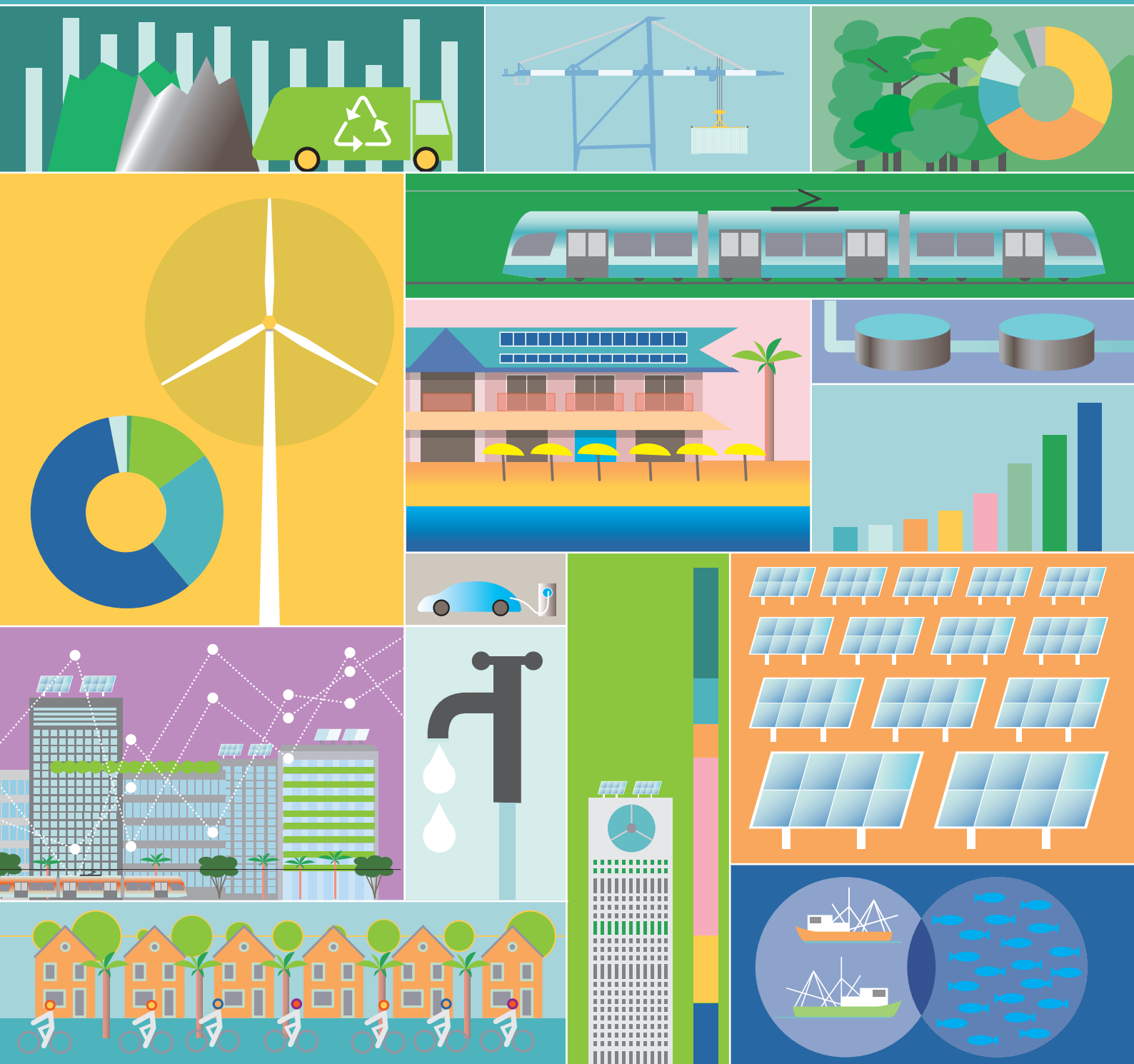




Green Finance Opportunities in Central America and the Caribbean 2021



Report prepared by
Climate Bonds Initiative

Climate Bonds INITIATIVE

Report sponsored by the
Central American Bank for
Economic Integration

CABEI
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Foreword by CABEI

The **Central American Bank for Economic Integration (CABEI)** was established in 1960 and its headquarters are based in Honduras. CABEI's mission is to promote economic integration and economic and social development in the Central American region. CABEI is composed of founding and non-founding members and aligned with attending the interests of all its member countries.

CABEI is the largest multilateral lender in Central America, contributing almost 50% of the total disbursements in the region. To this end, the Bank grants loans and provides technical assistance to entities of the region's member countries, mainly focusing on public sector infrastructure projects although it also provides loans to the private sector.

CABEI has a double AA credit rating in the international capital markets, which makes it the highest credit rating in all of Latin America, having built a global investor base for its medium- and long-term bond issuances. CABEI has a highly diversified funding base and has maintained uninterrupted access to international capital markets, issuing bonds in 24 currencies and 23 markets.

In the last 10 years, CABEI has not had a single arrear from any sovereign debt; a one-day late payment on any loan is immediately accounted as a delay.

In accordance with the Bank's commitment to Zero Carbon Emissions and its accreditations with global funds such as the Green Climate Fund and the Adaptation Fund, the Green Bond issues will further strengthen the Institution's impact on the Central America's resilience to climate change. During the 2015-2018 period, CABEI approved funding of USD2.8bn for climate change initiatives, which represents 35% of the Bank's total loan approvals for the same period and considers the channelling of approximately USD847m in external financing from other developing partners.



Introduction

This report has been prepared to help meet the growing demand for green investment opportunities – particularly green bonds – as well as to support the transition to a low-carbon economy in Central America and the Caribbean (CAC).¹

Over the past 15 years, the CAC region has seen steady growth – recording an average annual GDP growth of about 4% – although some economies have consistently grown more than others.² The countries leading the pack include Costa Rica, the Dominican Republic, and Panama, all of which have grown above the regional average over the last 30 years.

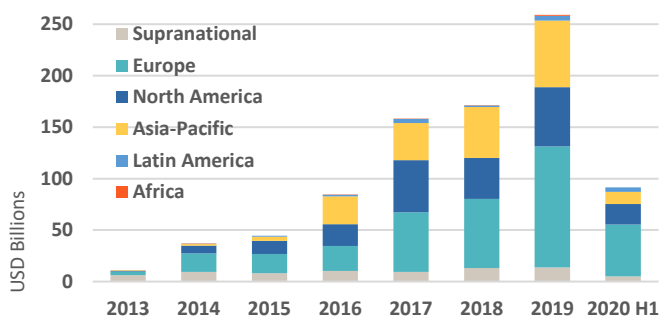
Overall, the economic growth rate in CAC has exceeded the Latin American average and that of most developed economies. This can be attributed to rapid productivity growth of over 2% per year (accounting for an estimated 56% of the region’s GDP growth) and an increasingly service-focused economy (compensating the drop in industrialisation levels).³ Sound monetary and public finance policies are another key factor.

Looking ahead, more accommodative monetary policies may lead to further growth, with high levels of investment and household consumption set to continue. According to Moody’s Investors Service outlook for Latin American and the Caribbean, 2019 sovereign creditworthiness was stable in the region, with economic conditions remaining credit supportive.⁴

However, as is the case globally, the recession caused by COVID-19 presents real dangers. In Central America, CABI expects a worst-case scenario where the region’s 2020 GDP contracts by 4.9% and public debt increases by at least 7.6 percentage points of GDP.⁵

This report primarily looks at green finance market development in CAC and the potential for further growth in a number of key areas. It provides a step-by-step guide for green bond issuance, as well as overviews of green debt instruments.

LAC represents 2% of total issuance, CAC 0.1%



Note: Total global issuance (2007 – 30 June 2020): USD868bn
 LAC issuance (since first bond in 2014): USD19.6bn
 CAC issuance (since first bond in 2016): USD981m

It also aims to facilitate greater engagement on green infrastructure investment between asset owners and developers and investors. Green infrastructure case studies for renewable energy, low-carbon transport, sustainable water and waste management from eight CAC countries are explored in the context of sector-by-sector reviews.

The report is intended for a range of stakeholders in the region and beyond, including funds, asset managers and other regional and international investors, potential issuers, infrastructure owners and developers, government bodies and policymakers, and the public.

Note: Unless stated otherwise, all analysis refers to amount issued (not number of deals or issuers). The cut-off date for all data and charts is 30 June 2020.

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Understanding green bonds

Green bonds

Green bonds are labelled debt instruments 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 placements, securitisations, covered bonds, and sukuk. Labelled green loans need to comply with the Green Bond Principles or Green Loan Principles. The key is for the proceeds to go to “green” assets.

Green definitions

The Climate Bonds Initiative uses the Climate Bonds Taxonomy, which features eight categories: Energy, Buildings, Transport, Water, Waste, Land use, Industry, and ICT.⁶

CBI also develops Sector Criteria with expert input from the international science community and industry professionals.⁷ Issuers can certify their green issuance(s) under the Climate Bonds Standard and Sector Criteria.⁸ 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% of proceeds dedicated to green assets and projects that are aligned with the Climate Bonds Taxonomy are included in the Climate Bonds Green Bond Database and market figures. If there is insufficient information on allocations, a bond may be excluded. The full version of the CBI Green Bond Database Methodology is available on CBI’s website.⁹ However, we are currently working on a revised methodology, to be published in the coming months.

What is green infrastructure?

In this report, green infrastructure refers to infrastructure projects that are aligned to the Climate Bonds Taxonomy. The taxonomy covers eight categories, but the key infrastructure sectors are renewable energy, low-carbon transport, and sustainable water and waste management.

The last 12 months

COVID-19

2020 was an exceptional year. The COVID-19 pandemic caught many off-guard, but the truth is pandemics are only one of the many negative impacts we can expect to occur with increasing regularity in the face of environmental degradation.

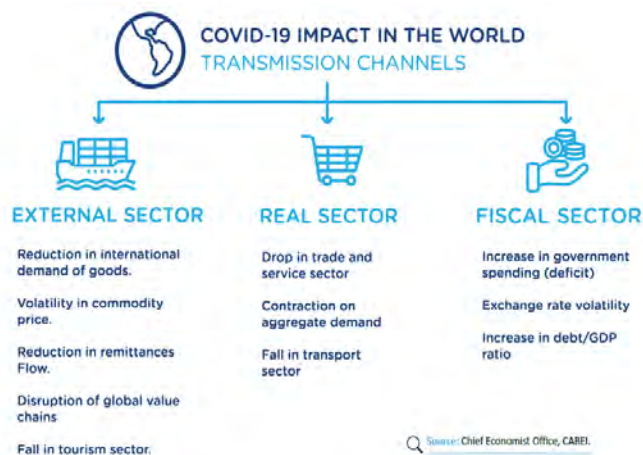
Far from a reason to invest more in the social dimension at the expense of green, the COVID-19 pandemic is another confirmation of the inter-relationship between social and environmental woes, of the dangers we face as a species, and of our unpreparedness to deal with negative shocks in a robust and resilient manner. **In that sense, it could actually be an important catalyst for positive change.**

Economic impacts

This is an unprecedented crisis; its impact is set to be greater than the Great Recession of 2008-09 and its magnitude comparable to the Great Depression of 1930. 2020 will see the first increase in global poverty in over twenty years, delaying the goal of ending poverty even further. The economic disruption and damage will persist as governments clamour to stimulate a recovery.

Uncertainty regarding the duration of the pandemic and isolation measures limits the ability to make inferences about the extent of economic impacts in Latin and Central America. **However, given the region's openness and integration with international markets, the main mechanisms of transmission of COVID-19 economic impacts are expected to be through the external sector.** The harshness will depend on the behaviour of the US economy, a market accounting for 35% of Latin American exports.

To inform CABEL's management and decision-making, estimates have been elaborated for two scenarios assuming an absolute halt of production in previously defined sensitive sectors; with a duration of four months for the hotel and restaurant sector (in both scenarios), and two to three months for the remaining sectors.



This exercise results in estimated 2020 GDP growth ranging between -2.5% and -4.9% for Central America. Economic growth will be mainly impacted by the reduction of activities in commerce, construction, transport, hotels and restaurants, and financial intermediation.

Summary of policy measures in CABEL member countries

Fiscal policy	Monetary policy	Economic recovery
<ul style="list-style-type: none"> Purchase of medical supplies. Funds to provide loans under favorable conditions to firms. Moratorium on utilities payments. Moratorium/tax holiday of value added tax. Discount/extension of due dates for income tax payments. Moratorium/holiday of specific taxes (for example: tourism, air transport, etc) Temporary reduction or abolition of tariffs for essential products such as food/medical supplies/ medicine. Holiday on social security contributions. Monetary transfers to vulnerable groups. 	<ul style="list-style-type: none"> Monetary policy loosening to provide liquidity and stability to financial system. Policy rate cuts. Lowering of reserve requirements to maintain credit flow. Adjustments of credit rating rules to minimize impact on banks portfolios. Freeze on debt service, interest payments and debt restructuring. Low interest loans to financial sector. Future markets, repos and swap lines with Federal Reserve. 	<ul style="list-style-type: none"> Country publicity campaigns. Local and Foreign investment attraction strategy partnering with each country investment agencies. Adoption of measures to facilitate restart operations by existing businesses and new firms' entry. Enhance competitiveness agency to improve productivity country wide.

Financing the recovery

The sanitary measures promoted by the governments to attend the emergency caused by the COVID-19 will generate greater fiscal spending as well as less economic activity and, therefore, a fall in fiscal revenues. Coupled with the public policy agenda for economic recovery to boost each country, **this will most likely demand an increase in public debt.**

In this context, estimates were made with the assumptions of two scenarios, resulting in debt-to-GDP ratio increases of between, on average, at least 4.7 and 7.6 percentage points for the Central American region in 2020.

For many Developed Market (DM) countries, the increase in debt should not pose a significant problem given record low interest rates and relatively strong debt affordability.

The pandemic has also maintained or even reduced the already low interest rates at which many DM governments can borrow, while increasing the risk premium paid by many private sector players as well as countries perceived as riskier.¹⁰

Emerging Market (EM) countries will likely have it harder, given many – China excluded – started the crisis in a weaker position and therefore less able to absorb the fiscal cost. While DM governments can run substantial deficits without driving interest rates and inflation higher, most EM economies have tighter borrowing constraints, especially in an environment in which DM governments are also borrowing heavily. In the EU, the pandemic recovery fund may allow more indebted countries to recover with support from Europe's larger economies, but the lack of such a bloc globally means that other mechanisms are needed to prevent meltdowns in many developing countries.

This is exacerbated by the fact that **emerging economies are also already suffering from severe drops in foreign direct investment (FDI) as a result of the pandemic.** Flows to EM have been hit especially hard due to export-oriented and commodity-linked investments being among the most affected. To make matters worse, the analysis also showed that international private sector flows to four out of ten key SDG areas have failed to increase substantially since the adoption of the goals in 2015.¹¹

Development finance institutions can play a crucial role in ensuring that such action extends to developing countries facing higher risk premiums. Initiatives like the EBRD's EUR21bn Solidarity Package¹² can be complemented by others that integrate the private sector, such as the USD1bn Impact Rescue Facility targeting SMEs in Africa, Latin America and Southeast Asia.¹³ These can be effective, especially in the short-to medium-term, but are still likely not to be enough and will need to be supplemented by more robust longer term solutions (potentially including debt restructuring).

Greening the stimulus

Any recovery efforts will need more capital. For emerging economies, rising public debt, combined with significant capital outflows and reduced exports, may leave the impression that financing green investments will be a 'nice to have' rather than a viable strategy once the disruption from the pandemic subsides.

On the contrary. **The most efficient stimulus packages will be those that are designed to create more jobs and support economic activity over the short term, while also getting economies on track for rapid and sustainable growth post-COVID.** Governments can use this spending to make them '21st century-ready' by investing in developing the skills of their population in a modern, low-carbon, climate-resilient infrastructure system and a healthy environment.

Specifically, governments will need to address two crucial considerations when planning recovery measures:

1. **Resilience is key:** The COVID-19 pandemic is not an isolated crisis; there will be more.
2. **Time for transition:** The recovery presents an opportunity to move economies on to a more sustainability-focused pathway – to Build Back Better.

Public sector interventions and measures for a green future

Governments, central banks, regulators and international financial institutions across the world are adopting a wide range of measures to prevent COVID-19 from causing long-lasting economic impacts. Below are some key measures that should be considered as steps towards a healthier more resilient future:

- **Investing in low carbon, climate-resilient (green) infrastructure.**
- **Leveraging the role of development finance institutions.**
- **Refinancing / restructuring sovereign and/or sub-sovereign debt using thematic labelled bonds.**
- **Managing corporate bailouts.**

For example, measures could include helping industry to cut emissions and investing in clean infrastructure such as renewable energy and public transport. Many energy and public transport projects take time to prepare, which is why these investments should be added to stimulus packages now – reviewing and updating existing plans – for the benefits to be realised in the coming years. With a committed stimulus plan in green skills and the creation of green sector employment opportunities, Central American governments can buffer the impacts of COVID-19 and simultaneously future-proof their economies.

Using green / sustainable capital markets

So far, two main types of bonds to finance recovery investments have been issued:

- **General Purpose bonds**, as part of a broader COVID-19 response plan by the issuer.
- **Use-of-Proceeds bonds**, which can be issued under a framework that is aligned with the International Capital Market Association's (ICMA) Green, Social & Sustainability Bond Principles (GSSBP) – or a specific COVID-19 response framework.

Sustainable – including green – finance presents a huge potential for governments, as well as other issuers, to tap global institutional investors looking for responsible investments. The focus should be on investments that can be described as 'Building Back Better' to create more resilient societies and economies.

By labelling their debt as 'green' or 'sustainable' in this way, as several sovereigns have already done, governments could send a clear market signal while contributing to the development of domestic green bond markets, and attracting a more diversified investor base. These and other potential benefits of issuing 'green' are covered in Climate Bonds' inaugural *Green Bond Treasurer Survey 2020*.¹⁴

Further, in 2019, Climate Bonds Initiative surveyed 48 of the largest Europe-based fixed income asset managers to gain a comprehensive understanding of how the fixed income investment community is making investment decisions when addressing climate risks and other environmental and social factors.¹⁵ The total AuM of respondents was in the order of EUR13.7tn, and their total fixed income AuM EUR4.3tn. From this survey, it emerged that investors want more green EM debt, supported by an increasing appetite for local currencies and longer tenors.

NB: For more detail see CABEI's Economic Impact of COVID-19 report¹⁶ and Climate Bonds' Sustainable Debt Global State of the Market H1 2020.¹⁷

Devastating 2020 hurricane season highlights the costs of not adapting

The most active Atlantic hurricane season ever recorded hit Central America with full force last November, with 30 named storms including 13 hurricanes and locals claiming they had never seen flooding like it. Altogether, over 200 people were killed and more than half a million displaced, furthering regional poverty at a time when the pandemic had already debilitated revenue streams and increased expenses.

Building resilience is critical. Climate change will escalate the frequency and severity of storms, among other natural hazards. A 2017 UN report estimates the economic costs of climate change at 1.5% to 5% of Latin America's annual GDP if temperatures rise above 2°C by mid-century (as they are expected to) – **while the cost of adapting is below 0.5% of GDP.**¹⁸ Many Central American countries, already confronted with poverty and debt, have struggled to prioritize this among so many other pressing needs, but it is now more important than ever.

CABEI

CABEI has been especially active in promoting sustainability over the last two years. The Bank's focus in 2020 has naturally been on providing essential support services in Central America in response to the COVID-19 pandemic, but apart from this and issuing its second green bond in November 2019, there have been other important developments in CABEI's work – one was the **agreement signed with its most recent non-regional member, South Korea**.

The list of CABEI's non-regional member countries is now Mexico, Cuba, Taiwan, Argentina, Colombia, Spain, and the Republic of Korea.

What is the agreement's purpose?

The entry of this new member solidifies CABEI as the **strategic ally of Central America**, attracting and channelling additional external resources to develop the region.¹⁹ The agreement's financial resources, to be received over the next five years, will contribute to the development of economic, financial and technical studies for the design and execution of important projects in the Central American region, especially those that look to enhance regional integration and sustainable development amongst eligible countries. South Korea will also channel technical assistance and cooperation resources to support this mission.²⁰

Combined, these resources will be used to identify and prepare projects that include international content, technologies and best practices – especially from the Republic of Korea – in relevant areas such as **health, energy, social and productive infrastructure, freight and passenger transportation, information and communication technologies (ICT), and climate change adaptation and mitigation**, among others.



Source: <https://www.bcie.org/en/news-and-media/news/article/cabei-welcomes-korea-as-a-new-member>

What funding does it entail?

The request for capital subscription of the Republic of Korea amounts to USD450m, which is expected to generate an increase in the amount of loans available by USD2.25bn, representing an expansion of CABEI's portfolio from USD7bn to more than USD9bn. The first capital payment was made in January 2020 for USD28m. The Republic of Korea's official incorporation as CABEI's latest extra-regional member materialised with this first payment.

The subscribed capital of USD450m includes an equity participation of 7.2%. In addition, financing agreements have been signed with official resources for public and private sector projects for USD750m.

As part of the overall funding, CABEI and Korea's Ministry of Economy and Finance signed a US\$50m Grant Agreement for non-reimbursable financial cooperation, to be channelled through a Trust Fund managed by CABEI.²¹ As part of this grant, South Korea made the first disbursement (USD10m) to launch the Single Donor Trust Fund – the first in CABEI's history – in August 2020.²² Its resources may cover initiatives in the health, education, finance, and other sectors affected by the health emergency caused by COVID-19.

Other benefits

One major impact of Korea's incorporation to CABEI was the strengthening of the Bank's financial profile, as it increased the percentage of CABEI's capital from members with an investment-grade rating from 32% to 37%.²³ This was the main driver behind rating upgrades from Moody's, Standard & Poor's, and Japan's Credit Rating Agency in 2019.

At AA/AA/Aa3, CABEI is now the most highly-rated bond issuer in Latin America.

The Bank's financial solidity was further reinforced as the Board of Governors increased its authorised capital from USD5bn to USD7bn in October 2019. This represented its eighth general capital increase and the second in the last decade.

In addition, the partnership with South Korea will strengthen institutional governance, while improving the benefits of the cooperation scheme agreements signed between CABEI and Korean institutions in favour of the Bank's member countries.²⁴ For instance, in October 2019, CABEI had signed a collaboration agreement with Korea Eximbank to promote electric mobility in the region.²⁵

The most emblematic project for CABEI's ambitions to develop clean transport in the region is the USD1.3bn TRP electric passenger train to be constructed in the metropolitan area of San José, the capital of Costa Rica, for which the Bank has approved USD550m of financing.²⁶ *The Costa Rica TRP project is covered in more detail on page 18.*

Wider context

The Republic of Korea has been an observer member of the Central American Integration System since 2012 and maintains important commercial links with the region, which will be further enhanced through its incorporation into CABEI and through the Free Trade Agreement with Central America.²⁷ The latter's negotiation process was also supported by the Bank.

Executive summary

Key findings

Green infrastructure presents a huge investment opportunity globally, with an estimated USD100tn worth of climate-compatible infrastructure required between now and 2030 in order to meet Paris Agreement emissions reduction targets.

CAC's green bond market has only seen six deals so far – including CABI's – but is expanding, with more already planned. 2019 was a positive year for the region's market, with a record number of new deals and several promising initiatives by a diverse group of players.

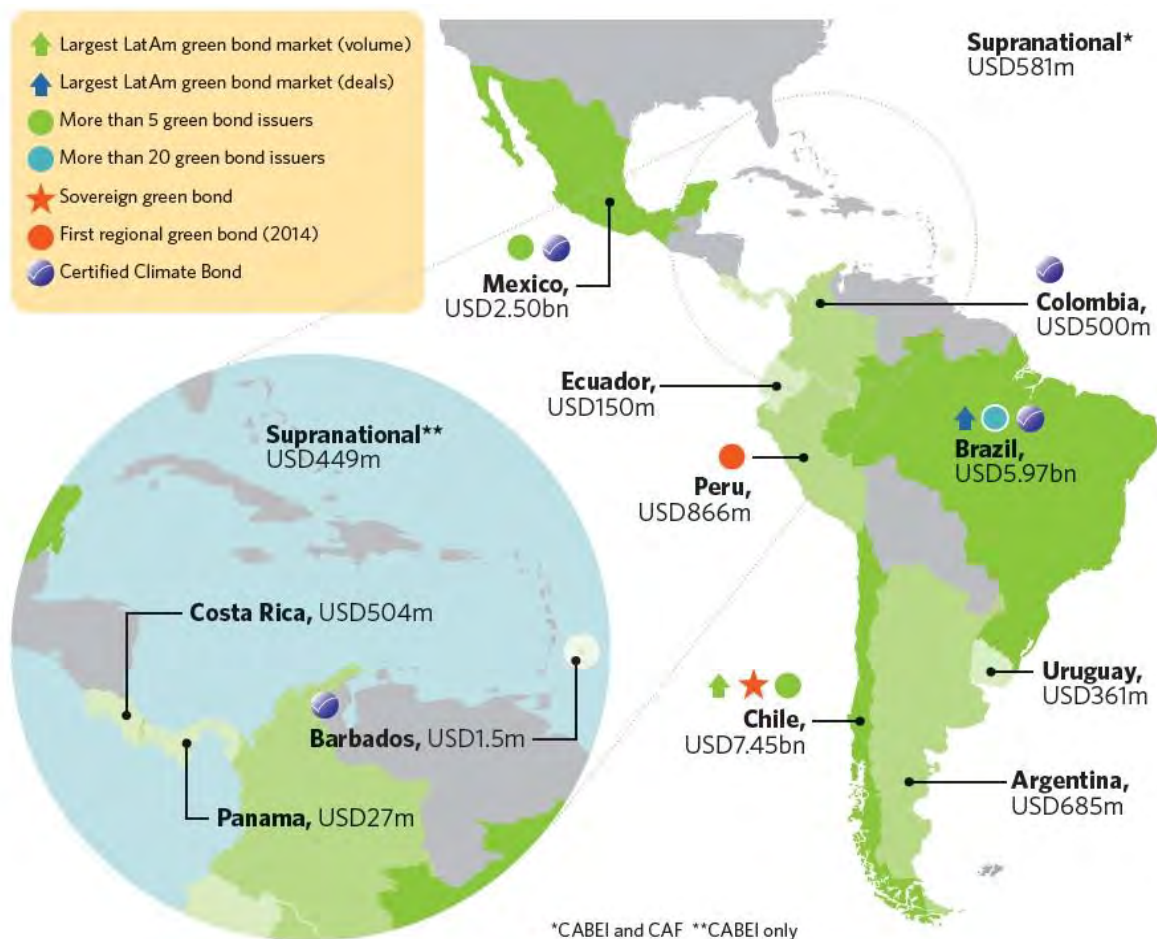
Further diversification of projects would be a welcome development and should be a focus for institutions in the region, including development banks, other public sector issuers and financial corporates.

There is significant growth potential for more green bonds. Given the region's geographical and economic profile, **sustainable infrastructure, agriculture, and the blue economy** are areas that offer enhanced opportunities.

This report contains **examples of green infrastructure investment opportunities in CAC** in four key sectors: renewable energy, low-carbon transport, sustainable water management, and sustainable waste management. These projects range from an almost USD2bn urban metro project in Panama to a USD10m water treatment project in Belize.

Having **common definitions of "green"** across global markets allows investors, potential issuers and policymakers to identify green assets and attract investment more easily. CAC governments could adopt best practice standards in identifying green projects in their infrastructure plans and prioritising those that are in line with international green definitions for their future infrastructure pipelines.

A variety of green financial instruments could be developed to capture funding from different sources and effectively leverage capital.



Looking ahead

Green finance growth is expected across the region, with new issuers and countries joining the market driven by much needed financing of green infrastructure. Investments in clean transport options, especially in the form of electrified public transport, are already happening and this is expected to continue increasing. Sustainable agriculture and blue (ocean-based) activities also present considerable opportunities.

2020 has been an exceptional year so far, with the COVID-19 pandemic affecting global investments, including those related to climate solutions. The effects on sustainable finance are already visible, with public sector issuers in particular prioritising investments in national health systems and response packages. **Going forward, we expect more focus on the social dimension but ultimately on "sustainability" as a whole.**

Policies and initiatives targeted at channelling finance and introducing incentives for green projects are urgently needed. However, to do so, closer co-operation and partnerships to share responsibilities and knowledge are key.

Overview of climate policies and initiatives in CAC

The introduction of climate policies and related initiatives, especially around green finance, has grown rapidly in LAC in the last few 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. Progress in CAC has been slower, but there are nonetheless various examples in the region, especially around environmental policy. A summary of key policies and initiatives is shown on the next three pages.

In order for NDCs (Nationally Determined Contributions) 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 between countries. Governments should be bold in encouraging investments in green projects and other stakeholders, particularly financial market participants such as stock exchanges, banks, and industry organisations, should form alliances reflecting their shared commitment to developing the space, for example by signing protocols.

Although all countries-in-scope have NDC targets, the country leading the way is clearly Costa Rica. Costa Rica now has close to 100% of its energy generated from renewables,²⁸ and after unchecked logging destroyed two-thirds of the country's rainforests, strict regulation and market-based incentives introduced during the 1980s via the National Forestry Fund have doubled forest cover.²⁹ While it has a GHG emission reduction target of 44% by 2030 (versus 2005) under its NDCs, Costa Rica plans to be carbon neutral by 2021.³⁰

Costa Rica

Costa Rica is the most advanced CAC country in terms of climate performance and ambition, and aims to be one of the world's first carbon-neutral countries (i.e. including offsets) by 2021. As part of its NDCs under the Paris Agreement, Costa Rica has defined a mitigation target of 44% reduction in emissions against business as usual by 2030.³¹

To achieve this, Costa Rica has defined multiple sector-specific targets for 2030 in its *National Decarbonisation Plan*, launched by MINAE (Ministry of Environment and Energy, which also runs SINAC, the National System of Conservation Areas) in February 2019, such as:³²

- Achieve and maintain a 100% renewable energy grid
- 70% of buses and taxis to be zero emissions and passenger trains 100% electric
- 100% of new commercial, residential, and institutional buildings designed and built with low-emission and climate-resilient systems.

Belize

Belize's NDCs focus on improving sustainable forest management and increasing renewable energy capacity.

Belize already has several structural policy framework plans in place to help it achieve its climate targets, including:³³

- Horizon 2010-2030
- Sustainable Energy Action Plan 2014-2033 (under which it has an 85% renewable energy target by 2030)
- Growth and Sustainable Development Strategy 2016-2019
- The National Climate Change Policy, Strategy and Action Plan 2015-2020.

Guatemala

As part of its NDCs, Guatemala has defined targets of 11.2% (unconditional) to 22.6% (conditional) reduction in GHG emissions by 2030 compared to the business as usual scenario.³⁴

These targets are incorporated into Guatemala's national development plan known as the *K'atun 2032 National Development Plan*.³⁵ Specific targets included in the plan are:

- Achieve 80% of electricity from renewables by 2027
- Improve energy savings by 25% in the industry and commerce sectors by 2027 against the 2013 baseline
- Reduce 15% in industrial use of firewood by 2027 against the 2013 baseline.

Dominican Republic

The Dominican Republic has defined a mitigation target of 25% reduction of base year GHG emissions by 2030 under its NDCs.³⁶

While the government does not have sector-specific targets, it has several climate policies and initiatives in place, such as:

- Carbon tax, introduced in 2012
- Growing hydropower biodiesel capacity
- Established a forestry working group to improve sustainability in the forestry sector.

The Dominican Republic government is also looking to phase out its fossil fuel generated electricity, which currently accounts for 90.5% of the country's installed capacity.³⁷

Panama

Under its NDCs, Panama has specific sectoral climate targets, primarily focusing on increasing carbon sinks, renewable energy, and sustainable forestry:³⁸

- Increase renewable energy capacity by 15% by 2030 and 30% by 2050 compared to the 2014 base year
- Increase reforested areas by 1m hectares by 2030.

Other than these targets, Panama plans to continue implementing the following climate policies:

- Participate in international emissions trading
- Boost investment in renewable energy sources such as solar, wind and biomass.

Honduras

Honduras has the following climate targets as part of its NDCs:³⁹

- Reduce national GHG emissions by 15% by 2030
- Achieve 80% of electricity supply from renewable sources by 2038.

In the context of the country's NDC commitments, the Honduran government aims to continue its progress towards creating a climate policy framework, including:

- Preparing a national investment plan in the face of climate change
- Focusing on water resources, risk management, agriculture, forestry and biodiversity, and infrastructure and renewable energy projects, which are core priorities of the National Climate Change Agency.

Nicaragua

Nicaragua has defined the following targets under its NDCs:⁴⁰

- Achieve 60% of renewable energy by 2030
- Increase forest absorption capacity of 20% by 2030.

Nicaragua's National Climate Change Policy is currently in the consultation phase. It will lay out the country's plans and include the following aspects:

- Increasing agricultural resilience
- Creating a low-carbon development strategy
- Solutions to human re-settlement due to climate change
- Developing green infrastructure
- Achieving forest conservation and restoration
- Promoting knowledge, research, and financing for climate change mitigation and adaptation.

El Salvador

El Salvador aims to establish a National Plan of Climate Change Policy, including several regulatory frameworks goals within its NDCs:⁴¹

- Strengthening institutional and legal framework for National Climate Plan before 2019
- Establishing a sectoral nation-wide climate plan, to include agriculture, water, and infrastructure.

El Salvador's climate targets, included in its Five-Year Development Plan (2014-2019), feature the following:⁴²

- Reduce the economic losses caused by climate variability in agricultural sector by one percentage point of GDP
- Increase the number of municipalities in a situation of risk of early warning systems by 20%
- Restore 10,000 hectares of salty forest and surrounding ecosystems
- Renew 30% of the coffee park, thereby ensuring its resilience to climate change
- Reduce the number of threatened species or in danger of extinction by 10%
- Reduce the consumption of substances that deplete the ozone layer by 25%.

Market development initiatives

The last few years have seen a significant increase in initiatives and measures to develop sustainable finance markets in CAC. While these have involved a range of stakeholders, stock exchanges are often key players and main instigators of market development.

Until now, the focus has largely been on green finance instruments, and most of all green bonds. This makes sense given the pressing need for climate solutions – especially in a region surrounded by seas and particularly vulnerable to the effects of climate change – and the fact that, within sustainable or responsible finance, the green segment is by far the most developed. This is clear by comparing the size of the green bond market with that of social and sustainability bonds, for example.

However, with the increasing level of integration of both social and environmental dimensions in financial and investment decisions, attempts to develop the market will also require a consideration of social factors, and cannot be limited to green finance only. Indeed, as the next section shows, various actors and initiatives are already approaching the issue from a 'sustainability', rather than simply 'green', perspective. Further, given the ongoing COVID-19 pandemic, the importance of the social dimension – especially related to health, of course – is rapidly growing.

Within debt markets, the issuance of green bonds has visibly declined in 2020 while that of social, sustainability, and newly emerged 'pandemic' bonds has taken off versus previous years. Issuers, particularly those from the public sector, are increasingly (and understandably) prioritising investments in health systems.

On this topic, Climate Bonds Initiative is currently creating a separate database for other (i.e. non-green) sustainable debt labels, and our *Sustainable Debt State of the Market H1 2020* report analyses and sheds more light on this important 'market segment'.

Stock exchanges' commitment to green financing



Costa Rica leads the way in terms of green stock exchanges initiatives. Its **BNV** published a *Guide for the Definition and Management of Green Projects*, targeted at potential green bond issuers, as well as a *Green Bond Guide and Voluntary Guidance on ESG Reporting*, in late 2018.⁴³

The stock exchange has taken several other steps to develop the green bond market (see box below) and promote wider sustainability engagement and market development. It has also released guides for *Social Bond* and *Sustainability Bond* issuance,⁴⁴ and launched the *BNV Sustainability Awards* in 2019 to reward capital market participants across several sustainability categories.⁴⁵

Costa Rica stock exchange initiatives

In 2018, Costa Rica's Stock Exchange (BNV) became the first from Central America to join the UN's SSE programme.⁴⁶ In this context, it has developed a number of initiatives to develop the green bond market:⁴⁷

- **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, including a requirement for issuers to obtain an external review
- **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. For instance, it recently organised a Responsible Investment Bootcamp with institutional investors⁴⁸
- Various **online green bond training resources**
- More broadly, launching 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.⁴⁹

The aim is to develop green finance instruments, particularly green bonds, in the country. During the event, BVRD released a *Green Bond Guide* for interested parties.⁵⁰



Panama's stock exchange (BVP) is another partner of the UN's SSE initiative and has recently released a *Green, Social and Sustainable Bonds Guide*.⁵¹ It has also started to offer a Green Bond Bootcamp and further educational events.

Specifically in the green finance space, the BNV and BVP organised a meeting last November to expand knowledge around green/sustainable finance among regional stock exchanges.⁵² **Ecuador's** BVQ also attended the event, which counted with training from Climate Bonds Initiative staff.

More broadly, Central American stock exchanges are increasingly integrated.⁵³ Panama's BVP has an agreement with the **El Salvador** stock exchange (BVES) to create an integrated model whereby authorized 'foreign' brokerage houses – "remote operators" – have direct access to the 'local' trading system and can trade on behalf of their clients directly.

The remote operators basically have the same obligations and benefits of any other brokerage house, which includes sharing of data, reporting, systems, information, etc. The two exchanges also have an MOU in place with the **Nicaraguan** exchange (BVDN), and there are ongoing conversations with all the exchanges from AMERCA⁵⁴ (Americas Capital Market Association).

Other green & sustainable finance initiatives

Some stock exchanges are also involved in, or even leading, other green and/or sustainable finance initiatives. We expect these to develop further and expand to more countries in the region.

Costa Rica hosted the PRE COP 25 last October, which comprised high-level meetings and events on a range of climate topics.⁵⁵ In the blue theme of COP 25, several discussions were related to mitigation and adaptation in oceans. Costa Rica's BNV hosted a panel on sustainable finance, with a focus on green bonds. During the event, a group of Costa Rican banks and regulators signed a historic green protocol for the banking industry.⁵⁶

Also in Costa Rica, two regulators and the Climate Change Directorate (CCD) have been coordinating a working group in the financial system to promote green finance, with the BNV participating in the discussions.⁵⁷ The CCD has also developed a Climate Change Metrics National System (SINAMECC), an inventory of GHG emissions by sector/activity aimed at measuring progress towards Costa Rica's climate goals.⁵⁸

Furthermore, as well as supporting other stock exchanges in the region, the BNV is collaborating with several national entities to develop the green finance space. For instance, it is currently working with the country's Ministry of Finance on the topic of sustainable bonds, with support from MexiCO2 (a subsidiary of Mexico's national stock exchange, the BMV).⁵⁹ In terms of pushing regulation, the BNV is working with pension fund and insurance regulators to promote responsible investment frameworks and disclosure. The former has already incorporated this into its new investment regulation, but it is not yet mandatory.⁶⁰

In Panama, the BVP has led a **National Sustainable Finance Workgroup** since September 2018, with public and private sector representatives such as the Ministry of Economy/Finance, Ministry of Environment, regulators, industry associations, NGOs, UNEP-Fi and the IDB. Its main goal is to develop a roadmap to make Panama a Sustainable Finance Hub in 24 months. Having played a major role behind CIFI's inaugural green bond in the country, the workgroup is comprised of four committees: taxonomy, socio-environmental risk analysis, environmental disclosure, and investments.⁶¹

The Caribbean leading the way on blue initiatives

Perhaps due to their smaller size, or geographical features, some of the smallest Caribbean states are leading the way on blue finance, i.e. policies and initiatives aimed at financing ocean conservation and sustainable management of marine resources.

- The **Organisation of Eastern Caribbean States (OECS)** is implementing a **Caribbean Regional Ocean Policy** in conjunction with the **World Bank** to facilitate co-operation for the transition to a blue economy, while **Barbados** has established a **Ministry of Maritime Affairs and the Blue Economy (MMABE)**.⁶²
- At a smaller scale, **Grenada** launched its **Blue Growth Coastal Master Plan** in 2016.⁶³ 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 identified potential investment options valued at over USD1bn (around 200% of Grenada's GDP!).
- A number of public-private partnerships (PPP) to co-manage Caribbean marine areas are also underway, for example developed by the NGO **Blue Finance** with the Caribbean Environmental Programme (CEP). In the **Dominican Republic's** second largest marine protected area (MPA), Arrecifes del Sureste, Blue Finance designed a 10-year agreement to co-manage the area in 2018. It secured debt financing from impact investors through Althelia's *Sustainable Ocean Fund*, blended with philanthropic grants.⁶⁴

Given the importance of ocean-based activities in the CAC region, a dedicated section with more commentary on the blue economy, including blue financing, is provided on pages 12-13.

CAC green bond market

Six green bonds from the CAC region have been issued so far.

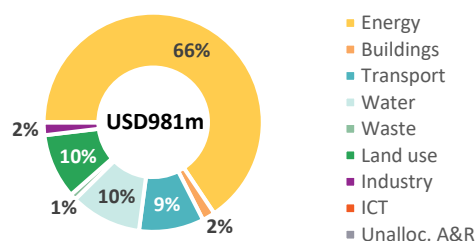
Banco Nacional de Costa Rica (BNCR), the country's largest bank and the second largest in Central America by assets, entered the market with a 5-year senior unsecured USD500m deal in April 2016. Fully state-owned, BNCR is the only government-backed entity in LAC apart from ISA CTEEP (Brazil) to have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

The second green bond from CAC was issued by the **Central American Bank for Economic Integration (CABEI)**, the region's supranational development bank, as a "demonstration" or "thematic" bond in August 2016. The deal was a 5-year unsecured green MTN of ZAR1.0bn (USD74m) to fund renewable energy.

2019 was the most active year for the region's green bond market. **Williams Caribbean Capital (WCC)** issued CAC's first Certified Climate Bond, becoming the tenth LAC issuer to do so. **CIFI** then became the first infrastructure bank from LAC to issue a green bond. **Ecosolutions**, a Costa Rican provider of energy efficiency solutions, issued a USD3.5m private placement to refinance two pellet-based biomass boilers in August. Finally, in November, **CABEI** issued its second green bond and the second largest in CAC, a 5-year USD375m deal. The eligible categories included sustainable land use, renewable energy, sustainable water management and clean transport, but only energy and water have been funded.

All six bonds finance energy projects. **CABEI's** and **CIFI's** can also finance other categories, but like **BNCR's** bonds, it remains to be seen whether all three eligible categories will be funded by **CIFI's** programme. Greater project diversification would be a welcome development, especially to fund transport, industry, waste and water infrastructure and land use – namely forestry and agriculture.

Energy accounts for two thirds of allocations in CAC - further project diversification needed



CAC issuers use a variety of external reviews. **WCC's** was the only Certified Climate Bond from the region so far (Solar Criteria), with Sustainalytics as the verifier. **BNCR's** had a Green Bond Rating, while **CIFI's** and **CABEI's** second green bond had SPOs from Sustainalytics. **CABEI's** first deal and **Ecosolutions'** did not obtain an external review.

Issuer	Country	Amount issued	Issue date	Issuer type	Use of proceeds
Banco Nacional de Costa Rica	Costa Rica	USD500m	Apr 2016	Govt-Backed	Energy*
CABEI	Supranational	ZAR1bn (USD74m) USD375m	Aug 2016 Nov 2019	Development Bank	Energy, Buildings, Industry Energy, Water*
Williams Caribbean Capital	Barbados	BBD3m (USD1.5m)	Jun 2019	Non-Finan. Corp.	Energy
Ecosolutions	Costa Rica	USD3.5m	Aug 2019	Non-Finan. Corp.	Energy
CIFI	Panama	USD27m**	Sep 2019	Financial Corp.	Energy, Waste, Water

Notes: *BNCR had Water as eligible, but only Energy was funded. CABEI also had Land use and Transport eligible. **USD200m GB programme but only USD27m issued.

Certified Climate Bond: Williams Caribbean Capital

In June 2019, **Williams Caribbean Capital**, a Barbados company, issued a BBD3m (USD1.5m) green bond, which was certified in August. It was a "first" in several ways:

- CAC's first Certified Climate Bond (under Solar Criteria)
- CAC's first green bond from a non-financial corporate
- CAC's first green private placement
- First green bond from Barbados
- First ever green bond issued in BBD

The proceeds will fund PV solar installation on rooftops and land via leases. For example, one project involves 2MWp PV solar systems installed on rooftops owned by the Barbados Investment & Development Corporation government agency; another is 5MWp of PV solar on land at Foursquare Estate, where the Barbados Water Authority has water pumps.

Williams Caribbean Capital is an investment and business development company formed as a JV in 2017.

Green bond from infrastructure bank: CIFI

Panamanian financing institution **Corporación Interamericana para el Financiamiento de Infraestructura (CIFI)** announced a USD200m senior unsecured green bond programme in September 2019. Only two tranches (3- and 5-year terms), totalling USD27m, have been issued so far.

This is the first (and only) green bond from Panama, the first by a financial corporate from CAC, and the only issued by a Latin American infrastructure bank so far. The proceeds are expected to finance infrastructure projects in the areas of energy, water and waste management. Within energy, wind, solar (including cogeneration), geothermal and hydro (up to 25MW) power may be funded.

CIFI is an infrastructure bank based in Panama, and is owned by private banks, investment funds and multilateral agencies. It operates across the region.

The deals by **BNCR**, **CIFI**, **CABEI** (2nd) and **Ecosolutions**, representing over 92% of the amount issued, were denominated in USD. **WCC's** was issued in BBD, the only globally in this currency so far. **CABEI's** first bond, denominated in ZAR, is the only green bond from LAC to be issued in a non-local currency other than USD and EUR. Denominating in USD tends to attract international investors.

Notably, one project finance loan was not included in **CBI's** database because it was unlabelled. In 2018, USA-based **Ormat Technologies** obtained an USD115m loan from OPIC to finance the development of a 35MW geothermal power plant in Honduras; had it been labelled, it could have qualified for inclusion.

CABEI green bonds

As a multilateral development bank (MDB), CABEI finances and helps to implement projects and programmes that stimulate the economic development of member countries, whilst also aiming to reduce poverty and inequality. A variety of financial instruments are deployed by CABEI through projects in sectors such as agriculture, energy, human development, and transport.

While the bank’s activities and initiatives have always incorporated environmental and social standards, in recent years CABEI has strengthened and focused its sustainable development strategy with environmental and social commitments. The ultimate objective is to not only improve the quality of life in its member countries, but also strive for sustainable development and resource use.

CABEI became one of Latin America’s first green bond issuers in August 2016, with an inaugural ZAR1bn (USD74m) “demonstration bond” to finance renewable energy projects; this also marked the first green bond by a supranational entity from LAC.

In 2019, the bank reiterated its commitment to green finance by formalising a **Green Bond Framework** – including a *Second Party Opinion (SPO) by Sustainalytics* – with the intention to redirect finance to strategic sectors for the transition to a low-carbon economy, including:^{65,66}

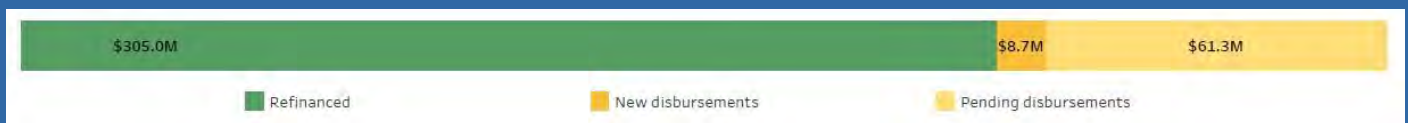
- **Sustainable Land Use:** namely forestry and agriculture
- **Renewable Energy:** wind, solar, geothermal, bioenergy and hydropower
- **Sustainable Water Management:** water distribution, water treatment, and flood defences
- **Clean Transport:** public transport (e.g. trains and clean buses), and clean vehicles and supporting infrastructure

In November, CABEI issued its second green bond, a USD375m deal. Below is some information about its use of proceeds (UoP) and impacts.

2019 CABEI green bond

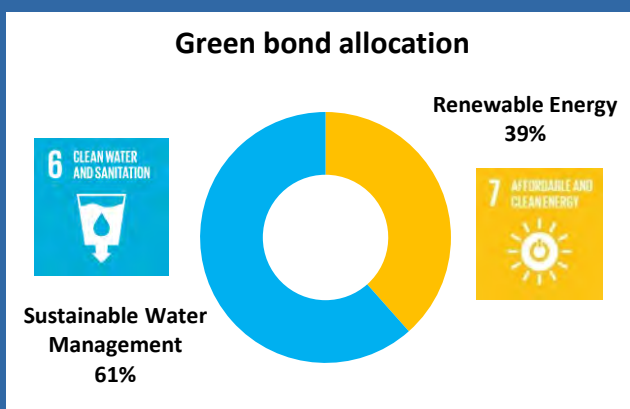
As is good market practice, CABEI will provide annual reports on the UoP and impacts of its 2019 green bond, including details on each project.⁶⁷

As of June 2020, USD314m of the proceeds (84%) had been disbursed to projects. Of this, USD305m (97%) was spent on refinancing previous debt, with the rest provided as new loans to projects. The remaining USD61m of the proceeds have been allocated to projects but have yet to be disbursed (these will be new loans, not refinancing).



The proceeds finance 12 eligible projects in total, located across 5 countries (Honduras, Nicaragua, Costa Rica, El Salvador, and Panama):⁶⁸

- 6 related to **renewable energy**: 4 wind (Honduras, Nicaragua, and Panama) and 2 hydropower (Honduras and Nicaragua)
 - o A total of **417MW** of installed capacity
 - o **1.2TWh** of annual energy generation
 - o **793,065 tonnes of CO₂** avoided per year
- 6 related to **sustainable water management**: various projects linked to water supply / distribution, drinking water treatment, and sewage (Honduras, Nicaragua, Costa Rica, El Salvador)
 - o **1.08 m³/s** of water produced
 - o **89 facilities** built and **80 facilities** upgraded
 - o **337,305 new connections** to drinking water supply and **14,188** to sewerage systems
 - o **Over 1.2m people** with access to drinking water in Costa Rica alone



CAC green bond market offers huge growth potential

There is a strong desire to tackle climate change in CAC, particularly given the region's vulnerability to extreme weather events and rising water levels.

Due to their scale, **it may also be easier for smaller countries to transition to a green economy, even more if acting together.** As noted above, there are already initiatives by governments and stock exchanges aimed at supporting this, particularly in Costa Rica.

Linked to this, there may be even more potential for sovereign green (or blue) bonds in CAC compared to the rest of LAC, as long as the state of public finances permits. Sovereigns have the power to boost green financing while sending an important signal to the market and wider public.

We also see potential for smaller public sector issuers to become green bond issuers. From a screening exercise of existing issuers, Caribbean entities such as **Trinidad & Tobago's** Water & Sewerage Authority, its Housing Development Corp, the **Virgin Islands'** Public Finance Authority or the Development Bank of **Jamaica** were identified as potential green bond issuers for climate projects.

Financing sustainable agriculture and the blue economy

A large part of global green bond proceeds finances green infrastructure.⁷³ While there is a deep and urgent need for such investments in CAC, which we cover in the upcoming 'Green Infrastructure Investment Opportunities' section, here we focus on two other sectors that are highly important for the region and far less funded by green bonds: **agriculture** and **marine activities**.



Agriculture

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%.

As well as 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. Following a 2010 drought in the Dominican Republic, for example, banana production dropped nearly 45% year-on-year.

Sustainable agriculture can contribute significantly towards climate mitigation and countries' NDCs, while also increasing food security and reversing other negative environmental effects.

Sustainable agri-financing in CAC

The public sector has traditionally been heavily involved in agricultural planning and financing, mainly for small rural producers, but few public sector instruments targeting *sustainable* agriculture exist in the region. One of the best examples is Costa Rica's new *National Financing Programme* for adaptation and mitigation in agriculture. Elsewhere in LAC, Brazil has the most advanced system of public sector financing for agriculture, including for sustainable methods; the Low-Carbon Agriculture (ABC) programme is the main one, and could be adapted in CAC.

Incentives for sustainable production could be strengthened. Building on international initiatives such as the Tropical Landscapes Financing Facility, the Responsible Commodities Facility and the Biodiversity Finance Initiative (BIOFIN), and others such as Costa Rica's NFP or Mexico's MasAgro, closer public-private partnerships

CAC's wider labelled sustainability market has yet to take off.

Sustainable, SDG, and even social bonds can play a role and are becoming popular globally, including among financial institutions. Panamanian Banistmo, for example, issued LAC's first gender social bond in June 2019 to finance female-owned SMEs⁶⁹; in Chile, BancoEstado issued a social bond to fund gender, SME, housing and social inclusion projects.⁷⁰ Social and climate goals can, of course, be combined. For example, the sustainability bond issued by Colombian development bank Financiera de Desarrollo Nacional (FDN) financed the acquisition of public buses for Bogotá's TransMilenio bus rapid transit system (a project that would qualify as a green bond).⁷¹

Assistance from multilateral agencies could be effective 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. In July 2019, for example, 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.⁷²

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

could be developed to creatively eliminate barriers to sustainable agriculture.

Green bonds for agriculture

Green – and SDG/sustainable/social – bonds could be a powerful mechanism to fund sustainable agriculture. There has been no such issuance in CAC so far.

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. Issuance from sovereigns, development banks, government-backed entities, and local governments (if the institutional capabilities exist) could all form part of public sector support for agri-finance.

Finally, development banks could support policy interventions, e.g. by offering loans and guarantees, and strengthen institutional frameworks, e.g. via technical assistance. In Peru, for example, USAID pairs loan guarantees with technical assistance to link producers with both financing and buyers for premium cacao. A range of other organisations working in the region, such as the International Centre for Tropical Agriculture (CIAT) and International Fund for Agricultural Development (IFAD), and social investors like Root Capital, could also provide support, both technical and financial.



Blue economy

CAC offers enhanced opportunities related to the blue economy. More than a quarter of the region's population – almost 100% in the Caribbean – lives on the coast. Close to 275m people work in fishing/aquaculture, which contributes around USD20bn to GDP. 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.

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

Sustainable solutions and governance

Recognising the real long-term value of marine resources and biodiversity is key. A 2018 Coral Reef Economy study estimates that 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 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.

Increasingly, modern governance structures must address issues with a holistic, circular, and ecosystems-based approach, rather than by focusing on single activities. Close cooperation between national and international stakeholders is also needed. Regional bodies could be leveraged – at the moment, they are mainly from the Caribbean and include OLDEPESCA, OSPESCA, COPPEAALC and the CRFM, but more could be developed.

As explored on page 9, a number of interesting initiatives to co-manage marine areas in the Caribbean are already underway. Combining these with elements of financing programmes could provide effective ways to sustainably manage the region’s oceans.

The blue finance landscape is evolving

The first global framework for sustainable ocean financing, the *Sustainable Blue Economy Finance Principles*, was launched by the European Commission and UNEP FI only in 2018.

One reason for the lack of investment and policies in this space is the shared nature of coastal and ocean-based assets. Another one is the higher risk associated with assets directly threatened by climate change.

Policymakers could help reduce financing costs by reducing, managing, transferring, and compensating for risks. UNDP’s *De-risking Renewable Energy Investment* framework assists policymakers looking to achieve a risk-return profile that catalyses private sector investment at scale.

While there is still a lack of adequate policy, several promising financing 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 include the specialist international NGO **Blue Finance**, initiatives by **The Nature Conservancy**, **ADB’s Oceans Financing Initiative**, and the **IDB’s Sustainable Islands Platform** and **Natural Capital Lab**.

Blue bonds

Blue bonds by public sector and multilateral issuers are more likely than by private sector players. Private resources can still be involved in project implementation though, and corporates operating in ocean-based activities could issue blue bonds to reduce or eliminate the negative impacts of their operations.

So far, only two have been issued, both by public sector issuers. Public sector issuers – particularly from island nations – can deploy blue bonds for climate-related projects. Sovereign blue bonds, such as the Republic of Seychelles’ in 2018, are especially promising. But, in some cases, local governments and state-owned companies can become issuers to finance blue projects.

CASE STUDY: World’s first sovereign blue bond

In October 2018, the Republic of Seychelles issued the world’s first sovereign blue bond, a USD15m private placement. The proceeds will support the expansion of MPAs, improved governance of fisheries and the development of the Seychelles’ blue economy. A USD5m partial guarantee from the World Bank (IBRD) and a further USD5m concessional loan from the Global Environment Facility (GEF) will partially cover interest payments. This illustrates how international agencies can help to de-risk and scale up sustainable investments.

Similarly, national and international agencies, including MDBs and cross-border associations such as the Pacific Alliance, could become blue bond issuers. As an example, the Nordic Investment Bank issued a blue bond earlier this year to fund various water projects in the Baltic Sea and around Stockholm.

CASE STUDY: First Nordic-Baltic blue bond

The Nordic Investment Bank (NIB) issued the first ever Nordic-Baltic blue bond in January. 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. Eligible projects include wastewater treatment, water pollution prevention and water-related adaptation.

Overall, CAC presents opportunities for blue finance including via a growing blue bond market, especially as the region’s capital markets develop further. Some studies indicate that SDG 14 is receiving the least investment globally of all the SDGs; increasing this would also contribute to many other SDGs (see below).

We note that these topics are explored in considerably more detail in our *LAC Green Finance State of the Market 2019* report.⁷⁴

Co-benefits of SDG 14: Life below water targets on other SDGs⁷⁵



Green infrastructure investment opportunities

Green infrastructure presents a huge investment opportunity globally, with an estimated USD100tn worth of climate compatible infrastructure required between now and 2030 in order to meet Paris Agreement emissions reduction targets. However, there remains a lack of identifiable, investment-ready projects.

Most CAC countries do not have a clear national pipeline of infrastructure projects. Publicly available pipelines did not specify whether or not projects are green. Research using publicly available resources reveals that green infrastructure projects and assets of different sizes and technologies exist across the region.

This section showcases examples of green infrastructure investment opportunities in CAC in renewable energy, low-carbon transport, sustainable water management, and sustainable waste management.

A list of 24 projects has also been compiled into a sample green project pipeline (see Annex 1). These projects range from an almost USD2bn urban metro project in Panama through to an almost USD10m water treatment project in Nicaragua.

What is green infrastructure?

This report uses the globally recognised Climate Bonds Taxonomy and Sector Criteria to determine which projects are green. Other international standards that could be applicable include the IDB Sustainable Infrastructure Platform; Effective energy management systems (EnMS)/ISO 50001; SOURCE; GRESB Infrastructure ESG Benchmark; Standard for Sustainable and Resilient Infrastructure (SuRe); and Envision (see Annex 2).

When it comes to criteria for green projects, investors have too few tools to ensure that their investments are making a significant impact. Having common or aligned definitions of 'green' across global markets, allows investors, potential issuers and policymakers to identify green assets and attract investment more easily.

Ideally, CAC governments could adopt a best practice standard to identify green projects in their infrastructure plans, then prioritise projects that are in line with international definitions for 'green' in future infrastructure pipelines.

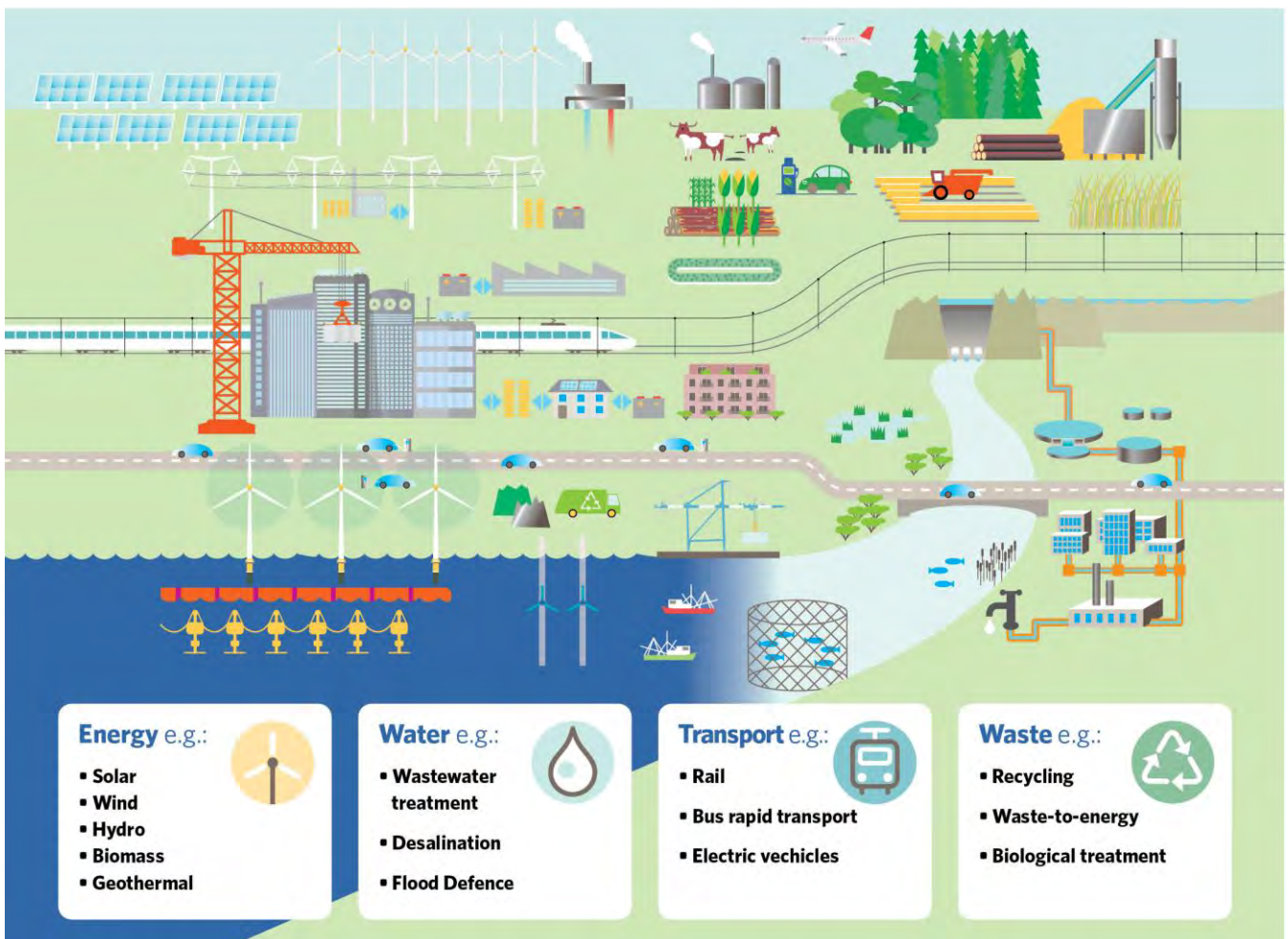
Investment pathways

The possible investment pathways for investors to gain exposure will vary depending on asset ownership structure (public, private, a mix), the stage in the asset's financing lifecycle, and the investor's mandate. Various metrics were used to classify the green investment opportunities by status:

- **Completed projects:** high profile, recently completed projects
- **Projects under construction:** major projects that are under construction
- **Planned projects:** major projects that have not yet begun construction but have been announced and/or have undergone business case planning and/or have been allocated budget.

The case studies and pipeline present green investment opportunities available in the short- to medium term.

Providing this level of visibility for could facilitate access to private sector capital for CAC's transition to a low-carbon economy and help meet global institutional investor demand for green assets.





Renewable energy

Energy generation, transmission or storage technology that has low or zero carbon emissions. This can include solar, wind and geothermal energy, bioenergy, hydropower, marine energy, or any other renewable energy source.

Sector overview

One in ten Central Americans lives without access to electricity: an estimated 7m people live too far from established grids.⁷⁶ There is significant potential for renewables to provide power supply and facilitate better connectivity in remote locations.

Central America is rich in renewable energy resources: in 2016, the region had a total installed generation capacity of 12GW.⁷⁷ Sources in the region include solar, wind, biomass, geothermal and hydropower.

In the past, energy production in Central America was dominated by hydropower. However, its share shrank as fossil fuel power generation became more popular.

Fortunately, the share of renewables has increased in the last 15 years along with changing attitudes towards sustainability.

Central America is home to one of the world's most ambitious national energy policies. Due to government intervention, Costa Rica has generated 98.53% of its electricity from renewable sources in the last four years.⁷⁸ As of October 2018, its electricity was generated through hydropower (72.2%), wind (16.1%), geothermal (8.9%), biomass (0.8%) and solar (0.1%).⁷⁹ The government aims rely solely on renewable energy by 2030.⁸⁰


Other Central American countries have set similarly ambitious goals, and thanks to initiatives like the Regional Clean Energy Initiative (RCEI) more Central American areas will have increased access to renewable power. Funded by USAID and regulated by Tetra Tech and the International Renewable Energy Agency (IRENA),¹ RCEI aims to build the capacity for and promote investment in renewable energy as well as encourage energy efficiency in the region.⁸¹


Investment pathways


Most generation and distribution assets in CAC are privately owned. Banks, specialised project financiers, debt clubs, investment funds, direct investors and the capital markets could potentially provide funding.

Green bonds are very well suited to large projects or portfolios and can be structured in a number of ways, including project bonds, corporate bonds, covered bonds or ABS. Aggregation of smaller projects can be done through securitisation or by banks originating green loans and refinancing in the green bond market (especially for smaller projects / issuers with low credit ratings, which could affect the ability of some international investors to get involved). Renewable energy funds are being used to support greenfield projects and stimulate innovation.

All six bonds issued in CAC have financed renewable energy (see page 10). Based on the disclosure at issuance, the main type of energy funded is solar, followed by wind, hydro and geothermal.

Case study 1 Solar farm		El Salvador
Title	Capella Solar Plant (140 MW) ⁸²	 <p>Source: https://www.pv-magazine.com/2018/11/29/neoen-announces-financial-close-for-140-mw-dc-pv-plant-in-el-salvador/</p>
Proponent	Neoen	
Location	Department of La Paz, El Salvador	
Status	Under construction, completion expected in 2020	
Classification	Energy (solar) generation facilities	
Description	100% owned by Neoen, a French renewable energy producer. The solar plant, combined with a 3 MW/1.5 MWh lithium-ion battery, will be the largest storage facility deployed in Central America.	
	The government will purchase the energy produced at a competitive price, at a tariff of USD 49.6/MWh, lower than grid parity. This price is considered the most competitive electricity price in El Salvador to date.	
Output	The project will reduce El Salvador's dependency on fossil fuels and increase its energy security, as the country currently imports electricity. The solar plant is expected to supply around 298 GWh of green electricity every year. Socially, the project is also expected to create about 600 direct and indirect local jobs over the next five years.	
Cost	USD150m	
Financial structure	A loan from Netherlands Development Finance Company FMO, IDB Invest and PROPARCO, a French Development Financial Institution (DFI), to Neoen. ⁸³	

Case study 2 Solar farm		El Salvador
Title	Solar PV Bósforo (100 MW) Project ⁸⁴	 <p>AES EL SALVADOR Y CMI INAUGURAN PROYECTO BÓSFORO</p> <p>Source: https://www.sica.int/busqueda/Noticias.aspx?IDItem=113178&IDCat=3&IdEnt=1225&Idm=1&IdmStyle=1</p>
Proponent	Bósforo, LTDA de C.V.	
Location	Central, Western and Eastern zones of El Salvador (Departments of La Unión, San Miguel, Usulután, San Salvador, Santa Ana, and Sonsonate).	
Status	In operation	
Classification	Solar energy generation facilities	
Description	<p>Bósforo, LTDA. de C.V. (Bósforo LTDA.) was created on the 10th March 2016 for the development of this project. The entity is 50% owned by AES Soluciones LTDA. de C.V. and 50% by CMI Solaris Investments SL.</p> <p>The project is composed of three phases, and is divided into 10 plants, each with a capacity of 10MW. Under the PPA, a tentative minimum price for the electricity generated was set at USD 92.25 / MWh, with a maximum price of USD 145 / MWh.</p>	
Output	Similarly to the Capella solar plant, the Bósforo project will contribute towards El Salvador reducing its use of fossil fuels while increasing its energy security. In total, the solar plant is expected to supply around 204 GWh of green electricity per year. Socially, the project created an estimated 504 direct temporary jobs during the construction phase, and 18 permanent jobs when operating commercially.	
Cost	USD160m	
Financial structure	CABEL is acting as the structuring agent for about 70% of the project's financing (c. USD112m).	

Case study 3 Wind farm		Honduras
Title	Cerro de Hula I Wind (102 MW) Project ⁸⁵	 <p>Source: https://ejatlas.org/conflict/proyecto-eolico-del-cerro-de-hula-honduras</p>
Proponent	Energía Eólica de Honduras S.A. (EEHSA)	
Location	The Project is located 24kms south of Tegucigalpa in the Municipalities of Santa Ana and San Buenaventura, in the Francisco Morazán Department of Honduras.	
Status	In operation	
Classification	Wind power generation facilities	
Description	<p>Energía Eólica de Honduras S.A.'s main shareholder is Energías Renovables de Mesoamérica (ERM) with 99.2%, commercially known as Mesoamérica Energy and located in Costa Rica.</p> <p>The energy sale price for the project will be maintained at USD112.5 / MWh, in line with the standing price for 2012 stipulated by the current PPA (CDH 1).</p>	
Output	The project focuses on contributing towards the electric energy demand by making use of wind resources in a competitive, efficient, and sustainable manner; the aim is to improve the quality of electric energy service in the area of influence. The wind power plant is expected to supply around 353GWh of green electricity per year.	
Cost	USD264m	
Financial structure	The total cost of the project is estimated at up to USD264.2m, for which the funding is structured as USD66m EEHSA, USD60m CABEL and USD138.2m Ex-Im Bank.	



Low-carbon transport

Transportation modes and ancillary infrastructure that produce low or zero direct carbon emissions. For example, this can include national and urban passenger rail and freight rail networks, Bus Rapid Transit (BRT) systems, electric vehicles, and bicycle transport systems.

Sector overview

Railways were historically used across Central America to transport agricultural goods. However, most of these networks were decommissioned by the end of the 1990s, with (full or partial) railways remaining in Honduras, Costa Rica, Panama, El Salvador, and Guatemala.

Underground metro systems are even less common in CAC. The first metro in the region was developed in Panama and was inaugurated in early 2014, with additional lines planned for the future.^{86,87} There is also a metro system serving the city of Santo Domingo in the Dominican Republic.

However, the number of light rail systems (LRT) – trams and monorails – is predicted to increase in Central America.

Three important projects in the pipeline are:

- **Costa Rica's TRP**, currently in tender process with construction planned to start in 2021. **CABEI** is a prime lender for this project (see case study 4).
- **Managua LRT** in Nicaragua.
- **Metro Riel in Guatemala**, which should be complete by 2021 (see case study 6).

This follows on from the success of bus rapid transit (BRT) in the region. Latin America is a global leader in deployed BRT network length and the number of cities with operational

BRT systems.⁸⁸ In CAC, BRT systems exist in Panama, El Salvador, and Guatemala.

The average number of passengers transported per bus per kilometre for cities in Latin America is high, which, along with the lower cost of deployment compared with most rail systems, is spurring further BRT development.⁸⁹ It is estimated that over the next 10 years, 23% of the world's future BRTs will be located in Latin America.⁹⁰

The share of electric buses will also grow. In Costa Rica, the Regulatory Authority of Public Services is developing an electric tariff for electric bus charging to facilitate the incorporation of this type of technology in the fleet of regular route buses. At the same time, Banco Popular and the National Bank are each developing special lines of credit for electric buses, electric taxis, electric business fleets and electric private vehicles.⁹¹

EV charging infrastructure for private vehicles is being developed as the share of EVs grows. In 2019, the first station in Panama was installed,⁹² and, in El Salvador, a station will be installed in Plaza Malta soon.⁹³

Future investment opportunities exist in EV, LRT and BRT as well as in public transport technology such as advanced payment systems, fare collection, ticketing innovations and passenger information.⁹⁴

Investment pathways

Many funding structures are available to encourage private sector involvement in the long-term financing required for low-carbon transport projects including green bonds, outright asset acquisitions, public private partnerships (PPPs) and the securitization of green financial assets.

Government-backed concessional loans are a new structure, which provides greater leverage against revenue streams from transport operations (i.e. fares).

Another innovative mechanism is 'value capture', which refers to the value that is generated for private landowners from infrastructure and surrounding business operations. This is explored in more detail in the 'Green finance leveraging mechanisms' section on page 27, including one of the most well-known examples, from Hong Kong.


While there have been no green bonds used to fund transport projects in CAC, there have been several in LAC.


The **Republic of Chile's** sovereign green bonds from 2019 and 2020 will predominantly finance upgrades and the expansion of Santiago's metro lines, but also electric vehicle infrastructure (e.g. charging stations and electric buses). **Mexico City** and Brazilian pulp & paper manufacturer **Klabin** have also raised funds for low-carbon transport projects.

In CAC, low-carbon transport infrastructure is typically owned by government entities. Green bond issuance from the public sector can provide indirect exposure for investors to specific projects and assets and provides attractive credit and liquidity credentials for institutional investors. Tagging issuance as "green" in advance can raise the assets' profile as potential sustainable investments.


As private sector appetite increases, funding sources should continue to diversify, supporting accelerated investment. Investors already fund bonds from rail and other transport companies globally.

More direct investment pathways include participation in consortium debt arrangements and/or equity stakes in individual projects via PPPs or other public-private ownership and financing structures.

Case study 4 Mass Rapid Transit		Costa Rica
Title	Rapid Passenger Train (TRP) of the Greater Metropolitan Area (GAM)	 <p>Source: https://www.elmundo.cr/opinion/el-proyecto-del-tren-rapido-de-pasajeros-debe-seguir-a-las-proximas-etapas/</p>
Proponent	Incofer (Instituto Costarricense de Ferrocarriles), Republic of Costa Rica	
Location	Greater Metropolitan Area (San José, Alajuela, Cartago, Heredia)	
Status	Planned. Feasibility study completed, currently in concession tender/bidding process with construction planned to start in 2022.	
Classification	Transport, public passenger transport, trains	
Description	The construction, equipment, and operationalization of a 74km electric train network covering Costa Rica’s Greater Metropolitan Area.	
Technical	<p>The TRP project will electrify almost all the existing railway (85km) and replace the currently used fossil fuel-powered trains with electric train-trams; given the very high share of renewables in Costa Rica’s energy matrix, this will result in considerable GHG emission reductions.</p> <p>The project will also introduce double tracks to allow for safer and smoother crossings between opposing trains, since the current railway is entirely single-track, as well as improved signalling and communication systems, improved stations and supporting infrastructure, and the acquisition of rolling stock (84 vehicles in total). The new vehicles will be about 70m long and each able to carry 600 passengers, with a maximum interurban speed of 80km/h and 50km/h in urban areas.</p>	
Output	<p>The expected benefits of the project include:</p> <ul style="list-style-type: none"> • Benefitting over 4.5m inhabitants of the GAM (of which about 34% are women) • GHG emissions avoided: 2.5m tonnes of CO²e (over the project lifetime) • Reduction of congestion and accidents (both on road and in the current railway) • Increased efficiency and reliability of service via improved rolling stock • About 1,000 temporary jobs during the construction phase • Generating 461 permanent jobs during operation (of which at least 22% women) • Generating 189 temporary ancillary jobs (of which 20% women). 	
Cost	The total planned cost is USD1.54bn. USD1.30bn (84.2%) for CAPEX, i.e. infrastructure and systems, rolling stock, and design & implementation; USD197m (12.8%) for financial and admin costs, guarantees, and insurance; and USD46m (3%) for expropriations / land acquisition.	
Financial structure	The project will be executed under a concession contract model, with funding from various sources. A USD550m loan from CABEI to the Costa Rican Government, with a 25-year term and 5-year grace period, will partially finance the projected CAPEX. A further USD945m will be financed by the concession holder (a private developer and operator) – the concession is granted by Incofer (Costa Rican Railways Institute), an autonomous entity of the Costa Rican Ministry of Public Works and Transport which has established an ‘Executing Unit’ taskforce dedicated to the project. Finally, the Costa Rican Government will directly provide USD46m for the purpose of expropriations.	

Case study 5 Metro line		Panama
Title	Panama City Metro Line 2 ⁹⁵	
Proponent	Metro de Panama S.A.	
Location	San Miguelito to San Antonia, Panama City	
Status	Completed in April 2019	
Classification	Transport, public passenger transport, trains	
Description	The construction of the 21km Panama Metro Line 2 extension begun on October 2015 and was carried out by a consortium including Odebrecht Infrastructure and FCC Construction.	
	<p>The metro line features energy efficiency technology. To optimize energy consumption, the electrical power supply system is equipped with a technology that transfers more than 99% of the energy generated from the train into stations services, such as escalators, lighting and ventilation.⁹⁶</p>	
Output	The line capacity is 40,000 passengers per hour in each direction. Ultimately, reducing congestion and air pollution.	
Cost	USD1.86bn	
Financial structure	The project was partially funded through a senior secure debt. SPARC EM SPC, an issuance vehicle company, completed the offering of USD619m aggregate principal amount of Series 2017-1 Senior Secured Notes due 2022 to partially finance its CDNO purchase commitment to the Consortium. ⁹⁷ UBS won the sole mandate, the project was securitized by a promissory note certificates from the line's 100% Metro Panamá, paid monthly. ⁹⁸	

Source: <https://railway-news.com/panama-metro-line-2-opening/>

Case study 6 City Light Rail		Guatemala
Title	Guatemala City Metro Rail Project ⁹⁹	
Proponent	Pronacom, Fegua, and Guatemala City Local Government	
Location	Guatemala City, Guatemala	
Status	Planned. Feasibility study completed in 2017.	
Classification	Transport, public-passenger transport, light rail	
Description	The Metro Riel would have 20 stations, covering about 20km of rail and with a maximum speed of 70 km/hour. This project will be further integrated into the existing Guatemala urban transport network.	
Output	This project is expected to reduce total travel time to and from the centre of the city by 40 minutes. Overall, it will improve traffic congestion in the city. The execution of this project will also generate about 3,500 jobs and an additional 1,500 during operation. ¹⁰⁰	
Cost	USD772m	
Financial structure	This project will be implemented by Guatemala's National Agency for the Development of Economic Infrastructure (Anadie) on a public-private partnership basis. ¹⁰¹	

Source: <https://www.prensalibre.com/ciudades/el-metro-subterraneo-metro-riel-y-el-corredor-eo-se-haran-realidad-solo-con-un-plan-maestro-metropolitano/>



Sustainable water management

Assets that do not increase or aim at reducing GHG emissions over the operational lifetime of the asset, address adaptation, and increase the resilience of the surrounding environments. This could include water capture, collection and storage, water treatment with methane emissions treatment, flood and drought defence, stormwater management, and ecological restoration/management.

This includes built as well as nature-based water infrastructure.

Sector overview

The CAC region is highly vulnerable to climate change, particularly the increasing frequency and severity of drought periods. In 2016, the Central American Dry Corridor experienced the worst drought in 10 years, with 33% of the population in need of humanitarian assistance.^{102,103}

These conditions exacerbate an already challenging situation, with poor water supply and safety resulting in poor health, food security and environmental conditions. For example, in Honduras, 623,000 people

lack access to safe drinking water, while 1.63m lack access to basic sanitation.¹⁰⁴

Significant investment in water and sanitation infrastructure is required in CAC in order for governments to promote development and achieve the 17 UN Sustainable Development Goals. CAC countries need to invest at least 0.41% of their annual GDP in order to meet their SDG commitments.¹⁰⁵ This refers to investment for developing new projects as well as rehabilitating existing assets.

The potential for improved water coverage and infrastructure development is significant: CAC currently uses only about 10% of their available water resources.¹⁰⁶ Further, the wastewater treatment market is expected to offer opportunities, driven by population growth and the requirements of environmental regulations, given that only 50% of municipalities in LAC have wastewater treatment plants.¹⁰⁷

Investment pathways

The majority of water infrastructure in CAC countries is publicly owned. The water authorities are owned by local government and funded by the respective treasuries.

Green bonds issued by local governments (provinces, cities, or utility companies


owned by them) could be one of the main means of funding water; however, no local government issuance for water has occurred in LAC, and issuance from other public sector issuers has been limited.


As previously highlighted, 62% of the proceeds raised through **CABEI's** 2019 green bond financed water management projects in various CAC countries.

CIFI, a Panama-based infrastructure bank, issued the country's first green bond in September 2019. The proceeds may be partly used to finance wastewater treatment, but it remains to be seen how they will be deployed. **Banco Nacional de Costa Rica** also had water as an eligible category but ended up financing renewable energy only.

The largest water-focused green bond issuer from the LAC region is Chilean company **Aguas Andinas**. Its two deals in the last two years raised funds for the implementation of potable water and wastewater treatment projects.

Further investment pathways exist in the construction, ownership and refinancing of new types of infrastructure such as water desalination assets and commercial / industrial water infrastructure.

Case study 7	Water treatment	Belize
Title	Water Supply on Ambergris Caye ¹⁰⁸	 <p>Source: https://tacogirl.com/ever-wondered-about-belize-water-and-how-the-plant-works/</p>
Proponent	Belize Water Services Limited (BWSL)	
Location	Ambergris Caye, Belize	
Status	In operation	
Classification	Water treatment, water storage	
Description	Belize Water Services Limited is looking to improve its water system on the island of Ambergris Caye. The project will allow it to expand its production capacity by investing in additional Reverse Osmosis infrastructure. It also includes the expansion of water and sewerage systems on the island, preventing further shortages. This will become increasingly important given the future effects of climate change.	
Output	The expansion of water treatment capacity and storage are expected to increase water security on the island, including preventing water shortages which have affected both residents and tourists in the past.	
Cost	USD8.5m	
Financial structure	This project is funded by a USD8.5m loan from the Caribbean Development Bank (CDB).	

Case study 8 Sustainable water		Nicaragua
Title	Sustainable Rural Water Supply and Sanitation Sector Project ¹⁰⁹	
Proponent	Republic of Nicaragua, Emergency Social Investment Fund (FISE)	
Location	Nationwide	
Status	Under construction	
Classification	Water, water infrastructure, water storage	
Description	The Sustainable Rural Water Supply and Sanitation Project is a nationwide water supply and sanitary (WSS) initiative in Nicaragua. The goal of the project is to improve access to sustainable WSS services in poor and rural areas, and increase Nicaragua's capacity to respond to water stress.	
Output	The completion of the project increases Nicaragua's water supply coverage and water security, especially in poor and rural areas.	
Cost	USD32m	
Financial structure	Funded by a grant and loan provided by the World Bank.	

Source: <https://florencechristian.org/rain-harvesting-systems-nicaragua/>



Sustainable waste management

The efficient use of resources to cut down on waste production, coupled with collection and disposal systems that promote reuse and recycle, thereby minimising residual waste going into waste-to-energy facilities. Where waste must go to land fill, there are gas capture systems installed to minimise emissions as well as measures to minimise run-off and other negative impacts on surrounding environments.

Sector overview

Urbanization typically drives the volume of waste production. The LAC region has the second highest rate of urbanization in the world, with almost 80% of the population living in cities.^{110,111} Despite the relatively high municipal solid waste (MSW) collection rate for these populations (89.9% of the population, when the global average is 73.6%), adequate final MSW disposal coverage is only at 55%.¹¹² Further, only 2.2% of all MSW in LAC is formally recycled (with some recyclable recovery completed by the informal sector).¹¹³ There is still a

large amount of waste that is not disposed or treated adequately, with prolific open-air dumps, which causes health and environmental issues.

The low sustainable waste management rate in the region could be attributed to the lack of suitable policies and a financing gap for facility development.

Fortunately, the level of interest from the private sector in waste recovery is increasing. In the Dominican Republic, there are two plastic recycling initiatives and the region's first metal recycling facility was built on the island.¹¹⁴

In CAC, a large share of MSW is organic waste, which could represent economic and energy generation benefits, where over 50% could be recovered and converted into compost or biogas production.¹¹⁵ Biogas as well as waste-to-energy plants have huge potential. Municipalities in the region have expressed interest in implementing such technology, with several plants already operational across CAC.

Investment pathways


Most major waste management assets and projects in CAC are publicly owned, with

public financing used mainly for waste treatment, waste-to-energy facilities, and sanitary refill infrastructure.

Green bonds issued by local governments or government-backed entities could be a means of funding sustainable waste management, but no issuance from such entities has occurred in LAC yet.

In CAC, only **CIFI** (Panama) has issued a green bond that may finance waste projects. In the wider LAC region, a few non-financial corporates (**BRF, Klabin, CMPC**), private bank **Banco Galicia** (Argentina) and development banks **CAF** and **Bancóldex** (Colombia) have issued green bonds to finance waste projects. Most projects are related to waste treatment, recycling, and pollution prevention/control.

Privately owned asset and projects, which include recycling facilities and waste to energy facilities, offer other means of debt and equity investment. There are also innovative approaches used in LAC, such as the **microenterprise organizations** in Lima and La Paz that outsource contracts for waste management facilities with municipalities.¹¹⁶

Case study 9 Recycling		Dominican Republic
Title	Three-in-one metal recycling plant	
Proponent	Cibao Metal Recycling (CIMER) Srl	
Location	Dominican Republic	
Status	Complete	
Classification	Waste, recycling, facilities for recycling materials	
Description	<p>This will be the first recycling plant for metals and metal compounds in the Caribbean.</p> <p>The plant has a capacity to process up to one tonne per hour of oil filters, two tonnes p/ hour of electronic scrap, and approximately five tonnes p/ hour of car parts and metal sheets.¹¹⁷</p>	
	<p>ANDRITZ MeWa, a part of international technology group ANDRITZ, was contracted to develop the complete three-in-one recycling plant. The project underwent rigorous environmental management plan, place evaluations, made by the Ministry of Environment and Natural Resources, to grant the environmental license.¹¹⁸</p>	
Output	<p>The plant will be able to process oil filters shredded down to a particle size of less than 30 mm and separated into three basic output materials: roughly 40% metals, 20% centrifuged motor oil, and 40% rubber and paper.¹¹⁹ Ideally, having a plant located in the region will make recycling more economically viable, and therefore more widespread.</p>	
Cost	N/A	
Financial structure	<p>The recycling facility is owned by CIMER Srl, a subsidiary of the YeYo Ochoa Group. The new plant was capital expenditure/ private investment by YeYo Ocha Group.</p>	

Source: <http://www.greenantilles.com/caribbeans-first-comprehensive-metal-recycling-plant-commissioned-in-the-dominican-republic/>

Case study 10 Waste-to-energy		Costa Rica
Title	Waste-to-energy gasification plant	
Proponent	Total Waste Energy Solutions (TWES)	
Location	Costa Rica	
Status	Planned project	
Classification	Waste, waste-to-energy	
Description	<p>TWES has submitted its proposal to build the waste-to-energy gasification plant in 2018. The project would be the largest solid waste energy park in Latin America. This park will include waste management features, some of them include reconversion processor, bio-fuel facility, and ethanol refinery.¹²⁰</p>	
Output	<p>This plant will process municipal solid waste into electricity, contributing to Costa Rica's national target to achieve total environmental sustainability by 2021.</p>	
Cost	N/A	
Financial structure	<p>Technical and financial model are currently still at preliminary stage.</p> <p>The proposed structure is private investment, with 100% investor-owned, 100% non-recourse finance at 5.0%, 20 years amortization, with conservative calculations showing IRR is 16% at 25/75 equity/debt ratio.¹²¹</p>	

Source: <https://thecostaricanews.com/total-energy-waste-solutions-announces-new-solid-waste-energy-park/>

Step-by-step guide to green financing

Entities have a wide range of options to choose from when seeking to finance green projects. The optimal financing structure will depend on the company and project-specific factors, as well as regulations and general market conditions. As each financing structure entails specific procedures, the steps provided below are intended to be a high-level guide highlighting the major aspects an entity should consider when planning to raise capital for a green project.

Step 1: Develop green asset strategy and process

The first step for any private or public sector entity looking to finance a green project is to develop a green investment strategy and define a framework laying out the selection process and eligibility criteria for identifying the projects to be financed.

Procedures for the tracking and reporting of allocated and unallocated funds also need to be defined. Further, more and more investors are looking for impact reporting, so it is advisable to identify suitable metrics and initiate a monitoring process.

Who can issue green bonds?

Any entity which has suitable green assets to finance can issue green bonds or obtain a green loan. The key aspect of green finance is that the proponent commits to investing the funds raised in green assets such as renewable power generation, low-carbon transport, low-carbon buildings, sustainable water management, sustainable waste management, sustainable land use, etc. and/or climate change adaptation or resilience measures such as flood defences. *An overview of the Climate Bonds Taxonomy categories is provided on the back cover.*

Is there guidance available?

When pursuing green bonds and green loans, the Green Bond Principles (GBP) developed by the International Capital Markets Association (ICMA) and the Green Loan Principles (GLP) published by the Loan Market Association (LMA) provide useful guidance on four key aspects:^{122,123}

- Setting eligibility criteria
- Asset / project screening
- Management of proceeds
- Post-issuance reporting.

The Climate Bonds Taxonomy builds upon the GBP and provides definitions for asset and project types compliant with the Paris Agreement, i.e. full decarbonisation by 2050 and limiting global warming to 2°C.⁹

Country-specific and any future regional guidelines and frameworks should be considered. Several regional countries have published green bond guidelines (*see pages 8-9*).

What's best practice?

It is market best practice to engage an external reviewer to evaluate the green credentials of the selected projects as well as the transparency and clarity of the framework. External reviews provide additional comfort to investors. There are a variety of external review formats (*see box*).

The Climate Bonds Initiative has developed the Climate Bonds Standard and sector specific criteria for a variety of asset categories – solar, wind, geothermal and marine renewable energy, low-carbon buildings, low-carbon transport, water infrastructure, forestry – and continues to develop metrics and criteria.

Step 2: Source of financing

Once the assets have been identified, the entity needs to determine the most suitable way to obtain the required funding. Direct investments are most common, but it may be possible to create an indirect investment platform (e.g. an investment fund).

Step 3: Deal structuring

The deal structure can entail a combination of different sources of financing, depending on the company, asset characteristics and macroeconomic factors.

Step 4: Debt origination

Debt origination involves a number of parties that help the issuer structure and execute the transaction. Highlighting the deal's green credentials by developing a Green Bond Framework and obtaining an external review demonstrates a high level of transparency which can benefit the origination process and attract investors.

Step 5: Post-issuance reporting

After a green bond, or loan, is issued, issuers should publish a public report annually on proceeds allocations, with details on the financed projects and the management of any unallocated proceeds. Disclosing the environmental impacts of financed projects using appropriate metrics and benchmarks is aligned to best practice.

External reviews

External reviews from an independent party, which confirm alignment with the Green Bond Principles (GBP) / Green Loan Principles (GLP) and/or compliance with the Climate Bonds Standard, have become common practice. The most common forms of review are:

- **Assurance report:** an external party confirmation of compliance with GBP.
- **Second Party Opinion:** an external assessment of the issuer's green bond framework, confirming GBP compliance and analysing the "greenness" of eligible categories.
- **Green rating:** an evaluation of the green bond or related framework against a third-party rating methodology, which considers the environmental aspects of the investments. These include products developed by international and domestic rating agencies, e.g. Moody's, S&P and RAM Malaysia.
- **Verification reports for Certified Climate Bonds:** third party verification, pre- and post-issuance, which confirms that the use of proceeds adheres to the Climate Bonds Standard and Sector Criteria.

Certified Climate Bonds

Issuers can certify bonds, loans or sukuk under the Climate Bonds Standard. Certification confirms that the bond is aligned to the Paris Agreement and to keeping global warming under 2°C.

In order to receive the Certified Climate Bonds stamp of approval, a prospective issuer must appoint an Approved Verifier, who will assess the assets and issue a verification report to confirm that the bond meets the Climate Bonds Standard.

The Climate Bond Standard allows Certification of a bond prior to issuance, which enables the issuer to use the Climate Bond Certification Mark in the bond marketing efforts and investor roadshows. After the bond has been issued and allocation of the bond proceeds has begun, the issuer must confirm the Certification by obtaining a post issuance verification report annually to maintain its Certified status.

Step 1

Develop green asset strategy and process

- Develop **green asset strategy** at corporate level
- Define **eligibility criteria** for projects / assets and create **selection process**
- Prepare **green bond framework**
- Identify qualifying green projects or assets
- Set up **tracking and reporting procedures**
- **Best practice tip:** arrange an **external review**

Step 2

Determine appropriate funding sources

- **Direct investments:** equity, debt and project finance, including Public-Private Partnerships
- **Semi-direct investments:** pooled vehicles, including securitisation, covered bonds, investment trusts, venture capital and equity funds
- **Indirect investments:** publicly listed equity, corporate bonds, participation in debt financing

Step 3

Deal structuring

- Consider need for **partnerships** be it for co-financing or access to expertise and/or network
- Determine share of funding from **public and/or private** equity and debt
- Evaluate need for **credit enhancement** mechanisms
- Prepare required **documentation**

Step 4

Debt origination

- **Arranger:** structures deal in conjunction with issuer; coordinates transaction execution
- **Legal advisor:** prepares bond prospectus, transaction documentation, legal opinion
- **Auditor:** prepares audit report and signs off on financial disclosure in the prospectus
- **Credit rating agency (optional):** prepares credit rating report; assigns a credit rating
- **Underwriter/lead manager:** structures bond, manages transaction, acts as book runner

Step 5

Post-issuance reporting

- **Report annually** to confirm that the funds are allocated to green projects/assets
- **Best Practice tip:** disclose environment impacts of financial projects in absolute terms and relative to an appropriate benchmark

Green debt instruments

Green financing instruments continue to evolve. The green label can be applied to a wide variety of instruments – the main requirement is that the proceeds finance climate solutions. Beyond green loans and bonds, Malaysian, Indonesian and UAE issuers have issued green sukuk, for example, while two Australian banks have launched green deposit schemes, and another created a green loan portfolio funding structure.

In the table below we have listed the more common green debt formats and, where possible, picked LAC or CAC examples.

Debt Instrument	Definition	Examples (from LAC as much as possible)
Supranational and sovereign green bonds	Proceeds are allocated to nominated projects and assets. Debt securities carry the credit rating of the issuing State. However, an independent rating may be assigned by ratings agencies.	<p>Supranational: CABEI issued LAC's first supranational green bond of ZAR1bn (USD74m) to support energy efficiency, renewable energy and power infrastructure projects in 2016. It issued a second green bond, for USD375m, in late 2019 to finance renewable energy and sustainable water projects (<i>covered on page 11</i>). CAF (Corporación Andina de Fomento) issued three green bonds worth USD52m, USD50m and USD30m to finance a range of environmental projects in LAC.</p> <p>Sovereign: No green sovereign bonds have been issued from the CAC region yet. The Republic of Chile issued LAC's first green sovereign bonds (USD6.2bn in total). The proceeds will finance a range of projects across transport, buildings, water and energy, the vast majority going toward transport, especially to improve and expand Santiago's metro system.</p>
Sub-sovereign green bonds (green state treasury and municipal bonds)	Proceeds are allocated to nominated projects and assets within the sponsoring region. Credit rating is based on that of the issuing municipality and the credit quality of the underlying assets.	<p>No green sub-sovereign bonds issued from CAC issuers yet.</p> <p>Mexico City became the first local government in LAC to issue green debt. Its two green bonds (2016: MXN1bn/USD50m, 2018: MXN1.1bn/USD54m) were earmarked for transport, water, buildings, and adaptation/resilience projects.</p> <p>Local governments in Argentina have also issued green bonds. The Province of la Rioja funded wind farms with its two green bonds (USD100m and USD200m), while the Province of Jujuy issued a USD210m bond for the development of a 300MW solar park.</p>
General obligation green bond	Proceeds are allocated to nominated projects and assets. As the green bonds are backed by general balance sheet assets from the issuer (rather than being secured on a specific project or asset), they carry the credit rating of the issuing entity.	State-owned Banco Nacional de Costa Rica (BNCR) issued a senior unsecured green bond in the amount of USD500m to finance various renewable energy and wastewater projects.
Green project bond	Proceeds are allocated to nominated projects and assets. The investor has direct exposure to the risk of the project(s), with or without potential recourse to the issuer. The credit rating is based on the quality of the backing green assets and the returns stream of the underlying project.	<p>No green project bonds issued from CAC issuers yet.</p> <p>Wind energy producer Energia Eólica (Peru) became LAC's first green bond issuer in 2014 with a USD204m senior secured green project bond used to refinance Cupisnique and Talara windfarms, which benefit from a 20-year guaranteed Power Purchase Agreement under Peru's Renewable Energy Resource Program.¹²⁴</p> <p>Ormat Technologies Inc. (Honduras) obtained a non-recourse USD115m project loan from US development finance institution Overseas Private Investment Corporation (OPIC) to finance a 35MW geothermal power plant.</p>
Green revenue bond	Proceeds are allocated to nominated projects and assets. As the green bonds are backed at least partially by the issuer's revenue stream, they carry the credit rating of the issuing entity. Local governments often issue revenue bonds, i.e. bond backed by future revenue receipts, e.g. from taxes or fees.	<p>No green revenue bonds issued from LAC issuers yet. However, in El Salvador, the municipality of San Salvador issued a USD10.5bn securitisation to finance major public projects backed by the future municipality's revenue flows.¹²⁵</p> <p>An example of a green revenue bond is the State of Hawaii's GEMS 2014-1, an ABS deal secured on the green infrastructure fee collected by three state utility companies via electricity bills. The bond raised funds for the Hawaii Green Infrastructure Loan Program, which aims at providing loans to finance the installation of renewable energy systems and for energy efficiency projects.</p>

<p>Dual recourse bonds</p>	<p>Proceeds are used to fund a cover pool of financial assets. Investors rely primarily on the issuer for bond payments and repayment, but the cover pool provides an alternative source for recovery if the bond defaults. Credit risk is reduced thanks to the cover pool security.</p> <p>Covered bonds legislation and credit history can further boost credit ratings for mortgage covered bonds (the most common).</p>	<p>No green covered bonds issued from LAC issuers.</p> <p>German mortgage bank Berlin Hyp was the first to issue a green covered bond in 2015, with a cover pool of mortgages in multiple European countries. In 2018, Swedish Landshypotek Bank issued a green covered bond with a cover pool comprising mortgages on certified and sustainably managed forestry assets.</p> <p>Bank of China issued a dual-recourse bond with a cover pool comprising unlabelled climate-aligned bonds in 2016.</p>
<p>Green securitisation / green tranches in ABS and MBS deals</p>	<p>Debt securities backed by a pool of underlying assets. Proceeds are allocated only to nominated projects and assets. An independent credit rating is often issued by a rating agency, but this is not a requirement. The credit risk is dependent on the asset risks. The only source of repayment is the cash flow of the assets.</p>	<p>No green securitisation bonds issued from CAC issuers yet.</p> <p>Securitisations have been used primarily to bundle building mortgages and loan and lease receivables, e.g. from solar.</p> <p>In LAC, they are most common in Brazil given the nationally relevant CRA (Agribusiness Receivables Certificate) and CRI (Real Estate Receivables Certificate) securitised instruments. Multiple Brazilian issuers have come to market with labelled ABS deals, especially CRAs related to forestry. For example, Suzano Papel e Celulose, a large pulp and paper producer, issued a BRL1bn (USD295m) green CRA in 2016, using the proceeds to invest in reforestation, expansion of certified forests and renewable energy.</p>
<p>Green structured finance and Mezzanine and subordinated debt</p>	<p>Proceeds are allocated to nominated projects and assets. These are hybrid capital investments from development banks seeking to support private investment in the senior debt or from investors with a higher risk appetite.</p>	<p>In 2017, the Inter-American Investment Corporation (IIC), a multilateral institution with an exclusive focus on providing direct and indirect financing to SMEs in LAC, arranged a USD136m 20-year B-bond to finance a 70MW wind farm in Uruguay developed by US-based energy company Invenergy. The bond was sold to institutional investors to refinance the A/B loan provided by IIC and DNB Bank for the construction of the wind farm.</p>
<p>Green convertible bond</p>	<p>Proceeds are allocated to nominated projects and assets. The security can be converted into a predetermined amount of the company's common stock. The bond will carry the credit rating of the issuing entity.</p>	<p>No green convertible bonds issued from LAC issuers yet.</p> <p>Japan-based Sumitomo Forestry issued the first green convertible in September 2018 to refinance the acquisition of 30,000 hectares of FSC-certified timberlands and plantation forests in Nelson, New Zealand.</p>
<p>Environmental impact bonds / pay-for-results green bonds</p>	<p>Proceeds allocated to nominated green projects/assets. Part of the project's risk is transferred from the issuer to investors. The payments to investors are conditional on the project achieving an expected outcome after a third-party evaluation has been conducted.</p>	<p>No pay-for-result green bonds issued from LAC issuers yet.</p> <p>In 2016, District of Columbia Water and Sewer Authority (USA) issued a USD25m private placement to fund the construction of infrastructure to absorb and slow surges of stormwater during periods of heavy rainfall. If the project does not meet expectations, DC Water will make an outcome payment to investors; if it does, no contingent payment will be due; and if it exceeds expectations, investors will make a Risk Payment Share of USD3.3m to DC Water.¹²⁶</p>
<p>Private placement</p>	<p>Green bond placed directly with the investor/s. Details of the deal such as pricing and maturity may remain confidential, but the issuer is expected to disclose details on the nominated projects and assets to be financed.</p>	<p>Williams Caribbean Capital from Barbados issued a BBD3m (USD1.5m) green structured bond to fund a variety of solar PV projects across the country. The structure was backed by the IDB, through their private sector branch IDB Invest.</p> <p>Private placements are common in LAC, e.g. IFC subscribed in full to the green bonds issued by Bancolumbia and Davivienda (Colombia) and Banco Galicia (Argentina).</p>
<p>Green loans</p>	<p>These instruments provide lending to encourage market development in climate-aligned sectors in line with the Climate Bonds Taxonomy and in compliance with the Green Loan Principles. Interest rates are based on borrower credit scores or an ESG score assigned by an ESG rating agency.</p>	<p>Green loans have yet to appear in CAC countries.</p> <p>Iberdrola Mexico obtained LAC's first green loan in 2018. The syndicated facility was signed with ten banks, led by BBVA. It will refinance three windfarms in Mexico and was reviewed externally by Vigeo Eiris, in compliance with the <i>Green Loan Principles</i>.</p> <p>Agrosuper, Chile's largest producer of animal protein, obtained USD100m to finance the acquisition of two salmon producers, the continued reduction in antibiotic use in production, and the certification of new centres under ASC. The loan was arranged by Rabobank, which has a strong presence in agri-finance.</p>

Green finance leveraging mechanisms

Blended finance

Blended finance structures combine public and private investments, channelling capital flows into the pipeline to deliver adjusted risks and improved bankability of projects.

An example on what can be delivered through the employment of blended finance structure is the **Risk Mitigation Instrument for Land Restoration project** by **Global Environmental Facility (GEF)**, which is managed by the Inter-American Development Bank. The combination of USD15m funds from GEF and USD120m in co-financing were used to provide guarantees and subordinated loans to restore degraded land in Latin America.¹²⁷

Value capture

The value capture model can support the payment for the initial costs of the projects by monetising the revenues generated by the assets' appreciation.

One of the best examples is Hong Kong's MTR, a pioneer of financing public transit through real estate and the value capture model since it started developing Hong Kong's urban metro system in 1975. Its "rail plus property" model allows Hong Kong's public transport company to self-finance by capturing the increase in above-ground property value once railways are built.

Credit guarantees

Guarantees can fully or partially absorb different types of risks that can range from project level risks to operation default exposure. They can help borrowers overcome financial structuring challenges, high up-front payments, long paybacks or even improve one's technical capacity.

Credit guarantees can enhance the credit worthiness of a project by providing coverage for a portion or the whole debt obligation subscribed by private investors, attracting, as well, a wider pool of investors and potentially achieving better deals.

These mechanisms can be particularly helpful for the financing of green projects in emerging markets, which usually have a higher-risk profile. For example, the **Republic of Seychelles** issued a USD15m sovereign blue bond in October 2018, which benefits from a USD5m **guarantee** provided by the World Bank as well as a USD5m **concessional loan** from the Global Environment Facility (GEF) (see page 13).

The **Clean Energy Finance Facility for the Caribbean and Central America (CEFF-CCA)** is a financing initiative of **USAID** that aims to support energy efficiency projects in the region through the provision of loans, guarantees, political risk insurance and investment fund support.¹²⁸ And, in Peru, it offers a **matching facility**, linking producers with financing, and buyers for premium cacao. It combines the provision of loan guarantees with technical assistance to cacao farmers. The technical assistance supports the adoption of sustainable farming practices, while the loan guarantees improve the deal credit metrics, facilitating access to financing at more favourable terms.

Mexican development bank **FIRA** offers **credit guarantees**, training, technical assistance and other activities that support stakeholders from the agriculture, fishing and forestry sectors.

The role of development banks

Multilateral banks can play an important role on helping issuers overcome financing obstacles and attract private investments, through de-risking mechanisms that may also increase capital flows. The provision of such tools can not only leverage credit worthiness, but also protect borrowers and lenders from political uncertainty or currency exchange volatility.

IDB Invest's B-bond structure, for example, aims at sharing investment risks and crowding-in institutional investment. The B-bond (bridge-bond) allows IDB Invest to involve institutional investors that typically prefer to invest in developed markets.

US-based **Invenergy** issued USD102m for the construction of a solar and wind power plant in La Jacinta, Uruguay. IDB Invest arranged a USD65m B-bond which was sold to a special purpose vehicle and then privately placed with an institutional investor. IDB Invest provided the remaining USD3.6m A-loan, thus raising USD68.6m for Invenergy.¹²⁹

Uruguayan renewable energy company **Atlas Renewable Energy** issued a similar USD114m **A/B structured bond** to finance solar energy projects. The deal's structure included senior and subordinated note tranches, with IDB Invest as the lender of record.¹³⁰

Multilaterals can – and do – also offer green finance leveraging solutions, acting as anchor investors, initiating emerging market investments funds and platforms, and providing technical assistance related to both sustainable business and financing.

The **Central American Mezzanine Infrastructure Fund II (CAMIF II)** is a USD250m private equity fund, which provides mezzanine loans and equity to small and medium infrastructure projects in CAC.¹³¹ Similar to CAMIF I (USD210m), CAMIF II will focus on traditional infrastructure such as renewable energy, transportation and water and sanitation, but it will also invest in natural resources, health and education, real estate, manufacturing, and tourism.

Set up by Latin American Partners (LAP) LLC, a private equity firm based in Washington DC, its investors include the IDB, the IFC and European banks.¹³² Their commitments are allocated into three tranches: senior loan, mezzanine and equity. CAMIF provides them with exposure to transactions that are difficult to originate and structure, which in most cases would not be visible to investors, in a region that is currently underserved by institutional investors.

Amundi Planet Emerging Green One, which is a USD2bn fund initiated by the IFC and managed by global asset manager Amundi, launched in March 2018. It can provide credit enhancement mechanisms, supporting green issuance and issuers and connecting investors to climate-smart investment opportunities.¹³³ The fund invests in the green bonds of emerging markets financial institutions, thus using international and institutional capital to support local lending to the real economy, leveraging both capital markets and local banks' market experience and expertise.

The **Currency Exchange Fund (TCX)**, set up in 2007, is funded by 22 development finance institutions and microfinance investment vehicles, with the support of the Dutch and German governments. TCX aims to offer currency risk hedging solutions in developing and frontier markets. This is made possible by pooling the risk of currencies for which there are no long-term hedging products, or, in some cases, no market at all.

TCX provides hedging tools in local currencies in Nicaragua, Honduras, Guatemala, Jamaica, Costa Rica, Haiti and the Dominican Republic.¹³⁴

Currency risk can be a significant barrier to attracting international capital to emerging markets. Therefore, hedging mechanisms for local currency risk or when deals are backed by local currency revenues, are vital for de-risking deals. Creating a currency market can also support the development and opening up of local financial markets.

Conclusion and considerations



There is huge potential for green finance in CAC. 2019 was a positive year for the market, with a record number of new deals by various issuers and several promising initiatives by a diverse group of players.

2020 has, of course, been an exceptional year so far, with the COVID-19 pandemic affecting global investments, including those related to climate solutions. This has produced a clear shift in sustainable finance markets, with the volume of green bonds falling considerably while that of other sustainable debt labels has grown. Public sector issuers in particular are, understandably, prioritising investments in national health systems and response packages. However, social and environmental issues are intrinsically connected, and pandemics are a great example of this. As economic and financial systems around the world increasingly take account of social and environmental impacts, the discussion will likely move towards 'sustainability' as an overarching theme rather than looking at its individual components.

Nonetheless, we expect to see the following in the green finance space going forward:

- 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 lying ahead. Future development can rely on existing regional markets and initiatives, and will benefit from issuers' best practice on the use of external reviews to showcase their green credentials. There is special potential for green finance to support investments in green infrastructure, especially linked to energy, transport, water and waste. Growth in most countries will also come from issuer type diversification. Labelling bonds from existing climate-aligned issuers as they refinance presents an additional opportunity to bring visibility to CAC's green finance market.
- 2. Investment in sustainable agriculture and blue projects:** As well as green infrastructure investments, given the importance of agriculture and ocean-based activities in much of CAC, 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 green bonds could also be particularly useful to achieve this.
- 3. Green bond issuance from the public sector to finance national development goals under the Paris Agreement:** This is all the more important in CAC given the need for investments in green and more resilient infrastructure, likely to be undertaken by the public sector. While public sector issuance in CAC is limited, looking at Latin America overall, 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, Colombia and Mexico announcing potential sovereign issuances, we see significant opportunities for CAC governments to scale up green finance while increasing its visibility among 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, and regional ones such as CABEL, CAF and the IDB, 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. Together with direct investment in projects, 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 Mexico's *CCFC* and Panama's *Sustainable Finance Workgroup*, 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 CAC 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 both in CAC, LAC and globally, several regional governments have already taken steps in the right direction; for example, some countries have developed Green and/or Social Bond Guidelines (although these don't yet exist at a regional level). Governments could also consider providing financial support for issuers to cover additional costs, such as those of obtaining external reviews. Further support could come from a platform providing aggregated information about the green bond market.

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, open dialogue, knowledge sharing, and common frameworks and objectives, are a necessity.

Annex 1: Sample green project pipeline

This sample pipeline includes ‘green’ and ‘potentially green’ projects taken from various public sources, including government documents, media articles and World Bank publications. The assessment of the ‘greenness’ of each project was based on the Climate Bonds Taxonomy. This sample pipeline is not comprehensive.

Country	Sector	Project name	Location	Status
 Belize	Energy	Mollejon Hydroelectric Plant overhaul ¹³⁵	Macal River, Belize	Completed
	Transport	Solar LED streetlights in three provinces ¹³⁶	San Ignacio Town; San Narciso Village, Corozal District; Belize City	Completed
	Water	Water treatment on Ambergris Caye ¹³⁷	Ambergris Caye	Under construction
	Waste	Belmopan Sewer Waste Biogas ¹³⁸	Belmopan, Belize	Planned
 Costa Rica	Energy	Las Pailas II geothermal plant ¹³⁹	Curubandé de Liberia	Completed
	Transport	LRT System ¹⁴⁰	San José metropolitan area	Planned
	Water	Las Trancas-Bahía de Papagayo aqueduct ¹⁴¹	Carrillo, Guanacaste	Completed
	Waste	TWES Waste-to-energy gasification plant ¹⁴²	Costa Rica	Planned
 Dominican Republic	Energy	Monte Grande Hydropower ¹⁴³	Yaque del Sur River, Barahona province	Completed
	Transport	Santo Domingo Metro Line 2 ¹⁴⁴	Greater Santo Domingo, Dominican Republic	Completed
	Water	Mirador Norte-La Zurza Wastewater Treatment Plant ¹⁴⁵	Santo Domingo North, Dominican Republic	Completed
	Waste	CIMER Three-in-one metal recycling plant ¹⁴⁶	Dominican Republic	Completed
 El Salvador	Energy	Capella Solar Plant (140 MW) ¹⁴⁷	Department of La Paz	Under construction
	Transport	El Salvador Pacific Railway ¹⁴⁸	Nationwide, El Salvador	Planned
	Water	Renovation of Las Pavas Drinking Water Treatment ¹⁴⁹	El Salvador	Under construction
	Waste	Nejapa Biogas Landfill Site ¹⁵⁰	Chalatenango, El Salvador	Completed
 Guatemala	Energy	Horus I Photovoltaic Plant ¹⁵¹	Santa Rosa area, Guatemala	Completed
	Transport	Guatemala City Metro Rail Project ¹⁵²	Guatemala City	Planned
	Water	Quetzaltenango Wastewater Treatment System ¹⁵³	Municipality of Quetzaltenango, Guatemala	Planned
	Waste	AMSA Waste-to-Energy ¹⁵⁴	Lake Amatitlan region, Guatemala	Completed
 Honduras	Energy	Sula Valley Biomass Plant (43 MW) ¹⁵⁵	Sula Valley	Completed
	Transport	BRT System extension ¹⁵⁶	Tegucigalpa	Under construction
	Water	Sanitary Sewerage and Wastewater Treatment Plant Works ¹⁵⁷	Municipality of Guajiquiro, Department of La Paz	Planned
	Waste	INVEMA PET Recycling expansion ¹⁵⁸	San Pedro Sula, Honduras	Completed
 Nicaragua	Energy	Eolo Wind Farm (44 MW) ¹⁵⁹	Province of Rivas, Lake Nicaragua	Completed
	Transport	Managua LRT ¹⁶⁰	City of Managua	Planned
	Water	Sustainable Rural Water Supply and Sanitation Sector Project ¹⁶¹	Nationwide	Under construction
	Waste	Gravita Nicaragua Recycling Plant ¹⁶²	Managua, Nicaragua	Completed
 Panama	Energy	Penonome Wind Farm ¹⁶³	Central Province of Coclé	Completed
	Transport	Panama City Metro Line 2 ¹⁶⁴	Panama City	Completed
	Water	Burunga Wastewater Management Project ¹⁶⁵	Burunga, Arraiján District, Panama	Planned
	Waste	Cerro Patacón waste-to-energy landfill ¹⁶⁶	Ancon, Panama District, Panama Province	Completed

Note: ‘Potentially green’ projects are projects that could be green, but more information would be needed to determine this.

Annex 2: International green standards

The **Climate Bonds Taxonomy** is used to identify green projects / assets which are aligned with achieving the goals of the Paris Agreement. It covers energy, transport, buildings, sustainable water and waste management, sustainable land use and marine resources, ICT and industry. It excludes fossil fuel power generation, ICE personal vehicles, and freight rail primarily used for fossil fuel transport.¹⁶⁷

The EU has significantly ramped up its sustainable finance efforts in the last couple of years, with the European Commission creating a dedicated Sustainable Finance work stream through which it has developed an **EU Green Bond Standard**. More broadly, it is also currently working on a **Taxonomy of Sustainable Activities** and an **International Platform on Sustainable Finance**.¹⁶⁸

The **IDB Sustainable Infrastructure Platform** is a framework of sustainability criteria that covers an integrated spectrum of economic, financial, environmental, social, and institutional dimensions for infrastructure projects. The framework addresses three key stages of infrastructure delivery: policy and planning (or upstream level), project preparation and design, and financing. It consolidates the fundamental environmental, social, institutional, economic, and financial principles for implementing sustainable infrastructure investments and is applicable throughout the entire project cycle and across different sectors and regions.¹⁶⁹

The **Effective Energy Management Systems (EnMS /ISO 50001)** standard establishes an international framework for the supply, use and consumption of energy in industrial, commercial, and institutional organizations. Implement an ISO 50001 compliant sustainable energy management system and demonstrate organization's commitment to

continuously improving energy performance, leading to economic benefits and reduced greenhouse gas emissions.¹⁷⁰

SOURCE is a global standard created by Sustainable Infrastructure Foundation (SIF). It offers governments a global, reliable, secure, and user-friendly project preparation software to maximize public sector users financing options including PPPs by providing well-prepared projects in a consistent and transparent way to the international community of contractors, investors, and lenders.¹⁷¹

GRESB Infrastructure ESG Benchmark uses the GRESB Infrastructure Assessment, which comprises two components: Fund Assessment and Asset Assessment. There is also a third component that is optional: a Resilience Module. The Infrastructure Fund Assessment assesses the ESG performance of infrastructure funds, and the Infrastructure Asset Assessment assesses ESG performance at the asset level for infrastructure asset operators, fund managers and investors that invest directly in infrastructure.¹⁷²

The **Standard for Sustainable and Resilient Infrastructure (SuRe)** is a global voluntary standard which integrates key criteria of sustainability and resilience into infrastructure development and upgrade, through 14 themes covering 61 criteria across governance, social and environmental factors.¹⁷³

Envision is a framework that includes 64 sustainability and resilience indicators, called 'credits', organized around five categories: Quality of Life, Leadership, Resource Allocation, Natural World, and Climate and Resilience. These collectively address areas of human wellbeing, mobility, community development, collaboration, planning, economy, materials, energy, water, conservation, ecology, emissions, and resilience.¹⁷⁴

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Climate Bonds Taxonomy

The Climate Bonds Taxonomy identifies the assets and projects needed to deliver a low carbon economy and gives GHG emissions screening criteria consistent with the 2-degree global warming target set by the COP 21 Paris Agreement. More information is available at <https://www.climatebonds.net/standard/taxonomy>.



ENERGY	TRANSPORT	WATER	BUILDINGS	LAND USE & MARINE RESOURCES	INDUSTRY	WASTE	ICT
Solar	Private transport	Water monitoring	Residential	Agriculture	Cement production	Preparation	Broadband networks
Wind	Public passenger transport	Water storage	Commercial	Commercial Forestry	Steel, iron & aluminium production	Reuse	Telecommuting software and service
Geothermal	Freight rail	Water treatment	Products & systems for efficiency	Ecosystem conservation & restoration	Glass production	Recycling	Data hubs
Bioenergy	Aviation	Water distribution	Urban development	Fisheries & aquaculture	Chemical production	Biological treatment	Power management
Hydropower	Water-borne	Flood defence		Supply chain management	Fuel production	Waste to energy	
Marine Renewables		Nature-based solutions				Landfill	
Transmission & distribution						Radioactive waste management	
Storage							
Nuclear							

Certification Criteria approved
 Criteria under development
 Due to commence

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