



# National Development Banks and Green Banks:

Key Institutions for Mobilizing Finance towards the Implementation of Nationally Determined Contributions (NDCs) and the accomplishment of the Sustainable Development Goals (SDGs)

Key Findings from Mexico City Workshop



A CPI and IDB Report with support of the Leveraging Green Investments - LGI Program

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## CONTEXT

On the 26-27th of June 2017 in Mexico City, the Inter-American Development Bank (IDB) with support of the "Leveraging Green Investments - LGI Program"<sup>1</sup> co-hosted a workshop with Banco Nacional de Obras y Servicios Públicos (BANOBRAS), the Latin American Association of Development Financing Institutions (ALIDE), and the Organization for Economic Co-operation and Development (OECD), in partnership with the Green Bank Network (GBN), to engage key development finance actors and discuss the roles that national development banks (NDBs) and green investment banks (GIBs) can play in mobilizing finance for the implementation of the Paris Agreement's Nationally Determined Contributions (NDCs) and the accomplishment of the United Nations' Sustainable Development Goals (SDGs).

## THE CHALLENGE

In September 2015, countries around the world finalized updates to the UN's Sustainable Development Goals (SDGs) through 2030. And in December, 196 countries negotiated the landmark Paris climate change agreement, which was subsequently signed by 32 countries from Latin America and the Caribbean (LAC) representing more than [99% of the region's emissions](#). Paris sent a clear signal of the global and regional commitment to substantive and urgent action to fight climate change, and together these events represent a watershed moment that redefines goals for sustainable development in LAC and around the world.

However, achieving LAC climate objectives will require significant investments - by some estimates more than \$176 billion per year through 2030 in the renewable energy, urban infrastructure, and energy efficiency sectors alone (IFC, [2016](#)). This is much greater than the USD 32 billion that can be tracked to all climate finance sectors in Latin America annually (CPI, [2016](#)).

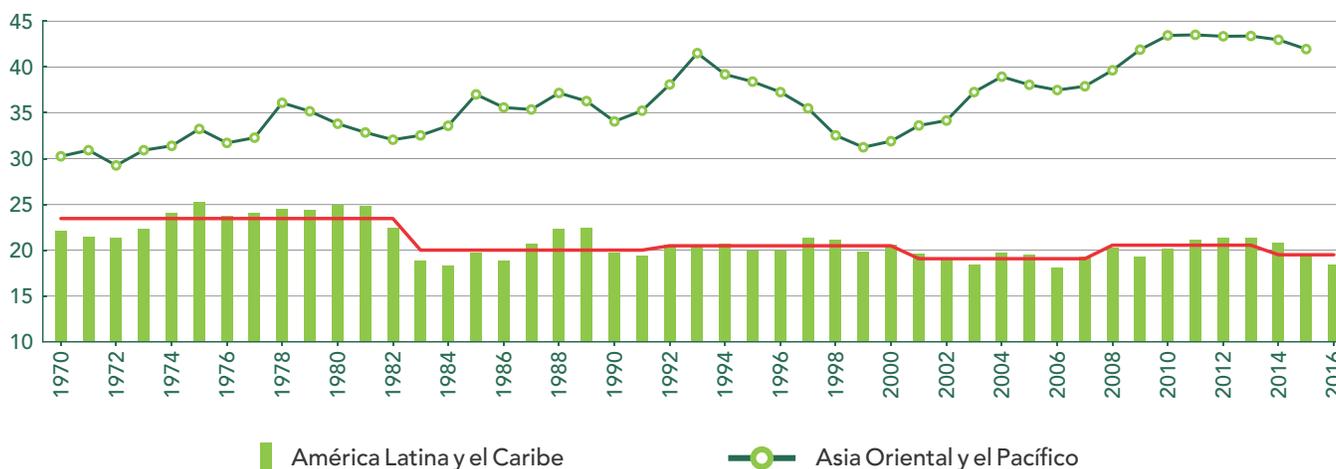
Stagnant economic growth and high unemployment have remained persistent obstacles to reaching SDGs, bringing millions of people out of poverty, and reducing inequality throughout Latin America. Over the past decades, Latin America has stagnated while Asia has grown (see Figure 1).



Figure 1

Gross Fixed Capital Formation as a percentage of GDP in constant 2010 US\$.

Source: Adapted from CEPAL, 2017.



<sup>1</sup>[www.greenfinancelac.org/lgi/](http://www.greenfinancelac.org/lgi/)



To bring growth back to the region, investment is crucial. Investment in infrastructure, science, research and development, innovation, and financial institutions will help reignite growth and NDCs can present a framework for aligning all of these elements towards green objectives.

NDCs are an opportunity to realign policy and economic priorities around a long-term vision to achieve SDGs and climate objectives (Carolino et al., [2017](#)). The private sector will need to play a key role in mobilizing needed investment. For investment to reach the scale needed, policymakers, public finance institutions, and the private sector will need to work together to create the right investment conditions and policy signals. Economic and financial decision makers need to be part of the discussions on how NDCs can be met. Policy makers will need to strengthen investment frameworks to create the right price signals and avoid perverse incentives like fossil fuel subsidies, while bringing needed climate investments forward.

As the central institutions in the financing of domestic economic policies and priorities, NDBs have a crucial role to play in mobilizing investment towards NDCs. However, there are important barriers that will need to be addressed to fulfill their potential. This brief presents key outputs of the discussions held during the workshop, focusing on its two objectives:

1. Synthesize lessons on how green financing institutions can support meeting Nationally Determined Contributions (NDCs) and Sustainable Development Goals (SDGs).
2. Understand levers that are available for NDBs to increase climate finance.

## **National Development Banks (NDB) have unique roles to play in the implementation of NDCs**

*NDBs have a privileged position in the operationalization of public policies. As such, they are in the best position to leverage private finance. They have relevant experience in everything that has to do with green funds, understanding of domestic barriers and risks and a vast experience in long term financing which are essential for green investment.” - Veronica Zavala Lombardi (IDB)*

LAC NDBs have decades of experience successfully operationalizing public policies by mobilizing investment towards key policy objectives. Their lengthy track records and wealth of experience bridging the gap between governments and private sector actors makes them a natural fit to support LAC countries in operationalizing NDCs. NDBs are already one of the largest sources of public finance for low-carbon, climate resilient infrastructure in domestic markets: 12 NDBs in Brazil, Mexico and Chile invested USD 12 billion in 2015 alone. (CPI and IDB, 2017 forthcoming).

However, many NDBs were established decades prior to current government climate or environmental goals. And NDBs face financial barriers such as lack of long-term capital, conservative investment mandates and insufficient risk-adjusted returns in climate-relevant projects as well as technical barriers that limit their ability to assess, identify, and operationalize climate projects.





## Box 1

### NDB experience and financial innovations.

NDBs throughout LAC already have significant experience mobilizing low-carbon, climate resilient investment and piloting innovative financial instruments. Several examples from institutions in Mexico include:

- **FIRA worked with IDB and the Clean Technology Fund (CTF) to pilot Energy Savings Insurance (ESI)** in Mexico to [support energy efficiency investments in agricultural SMEs](#) by guaranteeing the savings in energy efficient technologies like boilers, electric motors, industrial cooling, cogeneration, compressed air and solar water heaters. In addition to providing technology validation and financial stability for SMEs, the program also generated awareness of EE opportunities which 80% of SMEs were not previously aware of.
- **NAFIN successfully piloted Mexico's first green bonds**, including an initial USD 500 million in wind projects in 2015 and a second peso-denominated bond (roughly USD 100 million) in 2016. Thus far, NAFIN's green bonds have been oversubscribed, and have helped to drive a 623% increase in renewable energy generation in Mexico since 2009. The primary challenge going forward is ensuring sufficient pipeline to meet demand.
- **SHF implemented the EcoCasa program** using concessional [loans and technical assistance in conjunction with IDB, CTF, and KFW](#), to provide low-cost credit to housing developers to build energy-efficient housing. Small-scale developers in the program have an array of possible strategies, technologies, and materials to choose from to make houses more energy efficient, and this flexibility allows for a lower-cost implementation, that can be applied more-widely and can succeed using locally-sourced materials (CPI and IDB, 2017 forthcoming).

Suggested further reading: on the Role of NDBs in Catalyzing International Climate Finance (Smallridge et al., [2013](#)); and on the use of guarantees in green finance (Aldana et al., [2014](#)).

## National Development Banks (NDB) have unique roles to play in the implementation of NDCs

Specialist financial institutions like GIBs can offer solutions to some of the barriers to increasing climate finance investment that NDBs face. GIBs focus exclusively on financing green projects "mobilizing private low-carbon climate resilient investment using interventions to mitigate risks and enable transactions; innovative transaction structures and market expertise; independent authority and a degree of latitude to design and implement interventions; and a focus on cost-effectiveness and performance" (OECD, [2017](#)). In focusing only on green sectors, GIBs have far less diversified portfolios, and take on a different set of risks and regulatory responsibilities from NDBs.





# Table 1

## Barriers and potential solutions for financing green investment through GIBs.

Source: Adapted from Sims (2017).

Barrier	Potential GIB Solution
Lack of long-term, low-cost capital	Entity with sole mission of crowding in private capital to finance NDCs could be attractive to donors and private investors
Insufficient risk-adjusted returns	Separate pool of GIB capital could take on transaction risk that NDB might be reluctant to take on itself, thus enhancing its performance
Conservative investment mandates	Role of GIB could be to lead the way for NDB to expand into new sectors
Risk perception of climate finance investments	<p>GIBs can incubate innovative investments</p> <ul style="list-style-type: none"> <li>• Pioneering energy efficiency</li> <li>• De-risking aggregation of small scale projects</li> <li>• Introducing new technologies to market</li> <li>• Developing adaptation-focused financial products</li> </ul>
Lack of technical capacity	<ul style="list-style-type: none"> <li>• GIBs can attract sector specialists and can devote resources to in-house technical expertise</li> <li>• And this is an element that the existing GIBs see as essential to their success</li> </ul>

While roles and mandates of green banks can vary across regions and jurisdictions, the common defining characteristics among GIBs include that they are:

- **Not traditional banks** – they do not have deposits or account holders.
- **Empowered to take long-term risks**, and play roles in the market that other institutions do not. They have different institutional objectives and regulatory constraints.
- **Structured in various ways**. A GIB can be (1) a green division within an existing NDB, (2) a green affiliate controlled by an NDB, (3) a joint venture between an NDB and another entity—or (4) a new standalone institution.
- **Specialist institutions** that can work with other financial institutions to build capacities and mainstream green investments.
- **Able to crowd in private finance reducing real and perceived risk** of green projects and technologies. GIBs work to demonstrate the profitability of green technologies and transform markets.

Examples of green-bank-like institutions around the world are shown in the next figure.

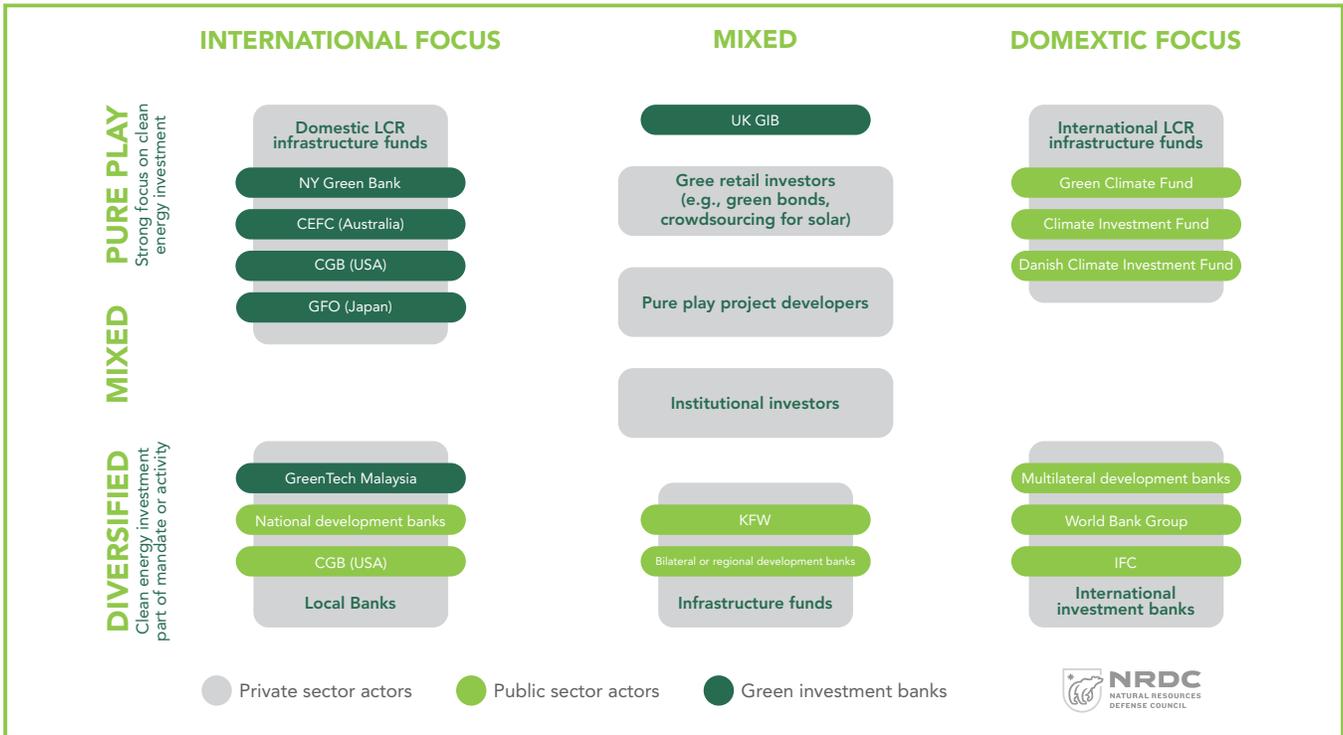




Figure 2

GIBs occupy a unique space in the climate finance ecosystem.

Source: Sims, 2017, adapted from OECD, 2016.



## Institution building and technical assistance can help NDBs increase climate investment

There are important technical challenges that need to be addressed so that NDBs can deliver climate finance effectively. NDBs often don't have the teams and capabilities in-house to assess and structure the broad range of projects involved in meeting NDCs.

The range of sectors and financial instruments needed to meet NDC goals, require a breadth of expertise that is outside of typical NDB operations. To design new financial instruments effectively, there is a need to **understand the market and barriers** that investors are facing. Instrument innovation should also be **accompanied by technical assistance to users**.

If non-standard instruments are designed, practitioners need to understand how to catalyze the market and create investor confidence. For example, in the green bond market experience shows that issuer and investor confidence can be increased, and the market accelerated, by anchor investment or origination support from specialist institutions. The [CEFC](#) in Australia invested in the first issuance of a green bond by a major Australian bank; NAFIN in Mexico pioneered the first issuance of a green bond for renewable energy projects in Mexico (CEFC, 2017; NAFIN 2017).

Finally, there is a need to learn how to measure impact and evaluate the effectiveness of individual projects and continue learning. Green investment introduces a new paradigm for financial institutions who are accustomed to only assessing financial performance and new approaches must be developed to understand climate impacts.



## Aligning incentives and finding new ways to measure and reward performance are very important

While NDBs are often tasked with developing new markets, these institutions are also created to achieve a net return. Financing riskier projects is a challenge, as incentives are not aligned for identifying and executing on the most innovative projects. And while developing the private sector and being 'additional' to private sector finance is a goal for most institutions, in practice, this goal can be in direct conflict with the need for net returns and financial stability.

To measure success, tracking climate finance and environmental outcomes is essential. Most NDBs in Brazil, Mexico, and Chile do not track climate finance systematically across portfolios -- and expressed particular challenges related to tracking adaptation investments (CPI-IDB, 2017 forthcoming). There is a need for alignment across institutions and governments.

### LEVERS TO INCREASE CLIMATE FINANCE

In spite of the challenges facing LAC NDBs, 12 surveyed institutions in Brazil, Mexico, and Chile alone made more than USD 11 billion in climate finance commitments in 2015 (CPI-IDB, 2017 forthcoming). To scale up, NDBs should consider new approaches to align incentives, reward performance and bring the right projects forward. The following "levers" (or discrete actions) could be employed:

- Employ performance-based approaches that provide financing to projects based on their ability to deliver measureable climate improvements. The discussion can be framed as how to deliver climate impacts effectively, as opposed to focusing exclusively on mobilizing finance. Examples of performance based approaches include energy service companies (ESCOs), renewable energy certificates, and others.
- Support the development of good project pipelines by working with the financial industry and project sponsors. Projects need to allocate and distribute risks along the financial supply chain in order to create bankable projects.
- Leverage new sources of financing including philanthropic capital and support from international climate funds like the Green Climate Fund, which may be able bear risks and provide support that private actors and NDBs cannot.
- Explore emerging sectors such as fintech, which holds significant potential to dramatically reshape financing for green projects. Innovations like crowdfunding of projects and companies, new methods of disintermediation, and the use of blockchains or distributed ledgers to verify transactions and lower costs – all hint at this potential. However, fintech applied to green financing specifically is a very new field, and many additional opportunities are likely to emerge in the future.
- Engage with specialist institutions like green banks, and explore new financial innovations and instruments (see Table 1) that can use public capital strategically to de-risk key investment areas and crowd-in private capital.



## CONCLUSIONS

By working together NDBs, GIBs, governments, and other development finance actors can help to push green finance forward in Latin America and throughout the world. As panelists, participants, and conveners from IDB, ALIDE, OECD, GBN and SEMARNAT all noted, there are important opportunities for collaboration on shared climate goals. And more-frequent and more-established knowledge-sharing and communication -- through publications, webinars, workshops, data sharing, and other channels – can be effective means of catalyzing this needed collaboration.

There is a significant economic opportunity in fulfilling aligned climate and development goals in Latin America. And there is an extraordinary consensus and commitment to act to scale up green investments both in Latin America and globally, to meet these goals. But time is extremely limited, we have an enormous gap in the finance needed, and discrete barriers in political and macroeconomic instability, policy alignment across institutions and governments, and missing technical expertise to identify, financially-structure, measure the impacts of green projects (particularly for adaptation), and generate much larger green pipelines.

Employing **NDBs' depth of experience in operationalizing government policies and creating markets is key**; and this can be strengthened by the **expertise of bespoke green banks that have a limited mandates, green sector-specific technical abilities, and deep knowledge of the risks of green projects and the most effective mechanisms for structuring** them. This complementary blend of expertise can **help to grow project pipelines and catalyze the private investments** that are needed to achieve Latin American climate and development goals.



**Table 2****Examples of climate finance solutions presented during the workshop and additional reading.**

Org(s), Geos(s)	Solution	Strengths and Lessons Learned
<p>OECD EIB</p>  	<p>Blended finance facilities (e.g. <a href="#">GEEREF</a>)</p>	<ul style="list-style-type: none"> <li>Blended finance is a catch-all term for many combinations of public and private finance blended into a single vehicle designed to overcome private investments barriers.</li> <li>An example is GEEREF - a fund-of-funds that employs public financing in a variety of different tranches that help to crowd-in private sector investment from around the world.</li> <li>But blended finance is only one piece of a larger set of tools needed: strong enabling environments; cohesive standards to insure additionality of public finance; improved monitoring &amp; evaluation; and more work to build the tools that can mobilize private finance more effectively.</li> <li>Additional reading: <a href="#">OECD work programme on blended finance</a></li> </ul>
<p>FIRA BANCOLDEX IDB</p>   	<p>Energy Savings Insurance (ESI) and guarantees</p>	<ul style="list-style-type: none"> <li>Insurance mechanisms and guarantees help to overcome challenges of: (1) long or uncertain payback periods for energy efficiency or other climate investments; and (2) assets that have strong return on investment but may be difficult to repossess or liquidate in the event of default from borrowers.</li> <li>Guarantees have been shown to be cost-effective means for leveraging finance. In practice, only a small percentage of guarantees are called but they can serve to provide confidence to investors and customers.</li> <li>FIRA worked with IDB to set up Energy Savings Insurance (ESI) in Mexico. This program works with agricultural SMEs to support investment by guaranteeing the savings in energy efficient technologies like boilers, electric motors, industrial cooling, cogeneration, compressed air and solar water heaters.</li> <li>In Colombia, ESI is being implemented to promote and scale up investments in selected EE technologies by hotels as well as clinics and hospitals.</li> <li>Additional reading: <a href="#">Development of ESI for SMEs in agricultural sector</a></li> </ul>
<p>UK Green Investment Bank</p> 	<p>Public sector green loans</p>	<ul style="list-style-type: none"> <li>The UK GIB pioneered a new type of "green loan" for municipalities that ties interest and repayments to energy savings.</li> <li>These loans were specifically designed to finance public sector energy efficiency projects, and allow for repayments to be shaped to fit within savings and alleviate already tight budgets by bringing immediate financial benefits to local authorities. The product can also include a development loan to help local authorities with the costs of progressing their plans.</li> <li>Additional reading: <a href="#">UK GIB Green Loan Glasgow Street Light investment background</a>; <a href="#">UK GIB Market Report - Low energy streetlighting: making the switch</a></li> </ul>



Org(s), Geos(s)	Solution	Strengths and Lessons Learned
<p>Connecticut Green Bank (CTGB)</p> 	<p>Commercial Property Assessed Clean Energy (C-PACE) warehousing and securitization</p>	<ul style="list-style-type: none"> <li>• C-PACE secures repayment for loans for energy upgrades (EE, RE) in buildings by tying them to property taxes, which transfer with ownership.</li> <li>• This allows owners to access affordable financing for building energy updates that may payback over time periods longer than the owner will hold the building.</li> <li>• CTGB and partners crafted a securitized multi-tranche bond structure for the purchase of projects -- the first securitization of C-PACE assets in the USA. This allowed capital providers to purchase a securitized portfolio of EE and solar PV projects across municipalities, purchasers get greater diversification and borrowers get better access to capital.</li> <li>• Additional reading: <a href="#">C-PACE PACEsetters</a>; <a href="#">CTGB innovative projects and financing solutions</a></li> </ul>
<p>NAFIN, CEFC, Climate Bonds Initiative</p>   	<p>Green Bonds</p>	<ul style="list-style-type: none"> <li>• Green bonds are fixed income instruments used to fund projects that have positive environmental and/or climate benefits.</li> <li>• The global market has grown from USD 2.6 billion in 2012, to USD 130 billion in 2017 -- but is still 0.2% of global issuance and needs to grow exponentially to meet lender, equity providers, and issuer needs.</li> <li>• NAFIN issued Mexico's first green bond for USD 500 million in wind projects in 2015 and a second peso-denominated bond (for USD 100 million) in 2016. Thus far, NAFIN's green bonds have been very successful and have been oversubscribed; primary challenges have been in establishing sufficient pipeline to meet demand.</li> <li>• CEFC has supported 9 of 13 green bonds issuances in Australia and helped grow the market from nothing to more than AUD 4.5 billion today.</li> <li>• Large upcoming opportunities exist in green sovereign bonds in LAC, green bond funds, and green asset backed securities; however the larger challenge is growing a pipeline of green projects that is sufficient for this.</li> <li>• Additional reading: <a href="#">NAFIN 2016 Annual Green Bond Report</a>; <a href="#">Climate Bonds Initiative latest reports</a></li> </ul>



Employing NDBs' depth of **experience** in operationalizing government policies and creating markets **is key.**







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