

# The Role of National Development Banks

in Catalyzing International  
Climate Finance

Diana Smallridge, Barbara Buchner, Chiara Trabacchi, María Netto,  
José Juan Gomes Lorenzo, and Lucila Serra



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# Contents

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Acknowledgements .....	vii
Acronyms.....	ix
Executive Summary.....	xi
<b>1. Introduction.....</b>	<b>1</b>
<b>2. The Current Landscape of Climate Finance .....</b>	<b>5</b>
<b>2.1. Key Issues in the Climate Finance Landscape .....</b>	<b>5</b>
<b>2.2. Sources, Channels, and Mechanisms of Climate Finance .....</b>	<b>7</b>
<b>2.3. A Glimpse into the Future: The GCF .....</b>	<b>10</b>
<b>2.4. Challenges in Climate Finance: A Mission for NDBs? .....</b>	<b>10</b>
<b>3. The Role of NDBs to Scale up Climate Finance .....</b>	<b>13</b>
<b>3.1. Introduction.....</b>	<b>13</b>
<b>3.2. The Conditions to Effectively Scale up Climate Finance.....</b>	<b>13</b>
<b>3.3. Unique Role of NDBs.....</b>	<b>14</b>
<b>3.4. Types of NDB Financial Instruments to Promote Private         Finance and Scale up Investments .....</b>	<b>16</b>
<b>3.5. Roles and Instruments of NDBs to Promote the Effective         Scaling up of Climate Finance.....</b>	<b>19</b>
<b>3.6. Overview of NDBs in the LAC Region .....</b>	<b>20</b>

<b>4.</b>	<b>How NDBs Can Leverage Private Finance.....</b>	<b>25</b>
<b>4.1.</b>	<b>Introduction .....</b>	<b>25</b>
<b>4.2.</b>	<b>Definition of and Methodology for Calculating the Leverage Effect .....</b>	<b>25</b>
<b>4.3.</b>	<b>The Leverage Factor of NDBs .....</b>	<b>26</b>
<b>4.4.</b>	<b>Leverage Effect by LAC NDBs.....</b>	<b>28</b>
<b>4.5.</b>	<b>Case Study: NAFIN Leverages the Local Financial Market .....</b>	<b>29</b>
<b>5.</b>	<b>Conclusions and Next Steps.....</b>	<b>31</b>
	<b>Bibliography .....</b>	<b>35</b>
<b>Annexes</b>		
<b>1.</b>	<b>Carbon Offset Mechanisms .....</b>	<b>41</b>
<b>2.</b>	<b>A Detailed Overview of Important Climate Finance Channels and Mechanisms .....</b>	<b>43</b>
<b>3.</b>	<b>Challenges and Outcomes of the Green Climate Fund (GCF) Negotiations .....</b>	<b>59</b>
<b>4.</b>	<b>Sample of NDB Climate Financing Activities and Access to International Climate Funds.....</b>	<b>61</b>
<b>5.</b>	<b>Case Studies of NDB Climate Finance Instruments .....</b>	<b>71</b>
<b>6.</b>	<b>Models of Leveraging .....</b>	<b>75</b>

## List of Tables, Figures and Boxes

### Tables

Table 1: Synopsis of Channels and Mechanisms .....	8
Table 2: Examples of Mechanisms and Channels for International Climate Finance ....	9
Table 3: NDB Instruments to Address Needs to Strengthen Climate Finance.....	20
Table 4: Instruments Offered by Selected NDBs.....	22
Table 5: Comparison of MDB and NDB Leverage Factor .....	27
Table 6: Capital, Assets, and Annual Business Volume of the Sampled NDBs, 2009–11 ( <i>in US\$ millions</i> ) .....	28

### Figures

Figure 1: Conditions for Effective Scaling up of Climate Finance .....	14
Figure 2: Key Features of NDBs.....	15
Figure 3: International and Domestic Green Finance Delivered by IDFC Members in 2011 .....	21
Figure 4: The Leveraging Effect of the CTF-REFF and NAFIN .....	30

### Boxes

Box 1: Defining “Climate Finance” .....	6
Box 2: National Development Banks.....	13
Box 3: NAFIN as Project Structurer .....	15
Box 4: FIRA as Risk Taker .....	16
Box 5: An Example of an NDB’s Use of a Grant Instrument .....	17
Box 6: An Example of an NDB’s Use of a Tier 1 Loan Instrument .....	17
Box 7: An Example of an NDB’s Use of a Tier 2 Loan Instrument .....	18
Box 8: An Example of an NDB’s Use of an Equity Instrument.....	18
Box 9: An Example of an NDB’s Use of a Guarantee Instrument.....	19
Box 10: An Example of an NDB’s Management of Funds.....	19
Box 11: Definitions of “Leverage” .....	26

## Objectives and Caveats

The objective of this publication is to analyze the unique role national development banks (NDBs) can play to scale up private sector financing for climate change mitigation projects (or “low-carbon development”) through the leveraging of international and national climate finance in their respective local credit markets. The publication will not address the role NDBs could play to scale up financing of climate change adaptation projects.

This publication was prepared for the following target audiences:

- Policymakers designing and implementing international climate finance mechanisms
- NDBs in developing countries that are interested in promoting and financing climate change mitigation investment programs and projects

The publication was prepared between February and October 2012, based on the following key sources of information:

- A survey undertaken in April 2012 involving nine NDBs from the Latin American and Caribbean (LAC) region
- The database of ALIDE (Asociación Latinoamericana de Instituciones Financieras para el Desarrollo) members
- Results and insights from a series of workshops and dialogues organized by the Inter-American Development Bank (IDB) in 2011–2012
- Existing literature on climate finance

The authors wish to acknowledge that the time frame for preparation of this publication did not allow for more in-depth data collection and more exhaustive fieldwork.

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# Acronyms

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AFD France	Agence Française de Développement	FIP	Forest Investment Program
AFD Paraguay	Agencia Financiera de Desarrollo	FIRA	Fideicomisos Instituidos en Relación con la Agricultura
AfDB	African Development Bank	FNMC	Brazilian National Fund on Climate Change
AGF	High-Level Advisory Group on Climate Change Financing	GCF	Green Climate Fund
ALIDE	Asociación Latinoamericana de Instituciones Financieras para el Desarrollo	GEF	Global Environmental Facility
BANCOLDEX	Banco de Comercio Exterior de Colombia S.A.	GHG	Greenhouse Gas
BANDESAL	Banco de Desarrollo de El Salvador	IBRD	International Bank for Reconstruction and Development
BEDE	Banco del Estado del Ecuador	IDB	Inter-American Development Bank
BFI	Bilateral financial institution	IDFC	International Development Finance Club
BNDES	Banco Nacional de Desenvolvimento Econômico e Social	JICA	Japan International Cooperation Agency
CDM	Clean development mechanism	KfW	German Development Bank
CIF	Climate Investment Funds	LAC	Latin America and the Caribbean
COFIDE	Corporación Financiera de Desarrollo	LFI	Local financial institution
COP	Conference of the Parties to the UNFCCC	MDBs	Multilateral development banks
CORFO	Corporación de Fomento de la Producción de Chile	MRV	Monitoring, reporting, and verification
CIF	Clean Technology Fund	NAFIN	Nacional Financiera
DFI	Development finance institution	NCRE	Non-conventional renewable energy
FAO	Food and Agriculture Organization of the United Nations	NDBs	National development banks
FINDETER	Financiera del Desarrollo Territorial	RE	Renewable energy
FINRURAL	Financiera Rural	REFF	Renewable Energy Financing Facility
		SMEs	Small and medium-sized enterprises
		TC	Transitional Committee for the Design of the Green Climate Fund
		UN	United Nations
		UNDP	United Nations Development Programme

UNEP	United Nations Environment Programme	UNFCCC	United Nations Framework Convention on Climate Change
UNEP-FI	United Nations Environment Programme Finance Initiative	US\$	United States Dollars

# Executive Summary

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There is a need to scale up private sector investments in climate change mitigation, and international climate finance can play a catalytic role to make this happen.

Significant investments are needed to support the global transition to a low-carbon, climate resilient future. To this end, international climate finance is essential. Today, annual financial flows to support low-carbon, climate-resilient development activities in developing countries are in the range of US\$70 billion to US\$120 billion (Buchner, Brown, and Corfee-Morlot, 2011; Clapp et al., 2012.). While this is good news, these amounts fall far short of global financing needs. By 2030, total annual additional investments that will be needed in developing countries to address climate change are estimated to be between US\$140 billion and US\$175 billion (World Bank, 2010a). Massive scaling up is needed to unlock additional financial resources and foster a sustainable development pathway.

Government resources cannot finance this transition alone, and fiscal austerity in developed countries has put increasing burdens on already constrained public budgets. Unlocking private sector capital will be essential to achieve large, transformational, and long-term impacts across all economies. However, significant questions remain about how to mobilize private investment in climate change activities, how to

design risk-return arrangements that attract public and private capital, and ultimately how to align public and private investment incentives. International climate finance can play a catalytic role in this regard.

A number of barriers hamper private sector investments in climate change mitigation. The unique role of national development banks (NDBs) can help overcome some of the difficulties.

The private sector is prepared to take certain risks, but is less comfortable with policy risk and activity- and country-specific barriers to investments needed for climate-friendly technologies and projects, which affect the risk-return profiles of investments. Public funds are essential for unlocking needed private climate finance by taking on the classes of risk that the private market will not bear. National development banks (NDBs) play a dual role in this context, both complementing and catalyzing private sector players.

NDBs have a unique role and focus compared to other players, such as bilateral international agencies or multilateral development banks (MDBs). Their special knowledge and long-standing relationships with the local private sector put them in a privileged position to access local financial markets and understand local barriers to investment. Compared to commercial banks and investment funds, they have a greater

potential to take risks than the financial intermediaries, providing long-term financing in local currency in their local credit markets.

Public financing from NDBs can be used to leverage private investment, contributing directly to the incremental cost of implementing low-carbon policies through two main activities:

- Increasing the demand for investments and financing in climate-friendly projects (pre-investment stage) by helping to address sector- and country-specific constraints, promote an appropriate and stable enabling environment for investment, build awareness and capacity to analyze and structure climate-related interventions, and bring projects and companies to a state of “investment readiness,” activities which will ultimately result in climate and related co-benefits.
- Providing the necessary incentives to mobilize the supply of climate-friendly investments from the private sector (investment stage) by offering financial instruments on adequate terms and conditions for these types of projects and by helping private investors and local financial institutions (LFIs) to understand and tackle the specific investment and financial risks and barriers that currently prevent private actors from engaging in projects that mitigate climate change.

NDB activities and instruments can address both demand- and supply-side financing needs to mobilize climate finance and can leverage at scale. An NDB can combine different sets of instruments to meet the needs of an investment project in both its pre-investment (i.e., grants and technical assistance) and in-

**NDBs use a variety of different financial and non-financial instruments that can mobilize private sector finance, and many of them already offer such instruments tailored to promote climate change mitigation.**

vestment stage (i.e., credit enhancements, de-risking instruments, funding subsidies, or other financial structures to entice private capital into a project).

The nine NDBs of the Latin American and Caribbean (LAC) region that were surveyed as part of the analytical effort for this publication represent one-third of the NDB assets and capital in the region. All nine are involved in climate change mitigation financing to varying degrees, through different sets of instruments, and at diverse stages of readiness to participate in this area. Some NDBs have only recently become involved in these types of activities, while others have already accessed international climate funds through bilateral and multilateral entities. To incentivize low-carbon investments and address their specific financing needs, all of the selected NDBs have dedicated programs and toolboxes in place, comprising a variety of instruments to finance climate-related projects.

The NDBs have great potential to leverage public and private resources because they can deploy a variety of financial instruments that other actors, such as MDBs, do not use. Since NDBs are closer to local financial institutions (LFIs) and can better understand the risks and barriers these institutions face, their ability to leverage is equal to or potentially greater than that of MDBs for the same instruments.

**Enhancing the role of NDBs could help fill the investment gap in climate change mitigation.**

At the end of 2011, NDBs in the LAC region had outstanding assets of nearly US\$1 trillion and a capital base of US\$100 billion that, combined with their capacity to leverage resources, makes them key players in the effort to scale up private investments for climate change mitigation.

NDBs have a high potential to leverage and mobilize climate finance. Although many NDBs in the LAC region are already piloting the use of financial instruments and strategies in support of climate finance, not all of them are ready to play this role. Some NDBs still

NDBs can play a more active and effective role if they are given a clear mandate within national frameworks for action to mitigate climate change and their technical capacities for channelling international climate finance are strengthened.

need support to become actively engaged in climate change finance, either because they have not received a clear mandate from their respective governments or because they are at an early stage of institutional development. This may be particularly true with regard to new areas of financial practice, such as climate finance. In order for these players to more effectively scale up private investments in this area, there is a need to:

- Enhance the coordination of relevant national and international climate policy and finance actors in order to allocate resources to support both policy initiatives and national private sector investment priorities, including through:
  - creating clear processes to design a single national climate strategy that builds on sector strategies elaborated by different ministries, leading to robust investment plans;
  - jointly preparing project pipelines with bankable projects; and
  - enhancing cooperation between UN agencies and multilateral and bilateral donors.
- Enhance the dialogue between national policy-makers and NDBs to promote a more active role of these banks in delivering international climate financing, including through:
  - using NDBs as mechanisms to manage and channel climate financial resources;

- taking into account NDBs' experience and advice for the design and functioning of new climate financing mechanisms under design, such as the Green Climate Fund (GCF); and
  - supporting readiness strategies and internal capacity building efforts for NDBs to make them more proactive and effective in channelling and promoting climate finance.
- Build knowledge about best practices with regard to climate finance, to improve understanding of effective funding sources and channels and the catalytic potential of different instruments. In this context, NDBs can offer important lessons on various design features of the emerging GCF, including how to design the private sector facility, by drawing on extensive experience with the private sector.
  - Encourage NDBs to develop readiness strategies for international climate finance mobilization and intermediation, including through:
    - building internal capacities and knowledge about international climate funds; and
    - strengthening their capacities to monitor, report, and verify the impacts of interventions, including the measurement of climate and related co-benefits and the amount (and type) of private financing leveraged.

NDBs have extensive knowledge on opportunities and barriers for investments in their countries, a long-standing relationship with the local private and public sectors, and a development mandate. Thus, it would be beneficial for decision makers designing the international climate change finance architecture to include these actors in developing effective mechanisms for long-term climate change investment financing on the ground.



# Introduction

Climate finance has become a key topic in recent international climate negotiations, resulting in a significant commitment of an additional US\$100 billion per year by 2020 from developed countries to collectively support developing countries' transition to a low-carbon, climate-resilient future. These financing objectives were set forth in the Copenhagen Accords at the 15<sup>th</sup> Conference of the Parties (COP) in 2009, and were included in the United Nations Framework Convention on Climate Change (UNFCCC) following COP 16 in Cancun in 2010.

By 2030, total annual additional investments needed in developing countries to address climate change are estimated to be between US\$140 billion and US\$175 billion.<sup>2</sup> Therefore, financial resources have to be scaled up significantly.

International climate finance has a key role to play in addressing this development challenge, and all players need to join forces. Public financial resources are far too scarce to finance this transition, even more so in times of tightening fiscal constraints in industrialized countries. The bulk of financing is thus expected to come from the private sector.<sup>3</sup>

Mobilizing the private sector is essential to ensure large, transformational, and long-term impacts in developing economies. Since the private sector has most of the investment needed to scale up climate finance, its mobilization is essential for promoting a potential transformation.<sup>4</sup> Moreover, an increased private sector

engagement will reduce the need for reliance on international and national public financing in the long run.

In practice, it is challenging to align public and private financing incentives. While, until recently, little attention has been paid to national development banks (NDBs), awareness about their potential to promote and catalyze private finance to mitigate climate change in developing countries is growing. NDBs can play a potentially crucial role in facilitating climate investments and delivering climate finance directly to investors by leveraging private capital. Their focus is unique, particularly compared to other national public institutions and international financial institutions. Indeed, NDBs are in a privileged position in their local

<sup>2</sup> The World Bank's 2010 World Development Report notes the related upfront financing costs for the implementation of renewable energy infrastructure and energy efficiency of US\$265 to US\$565 billion above business-as-usual investment needs, and annual adaptation financing in the range between US\$30 to US\$100 billion.

<sup>3</sup> See, for example, BNEF (2011) and AGF (2010a).

<sup>4</sup> Public funds alone cannot finance the transition, particularly in times of fiscal austerity in developed countries. Corfee-Morlot, Guay, and Larsen (2009), Buchner, Brown, and Corfee-Morlot (2011), and Clapp et al. (2012) confirm that the private sector remains the main source of climate finance and as such will be instrumental in harnessing sufficient resources to shift development onto cleaner pathways over time. As Della Croce et al. (2011) report, with their US\$28 trillion in assets, pension funds—along with other institutional investors—have the potential to play a significant role in financing climate-related interventions. Additionally, TC (2011a), de Nevers (2011), and Sierra (2011) call for private sector mobilization and engagement.

credit markets to promote the financing of innovative private sector activities, given a number of characteristics that are commonly associated with them. NDBs have a unique mandate to support the improvement of financial conditions in local financial markets by “crowding in” private financial intermediaries into new and innovative areas of investment, using appropriate financial and non-financial instruments. As a result, they are able to leverage private capital to finance investment projects. Further, NDBs:

- can promote, in some instances, market development, for example in new sectors and emerging industries;
- have long-standing relationships with local private financial institutions and hence understand the risks and barriers that they confront when financing underserved sectors; and
- can aggregate large numbers of small-scale projects by adopting a portfolio approach when assessing credit risk, while streamlining the application process, which minimizes transaction costs and encourages local financial institutions (LFIs) to participate.

NDBs are already playing a key role in climate change finance, even though this role is not yet fully acknowledged. In 2011 alone, a selected number of NDBs provided around US\$89 billion in financing to programs addressing climate change (Ecofys-IDFC, 2012).<sup>5</sup> In the Latin American and Caribbean (LAC) region, where NDBs have a long tradition and experience in financing private sector investment projects, they could play a vital role in mobilizing low-carbon private sector investments. NDBs seem to understand better than many other players the necessary conditions on the ground for long-term investment. Their public nature, legitimacy in the institutional landscape, strong engagement with the private sector, and use of a variety of financial and non-financial tools, combined with their understanding of local circumstances and sectors, suggest that NDBs have the natural ability and competency to play a fundamental role in climate

finance. Yet, more evidence is needed to understand the conditions and the institutional capacities required for NDBs to become effective intermediaries in climate finance.

This publication aims to contribute to the existing knowledge about the role that NDBs can play in channeling and leveraging climate finance and the conditions that would be needed for them to play this role in the most effective way. The publication addresses one of the building blocks needed to ensure large, transformational, and long-term impacts in their economies. Specifically, its objective is to analyze the unique role that NDBs could play in scaling up private financing for climate change mitigation projects through the leveraging of international and national climate finance in their respective local credit markets.

A better understanding of this role will allow NDBs to develop a proactive strategy for international climate finance, in terms of both accessing and leveraging finance from a broader range of sources, and influencing the operational design of future delivery mechanisms and channels. The study will also inform policymakers about the potential for NDBs to scale up private sector investments for international climate finance by identifying the necessary conditions to maximize this potential.

The publication is organized as follows. Section 2 briefly describes the current landscape of climate finance, identifying the main gaps and challenges in

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<sup>5</sup> This report refers to the International Development Finance Club (IDFC), a new network of 19 renowned national and subregional development banks with total assets of more than US\$2.1 trillion. The members of the IDFC established climate financing as the central focus of their 2012 development agenda. For more information, see <http://www.idfc.org/>. Ecofys-IDFC (2012) reports that IDFC members in 2011 made new green finance commitments of about US\$89 billion, US\$ 52 billion of which was invested in green energy and mitigation projects. Section 3.6 provides more details on the report. In addition, in late 2011, the World Federation of Development Financing Institutions (WFDI) issued the Karlsruhe Declaration, a set of statements to the Rio+20, indicating that it would “continue to use, through its member-institutions, their finance and investment resources and skills as levers to promote and pursue sustainable finances policies, practices and programs to alleviate the effects of climate change and other environmental and social problems.” For more information see <http://www.wfdi.org.ph/>.

scaling up low-carbon investments from the private sector and the role that NDBs could play in this regard. Section 3 discusses the advantages of NDBs in scaling up climate finance and, based on the LAC context and experience, examines the nature and types of financial instruments currently used by NDBs to

that effect. Section 4 focuses on the role and capabilities of NDBs in leveraging climate finance, drawing on empirical evidence from existing experiences. Finally, Section 5 offers recommendations on how to spur further action by NDBs with regard to international climate finance.



# The Current Landscape of Climate Finance

## 2.1 Key Issues in the Climate Finance Landscape

A comprehensive picture of climate finance improves understanding of the volume and type of finance that is being provided to advance action on low-carbon development; how the different types of support correspond to country needs and priorities; and whether financial resources are being spent productively. This understanding is critical to highlight the gaps and key issues in the current climate finance landscape and provide an indication of the solutions needed to address global climate change (see Box 1 for a definition of climate finance).

Drawing on data from a wide range of sources, a recent study assesses the current status of the climate finance landscape, mapping its magnitude and nature along the life cycle of financial flows, that is, the sources of financing, the intermediaries involved in distribution, financial instruments, and final uses (Buchner, Brown, and Corfee-Morlot, 2011). This first snapshot of the current climate finance landscape provides a number of noteworthy insights:<sup>6</sup>

- **Scale.** Total annual climate financial flows, predominantly from developed to developing countries, are between US\$77 billion and US\$115 billion,

averaging US\$97 billion.<sup>7</sup> This amount falls far short of the US\$100 billion promised by developed countries in the Copenhagen Accord. Not all of the US\$97 billion is additional to the climate financing available prior to the Copenhagen Accord; a significant amount was already being provided prior to the summit. In addition, financial flows are fragmented, and larger amounts are needed. Climate finance needs to be more widely dispersed, reaching not only large-scale, high profile projects, but also small-scale projects, which can be replicated.

- **Private finance.** Public climate finance has been at the center of discussions; however, not least because of the current financial and economic crisis in potential donor countries, its scale is restricted. Today, private financing already exceeds public financing, ranging between US\$37 billion and US\$72 billion, versus US\$21 billion, respectively. Private capital investments are thus the most

<sup>6</sup> For a detailed discussion of these findings, see Buchner, Brown, and Corfee-Morlot (2011).

<sup>7</sup> This range is in line with recent estimates by the OECD, which put total North-South climate finance in the range of US\$70 billion to US\$120 billion per year (Clapp et al., 2012). Going beyond a North-South focus, Bloomberg New Energy Finance estimates that US\$257 billion was spent on global renewable energy investment in 2011, with US\$168 billion and US\$89 billion spent in developed and in developing countries, respectively (FS-UNEP and BNEF, 2012).

important source of climate finance. There is a need for a better understanding of how to best catalyze private finance using limited public means.

- **Local knowledge.** Bilateral and multilateral financial institutions play a key role in distributing

### Box 1: Defining “Climate Finance”

There is no internationally agreed definition of what constitutes climate finance, or a climate project.<sup>a</sup> This circumstance poses problems when seeking to understand the nature and scale of financial flows. Following Corfee-Morlot, Guay, and Larsen (2009), Buchner, Brown, and Corfee-Morlot (2011)—who published the first comprehensive overview of the climate finance landscape—consider climate finance to be “climate-specific” finance, that is, earmarked for low-carbon and climate-resilient development. The objectives and outcomes of these flows consist both in direct and indirect greenhouse gas mitigation or climate change adaptation measures. Indirect measures, for example, support capacity building. Climate-specific finance may be either international public or private financing flows, and thus may either be concessional (public) or non-concessional flows, where the latter concerns private and some forms of public finance flows. It also heavily involves domestic public or private financial flows.

This definition of climate finance excludes a broader set of capital flows, typically referred to as “climate-relevant” finance (see Corfee-Morlot, Guay, and Larsen [2009] and Buchner, Brown, and Corfee-Morlot [2011]), which targets key greenhouse gas emitting sectors (such as power production and other energy supply, industry, agriculture and forestry, transport, and water) or sectors which are the main determinants of vulnerability to climate change (for instance, energy, forestry and agriculture, water, and health). These flows may influence, directly or indirectly, countries’ emissions levels and/or vulnerability, but with possibly negative implications on climate change (that is, by increasing global greenhouse gas emissions).

<sup>a</sup> For an in-depth discussion of this issue and the emerging meaning of climate finance, see Clapp et al. (2012); Buchner, Brown, and Corfee-Morlot (2011); and Corfee-Morlot, Guay, and Larsen (2009).

climate finance, accounting for approximately 40 percent of the total. Most climate finance is not distributed directly by governments to end users, but instead through government agencies and development banks. Dedicated climate funds channel a small but growing portion of the financing. This suggests that a better understanding of each individual country context, the end users of finance, and local ownership is important in order to accelerate the allocation of funds.

- **Coverage.** The lion’s share of climate finance (95 percent) is used for mitigation measures in emerging market economies; only a small share goes to adaptation measures. This calls for a better balance between mitigation, adaptation, and reducing deforestation, as well as between expenditures in middle- and low-income developing countries.
- **Toolbox.** A variety of instruments are available to distribute climate finance. Most climate finance (76–90 percent) can currently be classified as investments rather than support for policy incentives, carbon offsets, and grants. It is essential to understand which channels and instruments are most efficient in delivering climate finance, and what terms could best address existing risks and barriers.
- **Monitoring, reporting, and verification (MRV).** Robust MRV systems are paramount to track how funds are being spent and whether environmental results, including mitigation of greenhouse gas emissions, are being achieved. These systems also identify where progress could be made and demonstrate accountability.
- **Effectiveness.** Given the range of funding mechanisms and channels and the absence of comprehensive, rigorous MRV systems, there is a need for a greater understanding of how effectively climate financial flows are being used. The fragmentation of climate finance also puts a burden on project developers, due to the variation in the conditionality of various finance vehicles, which has an impact on transaction costs. This indicates that

there is scope for increasing the effectiveness of international climate finance.

From the preceding issues, two insights loom: to ensure broad, transformational, and long-term impacts in the developing countries' economies, a significant scaling up of climate finance is needed, which in turn requires the mobilization of private investment. Through their mandate, NDBs can engage the private sector, and local financial institutions (LFIs) and can help companies and projects to absorb climate finance. They can take risks that the private sector may not be able to bear and finance long-term investments.<sup>8</sup> Yet, there is a scarcity of comprehensive information on NDBs' activities and, more generally, on flows from and within developing countries (i.e., South-South flows and domestic flows,<sup>9</sup> including policy support, direct financing, and co-financing of internationally supported projects). Without such data, it is difficult to strengthen the role that NDBs can play in accessing and channeling climate finance flows.

## 2.2 Sources, Channels, and Mechanisms of Climate Finance

Current climate finance originates from many sources. The dominant source is the private sector, which, as previously mentioned, provides between US\$37 billion and US\$72 billion per year (Buchner, Brown, and Corfee-Morlot, 2011).<sup>10</sup> Domestic public budgets contribute around US\$21 billion a year, and carbon offset flows and voluntary/philanthropic contributions provide the remaining US\$2.2 billion per year and US\$0.5 billion per year, respectively.<sup>11</sup>

A closer look at existing climate finance channels and mechanisms reveals how money is currently being distributed on the ground and absorbed, and sheds light on the current and potential role of NDBs. The main channels and mechanisms of climate finance include bilateral and multilateral financial institutions and agencies, climate funds, and carbon funds. Table 1 provides a synopsis of the channels and mechanisms, and Table 2 explores the most important ones. Annex I offers insights about the carbon market.

To better understand the requirements that international climate finance imposes upon any entity that aims to take on an active role in climate change mitigation financing, it is helpful to explore the operational modalities and criteria of specific funds or funding mechanisms and the corresponding capacities needed (see Annex II for an in-depth look at selected examples under all categories).

A glance at these examples in the existing landscape shows that access, eligibility criteria, and monitoring and evaluation frameworks currently differ considerably among funds, and the private sector rarely plays a significant role. The proliferation of approaches and criteria entails time, effort, and money for the actors involved in climate finance. Harmonization and better coordination in this area are needed.

More recently established funding mechanisms have also included measures for improvement. For example, the Climate Investment Funds (CIF) include private sector representatives in their governance structure as observers, and the private sector is able to gain access to funding through MDBs, such as the Inter-American Development Bank (IDB) and the World Bank Group's International Finance Corporation (IFC), two CIF implementing entities.

Emerging funds reflect the increasing desire on the part of recipient countries to have enhanced ownership, or direct access, to climate finance, implying flexibility in fund management and lower transaction

<sup>8</sup> Sections 3 and 4 discuss this aspect in more detail.

<sup>9</sup> BNEF (2012) and Ecofys-IDFC (2012) provide recent insights on the volume of these flows. The former estimates South-South flows from a selection of development finance institutions in the amount of US\$3.9 billion in 2011. Ecofys-IDFC (2012), instead, estimates domestic climate flows to be in the amount of US\$44 billion, representing the amount of green finance sourced by development finance institutions based in non-OECD countries and spent domestically, in the respective home country of the institutions. The two reports adopt different methodologies and coverage of institutions.

<sup>10</sup> The lower bound is a top-down estimate of "green" Foreign Direct Investment (FDI) in developing countries, based on UNCTAD (2010). The upper bound is a bottom-up estimate of renewable energy projects in developing countries, based on Bloomberg New Energy Finance database.

<sup>11</sup> For a detailed discussion, see Buchner, Brown, and Corfee-Morlot (2011).

**TABLE 1. Synopsis of Channels and Mechanisms**

	Bilateral channels and mechanisms	Multilateral channels and mechanisms	Climate funds
Description	<ul style="list-style-type: none"> <li>• Bilateral financial institutions (BFIs) and bilateral funds are institutions or funds primarily belonging to or governed by individual countries.<sup>a</sup></li> <li>• Includes bilateral development finance institutions (DFIs) and development cooperation departments and agencies of individual countries. Also includes NDBs, which typically invest domestically but increasingly support international cooperation.</li> </ul>	<ul style="list-style-type: none"> <li>• Multilateral financial institutions and funds have multiple governing members, including both borrowing developing countries and developed donor countries.<sup>b</sup></li> <li>• Includes MDBs such as the World Bank and the IDB; regional development banks; and UN agencies.</li> </ul>	<ul style="list-style-type: none"> <li>• Recently, a number of national, bilateral, and multilateral organizations have set up climate-specific funds.</li> <li>• They are usually managed “off balance sheet,” with one or more national, bilateral, or multilateral organizations providing trustee and administrative services.</li> <li>• Each fund tends to have a finite lifetime and a specific sectoral focus, such as climate change mitigation and adaptation, reduced deforestation, land degradation, and sustainable forestry management (REDD), among others. Most of them are fairly new and have not yet disbursed large volumes of finance. They can be grouped into four categories:               <ol style="list-style-type: none"> <li>i. Global donor funds established by UN agencies—including the UNFCCC, the World Bank, the UNDP, the UNEP, and the FAO – such as the Global Environment Fund (GEF) and the CIF</li> <li>ii. Global donor funds managed by EU institutions, such as the Global Energy Efficiency and Renewable Energy Fund</li> <li>iii. Regional recipient funds managed by regional development banks, BFIs, and NDBs, such as the Congo Basin Forest Fund</li> <li>iv. National recipient funds managed by BFIs and NDBs, such as Brazil’s National Fund on Climate Change</li> </ol> </li> </ul>
Capitalization	<ul style="list-style-type: none"> <li>• Public budgets of donor countries.</li> <li>• Supplemented by own funds of bilateral banks and money raised on global capital markets.<sup>c</sup></li> </ul>	<ul style="list-style-type: none"> <li>• They raise money from a variety of sources, including capitalization from governments and borrowing programs and income from loans.</li> <li>• Finance raised by MDBs on capital markets can come from a mix of public and private investors.</li> </ul>	<ul style="list-style-type: none"> <li>• These funds are typically multi-donor, and, in addition to the money pledged, many of them leverage significant sums of finance, frequently from MDBs and BFIs.<sup>d</sup></li> </ul>

<sup>a</sup> This definition follows that of the World Bank (see: <http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,contentMDK:20040612~menuPK:41694~pagePK:51123644~piPK:329829~theSitePK:29708,00.html>).

<sup>b</sup> For a detailed discussion, see Buchner, Brown, and Corfee-Morlot (2011).

<sup>c</sup> For example, the Agence Française de Développement (AFD France), a French development agency, complements the grant money it receives from the French government, the European Commission, and international philanthropic organizations with funds raised in capital markets, through bond issues and private placements. To supplement resources provided by German federal budget, the KfW (a German development bank) raises funds on the capital market.

<sup>d</sup> For example, the GEF reports that from its inception to June 2011, it has leveraged additional investments of approximately US\$21.8 billion, while investing US\$3.8 billion in climate change mitigation, adaptation, and enabling activities (UNFCCC, 2011).

**TABLE 2: EXAMPLES OF MECHANISMS AND CHANNELS FOR INTERNATIONAL CLIMATE FINANCE**

	Mechanism / Channel	Key features	Capitalization	Funding instruments
Global donor funds	<b>Global Environment Facility (GEF)</b>	<ul style="list-style-type: none"> <li>Financing mechanism of the UNFCCC for the last 15 years. Manages three funds for mitigation and adaptation activities. Moved from a project-based focus to a medium- to long-term programmatic approach for greater impact.</li> <li>Benefits all developing country parties to the UNFCCC.</li> <li>Executed mainly through MDBs and the UN.</li> </ul>	Mainly public donor contributions	Mainly grants, and provides for concessional lending in some cases
	<b>Adaptation Fund</b>	<ul style="list-style-type: none"> <li>Operational since 2008 with the aim of financing adaptation activities.</li> <li>Benefits all developing country parties to the UNFCCC, with priority to the most vulnerable ones.</li> <li>Executed through accredited national or international entities.</li> </ul>	Levies carbon credits (from CDM); <sup>a</sup> public donor contributions	Grants
	<b>Climate Investment Funds (CIF)</b>	<ul style="list-style-type: none"> <li>Approved in 2008 as a mechanism to pilot transformational low-carbon and climate-resilient development. Manages two funds and has a sunset clause.<sup>b</sup></li> <li>Pilot programs in 48 countries with 200 projects.</li> <li>Executed through MDBs.</li> </ul>	Public donor contributions	Grants and concessional lending
Multilateral banks	<b>Multilateral development banks (MDBs)</b>	<ul style="list-style-type: none"> <li>Most MDBs, such as the World Bank, have dedicated climate funds and trust funds. In addition, many are earmarking their resources to promote activities to address climate change.<sup>c</sup></li> <li>MDBs benefit their own constituencies.</li> </ul>	Mainly member contributions	Grants, lending and concessional lending, guarantees, bond issues, and carbon funds
Bilateral channels	<b>Bilateral development finance institutions (DFIs)</b>	<ul style="list-style-type: none"> <li>Main delivery channel for rapid financing.</li> <li>Allocation of funds decided through bilateral government negotiation.</li> <li>Predictable and flexible delivery.</li> <li>Eligibility to participate in funds and specific conditions/criteria differ from one entity to the other.</li> </ul>	Government budget contributions and auctioning of carbon credits	Grants, lending and concessional lending, and carbon funds

<sup>a</sup> Clean Development Mechanism under the Kyoto Protocol.

<sup>b</sup> The sunset clause is a statutory provision to enable closure of funds once a new financial architecture has become effective under the UNFCCC regime (see <http://www.climateinvestmentfunds.org>).

<sup>c</sup> For example, a goal of the IDB is that 25 percent of its portfolio should be allocated to environmentally friendly activities.

costs, as well as responsibility for delivering results. One example is the Adaptation Fund, which gradually enables national implementing entities to access project funds directly, suggesting a more prominent role for national institutions and agencies in the future (see Table 2).

The Green Climate Fund (GCF), the most prominent fund being developed, embodies both private sector engagement and direct access. The operational modalities of the GCF are still under development, including how it will be capitalized and which instruments it will employ. This suggests that there is a window

of opportunity to influence its operational design. NDBs have experience in both dimensions, since they understand private sector needs and constraints and are in the business of leveraging financing for private sector investment projects.

### 2.3 A Glimpse into the Future: The GCF

The GCF was established as part of the Cancun Agreements, reached in December 2010. Although the volume of financing to be channeled through the GCF is unclear, the GCF was conceived as the main international financing mechanism to support developing countries' action to move towards a low-carbon, climate-resilient future, and the vehicle through which some of the current gaps of the climate finance landscape will be filled. Notwithstanding disagreement on many aspects and some practitioners' doubts about its viability, the proposal put forth to the COP 17 in Durban was approved.<sup>12</sup> The main aspects of the proposal are summarized in Annex III. Despite the adoption of the governing framework of the GCF in Durban, negotiations on its operational aspects are far from over. Several issues that were left partially unresolved at the end of 2012 will have to be addressed by the GCF's board over the course of 2013 and beyond.<sup>13</sup>

The window of opportunity to feed lessons from financing practices into the design of the GCF is a unique occasion for a variety of financial actors to influence the future of climate finance. In the spirit of ensuring country ownership—a guiding governing principle for the GCF—NDBs can offer important lessons on how to operationalize the fund, ensure an effective irrigation of resources to a broader spectrum of stakeholders, promote sectoral and programmatic approaches, and encourage the use of private investment. Thus, the experiences of the NDBs on the ground can be particularly useful for the design of the GCF's private sector facility.<sup>14</sup> The activities of NDBs as experienced players in channeling long-term financial resources to private actors suggest that there is a strategic fit for them to take on a stronger role in accessing and leveraging this fund and other

international climate finance resources, and in promoting the scaling up of private investment in their respective local credit markets.

### 2.4 Challenges in Climate Finance: A Mission for NDBs?

Addressing the challenges of climate change in developing countries requires a massive scaling up of annual investments in mitigation projects. While the concessional terms of international public climate finance could play a key role in catalyzing additional private and public finance for climate change mitigation projects, its implementation on the ground has been difficult. Indeed, while in the LAC region a total of US\$930 million in international climate finance was approved between January 2004 and October 2011, only US\$333 million of the aforementioned amount has been disbursed (Caravani et al., 2011). In addition, international climate finance has not been successful in promoting larger, programmatic approaches that leverage private investments to the scale needed.<sup>15</sup> NDBs could play a crucial role in enhancing the effectiveness of international public climate finance by ensuring that it results in broader transformational programs and by doing what they do best, namely leveraging private sector investments. In subsequent sections, this publication will explore in more detail how NDBs could address this challenge.

<sup>12</sup> See, for example, BNEF (2011).

<sup>13</sup> The official website of the GCF provides more information on key issues and next steps related to the design of the fund. See <http://gcfund.net/>.

<sup>14</sup> In December 2011, IDFC members proposed the “Smart Partnership” to the GCF, pledging their support, technical expertise, and knowledge for the design and governance of the fund. In addition, they highlighted their competitive advantages in leveraging, intermediating, and delivering resources on the ground to end users, hence offering to serve as accredited implementing entities of the fund to enhance GCF effectiveness. For additional information, see: <http://www.idfc.org>.

<sup>15</sup> Among various global assessments, one of the most important was undertaken by the UN's High-Level Advisory Group on Climate Change Financing (AGF), a group of experts tasked by the UN General Secretariat to develop practical proposals on how to significantly scale up financing for climate change mitigation and adaptation measures in developing countries (see AGF, 2010a).

### 2.4.1. Promoting the Scaling Up of International Climate Finance

Although most providers of international climate finance increasingly recognize the need to achieve scale and transformational impacts through programmatic and sectoral approaches to climate change mitigation, two main challenges will have to be overcome in order to scale up and achieve larger impacts. First, programmatic or sectoral approaches will demand not only an adequate and stable legal and policy framework that encourages private investment, but also specific incentives to encourage private investors and financial institutions to promote and finance these projects. Experience to date shows that most international climate funds have been allocated to national governments to address existing legal and policy constraints, with few resources being allocated to promote actual private investment on the ground. Second, programmatic or sectoral approaches entail high coordination and transaction costs (since several relevant actors need to be coordinated and the programs would need to be designed to demonstrate results), which are not easily borne by private sector promoters and financiers. In short, coordinating and supporting entities that have the capacity to interact with various relevant actors and can, at the same time, provide the necessary technical backstopping for project development and financing are key to the success of this approach.

NDBs can play a key role in supporting programmatic or sectoral approaches. The respective governments mandate the NDBs to provide long-term financing to sectors that promote economic development and growth, particularly those that are underserved by private financing. They also can aggregate small-scale projects by adopting a portfolio approach when assessing credit risk and streamlining the application process to minimize transaction costs, thus encouraging LFIs to participate. Finally, they can develop strategies, such as project incubators and innovative and catalytic financial instruments, which could induce the private sector to finance sectoral projects that otherwise

would not be financed due to real or perceived barriers and risks. As private financial institutions become engaged in financing these types of projects, their potential profitability will become apparent, making them more prone to participate in the future.

### 2.4.2. Leveraging Low-Emission Investments from the Private Sector

In the international climate finance landscape, the amount of private capital in circulation today exceeds the amount of available public financing. While there is broad consensus on the need to leverage private sector involvement, international climate finance has not yet been able to mobilize private financing for climate change investment projects at the scale needed.

A number of barriers are responsible for this situation. Fundamentally, the private sector is prepared to take only certain risks that correspond to perceived potential returns. Private actors are less familiar and comfortable with policy and institutional hurdles, as well as technology and country-specific barriers to entry, all of which affect the risk-return profiles of investments. The weakness of domestic capital markets in developing countries and other related risks increase uncertainty for the private sector.<sup>16</sup> These imperfections cannot always be resolved through regulation, worsening the situation.

Public funds, including international climate finance, are key to unlocking private climate finance by taking on the types of risks that the private market will not bear and in assuming tailored ownership interest where risks can be managed more effectively than in the private sector, such as regulatory risk or risks that are more perceived than real (e.g., demonstration of a proven technology). To date, many large sector-based climate change mitigation programs have paid scant attention to creating incentives for private sector participation. While there is a strong push for public-private

<sup>16</sup> For instance, currency risks or the fact that there is often no easy market/grid access for low-carbon technologies (see, for example, UNEP-FI [2012b]).

partnerships, the few existing partnerships are fraught with problems related to sharing risks and allocating profits and costs among the private companies and the government. In addition, there is uncertainty about how best to leverage, how to quantify its extent, and how to achieve an effective balance between public and private capital. Issues regarding state aid also need to be carefully considered in the context of world trade rules.

NDBs have a dual role in this context: to complement and to catalyze private sector investments. Their knowledge and long-standing relationship with

the private sector puts them in a privileged position to understand local barriers to investment, allowing them to assemble a financing package tailored to the needs of domestic investors. Apart from providing financial and non-financial instruments to directly engage and mobilize the private sector, they can also act as guarantee mechanisms for investments and market creation, offering additional incentives for the private sector to increase its investment. Compared to commercial banks and investment funds, NDBs are better able to take risks that stimulate long-term investment.

# 3

## The Role of NDBs to Scale up Climate Finance

### 3.1 Introduction

This section examines the conditions required for the effective scaling up of international and national climate finance. Describing the potential roles played and instruments offered by NDBs to leverage climate finance, the section gives current examples of initiatives in this area.

Within the LAC region, NDBs are already playing an important role in climate finance. This is evident from the results of a survey of members of the Latin American Association of Financial Institutions

for Development (ALIDE)<sup>17</sup> between April and July 2012. The survey focused on nine NDBs involved in climate financing to different extents and at different stages of institutional development. These banks represent over one-third of the region's NDB assets and capital. This sample includes the largest NDBs in the region by assets, capital, and annual business volume to illustrate how they are operating in the LAC region. Annex IV summarizes information on the nine banks under review. Finally, this section discusses the capacity needs and capital available, as well as opportunities to strengthen and enhance NDBs to make them more effective players in climate finance.

#### Box 2: National Development Banks

NDBs are government-backed, sponsored, or supported financial institutions that have a specific public policy mandate. NDBs come in many different shapes and sizes, and there is no one single or typical operating model. NDBs can differ in terms of ownership structure, financial objectives, policy objectives (special purpose or multi-functional), supervisory requirements, and financial instruments.

Source: Smallridge and de Olloqui (2011).

### 3.2 The Conditions to Effectively Scale up Climate Finance

Public finance from NDBs can be used to contribute directly to the incremental cost of implementing low-carbon policies through two main activities:

- Increasing the demand for investments and finance in climate friendly projects (pre-investment phase) by addressing sector- and country-specific

<sup>17</sup> Asociacion Latinamericana de Instituciones Financieras para el Desarrollo; for more information see: <http://www.alide.org.pe/>.

constraints, promoting an appropriate and stable enabling environment for investing, building awareness and capacity to analyze and structure climate-related interventions, and bringing projects and companies to a state of investment readiness, all of which will ultimately result in measurable environmental benefits.

- Providing the necessary incentives to mobilize the supply of climate-friendly investments (investment phase) from the private sector by offering financial instruments on adequate terms and conditions for such projects, and by supporting private investors and LFIs in understanding and tackling the specific barriers and risks that prevent private actors from engaging in green and climate change mitigation projects.

Scaling up investment requires increasing the demand for climate finance and encouraging its supply. Figure 1 depicts the climate finance needs on both the demand and supply sides in the pre-investment and investment phases.

The focus of the pre-investment phase is to leverage the demand for climate finance by creating an enabling business environment that is conducive to making climate-related investments, as well as to help motivate, prepare, and educate the project proponents to undertake the investments. During the investment phase, the goal is to attract capital—both debt

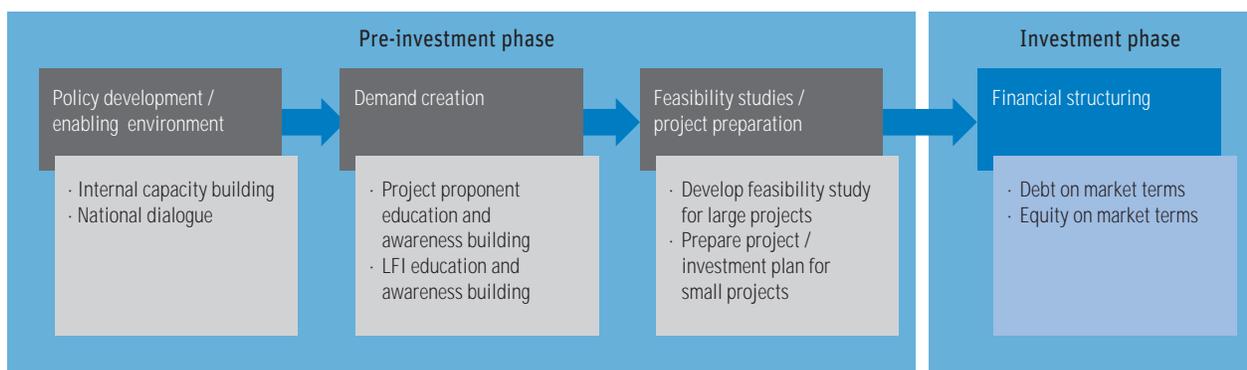
and equity. By understanding and tackling the specific investment and financial barriers that prevent private actors on both the demand and supply sides to engage in green and climate change mitigation projects, significant progress can be made toward closing the gaps and hence supporting the scaling up of the investments.

### 3.3 Unique Role of NDBs

NDBs have a privileged position in their local markets. Given a number of characteristics, NDBs can play a potentially crucial role in scaling up and delivering climate finance directly or by leveraging private capital. The following are the main features that make NDBs well suited to the requirements of climate finance (see also Figure 2).

- Development mandate:** NDBs are mandated by their respective governments to provide long-term financing to sectors that promote a country's economic development and growth, particularly to projects or sectors of the economy (or state-of-the-art technologies) that are underserved by private sources of finance.
- Public sector entity:** NDBs are part of the public sector, and hence can interact with different government agencies and administer non-reimbursable budgetary resources granted by those public

**FIGURE 1.** Conditions for Effective Scaling up of Climate Finance



Source: Authors' elaboration.

### Box 3: NAFIN as Project Structurer

National Financiera (NAFIN), in Mexico, has established itself as an innovator, incubating novel and catalytic financial instruments to support local micro, small, and medium enterprises to maximize their business opportunities. Section 4.4 provides an example of NAFIN's approach.

sector actors to support national or subnational priority programs, including climate change mitigation projects promoted by private sector actors. Moreover, NDBs have the ability to influence policy directly, bringing relevant inputs to policymakers about impacts and implementation of various policy options because of their involvement and interaction with the financial and non-financial private sectors. This role is particularly important in contributing to the creation of the necessary conditions to scale up climate finance.

- iii. **Financial institution:** NDBs are in the business of financing and risk taking, particularly in support of long-term investments. Indeed, NDBs are first and foremost financial institutions, often under the same bank supervision rules in their countries as commercial banks.
- iv. **Mobilizer:** It is typically not in the nature of NDBs to compete. They are expected to complement and

not “crowd out” private financial intermediaries, but rather “crowd in” these entities by providing appropriate financial and non-financial instruments. This role is particularly relevant for leveraging private capital.

- v. **Project structurer:** The NDBs can, in some instances, play a role to promote market development through the provision of additional resources, such as technical assistance and training to project developers, small and medium-sized enterprises (SMEs), and others to create the demand for financing by helping to develop and structure projects and programs. They also can create financing packages with terms and conditions that are adequate (and appealing) enough to satisfy local project developers' needs, taking into account local market specificities.
- vi. **Risk taker:** NDBs have long standing relationships with local private sector financial institutions, and hence understand the risks and barriers that these institutions confront when financing underserved sectors. Moreover, NDBs can assume certain project risks that private sector entities cannot or will not take, and therefore can draw incremental private capital into projects.
- vii. **Innovator and aggregator:** NDBs can aggregate small-scale projects by adopting a portfolio approach when assessing the credit risk and streamlining the application process to minimize transaction costs, thus encouraging LFIs to

**FIGURE 2.** Key Features of NDBs

<p><b>Development mandate</b> Promote financing and associated market development in underserved sectors</p>	<p><b>Public sector entity</b> Interact with different levels of governments and potentially influence policy making</p>	<p><b>Financial institution</b> In the business of financing and risk taking, particularly in support of long-term investments</p>
<p><b>Mobilizer</b> Work with private financial institutions and mobilize or attract co-financing</p>	<p><b>Project structurer</b> Understand the risks and barriers and can shape and influence the project structure</p>	<p><b>Risk taker</b> Identify, manage, mitigate, and assume risks that the private sector LFIs cannot</p>
<p><b>Incubator and aggregator</b> Develop innovative and catalytic financial instruments and can manage small-scale projects</p>	<p><b>International partner</b> Have access to long-term hard currency borrowings and work closely with the MDBs, bilateral DFIs, and foreign export credit agencies</p>	<p><b>Connector</b> Have connections to all of the relevant public and private sector actors in their sector or area of influence.</p>

Source: Authors' elaboration.

#### Box 4: FIRA as Risk Taker

FIRA (Fideicomisos Instituidos en Relación con la Agricultura) is a Mexican second-tier development bank. It has historically acted as risk taker, offering guarantee products to Tier 1 banks and other financial intermediaries to share the risk of lending, hence facilitating access to credit to local private investors.

participate. NDBs can develop and incubate innovative and catalytic financial instruments and demonstrate to the private financial sector the potential profitability within these areas.

- viii. **International partner:** NDBs have access to long-term sources of local and international financing, as well as to non-reimbursable resources for development purposes. In a number of countries, NDBs are the main financial player with access not only to long-term hard currency borrowings at relatively favorable rates and conditions for the financing of long-term investment projects, but also to grants and non-reimbursable technical assistance resources. The MDBs, bilateral development finance institutions (DFIs), and foreign export credit agencies use NDBs as financial intermediaries for long-term hard currency loans, as well as for the allocation and disbursement of development grants. They can also blend market and concessional resources from different sources.
- ix. **Connector:** NDBs can easily establish the connection with all of the relevant public and private sector actors that need to be involved in financing climate change mitigation projects. NDBs also have close relationships and interactions with social and environmental organizations, as well as with civil society, and are thus more easily accepted as partners than other lending institutions.

Given their unique position in their local financial markets to reach sources of capital, their strong

knowledge of their countries' development needs and local opportunities, and their vast experience in long-term financing, NDBs have the natural capacities and competencies to be in leadership positions in scaling up international and national climate finance. Furthermore, by learning lessons from other similar institutions, NDBs have the potential to “leapfrog” the existing climate finance players to make a significant impact on the ground. In short, the capacity of NDBs to engage LFIs in becoming active in climate finance is unique.

### 3.4 Types of NDB Financial Instruments to Promote Private Finance and Scale up Investments

NDB activities and instruments can address both demand and supply financing needs to mobilize climate finance, and can thus leverage scale. As illustrated in Figure 1 in Section 3.2, in the pre-investment phase, there are a number of activities in which the NDBs can get involved to prepare the policy environment, project proponents, local financiers, and the specific project itself for the investment stage. This is mostly through the provision of grants and technical assistance, although in the case of feasibility studies, it is possible (and even advisable) to require a reimbursable contribution if the project proceeds. In the investment phase, the NDBs can provide a combination of financial instruments to facilitate the financing of projects.

NDBs can apply the tools they have to address pre-investment and investment needs and to draw private capital into a particular area. The following are typical NDB financial instruments that can be used to leverage climate finance.

- i. **Grants:** Grants can be used for a variety of activities in both the pre-investment and the investment stages. In the pre-investment stage, grants can be used for technical assistance to increase the demand and to help the project or company become investment ready. This assistance may include training or capacity building at the company level, or preparation

of a business plan or a feasibility study. Grants can also be more widely used for awareness building and national dialogue and advocacy to strengthen the enabling environment. In addition, grants could be helpful during the pre-investment phase for specific training in climate finance.

In the investment phase, grants can be used to lower the interest rate. They can be mixed with commercial credits and used as a guarantee fund for losses, in lieu of providing equity in a capital structure of extending repayment terms/grace periods. These grants can be blended with NDB loans to support projects directly, or to channel them via the LFIs.

One example of an NDB's use a grant instrument is Chile's CORFO, which subsidizes studies for energy efficiency audits, the implementation of energy efficiency measures, and the preparation of investment plans for submission to a funding source (see Box 5).

- ii. **Tier 1 Loans:** Tier 1 loans are direct loans with some or all of the project obligor's credit risk assumed by the NDB. In this case, the NDB acts like a commercial bank, extending credit directly to a project or a company. The long-term financing can be senior debt, that is, *pari passu* with other lenders, or subordinated debt, putting the NDB in a role of secondary creditor. In these cases, NDB financing can be blended with concessional funding (grant or low-interest loans) from international climate partners. Box 6 presents an example of the use of a Tier 1 loan by BNDES to directly attract local and international financing for large wind projects.
- iii. **Tier 2 Loans:** Tier 2 loans are loans by NDBs to LFIs—typically commercial banks or other financial intermediaries—for on-lending. The NDBs take the credit risk of the LFIs directly, and the LFIs assume the credit risk of the project.

As in the previous case, NDBs can blend their own resources with highly concessional resources obtained from their own government, international sources of public financing, and multilateral and bilateral institutions in order to improve the terms

### Box 5: An Example of an NDB's Use of a Grant Instrument

CORFO (Corporación de Fomento de la Producción) in Chile has established a program (Programa de Preinversión en Eficiencia Energética) aimed at supporting SMEs to optimize energy consumption and reduce the costs associated with its use. CORFO co-finances studies and consultancy services that enable SMEs to identify various investment alternatives. It provides up to 70 percent of the total cost of the consultancy, with a limit of about US\$10,000.

Moreover, within its Non-Conventional Renewable Energy (NCRE)<sup>a</sup> program, CORFO supports energy generation projects by subsidizing preliminary pre-investment studies or specialized assessments for up to 50 percent of their total costs, up to a maximum of US\$60,000, but not more than 2 percent of the estimated total investment in the project. It also subsidizes up to 50 percent of the costs for advance studies in areas such as electricity connection assessments and environmental impact declarations, up to a maximum of 5 percent of the estimated total investment.

*Sources:* CORFO web site (<http://www.corfo.cl/programas-y-concursos/programas/programa-de-preinversion-en-eficiencia-energetica>); Duffey (2010).

<sup>a</sup> NCRE refers to wind, solar, biomass, biogas, geothermal, and tidal energy, plus hydro energy of less than 20 MW.

### Box 6: An Example of an NDB's Use of a Tier 1 Loan Instrument

In the case of Brazil, BNDES has participated on a *pari passu* basis with commercial banks on a number of large wind projects. The LFIs and BNDES participate in the transaction based on the same terms and conditions. Because such transactions are too large for any single LFI to fund, the NDB provides additional capacity through direct Tier 1 loans.

*Source:* BNDES web site at: [http://www.bndes.gov.br/SiteBNDES/bndes/bndes\\_en/Institucional/Press/Noticias/2011/20111312\\_eolicas.html](http://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Press/Noticias/2011/20111312_eolicas.html)

and conditions of their funding to Tier 1 banks. As such, they can offer better loan terms and conditions to project developers.

An example is COFIDE in Peru (see Box 7), which uses an innovative and unusual channel for financial intermediation for taxis and buses that convert to natural gas vehicles. The local gas stations collect the loan repayments via the gas pump. COFIDE provides Tier 2 loans at concessional rates

### Box 7: An Example of an NDB's Use of a Tier 2 Loan Instrument

COFIDE's COFIGAS is a program that provides the technology and funding to convert taxis and buses into natural gas vehicles in Lima, Peru. The cost of conversion is amortized over a period of time, and capital and interest payments are made at the gas pump every time the vehicles are refilled. The program utilizes an existing and secure payment platform, thereby improving the credit risk of individual loans, buying down transaction costs, and allowing wide-scale deployment. As of the end of 2010, 135 gas stations had entered the program. Also, 572 buses and over 100,000 taxis in the city of Lima had been converted into natural gas vehicles. Lima plans to convert another 15,000 to 18,000 buses within five years and 250,000 to 300,000 cars within 10 years.

The benefits of the program include a reduction in greenhouse gas emissions, and, for many taxi drivers, greater access to finance and other financial products, once they build their credit. In addition, as the program for conversion to natural gas has expanded, the number of financial intermediaries channeling funds into the program has grown significantly. The key to COFIGAS has been the reliability of the payment platform, which links COFIDE with gas stations and local banks throughout the country.

*Source:* COFIDE web site at: <http://www.cofide.com.pe/cofigas/presentacion.html>; [http://member.bnamericas.com/interviews/oilandgas/Carlos\\_Paredes\\_Corporacion\\_Financiera\\_de\\_Desarrollo\\_Cofide](http://member.bnamericas.com/interviews/oilandgas/Carlos_Paredes_Corporacion_Financiera_de_Desarrollo_Cofide); ALIDE (2011).

*Note:* COFIGAS is not only open to vehicles, but also to the industrial, residential, and service sectors.

to participating banks, as well as the technology platform to make the system work.

- iv. **Equity:** Some NDBs have a mandate to provide equity. They invest in technology companies and projects directly or via venture capital or seed funds. NDBs can be in a first-loss position vis-à-vis other investors, or they can invest alongside other investors. Some NDBs, such as BANCOLDEX Capital, a subsidiary of BANCOLDEX in Colombia, invest as Tier 2 investors (see Box 8). In other words, they invest in venture funds managed by a private fund manager, rather than directly in companies or projects. Often, the NDB investment is seen as an anchor in a fund, drawing additional local and international capital.
- v. **Guarantees:** Guarantees and related contingent liability instruments typically involve an NDB providing credit enhancement to a LFI, or other third party financial intermediary providing direct funding or other investments. The NDB assumes some or all of the credit risk associated with a project that might otherwise dissuade investors and lenders from providing funding.

There are different types of guarantees. Those relating to credit risk are the most straightforward and, generally speaking, better understood

### Box 8: An Example of an NDB's Use of an Equity Instrument

BANCOLDEX Capital provides equity capital to address the market gap for venture capital and private equity in Colombia. As a Tier 2 NDB, BANCOLDEX invests in funds rather than directly into companies or projects. The company made an investment in Progresia Capital, a small venture capital fund of US\$20 million based in Medellín. The fund focuses on high growth potential companies in the area of, inter alia, alternative energy and provides individual investments ranging between US\$500,000 and US\$2 million.

*Source:* BANCOLDEX web site at: <http://www.bancoldex.com/contenido/categoria.aspx?catID=359> (p. 29).

by market players. Traditional credit guarantees provide unconditional, irrevocable assurance to a third-party lender that principal and interest will be paid when due in the event the borrower is unable or unwilling to pay. Such guarantees normally cover less than 100 percent of the borrower's payment obligations. Full credit guarantees may cover up to 95 percent of the payment obligations, while partial credit guarantees may cover 25 to 30 percent of the payment obligation (normally with a capped absolute amount). In some cases, a credit guarantee may cover a certain percentage of a borrower's total assets or net worth. Box 9 provides an example of an NDB's use of a guarantee instrument from COFIDE, and an example of a capital guarantee and risk capital fund in support of clean energy and energy efficiency projects offered by CORFO.

- vi. **Management of funds:** In some instances, NDBs are asked to manage funds on behalf of other entities. In these cases, the NDB is not using its own resources, but rather the capital is provided by a

third party, such as the national government or a foreign donor, and the NDB manages it for a fee. As a public sector entity which acts within the financial sector, an NDB is an ideal player to take on this role, given the skills, expertise, and reliable systems that it has (see Box 10 for an example).

### 3.5 Roles and Instruments of NDBs to Promote the Effective Scaling up of Climate Finance

Table 3 summarizes how the instruments discussed in Section 3.4 can be deployed by NDBs to meet the needs described both in the pre-investment stage, through grants and technical assistance, and the investment stage, when the NDBs may need to offer credit enhancements, funding subsidies, or other financial structures to entice private capital into a project.

During the pre-investment phase, grants or financial contributions can be used to meet technical

#### Box 9: An Example of an NDB's Use of a Guarantee Instrument

Many of the larger LFIs in Peru have significant exposure and experience in financing hydropower projects and, for internal risk reasons or existing prudential regulations, may have reached their limits in this sector. A loan guarantee from COFIDE would mean for the LFI a full risk transfer from the counterparty, being no longer a project finance structure, but now a COFIDE risk.

Another interesting example is the capital guarantee and risk capital fund in support of clean energy and energy efficiency projects offered by another Tier 2 bank, CORFO. This instrument was introduced in 2009 within the NCRE support program to address NCRE-specific investment risks. In the case of capital guarantee funds, the instrument applies to both CORFO-funded projects and self-funded projects up to a total of US\$7.5 million.

Sources: COFIDE web site at: [www.cofide.com.pe](http://www.cofide.com.pe); Duffey, (2010).

#### Box 10: An Example of an NDB's Management of Funds

Established in 2010, the Brazil National Fund on Climate Change (FNMC) was created to finance mitigation and adaptation projects and to support studies on climate change and its effects. The trustee is BNDES. Part of the resources will come from a special tax on the profits made in the oil production chain, made possible by the Petroleum Law. Other contributions are collected from public, private, national, and international donors. The initial 2011 FNMC budget was estimated to be US\$132 million (R\$ 226 million).

Among others, BNDES also manages the Amazon Fund, created in 2008 to raise donations for non-reimbursable investments aimed to prevent, combat, and monitor deforestation in the Amazon. In addition to managing the fund, BNDES also raises funds, selects projects, and monitors their progress after they have been contracted.

Source: BNDES web site at: [www.bndes.gov.br](http://www.bndes.gov.br).

assistance needs in the following areas: capacity building; creating demand for companies and projects; developing expertise in the preparation and assessment of climate projects; undertaking feasibility and environmental impact studies; preparing business plans; and designing and implementing MRV systems for results.

During the investment phase, there are two elements in the capital structure: debt and equity. On the debt side, there may be issues regarding the LFI's ability to offer long-term debt for the project, in which case the NDB can provide a Tier 2 loan. Depending on the expected cash flow from the project, the loan can be at market or concessional rates. The latter are, generally, preferable for the support of mitigation-related projects as a tool to increase competitiveness of "clean" fuels in comparison to fossil fuels in energy generation. In other cases, the project or company requires the NDB to offer a Tier 1 loan. This could be alongside commercial banks on a *pari passu* basis or on more

generous terms, such as longer tenors or lower interest rates to improve the repayment profile of commercial bank debt. The NDB could also provide a guarantee, as best suited instrument to bear the risks that the private sector is not willing or able to bear. Similarly, the NDB can help the equity structure by providing additional equity on equal or more favorable terms.

### 3.6 Overview of NDBs in the LAC Region

NDBs are increasingly integrating climate change considerations into their core operations, and are also becoming more active in financing climate change interventions. This goes hand in hand with the growing realization that NDBs have a critical role to play in channeling funds towards low-emission projects and programs.

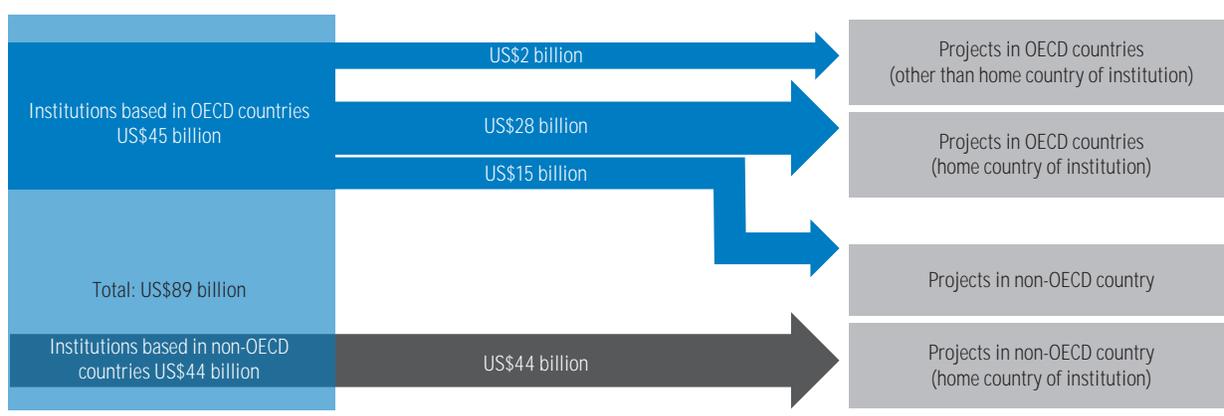
In an effort to present the role currently played by NDBs, the International Development Finance Club (IDFC) recently engaged in a study aimed at disclosing

**TABLE 3.** NDB Instruments to Address Needs to Strengthen Climate Finance

Phase	Climate finance needs	Climate finance activities	Ndb instruments
Pre-investment phase	Technical assistance	Policy development and capacity building	Grant
	Technical assistance	Demand creation	Grant
	Financial contribution	Feasibility study/project preparation	Partial grant or reimbursable contribution
Investment phase	LFI needs funding	Debt	Tier 2 loan market terms
	LFI needs funding/project needs subsidized interest rates		Tier 2 loan subsidized interest
	Project needs additional capital		Tier 1 loan market terms
	Project needs additional subsidized capital		Tier 1 loan subsidized interest
	Project needs early stage cash flow room		Tier 1 longer tenor/grace period
	LFI needs risk sharing		Guarantee
	Project needs capital		Mezzanine debt
	Project needs equity	Equity	Equity market terms
	Project needs additional equity to draw in additional investments		Equity first loss position

Source: Authors' elaboration.

**FIGURE 3. International and Domestic Green Finance Delivered by IDFC Members in 2011**



Source: Ecofys-IDFC (2012).

data on its members' involvement in green financing.<sup>18</sup> The IDFC found that NDBs' total green finance commitments in 2011 amounted to US\$89 billion, of which US\$52 billion was devoted to green energy and mitigation of GHG emission reductions activities (Ecofys-IDFC, 2012).<sup>19</sup>

NDBs in the LAC region are contributing to this volume. The Banco del Estado (BEDE) in Ecuador, BANCOLDEX in Colombia, BNDES in Brazil, and NAFIN in Mexico are included in the IDFC study (see Figure 3 above for a snapshot of the main findings).<sup>20</sup>

The contributions of NDBs in the LAC region have grown and are likely to grow even more as, in an effort to increase the availability of funds at terms and conditions appropriate to promote climate-related projects, some governments are increasingly involving development banks to promote the structuring and financing of mitigation and adaptation projects. This entails supporting them to enter into financing and technical assistance programs with MDBs in order to obtain the technical and financial support that will be required to fulfill this new mandate (ALIDE, 2011).

Table 4 provides an overview of the products offered by the nine NDBs surveyed between April and July 2012. For further analysis, see Annex IV, which offers examples of these nine NDBs' activities in climate finance, as well as their success in accessing and

intermediating international public climate funds. Also see Annex V, which describes some case studies.

According to survey responses, some banks are Tier 2 only (Agencia Financiera de Desarrollo [AFD Paraguay], BANCOLDEX, COFIDE, FINDETER, and FIRA), while others (BEDE, BANDESAL, BNDES, and Financiera Rural [FINRURAL]) can lend directly to projects (Tier 1) or indirectly via LFIs (Tier 2). Nearly half of them offer guarantees and other contingent facilities. Technical assistance is an important product for six of the nine NDBs, but only three approved financing in the past three years. Investment of equity, either

<sup>18</sup> Ecofys-IDFC (2012) mapped a broad range of green interventions, and hence adopted the green finance definition to refer to financial investments flowing into sustainable development activities through policies that promote and encourage sustainable growth. Their definition of green finance includes climate finance, but also considers a wider range of other environmental objectives.

<sup>19</sup> The study covers a broad spectrum of NDBs, from international players such as KfW and AFD France, to relatively smaller and nationally focused ones, such as NAFIN. Green energy and climate change mitigation activities include, for instance, renewable energy generation, energy efficiency measures in industry and buildings, and forestry projects. Of the US\$89 billion attributed to green finance commitments, approximately 10 percent was directed to adaptation measures, while 7 percent went towards other environmental projects.

<sup>20</sup> Among the other members in the LAC region, whose financing was mapped out in the exercise, are the Development Bank of Latin America (CAF) and the Central American Bank for Economic Integration (BCIE/CABEI).

**TABLE 4.** Instruments Offered by Selected NDBs

NDBs	Grants / technical assistance	Tier 1 loans (direct)				Equity					
		Tier 2 loans (via LFIIs)	Long-term investment loans	Short-term working capital loans	Other	Guarantees	Other contingent facilities	Direct equity	Equity into funds	Management of funds	Co-finance with other funds
AFD Paraguay	X	√	X	X	X	X	X	X	√	√	X
Banco del Estado (BEDE)	√	√	√	X	X	X	X	X	√	√	√
BANCOLDEX	X	√	X	X	X	√	X	X	√	X	X
Banco de Desarrollo de El Salvador (BANDESAL)	√	√	*	*	*	√	X	X	√	√	X
BNDES	√	√	√	√	√	X	X	√	√	√	X
COFIDE	√	√	X	X	X	X	√	X	√	√	X
FINRURAL	√	√	√	√	√	√	√	√	√	√	√
FINETER	√	√	X	X	X	X	X	X	√	√	X
FIRA	√	√	X	X	X	√	√	X	√	√	√

Source: Direct reporting from the NDBs, as of April 2, 2012.

\* Since 2012, with the Ley del Sistema Financiero para el Desarrollo, BANDESAL can provide Tier 1 loans. Through May of 2012, no Tier 1 loans had been granted. BANDESAL has also recently established a credit line for Tier 1 renewable energy generation projects.

directly into projects and companies or via funds, is provided by four of the nine banks.

All nine NDBs are involved in climate financing, albeit to different extents, using different instruments, and at diverse stages of “readiness” for actively promoting climate-related programs. For example, AFD Paraguay has only recently become involved in this area, contributing US\$220,000 in 2011 for a small reforestation project. Considering Paraguay’s commitment to addressing the drivers of deforestation and forest degradation, and the recent kick-off of the UN-REDD+ National Program, AFD Paraguay has an increasing role to play in the forestry sector.<sup>21</sup>

Others NDBs have already accessed, or are about to access, international climate funds from bilateral and multilateral entities. BANCOLDEX and FINRURAL, for example, will receive—through the IDB—international public climate funds, including US\$50 million and US\$15 million from the Clean Investment Fund (CIF), respectively. FINRURAL will receive funds from the CIF’s Clean Technology Fund (CTF) to finance two programs, one to convert the public transport system in Bogota (US\$40 million) and another to promote energy efficiency measures in hotels and hospitals (US\$10 million). The latter, which has financing instruments in place tailored to the forestry sector, will receive financing from the Forest Investment Program (FIP) in 2013.

BANDESAL and FIRA accessed bilateral funds from KfW, Germany’s leading development bank. With this bilateral funding, BANDESAL supports a program aimed to promote energy efficiency and renewable energy through dedicated credit lines offered on preferential terms, the so called “Empresa Renovable.”<sup>22</sup> With KfW funding, FIRA has financed on a zero-return basis the early stages of implementation of a programme of Activities (PoA), aimed at facilitating the capture and utilization of methane emitted from the anaerobic digestion of wastewater and/or sludge in relevant agro-industries in México, under the

framework of the Clean Development Mechanism.<sup>23</sup> KfW also provided its expertise to develop FIRA’s capacity in structuring such programs.

In addition to KfW, FIRA has established strategic alliances with several national and international specialized partners to capitalize on their expertise in the development of long-term sustainable projects, while improving its knowledge about environmental issues. Among these alliances are the United Nations Environment Program (UNEP), its Finance Initiative (UNEP-FI),<sup>24</sup> and the Sustainable Energy Finance Alliance (UNEP-FI, 2012a; ALIDE, 2011).

To incentivize green investments and address their specific financing needs, all nine NDBs have dedicated programs and toolboxes of instruments in place to finance climate-related projects. With the exception of AFD Paraguay, all offer climate finance on more favorable terms and conditions compared to their conventional credit activities. BNDES, for example, supports renewable energy (RE) projects at interest rates 1.4 percent below those offered for coal or oil thermal plants. The financing terms vary: 16 to 20 years for RE projects versus 14 years for conventional plants. Moreover, the maximum financing participation for renewable sources varies between 70 percent and 90 percent, while its participation for coal or oil thermoelectric plants is capped at 50 percent (IDFC, 2012b).

<sup>21</sup> Reducing Emissions from Deforestation and Forest Degradation (REDD) is an effort to offer incentives for developing countries to reduce emissions from forested lands and to protect and sustainably manage their forests. The UN Programme aims to assist developing countries in the preparation and implementation of national REDD+ strategies.

<sup>22</sup> For additional information, see <http://www.bandesal.gov.sv>.

<sup>23</sup> For additional information, see <https://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/7RY6JXGNIQCVK51X3XMX8K48484C8L/view.html>.

<sup>24</sup> UNEP-FI is a global partnership between UNEP and more than 200 financial institutions and partner organizations worldwide. For more information see <http://www.unepfi.org/about/index.html>



# 4

## How NDBs Can Leverage Private Finance

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### 4.1 Introduction

The potential of NDBs to use the financial instruments described in Section 3 to leverage other public and private sector resources is significant. This section focuses on how NDBs can leverage private climate investments by channeling international sources of funding into country-driven climate change mitigation activities. It explains leveraging and, specifically, how each dollar invested can mobilize additional resources to bridge the financing gap.

Within the LAC region, the estimated climate change mitigation investment needs will range between US\$40 billion and US\$80 billion per year until 2030 (Stern, 2009; World Bank, 2010a). However, current financial resources to meet these needs in the region amount to only US\$15 to US\$25 billion per year (Climate Wedge, 2011). The ability of the NDBs to engage the private sector through tailored and innovative financing solutions, and their potential to leverage national and international resources, could go a long way toward filling the gap.

### 4.2 Definition of and Methodology for Calculating the Leverage Effect

While there is broad agreement on the need to leverage private sector involvement in green financing, there is

no single, universally applied definition of this term, or methodology to calculate leverage ratios. There is uncertainty about how best to quantify its extent, as the terms have different meanings to different people (Buchner, Brown, and Corfee-Morlot, 2011; Brown et al., 2011).

Narrowly, in financial terminology, leverage refers to the ratio of equity to a blend of debt. Financial institutions, such as MDBs, measure it as the ratio of public to private co-financing, as they aim to understand and demonstrate the multiplier effect generated by their contributions. A dedicated climate change fund such as the Global Environmental Facility (GEF) surpasses these boundaries, considering the leverage effect that occurs beyond its intervention, such as project replication.

The methodologies used to calculate the leverage effect also differ among entities. For example, the CIF calculates leverage using a qualitative method prior to the investments, whereas the GEF examines the leverage ex-post based on empirical evidence gathered from interviews with GEF project managers. Ultimately, leverage impact largely depends on how climate finance is being delivered. Financial instruments have distinct characteristics and, thus, different capabilities to leverage or catalyze private capital.

The leverage factor is not only dependent on the instruments being used, but can vary considerably according to the barrier being addressed, the country/region

### Box 11: Definitions of “Leverage”

Some of the definitions of leverage being applied in the area of climate finance by various institutions include the following:

- The **CTF** reports the definition of leverage to be “a combination of the total public and private co-financing to CTF financing.”
- The **GEF Secretariat** defines leveraging to be “public and private co-financing that is: (a) additional (covers part of the incremental cost associated with climate-related interventions); (b) substitutes finance from one project to another; and/or (c) mobilized later as a result of a GEF project.”
- The **GEF Independent Evaluation Office** defines leverage as “financing that occurs in conjunction with GEF projects that support activities generating environmental benefits, and that would not have occurred in the absence of the GEF project, or that would otherwise have been spent in ways that contribute to environmental degradation.”
- The **World Bank Group** measures the project leverage of the group’s infrastructure financing defined as project cost divided by World Bank Group financing.
- The **World Bank Carbon Finance Unit** in the context of delivering carbon finance refers to leverage as “the overall capital investment needed for the project to the net present value of the primary carbon finance unit.”
- Bilateral DFIs generally consider the ratio of the disbursed loan to the budget money received from the government as its first level of leverage. Their second level of leverage is co-funding from other public or private investors.

Source: Brown et al., 2011; Buchner et al., 2012.

where the investment takes place, and the specific project characteristics (see Brown et al., 2011). The nature of the intermediary delivering the climate finance also impacts the level of leverage potentially achieved.

All of the definitions presented in Box 11, except for the World Bank Carbon Finance Unit, calculate the leverage effect achieved both by public and private

resources. Given that private finance represents the lion’s share of the climate finance landscape and that it is the source that needs to be incentivized and scaled up by NDBs, for the purposes of this report, leverage is defined as “the process by which private sector capital is ‘crowded in’ as a consequence of the use of public financial intermediaries and financial instruments” (Brown and Jacobs, 2011).<sup>25</sup>

### 4.3 The Leverage Factor of NDBs

Based on the definitions and methodologies adopted by different institutions active in climate finance, there have been many reports that claim significant leverage multipliers. No published work exists so far on the leverage potential of NDBs, using the instruments at their disposal and their comparative advantage compared to other intermediaries more distant from the market. A number of estimates of leveraging ratios are available, ranging from 1:3 to 1:8; that is, for every single dollar channeled by bilateral and multilateral banks, US\$3 to US\$8 are mobilized from commercial banks and other sources, such as capital markets or governments. Annex VI provides details on the methodology used to calculate leverage.

It is difficult to estimate a specific and sound leverage ratio for NDBs. Few of them consistently track and measure the amount of private sector capital that has been mobilized as a consequence of their activities. This is even more complex in the context of climate finance. However, a look at their advantages and disadvantages compared to those of MDBs indicates the scale of the catalytic effect generated by NDBs.

NDBs have a variety of financial instruments at their disposal to facilitate climate investments, many of which are the same as those that MDBs have, but the conditions under which they are provided are different. Box 12 compares the MDB climate finance leverage factors and adjusts them for the particular characteristics of NDBs. The importance of leverage was emphasized by the United Nations’ High-Level Advisory Group on

<sup>25</sup> See also AGF (2010a) and Brown et al. (2011).

Climate Change Financing (AGF), a group of experts tasked by the UN General Secretariat to develop practical proposals on how to significantly scale up financing for climate change mitigation and adaptation measures in developing countries. By using the concept of leveraging to determine the magnitude of total private investments to address climate change stimulated by public interventions (AGF, 2010b), the AGF derived a methodology for calculating the potential leverage that can be exerted by a variety of public financing instruments, such as those commonly used by MDBs.

This report does not seek to assess the validity of the AGF's estimates, but rather tries to build upon them to derive the leverage effect that could potentially be exerted by NDBs. Table 5 compares the MDB and NDB leverage factors of financing instruments, some of which are frequently available to NDBs, but for which no analysis on the use of them by MDBs has been conducted (and therefore N/A is listed in the MDB column). The leverage factor assumes that the only private capital directly mobilized comes from other financiers, such as LFIs. Moreover, the leveraging potential, which could exist by the use of a combined set of instruments, has not been considered. Annex VI discusses the theoretical model of leverage for NDBs for each of the financial instruments.

Tier 1 loans (both concessional and non-concessional) apply the same leverage factor that has been proposed for MDBs, as there is no reason to believe that the ability of an NDB to draw private capital to projects is any better or worse than that of an MDB. MDBs will have a better credit rating for foreign currency loans, which may entice foreign banks to lend alongside of them. However, for LFIs working in local currency, NDBs could have a similar level of leverage.

In terms of equity, leverage is assumed to be higher for NDBs than MDBs. NDBs typically focus on local funds, and often act as anchor investors. These funds will then invest in a number of smaller projects in early stages of development. NDBs can draw other institutional investors into the funds, and these, in turn, can draw co-investors into projects and companies. MDBs tend to work alongside offshore equity providers and can opt for direct investments in larger and relatively established projects. Sometimes, MDBs will also invest in funds, but the rationale is that local investors will rely more on NDBs to provide a signal or a demonstration effect.

As for guarantees, the leverage factor will depend on the type of guarantee being offered, but in all cases it is reasonable to expect that an NDB's leverage factor will be higher than that of an MDB (i.e., NDB guarantees will be less likely to be called; thus, less capital

**TABLE 5.** Comparison of MDB and NDB Leverage Factor

Category of instrument		MDB theoretical leverage factor	NDB theoretical leverage factor
Tier 1	Non-concessional debt	2–5 x	2–5 x
	Debt financed via grants	8–10 x	8–10 x
Tier 2	Non-concessional debt	N/A	1 x
	Debt financed via grants	N/A	4–8 x
Tier 1	Direct equity	8–10 x	12–15 x
	Equity financed via grants	20 x	20 x
Tier 2	Direct equity	N/A	12–15 x
	Equity financed via grants	N/A	N/A
	Guarantee at non-concessional rates	N/A	4–8 x
	Guarantees financed via grants	20 x	25 x

Source: Adapted from AGF, 2010b; Brown et al., 2011.  
N/A = no data available.

needs to be allocated) for two main reasons: (a) the NDB can more readily anticipate—and possibly even influence—host country factors, which could impact, directly or indirectly, the likelihood of a guarantee being called; and (b) by operating directly and solely in the host country, the NDB intimately understands local market conditions and the potential impact such conditions may have on the credit quality or commercial performance of a climate-related project.

NDBs have a variety of financial instruments available to facilitate climate change mitigation investments. Given the fact that NDBs are closer to the LFIs and, thus, can better understand the risks they face, the ability of NDBs to leverage is equal to or potentially better than that of MDBs for the same instruments.

#### 4.4 Leverage Effect by LAC NDBs

At the end of 2011, NDBs in the LAC region had outstanding assets of nearly US\$1 trillion and a capital

base of US\$100 billion, which, combined with their capacity to leverage resources, makes them unique players in scaling up private investments for climate change mitigation. Table 6 shows the nine NDBs sampled and the size of their capital, assets, and annual business volume for 2009 to 2011.

The banks analyzed in Table 6 represent over one-third of the LAC region’s NDB assets and capital. Five out of the nine banks sampled have systems in place to track specifically how much private finance is being leveraged by their operations: BNDES, COFIDE, FINRURAL, FINDETER, and FIRA. The information provided suggests that these institutions look at leverage in terms of co-financing. For instance, BNDES reports an average multiplier of about 1.4 times its own contributions for their general operations (based on data from 2009 to 2011). Following the same approach, COFIDE estimates that its Tier 2 loans mobilize an additional 20 to 30 percent more from private sources. Commercial banks generally finance up to 60 percent of project costs, while

**TABLE 6.** Capital, Assets, and Annual Business Volume of the Sampled NDBs, 2009–11 (*in US\$ millions*)

NDBs	Capital base	Total assets	Annual business volumes (approvals)		
	2011	2011	2009	2010	2011
AFD Paraguay	101	275	43	82	110
BANCO DEL ESTADO Ecuador	247	1,239	741	885	927
BANCOLDEX Colombia	694	3,069	2,449	2,677	2,828
BANDESAL El Salvador	198	575	213	212	291
BNDES Brazil	32,526	333,099	72,186	96,322	82,716
COFIDE Peru	804	2,005	824	1,039	1,570
FINRURAL Mexico	2,128	2,174	1,854	1,738	1,928
FINDETER Colombia	0.444	3,380	1,029	1,046	1,368
FIRA Mexico	4,687	7,104	7,986	8,331	7,935

Source: Direct reporting from the NDBs, as of April 2012.

the remainder has to come from other private capital. FIRA estimates the relative share of their lending to individual borrowers to be, on average, 54 percent of their entire portfolio (based on data from 2009 to 2011).<sup>26</sup> An average of 31 percent has to come from commercial banks, while the remaining from other sources, including other development banks and external sources.<sup>27</sup>

#### 4.5 Case Study: NAFIN Leverages the Local Financial Market

Nacional Financiera (NAFIN) has established itself as an innovator that incubates novel and catalytic financial instruments and structures to support local SMEs to maximize their business opportunities.<sup>28</sup> In addition, NAFIN has become a key partner in the implementation of the Mexican government's low-carbon development strategies and for accelerating private investments in low-carbon technologies.

Engaging the private sector in low-carbon financing has been a challenge, particularly in Mexico, where, in addition to sector-specific issues (e.g., high investment needs, technology-specific risks, banks' lack of relevant expertise, and high risk aversion), access to credit and the relatively underdeveloped size of the financial sector are major structural barriers in the local economy (IDB, 2011b).<sup>29</sup> These factors result in a lack of adequate financial instruments to support the RE sector, which results in high interest rates, high transaction costs, a need for large amounts of collateral, and an unexploited RE potential.

Within Mexico's Country Investment Plan, endorsed by the CTF Trust Fund Committee in 2011, these barriers were tackled through international financial and non-financial support to structure financing solutions such as the Renewable Energy Financing Facility (REFF).<sup>30</sup> This facility was established within NAFIN to fill the financing gap through the provision of: (a) direct loans to project developers, with maturities in the 10- to 15-year range, and fixed interest rates, to finance the construction of new RE projects;<sup>31</sup> and (b) contingent credit lines to cover transitory cash-flow shortages during the project life cycle (e.g.,

due to lower than expected energy generation, energy demand, or prices) up to the volume needed to service senior debt (IDB, 2011b).

NAFIN was chosen because of its privileged position for channeling—directly or indirectly—international resources, along with its own resources, to local players (i.e., other financial intermediaries or project developers), ultimately enhancing the overall leverage impact of the international funds. The program aimed to leverage the US\$70 million of CTF concessional resources, with at least US\$70 million that would come from IDB co-financing from an existing credit line and a similar amount from NAFIN's own resources (see Figure 4).<sup>32</sup>

NAFIN would then leverage the overall total (minimum) amount of the US\$210 million facility at the project level by catalyzing private capital. Since a single project is not entitled to receive more than US\$10 million of CTF financing, and no more than 50 percent

<sup>26</sup> FIRA operates as a second-tier lender only.

<sup>27</sup> The value represents the total amount that commercial banks lend to projects placed in FIRA's sectors of activity, as a percentage of the total lending in a given year.

<sup>28</sup> NAFIN demonstrated, on different occasions, its innovative capabilities. For instance, in 2001, it launched an online system to provide reverse factoring services to SMEs, giving access to short-term financing to many businesses that had not yet participated in the program (De la Torre et al., 2007; Klapper; 2005). In 2007, NAFIN launched a Program for Entrepreneurial Support, which was designed to make technical assistance and credit available for innovative microenterprise projects.

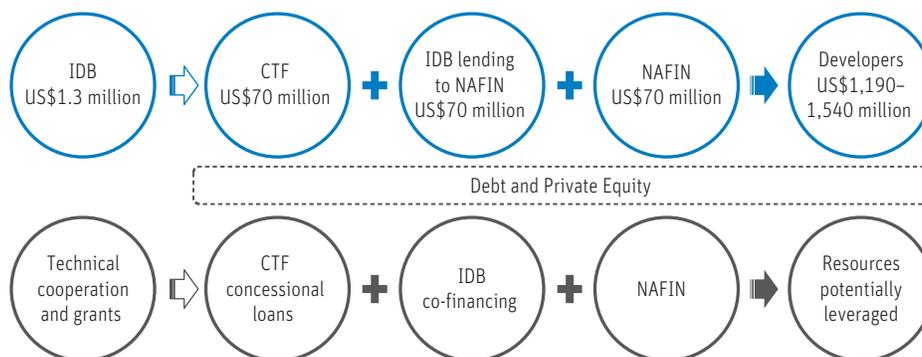
<sup>29</sup> According to the IDB (2011b), in Mexico total credit to the economy stands at 39 percent, far below the average of comparable economies in the region, which stand at about 60 percent. When considering banking credit only, the ratio is even lower (14.3 percent of GDP).

<sup>30</sup> In January 2009, the CTF Trust Fund Committee approved Mexico's Country Investment Plan, jointly developed, agreed upon, and owned by the government of Mexico and the CTF. Its aim is to support the low-carbon objectives included in the country's 2007–12 Development Plan, its Climate Change Strategy, and the Special Climate Change Program. The REFF project, implemented by the IDB, was approved by the CTF Trust Fund Committee in October 2011 (for more information, see <http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/Mexico%20Renewable%20Energy%20Program-Proposal%20III-final%20r2.pdf>).

<sup>31</sup> The final terms and conditions for borrowers will depend on the characteristics of the project, its internal rate of return, and its risk profile.

<sup>32</sup> The terms and conditions applicable to CTF concessional financing to NAFIN are as follows: 45 percent grant element; 48-month disbursement period; 20-year maturity; principal repayment years 11–20 at 10 percent; and a 10-year grace period. CTF's annual service fee is 0.75 percent, while the MDB upfront fee is 0.25 percent (IDB, 2011c).

**FIGURE 4. The Estimated Leveraging Effect of CTF-REFF and NAFIN**



Source: Authors' elaboration based on IDB (2011a, b).

of its total investment needs from the facility, this condition aims to maximize the leverage ratio, as well as the number of projects. The IDB estimates that at least US\$1.19 billion to US\$1.54 billion will have to be mobilized to cover the investment costs of the projects financed by the facility (IDB, 2011b; c).<sup>33</sup>

NAFIN is key to making this happen, as it is in charge of project selection, the demand stimulation, and the structuring of financial packages appealing to local project developers, taking into account the unique constraints that these developers face. Moreover, the risk-sharing arrangements put in place between NAFIN and borrowers will be critical for unlocking financing, as developers depend on the off-takers' credit qualifications.

NAFIN was a natural partner for the IDB for the execution of this program, given the long relationship between the two and the fact that NAFIN supports private sponsors in the financing of projects with climate change mitigation objectives. Moreover, over the years, NAFIN has proven to be a solvent institution with adequate risk management systems and practices in place. NAFIN has a Sustainable Project Directorate, a unit dedicated to supporting climate-related projects, which received technical assistance

from the World Bank. Furthermore, NAFIN already has experience in structuring the financing of wind energy projects, which will likely constitute the majority of the projects supported under the REFF. In fact, it has already supported the financing of the EURUS and the Piedra Larga Wind farms in the region of Oaxaca, which are also part of the overall CTF investment plan.

By executing the REFF program, NAFIN's capacity in the preparation, assessment, evaluation, and monitoring of risks in this type of project will be further strengthened. This capacity will then also extend to the LFI level. LFIs that take part in projects will develop their own capacity, familiarize themselves with the risk-management and financing requirements of RE projects, and develop the institutional capacity required to handle them, particularly with regard to the MRV of results, ultimately boosting RE investments in the country. The CTF Trust Fund Committee approved the REFF facility in 2011. By the end of that year, NAFIN completed the project structuring and negotiations with partner institutions.

<sup>33</sup> This figure is estimated considering a total 1,000 MW of installed generation capacity and investment costs of US\$2 to US\$2.5 million per MW, assuming an equity to debt ratio of 30/70 (IDB, 2011b).

## Conclusions and Next Steps

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To support the global transition toward a low-carbon future, there is a pressing need to scale up investments in climate change mitigation. As public financial resources cannot finance this transition alone, unlocking private capital is essential. However, barriers to private investment in climate change mitigation limit the involvement of that sector. International and national public funds are essential to unlock and mobilize private climate finance by taking on the classes of risk that the private market will not bear alone.

NDBs have a unique role and focus as intermediaries in climate finance. Their special knowledge and longstanding relationship with the private sector put them in a privileged position for accessing local financial markets and understanding local barriers to investment. NDBs have the potential to take on risks that commercial banks and investment funds may not be able to take, while financing long-term investments. Public finance channeled through NDBs can be used to leverage the private sector and international public finance for investments, contributing directly to the incremental cost of implementing low-carbon policies by addressing demand-side barriers, as well as providing the necessary incentives to mobilize the supply of climate-friendly private investment.

NDBs offer a range of financial and non-financial instruments to promote private finance. NDBs' activities and instruments can cover both demand and

supply financing needs to mobilize climate finance and, thus, can leverage at scale. An NDB can apply the instruments it has at its disposal to meet the needs identified in the pre-investment stage through grants and technical assistance, which help investors and LFIs to understand and tackle the specific investment and financial barriers that prevent private actors from engaging in low-carbon projects. Likewise, in the investment stage, NDBs may need to offer risk mitigation, funding subsidies, or other financial structures to entice private capital. Given the fact that NDBs are closer to LFIs and can better understand the risks they face, their ability to leverage is equal to or potentially better than that of MDBs for the same instruments.

Within the LAC region, NDBs are already piloting such instruments in support of climate change mitigation and have significant potential for leveraging national and international public and private resources. At the end of 2011, NDBs in the region had outstanding assets of nearly US\$1 trillion and a capital base of US\$100 billion that, combined with their capacity to leverage resources, makes them unique players in scaling up private investments for climate change mitigation. However, for these players to more effectively scale up such investments, the following actions are necessary.

- i. **Enhance coordination among national and international climate finance actors to encourage private climate finance.** The growing number of

initiatives and actors involved in climate change at the international, national, and subnational levels increases the need for mechanisms to coordinate the activities of these institutions and actors. In many cases, such mechanisms are either missing or need to be applied in such a way as to guarantee efficiency, complementarity, coherence, and a more organized decision-making process (TNC, 2012). Coordination needs to be improved in order to allocate international climate finance channels other than developing country government budgets. To scale up financing through the private sector, climate finance also needs to be provided for national private sector investment priorities. A better coordination of different national and international climate finance actors in each country requires the following:

- Ensuring consistency between national development objectives and climate change policies and programs
- Building national climate strategies based on sector strategies elaborated by different ministries, in coordination with the relevant stakeholders
- Creating robust investment plans based on these strategies, in consultation with national and international actors
- Jointly preparing project pipelines with bankable projects
- Enhancing cooperation and consistency of efforts between UN agencies and multilateral and bilateral donors at all levels

ii. **Enhance the dialogue between national policymakers and NDBs to promote an active role of NDBs in delivering international climate finance.** Based on an in-depth analysis of climate change strategies in Brazil, Costa Rica, Indonesia, Mexico, and Peru, a recent study highlights that limited in-country coordination between the various actors and institutions may in fact create dispersion and lack of focus in decision-making processes (TNC, 2012). In most cases, NDBs

currently lack a clear government mandate to promote national climate change mitigation programs and are rarely involved in the design of such programs. To fully use the potential of NDBs in climate finance, there is the need for the following actions:

- Using NDBs as mechanisms to manage and channel climate finance resources
- Considering NDBs' experience and advice for the design and functioning of new climate finance mechanisms, such as the GCF
- Supporting the climate finance readiness and internal capacity building efforts of NDBs so that they can be more proactive in channeling and promoting climate finance

iii. **Encourage NDBs to develop readiness strategies for international climate finance mobilization and intermediation.** NDBs have different focus areas and structures and are at distinct stages of institutional development. This is particularly true with regard to new areas of financial practice, such as climate finance. While there is no one-size-fits-all solution that can be applied to strengthen NDB participation in climate finance, their specific circumstances should be taken into account when considering how their institutional capacities and roles could be strengthened. Some NDBs, like BNDES, already have the capacity to be active in climate finance, while others still need to develop and strengthen their capabilities in this area. This can be achieved through a clear mandate and support from the government, as well as by increasing interactions with more developed regional, national, and international financial institutions.

In order for NDBs to become credible, reliable intermediaries in climate finance, they must develop a capacity for the MRV of the climate and environmental benefits of investments. To access international climate finance, investment programs must prove to be effective and achieve environmental benefits. This requires NDBs to develop considerable capacity.

Depending on their specific scope, institutional development, and government mandate, specific readiness programs can help NDBs build capacity and become reliable and credible intermediaries for climate finance. Components of readiness programs include the following:

- Building internal capacity and knowledge about international climate funds
- Improving capacity to measure, report, and verify the impacts of interventions, including the measurement of environmental benefits and the amount and type of private finance leveraged

iv. **Build knowledge about best practices of NDBs in climate finance.** A better understanding of effective funding sources and channels and the catalytic potential of different instruments can provide lessons to the international climate finance community on what works and what does not work, informing the design of existing and emerging financing mechanisms and helping governments to spend their limited financial resources more wisely. Given the ongoing efforts in the design of the

GCF, there is a window of opportunity for NDBs to feed lessons from their own financing practices on the ground, thus influencing the future of climate finance. NDBs can offer important lessons on various design features, including on how to design the GCF private sector facility, drawing on their own extensive experiences with the private sector.

Given that NDBs have extensive knowledge on opportunities and barriers for investments in their countries, their knowledge of the private sector in their credit markets, and their public and development mandates, decision makers designing climate change financial architecture should consider the particular experience of these financial actors in developing effective mechanisms for delivering long-term climate change finance on the ground.

Assigning NDBs a key role in mobilizing and intermediating international climate finance increases the potential to achieve climate and development goals. Targeted efforts to address a number of issues and themes could substantially improve the capacity of NDBs to make game-changing contributions to the international climate finance landscape.



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# Annex 1

## Carbon Offset Mechanisms

The Kyoto Protocol laid the foundation for a global carbon market, introducing two flexible mechanisms that allow entities to purchase emission reductions from projects in developing countries (Clean Development Mechanism, or CDM) or in industrialized country signatories (Joint Implementation, or JI) to comply with emission reduction commitments or with voluntary objectives. Most of the projects on carbon offset markets are currently related to CDM and JI, and their emission reductions can be acquired directly from project owners (the so-called primary market), or via carbon offset brokers or carbon procurement funds (the secondary market). Carbon offsets are financial instruments created by greenhouse gas (GHG) emission reductions. Contrary to other major international resource flows dedicated to mitigation, these offset mechanisms channel primarily private resources (more than 80 percent of CDM credits are purchased by the private sector).

The last decade has seen rapid growth in the CDM market. The value of transactions in the primary CDM market totaled around US\$27 billion in 2002–10, which is estimated to have been associated with around US\$125 billion in low-emission investments (Ambrosi et al., 2011). Since most transactions are forward purchase agreements with payment on delivery,

actual financial flows through the CDM have been lower. In 2010, the value of carbon offset finance was estimated to be between US\$2.2 and US\$2.3 billion,<sup>34</sup> or about US\$5.4 billion over 2008–10 (Ambrosi et al., 2011). These figures do not capture the underlying investment costs of corresponding emission reduction projects, highlighting that carbon offset revenues offer an additional revenue stream that enhances the overall financial viability or attractiveness of low-emission projects. A particular added value is that they can help incentivize the large, upfront capital investments that are often needed for low-carbon projects, providing, at the same time, incentives to overcome social inertia, lack of awareness, and various transaction costs that tend to hinder climate-friendly investments.<sup>35</sup> In addition, 2 percent of CDM credits issued are transferred to the Adaptation Fund, which aims to help reduce countries' vulnerability to climate change.<sup>36</sup>

Experience shows that carbon offset mechanisms can play a role in catalyzing low-carbon, climate-resilient

<sup>34</sup> This range is based on available data from the World Bank, the UNFCCC and IGES (see Buchner, Brown, and Corfee-Morlot, 2011).

<sup>35</sup> See Ambrosi et al. (2011) for an in-depth discussion.

<sup>36</sup> So far, approximately US\$150 million has been mobilized for adaptation projects and programs in developing countries (Ambrosi et al., 2011).

investment in developing countries, complementing and leveraging other financial resources. Yet, over the last few years, activities in the offset markets have slowed significantly, likely due to declining demand triggered by uncertainties about future mitigation targets and international market mechanisms after 2012.<sup>37</sup> Despite the slowdown in market activity, there is still interest in carbon markets, which suggests that their scale might increase significantly over time.

There are ongoing discussions on a follow-up to the first commitment period of the Kyoto Protocol, which is scheduled to end in 2020. So far, the only

major developed countries to agree to a second commitment period are Australia, the EU, and Switzerland. Other countries, such as New Zealand, have already opted out of a second commitment period, and Canada, Japan, and Russia have also announced intentions to not participate.

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<sup>37</sup> As Ambrosi et al. (2011) point out, a number of additional factors further constrain the potential of carbon offset markets, including “market fragmentation in the absence of a global agreement, transaction costs associated with complex mechanisms, low capacity in many countries, lack of upfront finance, weaknesses in the current ‘project by project’ approach and non-inclusion of some sectors with significant abatement potential (e.g., agriculture).”

## Annex 2

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### A Detailed Overview of Important Climate Finance Channels and Mechanisms

To better understand the challenges faced by any entity that wants to become an active intermediary for international climate finance, it is helpful to structure the overview of channels and mechanisms according to the analytical framework proposed by Ballesteros et al. (2010). The framework distinguishes between three dimensions:

- **“Power”** represents the capacity—both formal and informal—to determine outcomes. Formal power usually implies membership and decision-making rules, while informal power embodies political and economic influence outside the formal rules. This dimension addresses the question of whether responsibilities are adequately shared and reporting lines are in place (and transparent).
- **“Responsibility”** represents the exercise of power

for its intended purpose. This dimension monitors how the funding is implemented and ensures that the resources are allocated effectively and equitably. Questions include whether the standards and eligibility criteria of the financial mechanisms are strong enough to ensure that resources are spent effectively.

- **“Accountability”** verifies that standards and systems are in place to ensure that power is exercised responsibly. This dimension covers issues related to monitoring, reporting, and evaluation, both of financial resources and of social and environmental impacts.

The following tables apply this framework to the main institutions and mechanisms engaged in climate finance.

**TABLE A2.1. Bilateral and Multilateral Financial Institutions**

Agence Française de Développement (AFD France)		
SYNOPSIS	Description	AFD France is a bilateral development finance institution, wholly owned by the French State, dedicated to both industrial and commercial activities. AFD France is critical in the implementation of France’s official development assistance (ODA).
	“Green” strategy	With the strategic framework approved in 2005, AFD France has incorporated climate change into its policies.
	Sources of funds	French government, philanthropic organizations, grants from EU facilities, and capital markets, through bond issuance and private placements.
	Climate change funding	<ul style="list-style-type: none"> <li>• 2005–10: estimated US\$10 billion cumulative commitment (estimated 80 percent mitigation).</li> <li>• The <b>LAC region</b> received 20 percent of “mitigation” commitments.</li> </ul>
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>Board of Directors:</b> main decision-making body. It defines the eligibility criteria for accessing funds. Composed of 17 members appointed by decree, it comprises state representatives; experts appointed for their knowledge on economic, financial, ecological, and sustainable development issues; and staff members. Decisions are taken by consensus/vote.</li> </ul>
	Eligibility requirements	<p>Eligible “climate interventions” are classified according to predetermined criteria and tools defined as:</p> <ul style="list-style-type: none"> <li>• <b>Mitigation:</b> development intervention that avoids more GHGs emissions than it generates during its lifetime; projects are assessed with a <b>carbon footprint</b> tool.</li> <li>• <b>Adaptation:</b> development intervention that reduces vulnerability of goods, people, and ecosystems to climate risks. Projects are assessed against an <b>operational matrix of criteria</b>.<sup>a</sup></li> <li>• Eligible to apply for projects: governments, special operation executives, NGOs, private sector, and local authorities. Stakeholder involvement is pursued at all levels of the project cycle.</li> </ul>
EIB – Climate Change and Environment Fund Investment Programme		
SYNOPSIS	Description	The EIB is an EU financing institution whose shareholders are the 27 member states. The EIB supports the goal of low-carbon and climate-resilient growth, within and outside the EU.
	“Green” strategy	Climate change considerations are currently mainstreamed in all EIB sectoral policies and integrated into all operational activities.
	Sources of funds	EU budget, EU member states’ budget, and EIB resources.
	Climate change funding	2010: US\$4.2 billion in climate related loan commitments. Climate equity investments in fund represent approximately US\$200 million per year.

<sup>a</sup> AFD France has set up a precise typology of projects that can contribute to adaptation objective. The entire portfolio is screened against this typology (e.g., the energy/infrastructures sector, including projects such as building dams with protection systems against floods and early warning systems; and the water and sanitation sector, including projects such as the rehabilitation of water supply networks and drainage systems and the rehabilitation/building of wastewater treatment plants) (Loyer, 2009; AFD, 2009).

(continued on next page)

**TABLE A2.1. Bilateral and Multilateral Financial Institutions** *(Continued)*

POWER AND RESPONSIBILITY	Decision making	<p><b>Board of Governors:</b> defines the overall direction and credit policy guidelines. It is composed usually of finance ministers designated by each of the 27 member states.</p> <ul style="list-style-type: none"> <li>• <b>Board of Directors:</b> makes decisions on loans, guarantees, and borrowing.</li> <li>• <b>Management Committee:</b> the permanent collegiate executive body, which supervises the day-to-day running of the bank.</li> <li>• <b>Audit Committee:</b> independent body reporting directly to the Board of Governors.</li> <li>• The Board of Governors and Management Committee set project eligibility criteria.</li> <li>• Decisions are taken by vote.</li> </ul>
	Eligibility requirements	<p>Eligible mitigation and adaptation projects are developed within the framework of the EIB's sectoral lending policies and approaches, especially those regarding energy, transport, water, wastewater, solid waste, forestry, and research, development, and innovation.</p> <ul style="list-style-type: none"> <li>• A Technical Directorate is involved in the appraisal of all projects.</li> <li>• Eligible to apply for projects: NGOs and the private sector.</li> <li>• Regular communication with stakeholders is pursued.</li> </ul>
<b>The International Climate Initiative (ICI)<sup>a</sup></b>		
SYNOPSIS	Description	<p>The International Climate Initiative (ICI) is an initiative of the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU). Based on a decision taken by the German parliament, EUR 120 million from the auctioning of emission allowances is available annually for financial support to international projects supporting climate change mitigation, adaptation, and biodiversity projects with climate relevance, aiming also to ensure that such investments will trigger private investments of a greater magnitude.</p>
	"Green" strategy	<p>Germany has an ambitious domestic target and aims to become one of the most energy and ecologically efficient economies in the world. Being most dedicated to low-carbon (or zero carbon) development, it effectively is a laboratory of policy and financing mechanisms. ICI is an innovative financing mechanism: Germany is the first country to earmark revenues from the auctioning of emission trading certificates for investments in climate protection measures in developing countries and emerging economies.</p>
	Sources of funds	<p>A certain amount of the German federal budget is earmarked for the ICI German auctioning revenues from the European carbon market. The funds are eligible as ODA and mobilize additional capital (implementing agencies + other public and private-sector sources). Additional funds through the Energy and Climate Fund (launched 2011).</p>
	Climate change funding	<ul style="list-style-type: none"> <li>• Since 2008: EUR 120 million per year from auctioning revenues from 2008 until mid 2011.</li> <li>• Funding more than 230 projects, BMU commitments exceed EUR 500 million.</li> <li>• More than EUR 1.3 billion total funding volume of ICI projects.</li> <li>• The <b>LAC region</b> received <b>US\$79 million</b> (as of October 2011).</li> </ul>

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**TABLE A2.1.** Bilateral and Multilateral Financial Institutions (*Continued*)

POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>BMU:</b> main decision-making body, which allocates funds in all projects.</li> <li>• <b>International advisory group:</b> made up of experts from governments, academia, nongovernmental organizations, companies, financial markets, and international financial institutions; offers strategic support to the practical work undertaken in the ICI and to its further evolution.</li> <li>• <b>Administration:</b> program office located at Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); supported by KfW (German development bank).</li> </ul>
	Eligibility requirements	<p><b>Eligible actors:</b></p> <ul style="list-style-type: none"> <li>• Implementing organizations of German development cooperation, nongovernmental and governmental organizations, universities and research institutes, private sector companies, MDBs, and UN organizations and programs.</li> <li>• The presence of a robust executing organization in the partner country and support for the project from the country’s government are necessary preconditions for project selection.</li> </ul> <p><b>Project selection</b> is made with regard to the following:</p> <ul style="list-style-type: none"> <li>• The criteria of the Paris Declaration on Aid Effectiveness</li> <li>• Country ownership (since 2009)</li> </ul> <p>Strategic priority is given to projects that develop and implement monitoring, reporting, and verification (MRV) mechanisms and feed their experience with them into the international debate, targeting projects that are likely to be MRV-able under a post-2012 agreement.</p> <p>At the conclusion of each project, <b>a systematic evaluation</b> is conducted by a team of research institutes, including measurement of the mitigation impact through greenhouse gas monitoring.</p>

<sup>a</sup> For further information about ICI, see <http://www.bmu-klimaschutzinitiative.de/en/news> and <http://www.climatefundsupdate.org/regions/latin-america>.

**TABLE A2.2. Multilateral Funds**

		The Climate Investment Funds (CIF)
SYNOPSIS	Description	The Climate Investment Funds (CIF) comprise two multi-donor Trust Funds, the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF), <sup>a</sup> which aim to pilot low-emissions and climate-resilient development projects in developing countries through scaling up financing in the form of grants, concessional loans, risk-mitigation instruments, and equity and blended instruments. Operational as of 2008–09.
	Funding and donors	<ul style="list-style-type: none"> <li>• <b>US\$7.2 billion</b> pledged to date by 14 donor countries.</li> <li>• Eligible <b>LAC</b> countries should receive US\$705 million.</li> </ul>
	Focus	Mitigation, REDD, adaptation/climate resilience.
POWER AND RESPONSIBILITY	Governance and decision making	<ul style="list-style-type: none"> <li>• The CTF and the SCF are governed by distinct <b>Trust Fund Committees</b> (TFC) where donor and developing countries are evenly represented. TFC oversees operations, provides strategic guidance, approves the allocation of financial resources, and defines eligibility criteria. The SCF has one <b>subcommittee</b> for each of the targeted programs. Decision making is by consensus.</li> <li>• <b>MDB Committee</b>: facilitates coordination and collaboration among MDBs and performs certain duties delegated by the TFC and/or subcommittee.<sup>b</sup></li> <li>• <b>Trustee</b>: IBRD is responsible for managing and transferring resources to implementing entities and reports on the financial status of the funds.</li> <li>• <b>Observers</b> include representatives from UNDP, UNEP, GEF, UNFCCC, civil society, indigenous people (the FIP only), and the private sector. “Active observers” can propose agenda items.</li> </ul>
	Implementing entities	The AfDB, ADB, EBRD, IDB, and World Bank Group (IBRD and IFC). The private sector can typically access funds through IFC.
	Eligibility requirements	<p>Governments, NGOs, and the private sector can express interest in accessing financing.</p> <ul style="list-style-type: none"> <li>• <b>Eligible recipients</b>: ODA-eligible and have at least one active MDB lending program.</li> <li>• CIF specific criteria/processes apply.</li> <li>• Stakeholders are involved throughout the project cycle.</li> <li>• <b>Eligible projects</b>: CIF specific criteria apply.</li> </ul> <p>Programs are subject to board approval. External technical experts review CTF projects. For the SCF, each subcommittee appoints an expert group to make recommendations on the choice of pilot countries. Independent experts review SCF investment plans prior to submission.</p>
ACCOUNTABILITY	<ol style="list-style-type: none"> <li>1. Results-based management framework (RBM)</li> <li>2. Monitoring and evaluation (M&amp;E)</li> <li>3. Environmental safeguard standards</li> </ol>	<ol style="list-style-type: none"> <li>1. RBM with logic models and indicators approved for each of the CIF sub-funds to monitor performance.<sup>c</sup></li> <li>2. The TFCs monitor and evaluate the performance and financial accountability of the MDBs. Climate Investment Funds do not have a distinct independent evaluation office. They are subject to evaluation of the MDBs’ Independent Evaluation Offices. Evaluation results are annually reported to the TFC and MDB committees.</li> <li>3. MDB safeguard policies apply to programs and projects.</li> </ol>

<sup>a</sup> The SCF comprises the following three targeted programs: the Pilot Program for Climate Resilience (PPCR), the Forest Investment Program (FIP), and the Scaling Up of Renewable Energy in Low-Income Countries Program (SREP).

<sup>b</sup> Mandated in the SCF and CTF Governance Framework.

<sup>c</sup> In May 2012, the SPREP subcommittee approved a revised version of the SREP RBM (SCF/TFC.9/5, 2012). At the time of writing this report, the CIF Administrative Unit and the MDB Committee are working on a simplified RBM for the CTF, the PPCR, and the FIP.

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**TABLE A2.2. Multilateral Funds** *(Continued)*

MDG Achievement Fund (MDG-F)		
SYNOPSIS	Description	International cooperation mechanism aimed at accelerating progress on the Millennium Development Goals (MDGs). Operational as of 2007.
	Funding and donors	<ul style="list-style-type: none"> <li>Environment and climate change window: <b>US\$89.50</b> million pledged by Spain and transferred to programs.</li> <li><b>LAC countries</b> received US\$24 million (or 25 percent of the total).</li> </ul>
	Focus	Mitigation and adaptation.
POWER AND RESPONSIBILITY	Governance and decision making	<p>At the global level, governed by a two-member <b>steering committee</b> (SC) composed of representatives of the UNDP and the Spanish Secretary of State for the Ministry of Foreign Affairs, a secretariat, and technical subcommittees.</p> <p>The SC defines the overall leadership of the fund and its strategic guidance and decides on individual financial allocations.</p> <ul style="list-style-type: none"> <li><b>Administrative agent:</b> the UNDP <b>Multi-Donor Trust Fund Office</b> receives, administers, and disburses funds approved by the SC for country-level joint programs.</li> </ul> <p>At the country level, a three-level structure coordinates and supports program implementation.</p>
	Implementing entities	Programs are implemented in partnership with and/or through local institutions, such as UN agencies, national and local governments, the private sector, community organizations, and NGOs.
	Eligibility requirements	<ul style="list-style-type: none"> <li><b>Eligible recipients:</b> 59 countries identified in the Spanish Master Plan for International Cooperation.</li> <li><b>Eligible projects:</b> must be developed in compliance with specific guidelines by at least two UN agencies jointly with national government and nongovernmental counterparts, upon its full endorsement.</li> </ul> <p>In the first call for proposals, a key criterion for the selection of projects was the measurable impact on the achievement of the MDGs.</p>
ACCOUNTABILITY	<ol style="list-style-type: none"> <li>Results-based management framework (RBM)</li> <li>Monitoring and evaluation (M&amp;E)</li> <li>Environmental safeguard standards</li> </ol>	<ol style="list-style-type: none"> <li>An M&amp;E framework with specific indicators is developed for each joint program, as well as an M&amp;E strategy for the MDG-F as a whole. The strategy comprises midterm, final, and thematic evaluation.</li> </ol>

**TABLE A2.3. Multi-Donor Trust Funds**

		Global Climate Change Alliance (GCCA)
SYNOPSIS	Description	EU initiative seeking to strengthen cooperation between the EU and countries most vulnerable to climate change. Through financial and technical support, it aims to mainstream climate change into countries' planning and budgeting for national development programs. Operational as of 2008.
	Funding and donors	<ul style="list-style-type: none"> <li>• <b>US\$226 million</b> pledged by the EC and some member countries.</li> <li>• <b>LAC countries</b> received <b>US\$15 million</b> for adaptation, disaster risk reduction, and capacity building projects.</li> </ul>
	Focus	Mitigation, REDD, adaptation.
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>Administrator:</b> EU Commission via the DG for Development and Co-operation (DEVCO).</li> <li>• At the <b>country level</b>, the <b>management</b> of GCCA projects is <b>decentralized to EU delegations</b> to the maximum extent possible.</li> <li>• <b>Support facility:</b> supports national/regional capacity building and technical assistance measures, and identifies and formulates interventions in particular sectors.</li> <li>• There is evidence of consultation with civil society/stakeholders.</li> </ul>
	Implementing entities/ modalities	<ul style="list-style-type: none"> <li>• Implementation modalities are intervention-specific, and can be via joint programming and financing with partner governments or other international or regional organizations,<sup>a</sup> or via direct <b>general/sector budget support</b> released to the countries in tranches as set eligibility criteria or targets are reached.</li> </ul>
	Eligibility requirements	<ul style="list-style-type: none"> <li>• <b>Eligible recipients:</b> 73 LDCs SIDS countries. Countries are assessed based on their level of vulnerability to climate change, adaptive capacity, and engagement in climate change efforts. A series of broad criteria were established to select the first group of pilot countries.</li> <li>• <b>Eligible projects:</b> funds are allocated to interventions in thematic areas in countries according to availability of resources and population structure.</li> </ul>
ACCOUNTABILITY	<ol style="list-style-type: none"> <li>1. Results-based management framework (RBM)</li> <li>2. Monitoring and evaluation (M&amp;E)</li> <li>3. Environmental safeguard standards</li> </ol>	<ol style="list-style-type: none"> <li>1. Results-based monitoring system envisaged but yet to be established. Regular reporting on the state of the GCCA is carried out through the GCCA support facility.</li> <li>2. Independent external evaluation planned.</li> </ol>

<sup>a</sup> In the Caribbean, for instance, country support is given through the Caribbean Community Climate Change Centre (CCCCC).

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TABLE A2.3. Multi-Donor Trust Funds (Continued)

Global Energy Efficiency and Renewable Energy Fund (GEEREF)		
SYNOPSIS	Description	Public-private partnership initiated by the EU Commission to provide global risk capital through private investment in energy efficiency (EE) and renewable energy (RE) projects in developing countries and economies in transition. The GEEREF invests in <b>private equity funds</b> that provide equity finance to small and medium-sized projects (up to US\$13 million in size). Through the independent TA facility it also provides small grants (to date approximately US\$4 million). Operational as of 2008.
	Funding and donors	<ul style="list-style-type: none"> <li>• <b>US\$169</b> pledged by the EC, Germany, and Norway.</li> <li>• <b>LAC countries</b> received <b>US\$16.75 million</b> through the Clean Tech Latin American Fund (CTLAF II), a capital fund investing in private companies, particularly Brazil, Chile, Colombia, Mexico, and Peru in 2011.</li> </ul>
	Focus	Mitigation.
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>Administrator:</b> the EIB Group – jointly by the European Investment Bank (EIB) and the European Investment Fund (EIF)</li> <li>• <b>Investment Committee:</b> the committee is composed of representatives of the EC, Germany, and Norway, and approves investments and disinvestments.</li> <li>• <b>Board of Directors:</b> the board approves the fund’s budget, oversees operations, and appoints members of the Investment Committee.</li> <li>• Decisions are taken by unanimity.</li> <li>• Civil society is not involved in decision-making bodies. The fund communicates/ interacts with a broad group of stakeholders.</li> </ul>
	Implementing entities/ modalities	<ul style="list-style-type: none"> <li>• The final recipient of GEEREF fund.</li> </ul>
	Eligibility requirements	<ul style="list-style-type: none"> <li>• <b>Eligible recipients:</b> private equity funds focused on SME (up to US\$13 million), RE, and EE projects/enterprises requiring equity investment.</li> <li>• Candidate funds must have a pipeline of environmentally and financially sustainable projects and meet stringent investment criteria.</li> <li>• Candidate funds have to operate in emerging markets outside the EU, particularly in African, Caribbean, and Pacific countries.</li> <li>• Priority is given to investment in countries with policies and regulatory frameworks on EE and REs conducive to private sector engagement.</li> <li>• <b>Eligible projects:</b> a broad mix of RE and EE projects and technologies that meet strict investment criteria are considered for funding.</li> </ul>
ACCOUNTABILITY	<ol style="list-style-type: none"> <li>1. Results-based management framework (RBM)</li> <li>2. Monitoring and evaluation (M&amp;E)</li> <li>3. Environmental safeguard standards</li> </ol>	<ol style="list-style-type: none"> <li>1. GEEREF assesses results against its stated objectives; investments and final recipients are regularly monitored via procedures established at fund-of-funds level.</li> <li>2. GEEREF is audited and evaluated by the EC and by the EIB Group’s independent evaluation office, which reports to EIB management.</li> </ol> <p>The fund applies the EIB’s Environmental and Social Principles and Standards; fiduciary principles applied follow obligations under Luxembourgish law.</p>

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TABLE A2.3. Multi-Donor Trust Funds (Continued)

GEF Trust Fund	
SYNOPSIS	<p>Description</p> <p>The UN Global Environmental Facility (GEF) was established in 1991 as an independent financial organization to assist in the protection of the global environment and promotion of environmentally sustainable development.</p> <p>Currently, 182 countries are members of GEF, which functions as the <b>operating entity</b> of the financial mechanisms of the: United Nations Framework Convention on Climate Change (UNFCCC), UN Convention to Combat Desertification (UNCCD), Convention on Biological Diversity (CBD), and the Stockholm Convention on Persistent Organic Pollutants (POPs). Although not formally linked to the Montreal Protocol (MP), the GEF also supports its implementation in countries with economies in transition.</p> <p>The GEF administers three trust funds: the GEF Trust Fund, the Least Developed Countries Trust Fund (LDCF), and the Special Climate Change Trust Fund (SCCF). The GEF Trust Fund is the main funding resource of the GEF, and supports climate change as one of its six focal areas. The objective of this part of the fund is to help developing countries and economies in transition to contribute to the overall objectives of the UNFCCC. Projects support measures that minimize climate change damage by reducing the risk, or the adverse effects, of climate change.</p> <p>The GEF provides <b>grants and concessional financing</b> for eligible projects and enabling activities to developing countries and EITs. Recent approved reforms designed to give developing countries and stakeholders more control and access to funds include the following:</p> <ul style="list-style-type: none"> <li>• <b>Direct access</b> to GEF resources for recipient countries looking to meet various UN convention requirements</li> <li>• A <b>streamlined GEF project cycle</b> and a move to a more <b>refined and strategic programmatic investment approach</b></li> <li>• A reformed GEF's <b>Country Support Program</b> with US\$26 million in funding</li> <li>• The launch of a process to determine how best to <b>integrate new agencies, including qualified national entities</b>, into the GEF network</li> </ul> <p>Funding and donors</p> <ul style="list-style-type: none"> <li>• <b>US\$3.8 million</b> has been invested since GEF's inception (data as of June 2011).</li> <li>• This investment seems to have <b>leveraged</b> additional investments valued at more than <b>US\$21.8 billion</b>.</li> <li>• <b>LAC countries</b> received <b>US\$155.1 million</b> for climate change.</li> <li>• The Fifth Replenishment of the GEF (GEF-5) was finalized in 2010 and will fund operations and activities until June 2014. Thirty-five donor countries pledged US\$4.34 billion, of which <b>US\$1.4 billion</b> is programmed to support climate change mitigation.</li> </ul> <p>Focus</p> <p>Six focal areas: biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.</p>

(continued on next page)

**TABLE A2.3. Multi-Donor Trust Funds** *(Continued)*

<b>POWER AND RESPONSIBILITY</b>	Decision making	<ul style="list-style-type: none"> <li>• <b>Assembly:</b> composed of all 182 member countries, the assembly reviews the general policies, operations, membership, and potential amendments of the GEF.</li> <li>• <b>Council:</b> the main governing body, which is composed of 32 members appointed by constituencies of GEF member countries and responsible for developing, adopting, and evaluating the operational policies and programs for GEF-financed activities, as well as reviewing and approving the work program (projects submitted for approval).</li> <li>• <b>Country representatives:</b> the GEF Focal Points: government officials designated by member countries to ensure that GEF projects are country-driven and based on national priorities.</li> <li>• <b>Project partners:</b> organizations and entities implementing projects on the ground, including governments, national institutions, international organizations, local communities, NGOs, academic and research institutions, and private sector entities.</li> <li>• <b>Independent advice</b> through the Scientific and Technical Advisory Panel.</li> </ul>
	Implementing entities/ modalities	<ul style="list-style-type: none"> <li>• The GEF works through a partnership of 10 agencies that assist eligible governments and NGOs in the development, implementation, and management of projects from the proposal stage.</li> <li>• Implementing agencies: UNDP, UNEP, the World Bank (IBRD), FAO, UNIDO, AfDB, AsDB, EBRD, the IDB, and the IFAD.</li> <li>• The System for Transparent Allocation of Resources (STAR) decides on resource allocation and aims to channel them to countries with higher potentials to generate global environmental benefits and the capacity to successfully implement projects. The system provide incentives to eligible countries to maximize their investment benefits by increasing transparency, predictability of funding, planning, and country ownership.</li> </ul>
	Eligibility requirements	<p><b>Eligible criteria</b> to qualify for GEF funding:</p> <ul style="list-style-type: none"> <li>• GEF grants made available within the framework of the financial mechanisms of the UNFCCC should conform with the eligibility criteria decided by the Conference of the Parties (COP) of each convention.</li> <li>• A country is eligible to receive GEF grants if it is eligible to borrow from the World Bank or if it is an eligible recipient of UNDP technical assistance through its country Indicative Planning Figure (IPF).</li> <li>• GEF concessional financing shall conform with eligibility criteria decided by the COP of each convention.</li> </ul>

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TABLE A2.3. Multi-Donor Trust Funds (Continued)

ACCOUNTABILITY	<p>1. Results-based management framework (RBM)</p> <p>2. Monitoring and evaluation (M&amp;E)</p>	<p>1. The <b>Independent GEF Evaluation Office</b>, GEF’s backbone: provides a basis for decision making on amendments and improvements of policies, strategies, program management, procedures, and projects; promotes accountability for resource use against project objectives; documents and provides feedback to subsequent activities; and promotes knowledge management on results, performance, and lessons learned. Provides independent evaluations.</p> <p>2. Responsibility for <b>M&amp;E</b> is shared among the Independent GEF Evaluation Office, the GEF Secretariat, and the GEF coordination units of the implementing agencies and their evaluation offices. GEF agencies are required to develop M&amp;E plans and performance and results indicators for individual projects and programs. Responsibilities also include country portfolio, thematic, performance, and impact evaluations. Each evaluation will assess results (outputs, outcomes, and impact) according to five major criteria: relevance, effectiveness, efficiency, results, and—where possible—sustainability.</p> <p>3. <b>GEF’s M&amp;E policy</b>: in line with international standards, it establishes norms, standards, and minimum requirements for all projects presented to the council. It covers project design, implementation, and evaluation. M&amp;E processes and activities are informed by the RBM, which was approved by the council in 2007. The RBM builds on the strategic programming that is defined at the beginning of the replenishment period for each focal area, which outlines objectives, expected outcomes, and related tracking indicators.</p>
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**TABLE A2.4. Regional Recipient Fund**

Congo Basin Forest Fund (CBFF)		
SYNOPSIS	Description	Multi-donor funding mechanism established to provide financing for projects likely to alleviate poverty and address climate change by reducing the rate of deforestation in Congo Basin forests and empowering people and institutions to manage and preserve them. Operational as of 2008.
	Funding and donors	US\$165 million grant from the UK and Norway.
	Focus	Mitigation – REDD.
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>Governing Council:</b> defines strategic directions, is responsible for oversight, and actively reviews and endorses proposals. It encompasses broad representation, while ensuring African ownership and alignment with existing organizations and activities in the region.<sup>a</sup> Decisions are made by consensus or by simple majority vote. A voting member also represents civil society.</li> <li>• <b>Board of Directors:</b> primarily responsible for the general operations of the CBFF, and will serve as the decision-making body for certain operational matters according to provisions approved in the framework documents.</li> <li>• <b>Secretariat:</b> manages and oversees daily operation and is responsible for the initial assessment of proposals.</li> <li>• <b>Trustee and administrator:</b> African Development Bank (AfDB)</li> </ul>
	Implementing entities/ modalities	Governments, sub-sovereign entities, civil society institutions, and private sector institutions. Payments to projects will only be made if agreed performance targets are met.
	Eligibility requirements	<p>The CBFF criteria for eligibility are provided by the CBFF Operational Procedures.</p> <ul style="list-style-type: none"> <li>• Eligible <b>recipients:</b> governments, civil society organizations duly registered in a Congo Basin country, community-based organizations, NGOs, the private sector, and private forestry sector operators and institutions. Proposals are accepted from one or several partner organizations working together.</li> <li>• Eligible <b>projects</b> are assessed against a range of criteria stated in the operational procedures of the fund. They span from project goals to their innovative and transformational character. The commitment of Congo Basin countries to implement national strategies and action plans on deforestation will be critical in determining eligibility. The first call for proposals was issued in 2008.</li> </ul>
ACCOUNTABILITY	<ol style="list-style-type: none"> <li>1. Results-based management framework (RBM)</li> <li>2. Monitoring and evaluation (M&amp;E)</li> <li>3. Environmental safeguard standards</li> </ol>	<ol style="list-style-type: none"> <li>1. A RBM approach was established. CBFF-financed activities are monitored and supervised via a results-based approach, encompassing a project logical framework with defined performance indicators.</li> <li>2. The CBFF is subject to the AfDB independent evaluation system; evaluation reports are made available for the AfDB Board of Directors.</li> <li>3. All CBFF-funded projects apply AfDB safeguard policies, as well as fiduciary and financial management systems.</li> </ol> <p>AfDB staff ensures project compliance during the preparation and implementation phase.</p>

<sup>a</sup> It comprises representatives from the AfDB, donor countries, civil society, the Central African Forests Commission (COMIFAC); the Economic Community of Central African States (CEEAC) as well as UNEP and others. See AfDB (2009) for details. See also <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Congo%20Basin%20Forest%20Fund%20-%20Operational%20Procedures%20EN.pdf>

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**TABLE A2.4.** Regional Recipient Fund (*Continued*)

Amazon Fund (AZ)		
SYNOPSIS	Description	The Amazon Fund is aimed at raising donations to prevent, monitor, and combat deforestation, as well as to promote the preservation and sustainable use of forests in the Amazon Biome.
	Funding and donors	<b>US\$102.9 million deposited</b> by Norway, Germany, and Petróleo Brasileiro S.A. (Petrobras); another <b>US\$361 million in donations</b> to the AZ <b>formally committed</b> ; 31 approved projects, amounting to US\$156 million; by July 2012, the amount disbursed was equivalent to US\$48 million.
	Focus	Mitigation – REDD.
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• Brazil has full ownership of the AZ, with limited involvement from donor countries. <b>BNDES</b>, the Brazilian Development Bank, manages the fund. BNDES is responsible for raising funds; analyzing, approving, and contracting projects; monitoring projects; and rendering accounts. BNDES is permitted to retain 3 percent of proceeds from the AZ to cover costs related to managing the fund. The BNDES Priority Department of the Planning Division and a committee of senior executives first assess applications. If approved at this instance, the staff of the AZ makes a technical recommendation for approval or rejection to the board of directors.</li> <li>• <b>Steering Committee (SC)</b>, COFA, sets guidelines and priorities for the disbursement of funds, including assessing projects against the guidelines and monitoring the results obtained. The main policy document is the guidelines and criteria for the application of the AZ. BNDES acts as Executive Secretariat and a representative from the federal government as the Chair.</li> <li>• <b>Technical Committee</b>, CTFA, is appointed by the Ministry of Environment and is responsible for certifying reduced emissions from deforestation calculations made by the National Institute of Space Research and the Brazilian Forest Service.</li> </ul>
	Implementing entities/ modalities	Donations to the fund are <b>performance based</b> , paid only if reduced deforestation is demonstrated and only if deforestation in the year prior to payment is lower than the average for the previous 10 years.
	Eligibility requirements	<p>Eligible <b>projects</b> must meet the following criteria:</p> <ul style="list-style-type: none"> <li>• They must directly or indirectly contribute to reducing deforestation; up to 20 percent can be used to support projects that develop systems for monitoring and controlling deforestation in other Brazilian biomes or other tropical countries.</li> <li>• They must meet the various guidelines and criteria for the application of the AZ, including the results-based management framework.</li> <li>• They must meet the operational criteria of BNDES.</li> <li>• GHG emission reductions corresponding to AZ donations may not be negotiated in carbon markets.</li> </ul>
ACCOUNTABILITY	1. Results-based management framework (RBM)	1. A RBM is in place.
	2. Monitoring and evaluation (M&E) 3. Environmental safeguard standards	<p>2. <b>M&amp;E:</b> BNDES is required to report to the SC twice per year on the fund’s performance and fundraising progress. An external audit of the fund is carried out annually to verify proper appropriation of funds. Upon completion, projects are required to prepare a report and a project impact assessment of the environmental results attained. Representatives of BNDES and the donors to the fund have an annual meeting after the publication of the annual report to discuss the progress of the fund, issues of special concern for the implementation of the fund, and plans for changes in the SC criteria for the fund.</p> <p>Projects supported by the fund must abide by the guidelines of the 2008 Sustainable Amazon Plan (PAS) and the 2004 Action Plan for Prevention and Control of the Legal Amazon Deforestation (PPCDAM).</p>

**TABLE A2.5. National Climate Funds**

Guyana REDD+ Investment Fund (GRIF)		
SYNOPSIS	Description	The GRIF is a multi-donor trust fund for the financing of activities identified under the Government of Guyana’s Low-Carbon Development Strategy (LCDS).
	Funding and donors	<ul style="list-style-type: none"> <li>• <b>US\$250 million</b> pledged by Norway based on a results-based approach.</li> </ul>
	Focus	Mitigation REDD.
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>Steering Committee (SC):</b> the governing body of the GRIF that makes all funding decisions. It is composed of representatives of the Governments of Guyana and Norway (trustee, partner entities, and civil society may participate, but only as observers).</li> <li>• <b>Partner entities:</b> responsible for submitting project proposals to SC; they receive GRIF financing and follow project implementation.</li> <li>• <b>Trustee:</b> the International Development Association (IDA) of the World Bank, which transfers funds to partner entities upon project approval.</li> </ul>
	Eligibility requirements	<ul style="list-style-type: none"> <li>• <b>Eligible projects:</b> projects included in Guyana’s LCDS are eligible for GRIF financing.</li> <li>• The LCDS sets out the projects and sectors of strategic importance to the development of a low-carbon economy in Guyana identified through a national consultation process.</li> </ul>
	Implementing entities	Guyanese ministries, agencies, or any other eligible entity.
ACCOUNTABILITY	<ol style="list-style-type: none"> <li>1. Results-based management framework (RBM)</li> <li>2. Monitoring and evaluation (M&amp;E)</li> <li>3. Environmental safeguard standards</li> </ol>	<ol style="list-style-type: none"> <li>1. The GRIF secretariat and partner entities will track and report on the RBM and performance indicators developed and agreed upon at the project level.</li> <li>2. An independent verification of results is in place, as donor contributions are results-dependent.</li> <li>3. Principles and standards of the partner entity concerned with a given project are applied.</li> </ol>

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**TABLE A2.5.** National Climate Funds (*Continued*)

Indonesia Climate Change Trust Fund (ICCTF)		
SYNOPSIS	Description	The ICCTF is a financial mechanism created by the Government of Indonesia with the aim of aligning international climate finance with national investment strategies and facilitating private sector engagement.
	Funding and donors	<b>US\$18.47</b> pledged by Australia, Sweden, and the UK.
	Focus	Mitigation, REDD, adaptation.
POWER AND RESPONSIBILITY	Decision making	<ul style="list-style-type: none"> <li>• <b>Administrator:</b> Ministries of Planning (BAPPENAS) and Finance.</li> <li>• <b>Trustee:</b> UNDP, on an interim basis, which manages and channels granted funds.</li> <li>• <b>Steering Committee (SC):</b> responsible for management, strategic guidance, and operational guidelines. It approves/rejects projects.</li> </ul> <p>The SC consists of representatives from donors and representatives from the Government of Indonesia (from different ministries) and two civil society organization non-voting members.</p> <ul style="list-style-type: none"> <li>• <b>Secretariat:</b> composed of technical experts, it carries out day-to-day operations.</li> <li>• <b>Technical Committee:</b> supports the secretariat and committee.</li> </ul>
	Eligibility requirements	<ul style="list-style-type: none"> <li>• <b>Eligible recipients:</b> sectoral ministries and local governments are invited to submit proposals, either alone or in collaboration with other parties.</li> <li>• <b>Eligible projects:</b> energy, forestry, and peatlands; adaptation and resilience</li> <li>• Candidate projects assessed against selection criteria approved by the SC. In the first batch of projects approved, standard criteria, such as impacts, sustainability, and scalability, as well as whether the projects were high priority for the ministries, were considered.</li> </ul>
	Implementing Entities	Proponents or third-party subcontractors through bidding process.
ACCOUNTABILITY	1. Results-based management framework (RBM)	1. M&E carried out by the Technical Committee and reports submitted to the SC. An independent auditor appointed by the Government of Indonesia will audit funds used by ministries; one appointed by the SC will audit compliance with policies.
	2. Monitoring and evaluation (M&E)	2. Annual review reports and final program report will be prepared and made public.
	3. Environmental safeguard standards	3. No explicit safeguard policies are yet in place. The Technical Committee considers potential impacts when reviewing project proposals. The principles of the Jakarta Commitments Fund should be followed.



# Annex 3

## Challenges and Outcomes of the Green Climate Fund (GCF) Negotiations

The Cancun Agreements, reached in December 2010, formalized a collective commitment by developed countries to provide new and additional funding for action on climate change in developing countries. Beyond committing to the goal of mobilizing jointly US\$100 billion per year by 2020, the Cancun Agreements state “[...] funds provided to developing countries may come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources” (UNFCCC, 2010). They also established the Green Climate Fund (GCF), and a Transitional Committee (TC) for the design of the Fund, with the ambitious agenda of developing a detailed proposal on a number of design and operational aspects for approval to COP 17.

In Durban, the governing instrument of the GCF was adopted. The GCF is designated as an operating entity of the Financial Mechanism of the UNFCCC, accountable to and functioning under the guidance of the COP to the UNFCCC. Its main features are (as per Decision 3/CP.17):

- **Board.** The Board includes 24 members, active observers from civil society and the private sector, and equal representation of developed and developing countries.
- **A variety of funding windows.** The GCF’s initial funding windows cover adaptation and mitigation in equal measure, but the fund can also finance capacity building and similar activities for countries with limited resources. The Board is able to create windows to fund other programs over time, including, for example, for technology transfer and for the reduction of emissions from deforestation and forest degradation (REDD).
- **Country ownership.** National designated authorities will drive the funding process, recommending funding proposals to the Board members in the context of their national climate change strategies and plans and their own development objectives.
- **Multiple and simplified access to finance.** Recipient countries are granted direct access through accredited national implementing entities; in addition, multilateral agencies, such as the MDBs, figure as implementers. Simplified processes will be created for certain activities (e.g., small-scale approaches).
- **Catalyzing additional public and private finance.** The GCF will seek to catalyze additional finance through its activities at the national and international levels.

- **Engagement of the private sector.** A dedicated private sector facility operates separately from the two initial funding windows and provides financing directly and indirectly (i.e., through intermediation) to private sector mitigation and adaptation activities at the national, regional, and international levels. The facility's operations need to be consistent with a country-driven approach; as such, recipient countries will designate national authorities to review proposed projects to ensure alignment with national priorities.
- **Monitoring & Evaluation.** There is regular monitoring of impacts, efficiency, and effectiveness of GCF funded projects and programs, within a results framework established by the Board and an independent evaluation unit.

# Annex 4

## Sample of NDB Climate Financing Activities and Access to International Climate Funds



Climate Financing Activities					
Climate financing activities	Made concessional loans	No	Sector lending distribution	Energy	0 percent
	Made commercial loans	Yes		Transportation	0 percent
	Provided grants	No		Agriculture	100 percent
	Provided other instruments	No		Tourism	0 percent
	Total lending (09–11)	\$220,000		Other	0 percent

**Notes:** Small reforestation projects on pasture land and for “silvopastoril systems.”

- Terms of financing: low-interest loans.
- Bank’s contribution with own resources in support of this facility. Local currency. 12-year tenor, including 2-year grace period

Utilization of International Climate Finance		
Accessed international climate funds	No	<b>Notes:</b> Terms and conditions are not more favorable for climate investments. No access to international climate finance resources.
Through grants	No	
Through low-interest loans	No	

Climate Financing Activities					
Climate financing activities	Made concessional loans	Yes	Sector lending distribution	Energy	—
	Made commercial loans	No		Transportation	—
	Provided grants	Yes		Agriculture	—
	Provided other instruments	No		Tourism	—
	Total lending (09–11)	\$2,517,817,879		Other	—

**Notes:** PROVERDE program reported without details.

Utilization of International Climate Finance		
Accessed international climate funds	No	<b>Notes:</b> Banco del Estado applies more favorable terms and conditions for climate-related financing. See, for example, the PROVERDE program.
Through grants	No	
Through low-interest loans	No	

Financing Activities					
Climate financing activities	Made concessional loans	No	Sector lending distribution	Energy	—
	Made commercial loans	No		Transportation	—
	Provided grants	No		Agriculture	—
	Provided other instruments	Yes		Tourism	—
	Total lending (09–11)	\$7,954,000		Other	—

**Notes:** Starting in 2011, BANCOLDX decided to offer a special product to finance climate and environmental projects. Bancoldex, within its portfolio of products and services, includes credit lines that serve national and local needs for fixed investment and working capital for various projects, including environmental projects by micro, small, medium, and large enterprises in all economic sectors. Within these financing alternatives, BANCOLDX has offered three lines of credit dedicated to environmental issues since 2011:

- “Desarrollo Sostenible” (Sustainable Development)
- “Bogotá Banca Capital Impacto Ambiental” (Bogota Environmental Impact)
- “Modernización Empresarial” (Business Modernization)

These credit lines were structured with favorable financial conditions:

- Reasonable repayment terms (until 7, 5, and 10 years, respectively)
- Grace period (Until 1 year, 6 months, and 3 years, respectively)
- Low rates

In the specific case of “Desarrollo Sostenible,” the rate curve is inverted. That condition implies that “if you want more term, the rate is lower.”

Utilization of International Climate Finance		
Accessed international climate funds	Yes	<b>Notes: Terms and conditions are more favorable for climate investments.</b> With resources of the Clean Technology Fund, BANCOLDX designs and implements financial instruments with a grant component. The projects that BANCOLDX will finance are the following: <ul style="list-style-type: none"> <li>• Conversion of public transport in Bogota (diesel technology to hybrid technology)</li> <li>• Energy efficiency program (specifically in the hotel and hospital sectors)</li> </ul>
Through grants	Yes	
Through low-interest loans	Yes	

Climate Financing Activities					
Climate financing activities	Made concessional loans	Yes	Sector lending distribution	Energy	0 percent
	Made commercial loans	Yes		Transportation	57 percent
	Provided grants	Yes		Agriculture	8 percent
	Provided other instruments	Yes		Tourism	0 percent
	Total lending (09–11)	\$11,050,710		Other	35 percent

**Notes:** Endorses a special program called **Empresa Renovable, with funding from KfW (German Development Bank)**, which contributes to improve the environmental situation by promoting energy efficiency and renewable energy through financing with preferred conditions (longer terms and competitive interest rates). The program also provides technical assistance for investments in environmental reconversion, energy efficiency, and renewable energy. The maximum financing amount is up to 80 percent of the total investment.

Purpose of credit / maximum term / maximum grace period:

- Working capital / 4 years / 1 year
- Investments in capital / 12 years / 3 years
- Constructions and infrastructure / 12 years / 3 years

Utilization of International Climate Finance		
Accessed international climate funds	No	<b>Notes:</b> Terms and conditions are more favorable for climate investments. No access to international climate funds.
Through grants	No	
Through low-interest loans	No	

## BNDES (Banco Nacional de Desenvolvimento Econômico e Social)

Climate Financing Activities					
Climate financing activities	Made concessional loans	Yes	Sector lending distribution	Energy	–
	Made commercial loans	No		Transportation	–
	Provided grants	Yes		Agriculture	–
	Provided other instruments	Yes		Tourism	–
	Total lending (09–11)	\$31,529,000		Other	–

**Notes:** Key sectors include renewable energy and energy efficiency, public transportation of passengers, cargo transportation, water and sewer management, solid waste management, forestry, agricultural improvements, climate change adaptation, and disaster risk management (no distribution reported).

BNDES offers lower interest rates to finance renewable energy, more efficient equipment, urban transportation, and forest restoration.

Through the Amazon Fund, BNDES offers grants to reduce deforestation and degradation in the Amazon Forest.

Utilization of International Climate Finance		
Accessed international climate funds	No	<p><b>Notes: Terms and conditions are more favorable for climate investments.</b></p> <p>The main objective of the Amazon Fund (source of international climate finance) is to provide support to projects to prevent, monitor, and combat deforestation, as well as for the conservation and sustainable use of forests in the Amazon Biome.</p> <p><b>BNDES is the manager of the concessional loans of the National Climate Fund in Brazil.</b> The objective of BNDES is to ensure funds to support projects or studies aimed to promote climate change mitigation and adaptation. The climate fund supports projects in six sectors: efficient transport modals, efficient machinery and equipment, renewable energy (solar, ocean, and biomass), waste management with power generation, charcoal, and combating desertification. Additionally, BNDES offers special credit lines for renewable energy, (no concessional ones) energy efficiency, and forest restoration.</p>
Through grants	Yes	
Through low-interest loans	Yes	



Financing Activities					
Climate financing activities	Made concessional loans	No	Sector lending distribution	Energy	–
	Made commercial loans	Yes		Transportation	–
	Provided grants	Yes		Agriculture	–
	Provided other instruments	Yes		Tourism	–
	Total lending (09–11)	\$3,432,900		Other	–

**Notes:** COFIDE aims to become a leader in sustainable development financing. COFIDE is developing strategic alliances with different local and overseas institutions to assure the success of a new product called the **Green Projects Financing Program**, which is designed to finance renewable energy projects, programs for natural gas conversion, rainforest preservation, solid waste recycling, and wastewater treatment, among other initiatives.

Utilization of International Climate Finance		
Accessed international climate funds	No	<b>Notes:</b> Terms and conditions are not more favorable for climate investments. No additional information reported.
Through grants	No	
Through low-interest loans	No	

# Financiera Rural

Financing Activities					
Climate financing activities	Made concessional loans	Yes	Sector lending distribution	Energy	–
	Made commercial loans	No		Transportation	–
	Provided grants	Yes		Agriculture	–
	Provided other instruments	Yes		Tourism	–
	Total lending (09–11)	\$5,519,000		Other	–

**Notes:** Forestry Program provides loans tailored for the forestry sector.

Program conditions include the following:

- Maturity rates of up to 20 years (the longest maturity rates offered by the bank)
- 7-year grace period
- Interest rates are set at a range of 8.99 to 15 percent.

In addition, the Forestry Program allows tree biomass to be offered as a source of collateral. Furthermore, this program has access to two different sources of liquid collateral funds that can be used to facilitate credit access. The first liquid collateral fund is targeted for investments in forest plantations, and the second collateral loan can be used in the case of community forest enterprises. Financiera Rural also promotes and favors “technified” irrigation. It works with the Ministry of Agriculture as a technical agent to channel subsidies to its clients to be used for the purchase of technified irrigation systems.

- Since the subsidy only pays for part of the total cost of the irrigation system, Financiera Rural provides the remaining amount in favorable long-term loans (3–5 years).

Utilization of International Climate Finance		
Accessed international Climate Funds	Yes	<b>Notes: Terms and conditions are more favorable for climate investments.</b> Will channel funding from the Forest Investment Program, which is a specialized program within the Climate Investment Funds. The funds will be given partly in grants and partly in concessional funding.
Through grants	Yes	
Through low-interest loans	Yes	

Climate Financing Activities					
Climate financing activities	Made concessional loans	No	Sector lending distribution	Energy	38 percent
	Made commercial loans	Yes		Transportation	0 percent
	Provided grants	No		Agriculture	0 percent
	Provided other instruments	No		Tourism	32 percent
	Total lending (09–11)	\$43,318,000		Other	31 percent

**Notes:** In December 2010, FINDETER created a special loan program for energy efficiency and climate change mitigation with the objective of financing activities that would help in the reduction of greenhouse gas emissions. This program finances projects or investments for the following:

- Reduction of energy consumption
- Efficient generation of energy through renewable sources
- Reduction of carbon emissions
- Projects for CDM

Financial conditions of the program: max total loan is US\$15 million; loan term is max 5 years, including a grace period of max 1 year for capital.

Interest rate to intermediaries: IPC + 3.5 percent E.A. o DTF + 1.95 percent T.A.

Final interest rate: negotiated between the final beneficiary and the intermediary bank.

This loan program has financed one loan operation, which took place in August 2011 and was valued at US\$200,000.

Utilization of International Climate Finance		
Accessed international climate funds	Yes	<b>Notes: Terms and conditions of climate finance are more favorable.</b> Recently, the Inter-American Development Bank granted FINDETER two technical cooperation mechanisms. The first is developing a product that will assist projects focused on reducing carbon emissions. The second is developing a system that will measure the environmental and social risks of the projects that are seeking financing from FINDETER.
Through grants	Yes	
Through low-interest loans	No	

Climate Financing Activities					
Climate financing activities	Made concessional loans	Yes	Sector lending distribution	Energy	82 percent
	Made commercial loans	No		Transportation	0 percent
	Provided grants	Yes		Agriculture	10 percent
	Provided other instruments	Yes		Tourism	0 percent
	Total lending (09–11)	\$91,075,900		Other	8 percent

**Notes:** Established in 1954, FIRA (Fideicomisos Instituidos en Relación con la Agricultura) is a second-tier development bank that offers credit and guarantees, training, technical assistance, and technology-transfer support to the agriculture, livestock, fishing, forestry, and agribusiness sectors in Mexico. Originally, FIRA was established with the creation of FONDO (Fondo de Garantía y Fomento para la Agricultura, Ganadería y Avicultura). Subsequently, three other trusts were created and integrated to fulfill FIRA's current structure:

- FONDO (1954) (Fondo de Garantía y Fomento para la Agricultura, Ganadería y Avicultura): focused on mobilizing resources to the primary sector through short-term financing, targeted for working capital.
- FEFA (1965) (Fondo Especial para Financiamientos Agropecuarios): financing, subsidies, and other services for production, collection, and distribution of goods and services through long-term financing for the acquisition of machinery, equipment, installations, and others.
- FEGA (1972) (Fondo Especial de Asistencia Técnica y Garantía para Créditos Agropecuarios): Identification, evaluation, guarantees, technical assistance, supervision, training, and technology transfer services targeted to improve the sector's development and credit payback.
- FOPESCA (1989) (Fondo de Garantía y Fomento para las Actividades Pesqueras): focused on channeling FIRA's resources toward the fisheries sector.

Utilization of International Climate Finance		
Accessed international climate funds	Yes	<p><b>Notes: Terms and conditions are more favorable for climate investments.</b></p> <p>KfW financed on a zero return basis the early stages of one of the PoAs that FIRA is proposing to coordinate and also provided expertise on the structure of the program and an assessment of its potential market.</p> <p>Alongside the Inter-American Development Bank, FIRA is currently working to develop, through concessional funds, a portfolio analysis and an environmental and social risk management system.</p> <p>UNEP is providing an external expert consultant to train FIRA's employees (sales employees) in climate change mitigation projects and is also providing its expertise in climate change mitigation project structuring, especially to work with voluntary carbon markets. Finally, a study on FIRAs carbon project portfolio is taking place to analyze which project activities yield the highest mitigation potential.</p> <p>With funds from the Spain's Ministry for Industry, Energy, and Tourism, FIRA is currently collaborating to obtain a report on the viability to implement a program of energy efficiency and water preservation in the dairy industry of Mexico.</p>
Through grants	No	
Through low-interest loans	No	



# Annex 5

## Case Studies of NDB Climate Finance Instruments

### Case Study 1.

#### Unlocking domestic private finance by channeling international partners' climate-related funds to local financial institutions.

In 2006, El Banco de Desarrollo de El Salvador (BANDESAL) established the Empresa Renovable financing program, which aims to promote micro, small, and medium-sized enterprise investments in industrial energy conversion, energy efficiency, and renewable energy (RE) (mainly solar PV and small hydro).<sup>38</sup> Developed and financed with resources provided by KfW (German Development Bank), the program entails the following:

- A grant for technical assistance to increase knowledge and overcome capacity barriers;
- A credit line (Tier 2) at preferred terms and conditions to overcome the lack of long-term finance at competitive rates for investment in these sectors<sup>39</sup>

The grant covers a portion of the costs of feasibility studies and consultancy services for an amount

<sup>38</sup> Eligible sectors include transport, manufacturing, mining and quarrying, service (hotels, waste management, etc.), and agriculture (poultry, pigs, cattle, fishing).

<sup>39</sup> The list of eligible projects is available at [www.bandesal.gob.sv](http://www.bandesal.gob.sv)

that varies according to the type of intervention supported: up to US\$4,000 for energy conversion and energy efficiency projects, and up to US\$30,000 for RE projects. Private sector applicants cover the remaining costs, contributing at least 25 percent of the costs of the former projects and 50 percent of the costs of RE projects. These contributions are fully reimbursed to applicants that ultimately request and use the associated credit line.

The credit line, which covers up to 80 percent of the total investment, is characterized by a long-term repayment option, with a grace period of up to three years and a competitive interest rate fixed over the entire term of the loan. The fixed interest rate applied to

**TABLE A5.1. BANDESAL'S Empresa Renovable Terms and Conditions<sup>a</sup>**

Purpose of credit	Maximum term	Maximum grace period <sup>b</sup>
Working capital	4 years	1 year
Capital investment (i.e., machinery, equipment, etc.)	12 years	3 years
Construction and infrastructure	12 years	3 years

<sup>a</sup>For further details, see <https://www.bandesal.gob.sv/>.

<sup>b</sup>Since 2012, BANDESAL has also offered a credit line for Tier 1 "Energy Generation" for RE projects, with a maximum 20-year repayment term and 5-year grace period.

local financial institutions (LFIs), the project implementing agencies, amounts to 3.6 percent, and LFIs are asked to add, at a maximum, 4 points of intermediation margins to ensure the competitiveness of the line.

In addition, if investors need complementary guarantees to improve their access to credit, they can benefit from the Guarantee Fund (PROGAPE), managed by BANDESAL, or the Mutual Guarantee Company (Sociedad de Garantías Recíprocas, or G&S). Both companies offer credit guarantees under favorable conditions.<sup>40</sup>

In the past three years, BANDESAL'S Empresa Renovable has deployed almost US\$11 million in loans, and US\$308,408 in technical assistance grants, financing about 70 companies at an average interest rates of 7 to 8 percent, 1 to 2 percent lower than the average market rate and, moreover, fixed at mid- and long-term rates as opposed to market rate. This initiative has mobilized about US\$6 million in private investments.<sup>41</sup> Households recently became eligible for the program for investments in RE or energy efficiency (i.e., for the use of solar energy for domestic electrical systems). Broadening the target audience implies enhancing the private finance leverage potential of this initiative.<sup>42</sup>

## Case study 2

### Risks management tools to remove barriers to investment in low-carbon projects, thereby leveraging private capital for climate change mitigation.

FIRA (Fideicomisos Instituidos en Relación con la Agricultura), a Mexican second-tier development bank, has historically acted as risk-taker, offering guarantee products to Tier 1 banks and other financial intermediaries to share lending risk, therefore facilitating access to credit to local private investors.

Along with funding, FIRA also offers training, technical assistance, and technology-transfer support for the implementation of projects in the agribusiness sectors, livestock, fishing, forestry, and related

industries. Its portfolio of activities, mainly directed to benefit productive SMEs, includes promoting investments in projects with mitigation and adaptation purposes as part of its mission to promote Mexico's sustainable development.<sup>43</sup>

In 2011, based on a need to incentivize the participation of financial intermediaries in "green" investment identified by FIRA—which noticed the reluctance of the private banks to finance renewable energy projects, principally due to their lack of knowledge and understanding of the technologies involved—FIRA and the Mexican Ministry of Agriculture, Livestock, Rural Development, Fisheries, and Food (SAGARPA) created a guarantee fund, FONAGA Verde. FIRA is responsible for operating FONAGA Verde within the National Strategy for Energy Transition and Sustainable Use of Energy, so-called Bioeconomía.<sup>44</sup>

FONAGA Verde is a loan guarantee program that aims to cover first credit defaults in renewable energy and biofuel generation projects. With an initial capital base of US\$18 million (249.5 million pesos), financed with resources of the Energy Transition and

<sup>40</sup> PROGAPE provides guarantees of up to 70 percent and G&S of up to 100 percent. They charge an annual fee for the services that ranges between 2 to 3.5 percent of the amount guaranteed.

<sup>41</sup> The average interest rate (2009–11) in market rate loans with a one-year or longer term is about 9 percent (source: <http://www.bcr.gob.sv/esp/>).

<sup>42</sup> It should be noted that since the law on the financial system (Ley del Sistema Financiero para el Desarrollo) came into effect in January 2012, BANDESAL can directly offer the Empresa Renovable credit line to final end users. Since then, in fact, BANDESAL, has been able to provide Tier 1 loans. Up to date (May 2012), no Tier 1 loans have been granted, as the corresponding new policies and procedures are currently being revised, and are yet to be approved by the recently constituted Board of Directors of BANDESAL (source: personal communication with BANDESAL in May 2012).

<sup>43</sup> In 2011, FIRA participated in a total of 405 projects in 30 states in Mexico related to the efficient use of energy, renewable energy, forestry, and the reduction of greenhouse gas emissions, as well as water conservation projects that help to adapt to the consequences of climate change, generating investment of at least US\$183 million for producers and Mexican companies. FIRA reported that 16,933 producers benefited from these projects (source: personal communication with FIRA in July 2012 and FIRA's web site at: <http://www.fira.gob.mx>).

<sup>44</sup> For additional information, see <http://www.firco.gob.mx/proyectos/bioeconomia/paginas/proyecto-de-bioeconomia.aspx>.

Sustainable Use of Energy Fund, it operates through reserves classified by type of intermediary and credit. It has two subaccounts, covering 14.29 percent of the value of short-term working capital credits and 20 percent of long-term fixed investments.<sup>45</sup>

The maximum amount of the reserve per project is established at 10 percent of the fund's initial capital base, implying that a single project can have a reserve of up to about US\$1.8 million (23 million pesos). This ensures that the highest possible number of projects can benefit from fund's resources, preventing the concentration of resources on just a few interventions.

Eligible projects include biodigester systems, cogeneration, solar thermal and photovoltaic systems, wind energy, small hydro, production of bio-energy crops, pilot plants for biofuel production, and any project technology that generates or uses renewable energy and/or biofuels. Between 2010 and 2011, FIRA, through FONAGA Verde, supported several projects throughout Mexico with more than US\$1.4 million in guarantees that have boosted over US\$11.2 million of direct investment in renewables and biofuels.<sup>46</sup>

Considering the ambitious Mexican objectives to reduce greenhouse gas emissions to 50 percent below

2000 levels by 2050 and to increase the share of renewable energy in the country's energy mix to 35 percent by 2024—as stated in the climate bill approved last April 2012—investments in this sector are expected to greatly increase in the coming years. It is actually estimated that FONAGA Verde has the potential to boost investments by about US\$200 million (2.5 billion pesos) (Mergers-Alliance, 2012).<sup>47</sup>

FONAGA Verde is an important complement to the array of products offered by FIRA in the “clean” sector. All projects that have thus far been guaranteed with the fund have received FIRA loans, with an average value of US\$490,000. One-third of the projects are related to biodigester systems, confirming FIRA's primary role in the agribusiness sector.

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<sup>45</sup> For additional information, see <http://www.fira.gob.mx/Nd/FONAGA%20VERDE.pdf> and ALIDE (2011).

<sup>46</sup> As of July 2012, the average value of the project guaranteed by FONAGA Verde amounted to about US\$90,000. An estimated 93 percent of the funds' portfolio is represented by long-term loans. So far, there have not been any guarantee payments as all the lenders are repaying their loans as convened (based on personal communication made with FIRA in July 2012).

<sup>47</sup> For more information, see <http://www.sener.gob.mx/portal/Mobil.aspx?id=1938>.



# Annex 6

## Models of Leveraging

There is no single and universally applied definition of leverage, or methodology, to calculate leverage ratios. There is uncertainty about how to best quantify leverage as the terms have many different meanings for different people (Buchner, Brown, and Corfee-Morlot, 2011; Brown et al., 2011). Narrowly, in generic financial terminology, leverage refers to the ratio of equity to a blend of debt. Instead, financial institutions, such as MDBs, measure it as the ratio of public to private co-financing, as they aim to understand and demonstrate the multiplier effect generated by their contributions. For a dedicated environmental fund such as the Global Environmental Facility (GEF), the term can also include the resources mobilized during a second stage, as a result of the financed project (e.g., in case of project replication) (Brown et al., 2011).

The importance of leverage was particularly emphasized by the United Nations' High-Level Advisory Group on Climate Change Financing (AGF), a group of experts tasked by the UN General Secretariat to develop practical proposals on how to significantly scale up financing for mitigation and adaptation measures in developing countries. By using the concept of leveraging to determine the magnitude of total private investments to address climate change stimulated by public interventions (AGF, 2010a), the AGF derived a methodology for calculating the potential leverage factors that can be exerted by a variety of public financing

instruments, particularly those used by MDBs. This report does not seek to assess the validity of the AGF's estimate, but rather tries to build up on them to derive the leverage effect potentially exerted by NDBs.

### Existing Models of Estimating Climate Finance Leverage

NDBs have a variety of financial instruments available to facilitate climate investments. Many of the instruments are the same as those available to the MDBs, but the conditions under which they are provided are different. For example, NDBs invest directly in projects (referred to as Tier 1 lending or investing) or via financial intermediaries (Tier 2 lending or investing). Given the fact that NDBs are closer to the local financial institutions and better understand the risks they face, their ability to leverage is equal to or potentially better than the ability of MDBs to leverage the same instruments. Table A6.1 depicts the leverage factor, which can be applied across MDB instruments.

For example, every US\$1 of non-concessional debt—that is, debt for which there is no grant portion—can mobilize between US\$2 and US\$5 of private capital. Similarly, direct equity into a project, alongside that of a project sponsor, can leverage an estimated 8 to 10 times this amount in private capital. Debt that carries a grant portion—that is, is a concessional/low-interest loan—is estimated to leverage 8 to 10 times.

**TABLE A6.1. Estimated Leverage Factor of MDB Instruments**

Category of MDB instrument	Estimated leverage factor
Non-concessional debt	2–5 x
Debt financed via grants	8–10 x
Direct equity	8–10 x
Equity financed via grants	20 x
Guarantees financed via grants	20 x

Sources: AGF, 2010b; Brown et al., 2011.

It should be noted, however, that in this latter case, it is unclear how the AGF derived this leverage ratio (Brown et al., 2011).

Non-concessional “senior” debt tends to have a low to medium leveraging impact. This is especially the case when such instruments are provided on a *pari passu* basis. For smaller companies or projects with smaller funding requirements, the senior debt may be the largest component of the overall funding structure. In cases where the senior debt is provided as part of a larger syndicated funding structure, leveraging would be higher; however, small companies or projects do not typically fund themselves via syndicated structures, which are relatively complex, costly, and time-consuming to arrange.

Subordinated debt has more significant leveraging potential, since this funding instrument can be deployed in a highly tactical manner, tailored to fill crucial risk appetite gaps between more patient equity funders and less patient debt funders. Debt terms may be subordinated in terms of access to security, priority of debt repayment, length of repayment period, length of grace period before repayments, loan disbursement profile (i.e., first in-last out), loan covenants and events of default (including cross default), and a host of other possible parameters. In many instances, only a small amount of high-risk subordinated debt is needed in order to make the capital structure work for the other funders. The potential benefits to smaller companies and projects are no different and, arguably, even more important to the smaller end

of the market as a valuable quasi-equity-type risk product.

Concessional loans—that is, debt financed through grants—have a greater leverage effect than non-concessional debt, as the grants can be blended with other sources of capital. Equity financed through grant components can be seen as equity in a subordinated position—that is, with a lower hurdle rate—or in a first-loss position, as compared to private capital. However, there is some danger in confusing equity with a zero return hurdle and the expectation of full loss of capital as effectively being like a grant.

The category of guarantees is considered above all as grant-based, with a significant leveraging impact. However, it can also be the case that guarantees, when appropriate risk-based fees are charged, are not subsidized products but can earn a return.

### Framework for Measuring NDB Climate Leverage

This section considers the comparative advantages and disadvantages of NDBs versus MDBs in catalyzing and leveraging private financing through the use of the different instruments at their disposal. This approach is intended to stimulate discussion, acknowledging that it requires further empirical evidence.

NDBs have a variety of financial instruments available to facilitate climate investments. Many of the instruments are the same as those available to MDBs, but the conditions under which they are provided are different. For example, as mentioned previously, NDBs invest directly in projects (referred to as Tier 1 lending or investing) or via financial intermediaries (Tier 2 lending or investing).

Each instrument can have a grant component for which the leverage factor is different. Table A6.2 shows an estimate of the leverage factors for each instrument, building on those that have been proposed for MDBs. The table includes additional instruments, which are frequently available to NDBs, but for which no analysis has been conducted in terms of their use by MDBs (and therefore N/A is listed in the MDB column). The

**TABLE A6.2.** Comparison of MDB and NDB Leverage Factor

Category of instrument		MDB theoretical leverage factor	NDB theoretical leverage factor
Tier 1	Non-concessional debt	2–5 x	2–5 x
	Debt financed via grants	8–10 x	8–10 x
Tier 2	Non-concessional debt	N/A	1 x
	Debt financed via grants	N/A	4–8 x
Tier 1	Direct equity	8–10 x	12–15 x
	Equity financed via grants	20 x	20 x
Tier 2	Direct equity	N/A	12–15 x
	Equity financed via grants	N/A	N/A
	Guarantee at non-concessional rates	N/A	4–8 x
	Guarantees financed via grants	20 x	25 x

Source: Adapted from AGF, 2010b; Brown et al., 2011.

N/A = no data available.

leverage factor assumes that the only private capital directly mobilized comes from other financiers, such as local financial institutions (LFIs). Moreover, the leveraging potential, which could exist by the combined use of a set of instruments, has not been considered.

Tier 1 loans (both non-concessional and concessional) apply the same leverage factor that has been proposed for MDBs, as there is no particular reason to consider that the ability of an NDB to draw private capital into projects is better or worse than MDBs. MDBs will have a better credit rating for foreign currency loans, which may entice foreign banks to lend alongside them. But, for LFIs in local currency, NDBs could have similar leverage.

Tier 1 loan instruments are considered to have more leverage impact than Tier 2 instruments, because, as direct lenders, NDBs can influence the project directly. A Tier 2 non-concessional loan is a loan to a financial institution—one that is “on-lent” at market-based terms—in which the NDB takes on the credit risk of the LFI. Often, the LFI uses the NDB as a source of funding to access long-term foreign currency funds. The leverage effect is 1:1—that is, it assumes there is no additional private capital from an LFI that is drawn into a project with this instrument, as it is filling a liquidity or funding need and not a credit gap. A Tier 2 concessional loan provides the same type of facility to

the LFI, but at a low interest rate. In this instance, it can be blended with the LFI’s own funds and on-lent to the end-project at a below-market rate. The extent to which the LFI will provide funds may vary, but for the purposes of this report, it is assumed that the subsidized funding is evenly blended with non-subsidized funding. This results in a proposed leverage of 4 to 8 times.

Equity funding tends to have a medium to high leveraging impact, since equity is often the most challenging part of the capital structure to source. This is especially the case for smaller projects in less developed markets—where local private equity markets may be relatively underdeveloped and unsophisticated—while offshore equity providers tend to opt for larger investments in relatively established projects. As a result, the equity leverage is assumed to be higher for NDBs than MDBs. Equity is either provided directly by the NDB in projects (Tier 1) or via a fund (Tier 2). The assumption made is that leverage factors are considered the same, whether the NDB invests directly or via a fund, even though it is conceivable that investing via a fund could reach a broader audience, with a magnifier effect.

As for guarantees, the leverage factor will depend on the type of guarantee being offered. Guarantees which cover a particular risk or set of risks (e.g.,

technological or regulatory), and which are provided by an entity closer to that risk (i.e., NDBs), can be catalytic and offered on the basis of a non-concessional fee.

In all cases, it is reasonable to expect that the NDB's leverage factor will be higher than that of an MDB. NDB guarantees will be less likely to be called, thus less capital needs to be allocated, for the following two main reasons:

1. First, the NDB is an integral part of the host country government and, by virtue of this relationship, is in a position to anticipate—and possibly even influence—host country factors which could impact, directly or indirectly, the likelihood of a guarantee being called. For instance, local policy approaches and regulatory environments might improve the credit quality of climate-related projects, with an obvious example being feed-in tariffs for renewable energy projects. Therefore, the NDB's ability to help ensure a stable policy and regulatory environment

over the term of a project loan or investment could help mitigate the risk of a guarantee being called.

2. Second, by operating directly and solely in the host country, the NDB intimately understands local market conditions and the potential impact that such conditions may have on the credit quality or commercial performance of a climate-related project. These conditions may include local labor conditions, permitting and approval processes, and local acceptance of proposed projects (e.g., wind farms or hydro dams). These factors may have less direct or sustained impacts than others such as tariff regimes, but they are nonetheless important factors to assess in determining the likelihood of a guarantee being called.

These advantages of NDBs support the rationale for a higher leveraging impact over MDB guarantee activity, of up to 8 times for guarantees for which market-rate fees are paid, and up to 25 times for guarantees financed via grants.

“National development banks are key actors in climate finance and should play a far more active role given that, apart from their financial nature, they have other attributes that make them unique actors in the market. The challenge will be to gain from their experiences and knowledge at the national level in order to channel international resources into projects that mitigate greenhouse gas emissions.”

Rodrigo Sánchez Mújica, Esq.  
Director General  
Fideicomisos Instituidos en Relación con la Agricultura (FIRA), Mexico

“FINDETER seeks to support sustainable progress through the funding of infrastructure projects that generate wellbeing and improve the quality of life for Colombians. To fulfill these clear guidelines, we emphasize the importance of promoting, structuring, and financing projects aimed at mitigating and adapting to climate change. We have therefore developed two lines of credit with special conditions to encourage market development, and are currently designing a third that will promote the potential of energy efficiency in the public lighting sector.”

Luis Fernando Arboleda  
Manager  
Financiera del Desarrollo Territorial (FINDETER), Colombia

“This publication is an important contribution to the objective of strengthening participation of national development banks as intermediaries in international climate finance, which helps to trigger investments aimed at mitigating climate change. ALIDE will continue to collaborate within the framework of its alliance with the IDB to increase the capacities of national development banks to achieve environmental sustainability for our countries.”

Eduardo Vásquez Kunze  
Head of Institutional Relations  
Asociación Latinoamericana de Instituciones Financieras para el Desarrollo (ALIDE)

“The national development banks and the international financial institutions will be at the core of implementing a shift of paradigm on how we do business on planet Earth.”

Dr. Jochen Harnisch  
Division Chief  
Competence Centre Environment & Climate  
German Development Bank (KfW)

“This study unveils the important efforts made by national development banking in Latin America to promote a green economy model that responds better to the major climactic challenges of recent decades, and that will continue to be a cause for debate in coming years. The joint work with national development banks offers an innovative alternatives for working hand-in-hand with our clients to strengthen their activities within the framework of our strategic goal of offering more humane and sustainable banking.”

Carlos Raúl Yepes Jiménez  
President  
Bancolombia Group

Institutions for People

