1 due to impacts on tourism, commercial fisheries and coastal development, estimates a 2018 *Coral Reef Economy* study.⁹⁰ A live shark in the Galapagos, for example, can bring in over USD5m in tourism revenue over its lifetime; a shark killed for its fin is only worth USD280.⁹¹

Ocean-based activities usually lack well-defined property rights and their impacts are difficult to attribute to a given cause, unlike land-based activities, where ownership and impacts are easier to define. An initiative to protect one marine area, for example, is likely to increase fish populations elsewhere. This constitutes an additional challenge for the sustainable management and financing of activities.

Governance

Although the focus of governance measures in the past has tended to be on single activities, the intensified use of marine resources and greater understanding of cumulative impacts has created the need for modern governance structures that address activities with a holistic, circular and ecosystems-based approach.^{92,93} Not only that, but closer collaboration between different stakeholders – nationally and internationally – is needed.

Regional bodies could be leveraged in this context. At the moment, these mainly concern fisheries in the Caribbean, but perhaps more bodies could be developed elsewhere. They include the Latin American Organisation for Fisheries Development (OLDEPESCA), the Central America Fisheries and Aquaculture Organization (OSPESCA), the Commission for Small-Scale and Artisanal Fisheries and Aquaculture of Latin America and the Caribbean (COPESCALC) and the Caribbean Regional Fisheries Mechanism (CRFM).

Collaboration between these and other bodies that focus on activities other than fishing (e.g. tourism, offshore energy, adaptation) is critical for the sustainable management of shared resources. Establishing marine protected areas can be a highly effective tool to do so. To achieve this, stronger domestic and international institutional frameworks will likely be needed.

The Caribbean leading the way

Perhaps due to their smaller size, or geographical features, some of the smallest Caribbean states are leading the way. The **Organisation of Eastern Caribbean States (OECS)**, a ten-member group of islands including Antigua and Barbuda, Dominica and Grenada, is implementing a **Caribbean Regional Ocean Policy** in conjunction with the World Bank to facilitate co-operation for the transition to a blue economy.⁹⁴ **Barbados** has established a Ministry of Maritime Affairs and the Blue Economy (MMABE).

A number of interesting public-private partnerships (PPP) to co-manage marine Caribbean areas are also underway. At a smaller scale, **Grenada launched its Blue Growth Coastal Master Plan (MasterPlan)** in 2016, an integrated sustainable management plan for its marine and coastal environments.⁹⁵ Among many initiatives, it includes an integrated coastal zone management policy for the tri-island State of Grenada, Carriacou and Petite Martinique, as well as a Blue Innovation Institute that aims to be a centre of excellence on marine research and innovative blue financing instruments. **It initially identified potential investment options with attractive returns valued at over USD1bn (around 200% of its GDP!).**

Technologies

While more research and experimentation are needed, many tech-based solutions to support the sustainable use of ocean-based resources exist and will continue to be developed.

Spanning fields such as water and ecosystem management, renewable energy and resource sustainability, these are not limited to marine solutions only. They include the development of plastic alternatives, circular production/consumption systems, battery technologies, smart water meters and sensors, offshore wind, satellite imagery and autonomous shipping, to name a few.

The blue finance landscape is evolving

Despite all of this, several studies indicate that **SDG 14 Life below water** is receiving the least investment globally out of all the SDGs. The first global framework for sustainable ocean financing, the **Sustainable Blue Economy Finance Principles**, was launched in 2018 by the European Commission and UNEP FI.⁸⁴

Challenges associated with small markets and infrastructural deficiencies are compounded by higher risks associated with investing in coastal/ocean assets that are directly threatened by climate change, leading to higher financing costs.⁹⁴ To help reduce financing costs, policymakers could:

- **Reduce risks** e.g. through better renewable energy policy design and institutional capacity building,
- **Manage / transfer risks** e.g. through loan guarantees issued by development banks, or
- **Compensate for risk** e.g. through insurance policy structures.

In this context, UNDP's *Derisking Renewable Energy Investment* framework assists policymakers in implementing a different mix of policy and financial instruments in order to achieve a risk-return profile that catalyses private sector investment at scale.⁹⁶

While there is still a lack of adequate policies, several promising blue finance initiatives have been developed. They invariably involve a network-based, multi-stakeholder approach. By catalysing private sector investment, these creative solutions are especially pertinent in an environment where fiscal space is constrained, public debt is elevated and aid resources are limited, which is the case in much of the Caribbean. Some examples are explored below.

Blue Finance (UNEP)

Blue Finance is a specialist international NGO acting under the institutional umbrella of UNEP. With expertise in structuring co-management agreements and sustainable financing mechanisms for marine protected areas (MPAs) globally. It has several initiatives in partnership with NGOs, governments, communities, donors and impact investors in the Caribbean and Southeast Asia.

In the Caribbean, projects are being developed with the Regional Activity Centre for the Protocol on Specially Protected Areas and Wildlife for the wider Caribbean (SPAW-RAC) of the **Caribbean Environmental Programme (CEP)**. One of the most important ones is underway in the Dominican Republic.⁹⁷

Co-management in the Dominican Republic

The co-management of the second largest MPA of the Dominican Republic, Arrecifes del Sureste, involves partnering with the government and local NGOs. Blue Finance designed a 10-year agreement to co-manage the MPA in 2018. The company comprises two local conservation NGOs, two local foundations of major tourism holdings and other associations.

Blue Finance secured debt financing from impact investors through **Althelia's Sustainable Ocean Fund**, blended with philanthropic grants. Capital is now being used to hire staff and purchase required equipment, with the development of a Management and Marine Spatial Plan also in process. The company is expected to become financially sustainable and generate its own incomes from statutory MPA user fees and an innovative edutainment visitor centre.

The Nature Conservancy

Blue Bonds for Conservation

TNC's Blue Bonds for Conservation is a global programme that aims to leverage upfront philanthropy in order to restructure sovereign debt and catalyse ocean conservation investments.⁹⁸ TNC estimates it can be used to protect over 4m km² of the world's oceans in the next five years.

In essence, TNC leverages public grants and commercial capital to restructure nations' sovereign debt, leading to lower interest rates and longer repayment periods. A portion of those savings fund new marine protected areas and conservation activities to which the country has committed. So far, 20 island nations are taking part in the initiative. One of them, the Republic of Seychelles, issued the world's first sovereign blue bond in 2018.

Coastal Zone Management Trust

Another example of TNC's work can be found in Mexico. Working with the State Government of Quintana Roo and partners in the science community, TNC has helped develop a Coastal Zone Management Trust that will focus on climate adaptation.⁹⁹

The trust will receive taxes, collected by the tourism industry, that will fund maintenance and restoration efforts for 60km of reef and beaches in the Cancún and Puerto Morelos areas - healthy reefs can reduce up to 97% of a wave's energy before it hits the shore. The funds will also be used to purchase an insurance policy, which is triggered when severe weather events, such as storms, hit the reef area. The released funds can then be used for restoration activities to help the reef recover more quickly.

Reef Resilience Network

This project seeks to find new resources and tools for conservation while building capacity among coral reef managers across Southeast Asia and the Caribbean. The focus is on adaptation and resilience measures.¹⁰⁰ Through a recent partnership where UNDP maps the vulnerability and identifies resilience needs at the community level, the Network is used to develop conservation biology measures for coral reefs. Based on this, an insurance provider then writes a policy which can be taken to scale, providing protection and resilience.

ADB's Oceans Financing Initiative

In May 2019, the Asian Development Bank (ADB) released its **Action Plan for Healthy Oceans and Sustainable Blue Economies**, through which it commits to expand its investments and technical assistance in ocean health and the blue economy to USD5bn between 2019–2024.¹⁰¹ As part of the Plan, ADB created the **Oceans Financing Initiative**, aimed at supporting member countries in obtaining finance for sustainable blue projects.¹⁰²

ADB's approach is based on four pillars: (1) developing blue finance frameworks; (2) creating bankable projects; (3) using innovative financing instruments; and (4) increasing access to finance. The initiative will leverage public sector funds to create investment

opportunities able to attract funding from a range of sources, including the private sector.

Technical assistance and funds from ADB and donors, along with innovative financing instruments such as revenue guarantees and credit-enhanced bonds, will be used to reduce projects' risks, making them more bankable.

It will first be piloted in Southeast Asia, with support from the **ASEAN Catalytic Green Finance Facility** (under the ASEAN Infrastructure Fund), the **Republic of Korea**, and **WWF**. While the ADB's Oceans Financing Initiative is restricted to Southeast Asia, similar ones could be developed in LAC.

IDB initiatives

The IDB's **Natural Capital Lab** is the main instrument launched by the development bank to support investments in the blue economy.¹⁰³ Attracting public and private sector entities, the lab drives financial innovation in the areas of conservation, biodiversity and marine ecosystems, among others.

As a financial innovation lab, activities include the deployment of funding in the form of grants, loans, equity, risk capital, and guarantees. Some of its lines of work include testing new financing models, collaborating with companies to value and leverage natural capital in their supply chains, and creating enabling regulatory frameworks for innovation in natural capital finance.

It is also a lab for strategic dialogue and partnerships. For example, it promotes partnerships with global initiatives that convene leaders in technology, science, conservation, and business, and seeks to develop a network of Ministries and international actors (such as the Convention on Biological Diversity).

In 2018, the IDB launched a Caribbean-focused **Sustainable Islands Platform**.¹⁰⁴ It helps island nations, which often face common challenges and constraints, to pursue sustainability through innovative development pathways under three pillars: (1) blue economy, (2) circular economy and (3) climate resilience.

The platform emphasizes integrated sustainability solutions via an "island systems approach". It stems from IDB's **NDC Invest** programme launched in 2016 to support countries in meeting their climate targets by working with public and private entities to create investment plans and bankable projects.

Blue bonds

There are undoubtedly opportunities for blue projects to be financed by bonds, that if labelled, could be included in Climate Bonds' green bond database.

Blue bonds are more likely to be undertaken by public sector and multilateral issuers than private sector players due to the shared nature of coastal and ocean-based assets. Private capital can still be involved in project implementation though, and corporates operating in ocean-based activities, such as shipping and tourism, could issue blue bonds to reduce or eliminate the negative environmental impacts of their operations.

Fisheries could also do so, although the better-defined limits in aquaculture likely make it more suitable for bond issuance from individual corporates. Despite not labelled *blue*, Agrosuper's green loan to finance salmon aquaculture is an example of this.

An estimated USD150-300bn is required in aquaculture capex during the next decade. While much of aquaculture is currently linked to harmful environmental impacts, techniques such as using seaweed and bivalve cultures and offshore finfish systems could

provide sustainable investment opportunities. To this end, **The Nature Conservancy** has partnered with **Encourage Capital** to create a guide for impact investment in sustainable aquaculture.¹⁰⁵

Public sector issuers – particularly island nations – can deploy blue bonds for climate-related projects. Sovereign blue bonds, such as that issued by the Republic of Seychelles in 2018, are especially promising. But, in some cases, local governments and state-owned companies could also issue bonds to finance blue projects. For example, in the USA, Louisiana Local Government Environmental Facilities and Community Development Authority has issued three green bonds totalling USD30m since June 2018 to fund several coastal adaptation projects, including building dikes and reversing wetland and biodiversity loss.

Similarly, national and international agencies, including MDBs and cross-border associations such as the **Pacific Alliance**, could become blue bond issuers. The examples of blue financing mechanisms explored in the previous page open up many opportunities for their role in supporting the blue economy.

CASE STUDY

World's first sovereign blue bond

In October 2018, the **Republic of Seychelles** issued the world's first sovereign blue bond. The USD15m bond was a private placement. The World Bank helped structure the bond and find its three investors: Calvert Impact Capital, Nuveen and Prudential Financial.¹⁰⁶

Proceeds will support the expansion of MPAs, improved governance of fisheries and the broader development of the Seychelles' blue economy. The bond is partially guaranteed by a USD5m guarantee from the World Bank (IBRD) and further supported by a USD5m concessional loan from the Global Environment Facility (GEF), which will partially cover interest payments. It illustrates how international agencies can help to de-risk and scale up sustainable investments.

CASE STUDY

First Nordic-Baltic blue bond

In January 2019, the **Nordic Investment Bank (NIB)** issued the first ever Nordic-Baltic blue bond. SEB acted as the lead arranger for the SEK2bn (USD221m) senior unsecured deal, which targets sustainable investors by supporting water projects around the Baltic Sea.¹⁰⁷

Eligible projects include wastewater treatment, prevention of water pollution and water-related climate adaptation.

The Baltic Sea has been affected by eutrophication due to high levels of nitrogen and phosphorous discharge, which have resulted in excessive plant and algae growth. Investments in wastewater treatment are thus important for sustainable urban development in the region.

Another project involves the redevelopment of the Slussen water locks. It focuses on flooding mitigation measures to allow Stockholm and the wider Mälaren region to prepare for the effects of rising sea levels and more extreme weather.



Brazil's climate goals

As part of its NDCs under the Paris Agreement, Brazil has defined the following mitigation targets:

- 37% reduction in GHG emissions versus 2005 by 2025
- 43% reduction by 2030

To achieve this, it has defined sector-specific targets, e.g.:

- Achieving 45% of renewables in its energy mix by 2030, and increasing the share of sustainable biofuels to 18%;
- Strengthening and enforcing the implementation of the Forest Code to achieve zero illegal deforestation in the Amazon by 2030;
- Restoring 12 million hectares of forests by 2030;
- Strengthening the Low-Carbon Agriculture Programme (ABC), restoring an additional 15 million ha of degraded pastureland and enhancing 5 million ha of integrated cropland-livestock-forestry systems by 2030.

For more details, see its [INDC submission](#) to UNFCCC.⁴⁸

Buoyed by macroeconomic stability, favourable demographic trends and external conditions, Brazil's strong growth and remarkable social progress over the past few decades made it one of the world's leading economies.¹⁰⁸ In the last few years, however, the country's deepest ever recession and a series of political events have reversed the positive trend. The 2018 election of pro-market Jair Bolsonaro as President brought hope of an economic recovery, but also many concerns, most significantly about his stance on environmental policy. In the first two months of 2019, for example, Brazil saw a 54% increase in deforestation compared to the same period in 2018.⁴⁹

Brazil is by far the largest LAC green bond market

Brazil boasts the largest green bond market in LAC. At USD5.1bn, issuance represents 41% of the region's total to date. 2017 was the "golden year" with 10 of the country's 19 bonds – and 21% of LAC's total volume to date – issued during that year. In 2018, the country then experienced a more pronounced drop in issuance (-92%) than the region (-49%) as a result of political uncertainty.

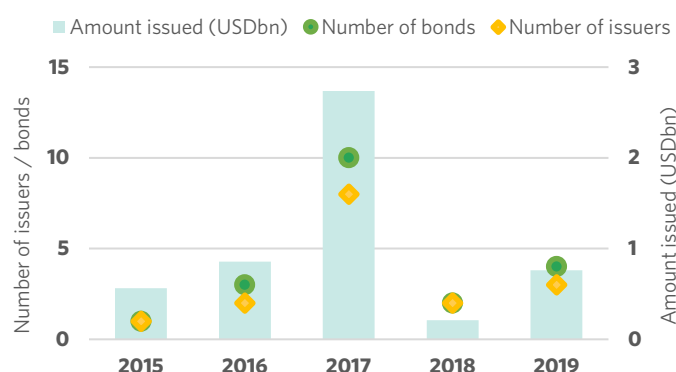
However, volumes have picked up again in 2019, and already exceed USD1bn, if the bonds from Neoenergia (BRL1.3bn/USD343m), Athlon Energia (BRL40m/USD10m), Celulose Irani (BRL505m/USD131m) and Grupo Sabará (BRL20m/USD5m) issued in July / August – i.e. after the report cut-off date – were to be included in the data.

Brazil's first green bond was issued by multinational food processor BRF S.A. in 2015. At EUR500m (USD564m), it was the first benchmark-sized deal from LAC, as well as one of the first green bonds globally to fund Industry more than any other UoP category.

Most of the region's largest deals were issued by Brazilian entities. Six of LAC's eleven benchmark-sized bonds (i.e. USD500m or more) were issued by Brazilian entities, including BNDES (USD1bn), Fibria (USD700m) – now part of Suzano – and BRF.

All deals after BRF's EUR-denominated bond have been issued in USD or BRL. Larger bonds tend to be in USD: USD deals represent 70% of issue volume but only seven of 19 deals. Smaller deals tend to be issued in domestic currency: 19% of volume from 11 deals.

After a record 2017, 2018 was a very weak year for the Brazilian green bond market



Note: The 'Number of issuers' above reflects those in a given year. Since three issuers cover two years, the total number of issuers is 13.

Brazilian bonds have longer tenors, on average, than LAC overall.

The most common term is 5-10Y, especially for larger deals, with 10 of 19 bonds and 78% of the issuance volume falling in this range. Bonds within the '5Y or less' and '10-20Y' ranges tend to be small. Only two bonds have come out with an original term exceeding 20Y.

The lion's share of green bonds in Brazil are senior unsecured (81%), and corporates dominate. Private placements account for 14%.

Obtaining external reviews is very common in Brazil. Larger bonds tend to have a second party opinion (13 out of 19 deals, and 89% by amount), whilst Certification under the Climate Bonds Standard is more frequent among smaller ones (five deals, 7% by amount). Sustainalytics is the preferred provider of SPOs (seven deals, 87% of the value), followed by Sitawi (six deals, 13% of the value).

Non-financial corporates dominate issuance

Non-financial corporates account for 16 of the 19 bonds issued and 71% of the amount issued. Further, only non-financial corporates have been repeat issuers. Brazil represents the bulk of LAC's non-financial corporate issuance, accounting for 67% of the amount issued and 11 of 19 issuers.

Other issuer types include:

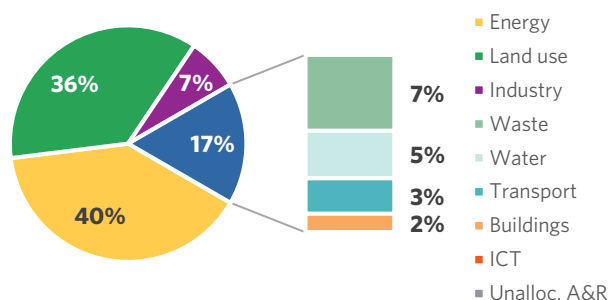
- **Development bank:** BNDES issued a USD1bn bond in May 2017 to finance eight wind power projects. It is the only one issued by a Brazilian development bank to date;
- **Government-backed entity:** In April 2018, state-owned transmission system operator ISA CTEEP became the second government-backed entity in LAC to issue a green bond; and
- **ABS:** Suzano Papel e Celulose, LAC's largest pulp and paper producer, entered the green bond market in September 2016, and shortly after, it issued the region's only green ABS as a CRA (Brazil's Agribusiness Receivables Certificate).

Noticeably, no Brazilian financial corporates or local governments have issued. We would not expect local governments to issue due to debt issuance restrictions and the need for federal guarantees.³⁹ It is odd, however, that banks have not entered the market yet, especially since some have acted as green bond lead managers: **Itaú Unibanco** is sixth in LAC rankings (nine deals, USD708m), while state-owned **Banco do Brasil** is ninth (four deals, USD328m).

High allocations to forestry and paper

Land use and Industry, typically two of the least funded categories globally, are the second and third most funded in Brazil. Brazil's economy is heavily dependent on agriculture and forestry: two of the highest GHG-emitting sectors in the country. The dominance of these industries is reflected in its rather unique use of proceeds mix. On the other hand, Transport and Buildings – two of the “popular” use-of-proceeds sectors globally – have very low allocations from Brazilian issuers, accounting for 5% combined.

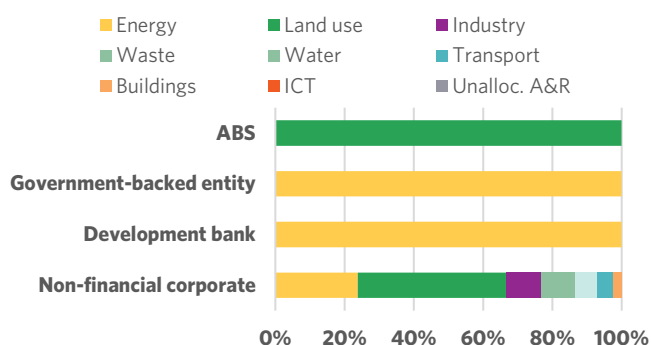
Top 3 in Brazil: Energy, Land use and Industry



Non-financial corporates raise funds for the greatest variety of sectors, while development banks, government-backed entities and ABS issuers have financed only Energy and Land use projects so far.

All Land use allocations in Brazil finance certified forestry products, almost all related to pulp and paper production (e.g. Klabin, Suzano). A smaller portion relates to conservation efforts by those same paper producers. This is likely due to the relative ease of issuing green bonds, given that these companies are already producing sustainably and have obtained FSC or PEFC certification for their products. **Celulose Irani**, another paper producer, issued a BRL505m (USD122m) green bond in July (not included in the analysis).¹⁰⁹

Non-financial corporates have varied UoP



On the other hand, it is more challenging to ensure sustainable *agricultural* production, especially within large-scale producers, which are more likely to issue green bonds. In part this is due to the lack of an accepted transition trajectory to full decarbonisation by 2050. One potential avenue, is the Responsible Commodities Facility, an international initiative to produce soy sustainably (see p. 18).

Marfrig, one of Brazil's largest food processors and the second largest producer of beef globally, recently issued a USD500m “sustainable transition bond” to finance the sourcing of sustainable cattle in the Amazon Biome. It is not included in Climate Bonds' green bond database as its climate credentials are weak, largely due to the nature of cattle farming, i.e. particularly high methane emissions and the use of large tracts of grazing land, some created through deforestation. Tackling emissions and sustainable land management need to be addressed to strengthen agricultural issuers' climate credentials.

Sector growth and future potential

Green finance has huge growth potential in Brazil and could support the country in meeting its climate goals. As well as continued growth in Land use, Energy and Industry, there are opportunities to expand into Transport, Buildings and Waste.

Scaling up sustainable investment will mainly depend on the Brazilian Government's commitment to greening the economy through public and private sector investments. The Brazil Green Finance Initiative, launched by CBI and the Business Council for Sustainable Development (CEBDS), brings together various stakeholders to scale up green finance.¹¹⁰

Public investment in green infrastructure has the power to set Brazil on a sustainable course for the long run, while sending an important signal to the market and providing an opportunity for the country to access new capital. Part of this could be achieved through sovereign green bonds. Development banks could also act as funding vehicles, such as with BNDES' Finame Renewable Energy line and Climate Fund Programme.¹¹¹ Our *Opportunities for Sustainable Infrastructure Investments at City Level in Brazil* report from December 2018 looks at green infrastructure opportunities at city level.¹⁹

Brazil also has a significant pool of climate-aligned issuers that could become green bond issuers. Apart from those that have already issued green bonds, the largest include: **Engie Brasil** and **SESA** (Energy); **Sabesp** and **Copasa** (Water); **MRS Logística** (Transport); and **Duratex** (Land use).

Potential for green bond issuance could present itself among state-owned companies, such as energy company **Eletrobras** and financial institutions **Caixa Econômica Federal** and **Banco do Brasil**. In this context, financial corporates could be more active in supporting the market by becoming green bond issuers themselves – so far, none in Brazil have done so.

Green private sector investment needs to be supported by adequate policy. Labelling among Brazil's climate-aligned issuers, for example, could be incentivised by building on the requirement for ESG-reporting for all banks and listed companies, which has already been introduced.

B3, the largest Brazilian stock exchange, has taken several steps to grow responsible investment in recent years. Having joined the UN's SSE, it offers a separate listing for green bonds and has several sustainability-related indices.^{112,113} Complementing this:

- Brazil's Federation of Banks (FEBRABAN) and CEBDS released **Guidelines for Issuing Green Bonds in Brazil** in 2016;¹¹⁴
- In 2017, investors representing BRL1.8tn (USD450bn) in assets under management signed a joint **Green Bonds Statement** showing their support for green bonds;¹¹⁵ and
- The **Financial Innovation Laboratory (LAB)** was launched by the IDB in collaboration with Brazil's Securities and Exchange Commission (CVM) and the Brazilian Development Association (ABDE).¹¹⁶ It aims to research, develop and pilot finance instruments to increase climate-related investment.

A more holistic strategy to protect the environment, preserve natural resources and grow sustainably – rather than simply growing GDP – is also necessary to underpin the growth of the Brazilian green bond market and expand its scope.

Most Chilean issuers are non-financial corporates but the Sovereigns have boosted Chile's GB market

Chile is the second largest LAC green bond market by amount issued (USD3.1bn), third by number of bonds (six) and third by issuers (four), along with Colombia and Peru.

The country's first green bond came in 2017: **CMPC** – one of the world's largest pulp and paper manufacturers – issued a USD500m green bond to finance sustainable forestry, sustainable water management, industrial energy efficiency and waste management projects related to its operations. CMPC became the third paper producer in LAC to issue a green bond, and the first outside of Brazil.

2018 saw two new issuers come to market. **Aguas Andinas** was the first non-financial corporate. **Agrosuper** was the first to use a green loan and to fund sustainable fisheries (see p. 18).

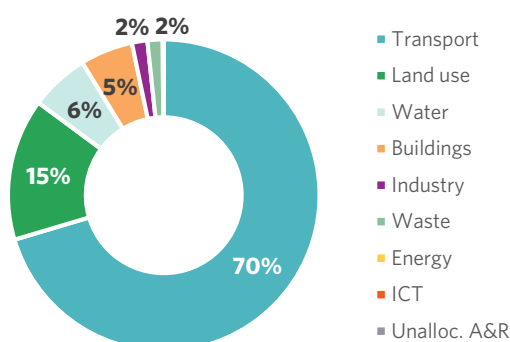
The real boost to Chile's green bond market came in mid-2019, when the **Republic of Chile** issued two Sovereigns, the first green sovereign bonds in the Americas. One was issued in the US market (USD1.4bn), the other was a Eurobond (EUR861m). They will primarily finance low-carbon transport, but also sustainable buildings, renewable energy and water management projects (see p. 6).

Chile's UoP mix is uncommon due to green Sovereigns

Alongside Brazil, Chile is the country with the most use of proceeds categories funded (seven). Due to the sovereign deals, Transport dominates heavily. Most transport projects will finance the construction and upgrades of metro lines, but they also include rolling out electric buses and infrastructure for electric vehicles.¹⁶

The country is pushing electromobility. As well as already having the largest electric bus fleet in LAC (second in the world, only behind China),¹¹⁷ the Government's Electromobility Strategy aims to achieve a 40% share of private vehicles and 100% of public urban transport electric by 2040.¹¹⁸

Transport is top sector due to Chile Sovereigns



Note: Energy (not visible) represents 0.1% of issuance.

Land use is the second-largest funded sector thanks to CMPC's green bond and Agrosuper's green loan.

Energy accounts for just 0.1% of issuance, which is very uncommon. In every other LAC country, Energy is the most funded sector. This is also the case globally.

95% of Chilean issuance is denominated in USD or EUR, again highly influenced by the two large sovereign deals. The remaining 5% came from Aguas Andinas' two deals, denominated in Chile's Unidad de Fomento, a unit of account whose exchange rate with the Chilean Peso is constantly adjusted for inflation.

Green bond deals tend to be longer dated in Chile than in other LAC countries. Driven by the USD Sovereign, which matures in 2050, half of issuance has a tenor longer than 20 years. At its peak, the order book for the USD-denominated bond was 13x oversubscribed. The EUR Sovereign has a 12-year tenor and was 4.7x oversubscribed.¹⁶

Agrosuper's 7-year loan has the shortest original term to maturity.

97% of Chilean issuance benefits from an external review. Due to the Sovereigns, 76% are Certified Climate Bonds, the rest benefit from an SPO. The only deal without a review was Agrosuper's loan.

Three bonds benefit from an SPO. CMPC obtained an SPO from Sustainalytics: at USD500m, the deal accounts for 77% of the three bonds' total volume. Vigeo Eiris provided the SPO for Aguas Andinas' two bonds.

One ESG and three social bonds were issued by Chilean entities between 2016-18, all by financial institutions. Three were issued by BancoEstado, a state-owned bank, and one by financial corporate Caja de Compensación Los Héroes. They finance social housing, social inclusion, microfinance and female entrepreneurship projects. Their combined value was USD372m, with two social bonds having been issued in JPY.

Broadening issuer base and green public sector investment can create momentum for growth

Chile's sovereign green bonds could be an important catalyst in the country's transition towards a low carbon economy, as it seeks to reduce GHG emissions by 30% by 2030 (versus 2007).¹¹⁹ As well as financing various key projects, namely the decarbonisation of Chile's public transport infrastructure, the sovereigns' high visibility is likely to send an important signal to the market and wider public.

This could spur further issuance among public and private sector issuers alike, especially if coupled with coherent policies that stimulate green investments, including from government-backed entities. This would contribute significantly towards the country meeting the targets under its **2014-22 National Green Growth Strategy** and **2050 Energy Strategy**.^{120,117} Another important area of focus in Chile is the potential for blue bonds (see p. 20-22).

Santiago's stock exchange (BCS) has also taken steps to develop green finance. It has joined the UN's SSE initiative.¹²¹ It provides a sustainability-related index (DJSI), offers ESG-related training, and published a *Green and Social Bond Segment Guide* in 2018.¹²²

However, more can be done; for example, the BCS could develop separate green bond listings, provide incentives for issuers (as is happening in Costa Rica) and more broadly require ESG reporting for all listed bonds.

As the market evolves, we would hope to see greater issuer and sector diversification in terms of use of proceeds to ensure a broad-based transition to a low-carbon economy.

Eight bonds from six issuers totalling USD1.8bn have been issued by Mexican entities since the first green bond in 2015, excluding Mexico City Airport. The second largest LAC country by both population and GDP after Brazil, Mexico has the third largest green bond market in LAC.

2018 was critical for the Mexican green bond market. On the plus side, almost two-thirds of total volume to date, as well as five bonds from distinct issuers, including one by repeat local government issuer Mexico City, came to market. However, the year was marred by the cancellation of NAICM, Mexico City's new airport, which was planned to be the largest infrastructure project globally to be financed by green bonds (see p. 3 for details). *The analysis and figures in this report do not include the Mexico City Airport bonds.*

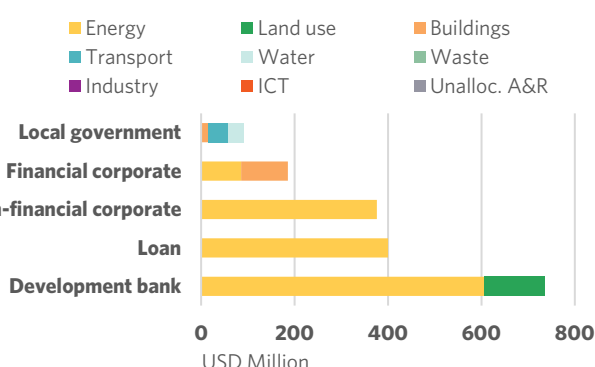
For the green bond market, the direct effect of the new airport's cancellation is that figures are USD6bn lower. More importantly, though, it left many investors in breach of their investment policies, because the bond proceeds are no longer earmarked for green assets/projects. The impacts of this on Mexico's, LAC's, and possibly even the global, green bond market remain to be seen. In Mexico, no green bond has been issued since. We hope the government finds an adequate and prompt solution.

For its size, the Mexican green bond market is diverse

Mexico's green bond market is three times smaller than Brazil's and just over half the size of Chile's. Yet, in many ways, it is just as diverse, if not more. This is most clear looking at issuer types.

Mexico has the highest number of different issuer types in LAC: five. Most bonds have been issued by public sector issuers, which include development banks **Nafin** (two bonds) and **FIRA**, and local government **Mexico City** (two bonds). Within the private sector, financial corporate **BBVA Bancomer**, one of the largest banks in the country, and non-financial corporates **Iberdrola Mexico** and **Eólica Mesa Paz** each had one deal in 2018.

Energy allocations are common in Mexico



82% of allocations are going into renewable energy. Buildings and Land use are the second largest categories, each accounting for 7%, while Transport and Water account for 2% each. Development bank FIRA's Certified Climate Bond is the only one funding sustainable land use – more specifically protected agriculture. Mexico City's bonds finance the widest range of categories within a single bond.

Mexico's three largest bonds are denominated in USD. The currency represents 71% of issuance, the rest being in MXN. This is not surprising, given the volatility of the Mexican Peso and the country's close ties with the USA. **Six of eight bonds are USD100m or above**, and the first green bond issued in the country – Nafin's inaugural USD500m 2015 deal – was benchmark-sized.

The tenor of green bonds from Mexican entities is relatively short. 75% of bonds, accounting for 70% of the amount, mature within five years of issuance. Only two bonds, both from 2018, have longer terms: Eólica Mesa Paz – 26 years; and Mexico City – 10 years.

It is common for Mexican issuers to obtain external reviews. SPO tend to be used for smaller deals (five bonds, 44% of volume), Certification is more common for larger ones (two bonds, 35%). Only one bond did not engage external reviewers (Eólica Mesa Paz), but financing a single wind project, this was less important.

Three out of five SPOs were provided by Sustainability. The Carbon Trust entered the market with an SPO for Mexico City's MXN1.1bn (USD54m) deal from late 2018, which financed Buildings, Transport, Water and Adaptation projects.

Both Certified Climate Bonds were issued by development banks.

Nafin's USD500m private placement from 2015 was Certified under the Wind Criteria of the Climate Bonds Standard's. FIRA Certified its green bond under the newly created Protected Agriculture Criteria.

Mexico boasts the most social/sustainability/ESG bonds issued in LAC, with seven such deals since 2017. Issued by two development banks, two non-financial corporates and one local government, they total USD1bn and were all denominated in MXN. They financed a variety of projects, such as access to water and sanitation, education, financial inclusion, gender equality, SME finance and social housing.

Sector growth and future potential

We expect Mexico's green finance market to expand in the near future notwithstanding negative news flow. After the cancellation of Mexico City Airport in early December 2018, a multi-billion dollar bailout plan was announced for oil company Pemex earlier in 2019.¹²³ The latter decision sends mixed messages about Mexico's energy future, especially since it is linked to the drilling of over 500 new oil wells in 2019 and a risky deep-water project in the Gulf of Mexico (Perdido Fold Belt).^{124,125} And yet, Mexico's green finance market shows significant potential in helping the country meet its NDC goals.

LAC's first dedicated green bond segment was launched by Mexico's main exchange (BMV) in 2016.¹²⁶ It includes a separate listing for green bonds and its own *Green Bond Principles* for prospective issuers, which require an SPO or Certification under the Climate Bonds Standard for listing.¹²⁷ BMV is also part of the UN's **Sustainable Stock Exchange (SSE)** initiative.¹²⁸

In July, Mexico's **Climate Finance Advisory Board (CCFC)** joined the International Network of Financial Centres for Sustainability (FC4S), announcing it intends to turn Mexico into a regional green finance powerhouse.²⁵ The Central Bank is a Steering Committee member of the global **Network for Greening the Financial System**.²²

Investors also seem committed. A group of investors representing USD225bn in assets signed a **Green Bonds Statement** in 2017,¹²⁹ followed by a declaration in favour of ESG disclosure in 2018.¹³⁰

Like the rest of LAC, Mexico presents many opportunities for investments into green infrastructure. The IFC, for example, signed the Agreement for Co-operation in Infrastructure Financing with BEEL Infrastructure Partners – an asset management firm specialising in LAC projects – in June 2019.¹³¹ Its aim is to identify and co-finance sustainable infrastructure projects in Mexico.

Sovereign issuance and increased issuance from sub-sovereigns could boost the green bond market and help meet NDC promises.



Peru's green bond market is dominated by non-financial corporates and Energy projects. LAC's first green bond was issued by Peruvian windfarm operator **Energía Eólica**, an indirect subsidiary of Contour Global, in December 2014. The USD204m senior secured green bond refinanced the Cupisnique and Talara windfarms, which have a guaranteed 20-year PPA with the Government.

Almost four years passed until Peru's next green bond was issued. Non-financial corporate **Protisa Perú**, a subsidiary of CMPC Tissue and CMPC (Chilean pulp/paper producer, itself a green bond issuer), issued a senior unsecured PEN100m (USD30m) green bond in late 2018. It remains the only Peruvian deal that didn't finance Energy: the proceeds were earmarked for industrial energy efficiency, water management, waste and pollution prevention projects. Protisa engaged Sustainalytics as an SPO provider.

2019 is already a record year with three issuances, all notable in some respect. Included in the analysis are two April bonds:

- Transmission operator **Consorcio Transmantaro** came to market with the country's largest green bond (USD400m). The bond benefits from a Moody's green bond assessment. The proceeds will finance the installation of transmission lines and energy efficiency improvements to existing transmission infrastructure.
- National development bank **Cofide** issued a PEN100m (USD30m) green bond, making it the first financial institution to enter the market. Sustainalytics provided an SPO. The proceeds allocated towards Energy projects.

After the cut-off date, **Ergon Perú** issued the country's first private placement (USD222m) in July. The proceeds finance the installation of almost 200,000 solar PV systems in rural areas, after the company was awarded a contract to supply these as part of the Government's National Rural Electrification Plan.¹³²

The Government has announced it may issue a sovereign green bond, possibly in 2020.¹⁰ This could boost Peru's market, perhaps encouraging existing issuers to issue again (all have single deals).

There also seems to be potential for financial corporate issuance to help scale up the market. Most business financing in Peru comes from the private sector, after a wave of privatisation since the mid-1990s.¹³³ State financing is mainly restricted to public spending, public infrastructure investment and funding for agriculture, which are well suited to green bond financing.

Existing green finance initiatives should also be leveraged. The Lima Stock Exchange (BVL), a member of the UN's SSE,¹³⁴ published a *Green Bond Guide for Peru* in 2018 with support from the UK Government.¹³⁵ It requires ESG reporting from all listed companies since 2015 and offers ESG-related training as well as sustainability-related indices. As the market evolves, it could help improve green bond discoverability by creating a separate green bond listing.

The green bond market has yet to take off in Peru but there are promising signs. Government support, especially in the form of a sovereign green bond but also through market incentives and conducive climate and financial market policies, can be beneficial.

Argentina



Argentina has recorded the issuance four green bond deals from three entities between 2017-18. All four were in USD.

After inaugurating the country's green bond market with a USD200m private placement (PP) in early 2017, local government **Province of La Rioja** became a repeat issuer later that year with a USD100m senior unsecured deal. The bonds financed wind projects in the province. Both obtained an E1 green bond rating from S&P.

In-between those two deals, **Province of Jujuy** became LAC's third local government issuer (Mexico City being the first) with a USD210m senior unsecured deal, which received a Sustainalytics SPO. While it also financed Energy, the proceeds were used for the construction of three 100MW solar PV parks.

The country's latest green bond was issued by commercial bank **Banco Galicia** in June 2018. The USD100m PP was fully subscribed by the IFC. Although it partly targets energy efficiency projects in different sectors (e.g. Industry), most proceeds are allocated towards renewable energy, namely solar, wind and biomass.

The fact that Argentina's local governments have started using green bonds is positive. The possibility of issuance by Provinces through a solid but relatively decentralised governmental structure could make it easier to invest in green infrastructure and monitor impacts. In some other countries, most notably Brazil, this is either very hard or not possible. However, funding sustainable infrastructure presents significant opportunities as cities grow.

A more diversified issuer base would be beneficial. While this is most pertinent to the private sector, it also applies to public sector

entities. Initiatives to facilitate access of other issuers to the market should be devised and implemented.

The **Sustainable Finance Protocol**, signed by 18 banks in July, aims to build a sustainable finance strategy in the banking industry.¹³⁶ It is a good start, but more extensive policy support would help. More issuance from banks, in particular, could make green finance available to the real economy and to borrowers that do not have big enough financing needs and/or the expertise to access the green bond market directly.

In addition, diversifying green finance to sectors other than Energy should be an area of focus. The Government's auction-based programme for renewable energy generation and sourcing, **RenovAr**, received a further USD250m guarantee this year (after USD480m in 2017) from the World Bank.¹³⁷ Combined with the country's **Renewable Energy Fund**, RenovAr has been successful in scaling up investments in renewable projects. The first transaction financed as part of RenovAr was the El Corti 100MW wind farm, the largest in the country, which was funded by an A/B-loan from IDB Invest.¹³⁸

Financial sector support would be key for scaling up green finance. Argentina's capital markets regulator, CNV, published the *Green and Social Bond Guidelines* earlier this year.¹³⁹ Clear guidance for issuers is important, but ideally it should be complemented by related actions by Buenos Aires' stock exchange (BCBA) in the form of, say, assistance for green bond issuers (e.g. training) and/or specialised listing rules or bond segment to increase green bond visibility. These could help channel market potential to green bonds.



Colombia's GB market is unique in many ways

Colombia is the third largest LAC country by population and has the region's fourth biggest economy. Its green bond market is only the seventh largest, but it is unique in several ways.

Unlike any other LAC market, financial corporates dominate in Colombia, accounting for 80% of the amount issued. Two of its four issuers, **Bancolombia** and **Davivienda**, were the first financial corporates in LAC to issue a green bond (in 2016 and 2017, respectively). Bancolombia is the only Colombian repeat issuer. The IFC purchased all three bonds issued by these two entities.

The other two issuers are development bank **Bancóldex** and non-financial corporate **EPSA** (Empresa de Energía del Pacífico), an energy company.

More than half of volumes (58%) fall in the 5-10Y tenor bracket, while just over a third (37%) had an original term of 5Y. The only long dated deal was EPSA's 12-year COP70bn (USD24m) bond.

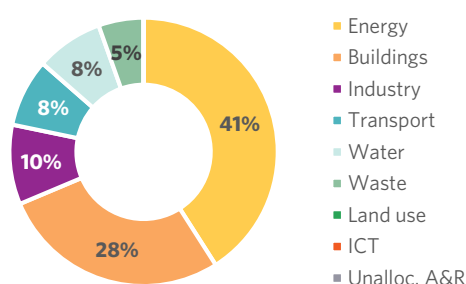
EPSA's is – so far – the only Certified Climate Bond (under the Solar Criteria of the Climate Bonds Standard). Two other deals benefit from external reviews: Bancolombia's green bond received an assurance from Deloitte; Bancóldex's obtained an SPO from Sustainalytics. The remaining two bonds do not benefit from an external review.

All five green bonds issued by Colombian entities were denominated in COP. Bancóldex issued a COP200bn (USD66m) unsecured deal, while the remaining four were private placements (PP). They represent 86% of Colombian issuance, which is indicative of a still nascent green bond market.

High allocation to Buildings and Industry projects

Due to the prevalence of financial corporate and development bank issuance, a variety of sectors have been financed in Colombia. It is an uncommon mix, however. Although Energy leads with 41%, Buildings and Industry make up the rest of the top three. This makes Colombia the country in LAC with the highest share directed towards Buildings and Industry.

Colombia's top 3: Energy, Buildings, Industry



Allocations to **Buildings** are driven by Bancolombia's and Davivienda's three deals. Colombia is among the 20 fastest-growing markets globally for construction spending, and the Government has been pushing the adoption of green building codes as part of its Green Growth Strategy.^{140,141}

For example, with support from the IFC, Bancolombia used part of its green bond proceeds to finance VerdeVivo, a set of sustainable housing projects in metropolitan areas created by construction company Conaltura. The buildings meet high-level international environmental standards.

In terms of Industry allocations, 85% came from Davivienda's green bond, with part of the proceeds going to energy efficiency projects.

So far, Land use projects have not been funded. This should really be a focus area for Colombia going forward, since land use-related activities are the top GHG emitter in the country.¹⁴²

Colombia poised for green finance growth

The Government is thought to be considering a sovereign green bond in the next year.¹¹ Colombia's green finance market offers many opportunities for growth. A sovereign issuance could enhance the visibility of its green bond market.

Issuance from financial corporates has the power to significantly scale up investment in green projects, as well as increasing the visibility of green finance in the public arena. Colombia is ahead of other countries in terms of financial corporate issuance, and this could be built on to expand issuance to other financial institutions.

Other socially responsible investment instruments could also direct financing to green projects. Bancolombia, for example, issued its first sustainability bond in July (COP657bn/USD190m), which was fully acquired by IDB Invest.¹⁴³ The proceeds will finance 28 projects around the country, of which 18 were environmental and 8 focused on access to basic infrastructure and social housing.

In June, **Financiera de Desarrollo Nacional (FDN)**, a sister development bank of potential public sector issuer **Findeter**, issued a COP131bn (USD38m) sustainability bond to finance the acquisition of public buses for TransMilenio, Bogotá's bus rapid transit system.¹⁴⁴ This complements public transport investments made in other cities this year: **Cali**, for example, plans to complete a fleet of 125 electric buses in 2019, while **Medellín** has already ordered 64 BYD electric buses.¹²⁷

The Government's **National Climate Change Decree (SISCLIMA)**¹⁴⁵ and **Green Growth Plan** are promising initiatives that could be leveraged to increase investment in green projects, such as infrastructure and construction. Integrating this with wider supportive policy, including financial incentives for issuance in the context of the **Green Bond Road Map** released in 2017, could be especially powerful.¹⁴⁶

MDBs already have a history of investing in Colombia with an environmental focus. Further capacity- and network-building in this area, including working with other regional countries, could be effective in helping to scale up the country's green finance market.

Combined with stock exchange initiatives, the involvement of Superintendencia Financiera de Colombia, the financial markets regulator, in the global **Network for Greening the Financial System (NGFS)** could also support these efforts.¹⁴⁷

The Colombian Securities Exchange (BVC) is a member of the UN's **Sustainable Stock Exchange** programme and already provides a **sustainability-related index (COLIR)**. This could be used as a platform to create a more robust green finance segment, for example including separate listings for green bonds, education and training resources, and incentives for issuers.



Only two green bonds have been issued in the Central American & Caribbean (CAC) region so far. Both are from 2016.

Banco Nacional de Costa Rica (BNCR), the country's largest bank and the second largest in Central America by assets, entered the market with a 5-year senior unsecured USD500m deal in April 2016. 100% owned by the Costa Rican Government, BNCR is the only government-backed entity in LAC apart from ISA CTEEP in Brazil to have issued green debt. It is also one of only six LAC banks to have done so. Although the proceeds were intended to finance solar, wind, hydro and wastewater projects, they were only used for renewable energy. Moody's assigned the bond a GB2 Green Bond Assessment.

The other green bond from CAC was issued by the **Central American Bank for Economic Integration (CABEL)**, the region's supranational development bank. CABEL issued a 5-year unsecured green MTN of ZAR1.0bn (USD74m) in August 2016. While aimed at funding renewable energy, this has not been confirmed due to the lack of disclosure at or post-issuance (as of November 2018).

One loan used for a green project was excluded from our database because it was unlabelled. In 2018, USA-based **Ormat Technologies** obtained an unlabelled USD115m loan from OPIC to finance the development of a 35MW geothermal power plant in Honduras.

Stock exchanges' commitment to green financing

Costa Rica leads the way in terms of stock exchanges initiatives.

BNV, the Costa Rica Stock Exchange, has published a *Guide for the Definition and Management of Green Projects* (with EY), which targets companies interested in issuing green bonds.¹⁴⁸ It has taken several other steps in order to develop the market.

CASE STUDY

Costa Rica stock exchange initiatives

In 2018, Costa Rica Stock Exchange (BNV) became the first from Central America to join the UN's SSE programme.^{149,150}

It has developed a number of initiatives to develop the green bond market:²⁴

- **Dedicated green bond webpage** with relevant information
- **Separate green bond listing via label**, in which a 'V' (for 'Verde', i.e. 'Green') is incorporated in the ISIN
- **Green Bonds Standard** based on ICMA's GBPs, which listed bonds must comply with (external review required)
- **Differentiated fees**, as well as multiple support services (such as advice during the issuance process and organisation of a promotional road show) for issuers
- **Green bond training** for investors, issuers and other stakeholders via seminars and other events, as well as online green bond training resources
- **Launched the Green Economy Principles** to promote a low carbon economy, after hosting the country's first Green Economy Investment Summit.

In the **Dominican Republic**, the stock exchange (BVRD) launched the first **Green Finance Forum** in July 2019, bringing together financial sector, corporate and public sector players.¹⁵¹ The aim is to develop green finance instruments, particularly green bonds, in the country. During the event, BVRD released a guide about green finance/bonds for interested parties (again with EY's support).

The **Panama** stock exchange BVP has joined UN's SSE initiative,¹⁵² and plans to release a *Green, Social and Sustainable Bonds Guide*.

CAC's green bond market offers potential for growth

Despite the relatively small size of CAC's green bond market, we believe the region offers much potential, for various reasons.

There seems to be a desire to tackle climate change, especially given the region's vulnerability to extreme weather events and rising water levels. Due to their smaller scale and less complex systems, it may also be easier for smaller countries to transition to a green economy, even more so if they act together.

During the writing of this report, the IFC lent USD35m to Davivienda Costa Rica to finance renewable energy and sustainable buildings, with potential for a green bond issuance to support this.¹⁵³ The support of multilateral institutions could prove beneficial in developing CAC's capital markets and helping financial institutions come to market. This could have a leveraging effect, with banks being able to lend to various local infrastructure projects.

Costa Rica is leading the way in the CAC region in terms of supportive climate policies, but several countries have NDC targets (e.g. Panama, Guatemala, Dominican Republic). In September 2019, infrastructure bank **CIFI** issued a USD200m green bond to finance various energy assets, waste and wastewater projects in **Panama**.¹⁵⁴ In August, Williams Caribbean Capital (**Barbados**) Certified a BBD3m (USD1.5m) green bond, issued to finance solar PV asset.

Costa Rica's transition journey from decimated rainforests to carbon neutrality by 2021 is instructive. After unchecked logging destroyed two-thirds of Costa Rica's rainforests, strict regulation and market-based incentives introduced during the 1980s via the National Forestry Fund have doubled forest cover.¹⁵⁵ Close to 100% of its energy is now generated from renewables.¹⁵⁶ While it has a GHG emission reduction target of 44% by 2030 (versus 2005) under its NDCs, it plans to be carbon neutral by 2021.¹⁵⁷

CAC also offers enhanced opportunities related to the blue economy, given its geographical attributes and reliance on ocean-based activities. The blue bond market could take off in the region, especially with support from governments, MDBs and NGOs such as *Blue Finance* and *The Nature Conservancy*.

There may be even more potential for sovereign green/blue bonds in CAC compared to the rest of LAC, as long as the state of public finances permits. Linked to the blue economy and also owing to the countries' smaller size, sovereigns can help aggregate funding requirements across multiple projects, as well as the power to boost green financing and signal climate commitments to the market.

We also see potential for other public sector issuers to become green bond issuers. For instance, the Water and Sewerage Authority and Housing Development Corp in **Trinidad and Tobago**, or the **Virgin Islands'** Public Finance Authority could perhaps issue green bond to finance climate-friendly projects.

For these reasons, we believe CAC's green finance market presents many growth opportunities in the years ahead.

Conclusion



There is significant potential for green finance in LAC. 2019 has been a positive year for the market, with record high volumes already, the region's first sovereign green bonds, and a number of very promising initiatives by a diverse group of players. COP 25, which will be hosted by Chile this year, could help catalyse the market.

Going forward, we expect to see:

1. **Continued growth in green bond issuance with new issuers and countries joining the market:** Progress to date has laid the groundwork for the opportunities ahead. Future development can rely on the current relative strength of the green bond markets in Brazil, Chile and Mexico, and will benefit from issuers' best practice across the region on the use of external reviews to showcase their green credentials. There is special potential for green finance to support investments in green infrastructure. Growth will also come from a diversification of issuer types in most countries.

Labelling bonds from existing climate-aligned issuers as they refinance presents an opportunity to bring further visibility to LAC's green finance market. A sectoral analysis of issuers has revealed that Brazil, Colombia and Chile have the largest climate-aligned issuance to date.

2. **Investment in sustainable agriculture and blue projects:** Given the importance of agriculture and ocean-based activities in many LAC countries, special focus is needed to develop these sectors sustainably whilst increasing their adaptive capacity to climate shocks. Policies that drive investment in sustainable agriculture and ocean projects, by both the public and private sector, should be a priority for policymakers across the region. Sovereign and sub-sovereign green bonds could be deployed to achieve this.

Understanding the complexity of both sectors is key to finding effective nature-based solutions that address problems holistically and with the involvement of various stakeholders. Several promising financing initiatives, many of which hinge on development banks and NGOs, already exist in LAC and globally. For example, these include the Tropical Landscapes Financing Facility, Responsible Commodities Facility, Blue Finance, ADB's Oceans Financing Initiative and IDB's Sustainable Islands Platform.

3. **Green bond issuance from the public sector to finance national development goals under the Paris Agreement:** A spotlight on public sector entities highlighted examples of issuers which could be entrants in the green bond market, if their climate-aligned assets are sizeable enough to be (re)financed via a labelled green debt instrument. The green sovereign bonds from Chile, deals from local governments in Mexico and Argentina, and multiple issuances from development banks across the region, have set the stage for further issuance from the public sector to mobilise funding for

green infrastructure. With Peru and Colombia announcing potential sovereign green bonds, we see opportunities for sovereigns to scale up green finance while increasing its visibility among investors and the general public.

4. **Development banks leveraging their expertise and financial capabilities to support local market development:** Multilateral players such as the IDB and IFC are expected to continue to facilitate green bond issuance by acting as "anchor investors" for local issuers. This provides a signal to foreign investors that borrowers are credible. Supranational institutions have already implemented some measures to spur market growth, such as guarantees, de-risking mechanisms, investment funds, platforms for collaboration and knowledge exchange, and support on the issuance process. These could be built on and expanded more systematically throughout LAC.
5. **Increased engagement of the wider banking and finance sector in green bond issuance:** International initiatives such as the Network for Greening the Financial System, the International Network of Financial Centres for Sustainability and the Sustainable Banking Network, and national ones such as Brazil's Green Finance Initiative and Mexico's CCFC, can disseminate knowledge, ensure consistent messages and provide support to lenders to scale up green lending. More research on innovative instruments, such as through IDB's Natural Capital Lab, could support this further. Stock exchanges and banks also have a key role to play – several in LAC have already been active in enabling and promoting green finance and this work should be strengthened.
6. **The introduction of further policies, incentives and guidelines around green finance:** The market is a function of and responds to the architecture of the system. Coherent and supportive policy is thus instrumental in scaling up investment in green projects. While substantial and comprehensive policies are still lacking in LAC as in many other regions of the world, several governments in the region have already taken steps in the right direction. For example, some countries have developed *Green and/or Social Bond Guidelines*. Governments could also consider providing financial support for issuers to cover additional costs, such as those of obtaining external reviews.
7. **Greater transparency and better visibility:** Further support could come from a platform providing aggregated information about the green bond market, possibly even including standardised reporting by issuers. IDB is currently developing a public Green Bond Transparency Platform with advisory support from a consortium of market actors.

Naturally, all of these are interconnected. Success in growing green finance requires a concerted effort by market participants and a holistic understanding of the system. Close co-operation, common objectives and knowledge sharing between parties are a necessity.

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How to issue a green bond/loan

Who can issue green bonds?

Any entity which has suitable green assets can issue green bonds and/or obtain green loans. Suitable green assets include renewable energy, low carbon transport, low carbon buildings, sustainable water and waste management, sustainable land use as well as climate change adaptation measures such as flood defences.



1 Develop a green bond framework

- Define eligibility criteria for projects/assets
- Create selection process
- Set up tracking & reporting

Available guidelines & standards:

International: Green Bond Principles (GBP), Green Loan Principles, Climate Bonds Taxonomy and Climate Bonds Standard

Country-specific: Brazil, Chile, Mexico, Argentina, Peru, and Costa Rica



2 Best practice: Arrange an external review



Assurance report: an external party confirmation of compliance with GBP/GLP

Second Party Opinion: an external assessment of the issuer's green bond framework, confirming GBP compliance and analysing the eligible asset categories

Green rating: an evaluation of the green bond and framework against a third-party rating methodology, which considers the environmental aspects of the investments. In LAC, these mainly include products developed by international rating agencies such as S&P and Moody's.

Verification report for Certified Climate Bond: third party verification, pre- and post-issuance, which confirms that the use of proceeds adheres to the Climate Bonds Standard and Sector Criteria and the Paris agreement to keep global warming to 2°C and achieve full decarbonisation by 2050

3 Check for support mechanisms:

In some LAC countries, it is mainly stock exchanges that provide some support services for green bond issuers. Although financial support is rare (only Costa Rica's BNV seems to offer reduced fees for green bonds issuers, as well as helping them in organising roadshows), it is worth checking this locally, especially since green finance policy is changing rapidly. Other local organisations, such as Brazil's CEBDS and Mexico's CCFC, may also be able to provide support.



4 Issue the bond / loan!



5 Post-issuance reporting

Report annually to confirm that the funds are allocated to green projects / assets

Best practice: Disclose environmental impacts of financed projects in absolute terms and relative to an appropriate benchmark

