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Case Study on Catalytic Finance: The Inter-American Development Bank

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Introduction

Guided by the United Nations' 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), governments, development institutions and multilateral agencies around the world have declared their intention to strive for economic development balanced by social and environmental sustainability. The achievement of this broad set of goals requires massive investments in development-related projects. The United Nations (UN) estimates that the new agenda will require flows of capital to developing countries to increase from a scale of hundreds of billions to that of trillions, requiring nearly US\$4 trillion per annum globally; in developing countries, the existing funding gap is estimated at approximately \$2.4 trillion.¹ Development finance institutions (DFIs) and multilateral development banks (MDBs) are expected to play a key role in closing this funding gap, because this scale of financing cannot be accomplished by the public sector alone. Even more crucially, these financing goals will require significant participation by private investors: the flows of capital controlled by the private financial sector are significantly larger than those available for sustainable development from governments and multilateral agencies as well as those available for philanthropic activities. Private financial investments are primarily concerned with achieving stable risk-adjusted returns and not with furthering developmental goals. However, the interests of private investors and the broader developmental agenda have significant overlap insofar as sustainable development is compatible with and often a prerequisite for sustained financial returns in emerging markets investments. Moreover, the widespread support and legitimacy that sustainable development-related investments enjoy in both investing and investee communities can help to underwrite the financial success of related projects. Finally, the advent of the COVID-19 pandemic and associated disruptions to economic activity, supply chains, trade flows and public health have clearly demonstrated the crucial need for coordination between private investors, development institutions, governments and philanthropic foundations in their pursuit of the SDGs. The purpose of what we have called *catalytic finance* is to design, implement and foster innovative transactions, financial instruments, novel screening and due diligence practices, networks of partnerships, specialized communities of capital providers, issuers and intermediaries and a larger ecosystem of diverse actors focused on allocating private, government and multilateral capital into development projects.

According to the UN, the resources and capital needed to achieve the sustainable development agenda do exist, but need to be redirected. Some observers have argued that for corporate decision-making, financial capital is no longer a scarce resource: the ratio of worldwide financial

¹ See Convergence. (2018). *The State of Blended Finance 2018*. Retrieved from <http://www.oecd.org/water/OECD-GIZ-Background-document-State-of-Blended-Finance-2018.pdf>

assets to global GDP is expected to rise from 6.5x in 1990 to more than 10x in 2020.² Since the ratio of financial assets to GDP is increasing, we should expect an abundance of financial capital in search of GDP-generating investment opportunities; indeed, the global and sustained reduction in real interest rates and hurdle rates of return during this period is a corollary of this trend. However, though growing, the amount of capital available for impact investing is limited, and there is still a gap in financing opportunities for sustainable development projects. It is estimated that only 10% of current infrastructure investments come from the private sector, providing significant potential for further private sector involvement.

The abundant private capital in the developed world, in searching for value-generating investment opportunities, might gravitate towards developing countries where the ratio of financial assets to GDP is relatively low and capital is correspondingly scarce. The genuine and pressing needs for development-related projects can cement the viability of private investments in emerging markets. The ‘crowding in’ of private capital towards achieving the UN SDGs has the possibility of opening up \$12 trillion of market opportunities in food and agriculture, energy and materials, and public health and wellbeing.³ However, private investors in developed markets remain wary of the myriad unfamiliar risks of investing in emerging markets. Private investors choosing to invest in developing countries suffer from extreme information asymmetries, unfamiliar regulatory regimes, limited disclosure requirements and political and currency risks which are difficult to measure, among other challenges. Finally, the diffuse benefits of investment in public health reduce the incentives for private return-seeking capital to contribute the achievement of health-related SDGs. As a result, private capital directed towards sustainable development remains untapped where it is most needed, that is, in developing countries.⁴

Another key challenge—and also opportunity—is the diversity, malleability and complementarity of different sources of capital. Capital devoted to development purposes can take the form of grants, concessionary capital, narrowly and widely distributed equity, mezzanine and convertible debt, subordinated, senior and secured debt, loan guarantees, public endorsements from nongovernmental organizations, as well as community legitimacy. The structuring of financial flows requires that viable transactions are designed in a decentralized way, tailored to the particulars of specific situations with different cash flow expectations, maturity, volatility and other sources of both financial and development risk. While there exists significant pools of capital in search of stable returns that could be tapped by the development and sustainable finance

² See Mankins, M., Harris, K., & Harding, D. (2017). Strategy in the Age of Superabundant Capital. *Harvard Business Review*, 95(2), 66-75 for an articulation of this view.

³ See Niculescu, M. (2017). Impact investment to close the SDG funding gap. *United Nations Development Programme*. Retrieved from <https://www.undp.org/content/undp/en/home/blog/2017/7/13/What-kind-of-blender-do-we-need-to-finance-the-SDGs-.html>

⁴ Bendersky, M. (2019a).

communities, there is a need for an institutional actor that can function as the policy entrepreneur to address the collective action challenge of organizing and mobilizing disparate sources of capital. The policy entrepreneur has the unique task of curating diverse sources of capital, while respecting their differential maturity, risk and return requirements, into a blended pool that meets the capital structure, collateral, amount, timing and other requirements of the issuer. In principle, DFIs, MDBs, and philanthropic institutions have a unique position at the nexus of capital suppliers and investment projects. As such, they could evolve to act as curators of capital mobilization that create the innovative transaction structures to maximize the flow of private and public capital in diverse forms to the neediest development projects.

More broadly, this curation of a variety of capital sources has been referred to as *blended finance*. Blended finance is a tool to leverage limited amounts of scarce development-focused capital into much larger amounts of other capital, particularly private capital, towards projects with high development impact. In order to successfully implement blended finance transactions in a development finance context, a development bank must play the essential role of a policy entrepreneur, often sourcing catalytic capital and other resources in a highly customized manner to address specific financing challenges. This case study examines three innovative transactions designed by the Inter-American Development Bank (IDB) to address specific development financing challenges in the Latin America and Caribbean (LAC) region.⁵ The role of policy entrepreneur is one that must be explicitly nurtured. In 2008, the IDB launched a dedicated functional unit called the Office of Outreach and Partnerships (ORP), tasked with fostering the essential and catalytic cooperation between public and private entities to accelerate development progress in the LAC region. Bernardo Guillamon, Manager of the ORP, states emphatically, “The ORP is an IDB Group success story. Driven by the vision of the IDB’s President Luis Alberto Moreno, in the last decade this dedicated partnerships team has successfully mobilized tens of billions of dollars and cooperated with more than 500 partners. This success is a result of hard work and a commitment to designing high-impact, catalytic collaborations. But it is also made possible by our position in the IDB’s strategic core, our close coordination with higher management, and the institutional infrastructure and human capital that the creation of ORP has brought to the IDB Group.” The work of fostering cooperation between so many partners in order to leverage development capital is difficult, but essential to the success of what we call catalytic finance.

We examine the methods deployed by the ORP in three cases to decrease actual and perceived risk, and match appropriate sources of capital with pressing development needs. These cases comprise risk reduction in the financing of geothermal energy, securitization of solar energy, and collective action to facilitate efficient and results-based investment in disease prevention. The

⁵ The authors disclose that Satyajit Bose has worked as Principal Investigator of sponsored research projects funded by IDB related to catalytic finance and sustainable finance indices in emerging markets.

broader lessons from these examples, when scaled up to similar situations, can facilitate the leveraging of private investment in the underdeveloped world that is many times larger than the available public capital.

What is the role of catalytic finance?

According to the OECD, blended finance is defined as the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries. “Development finance” is defined as public and private finance that is being deployed with a development mandate, and “additional finance” is commercial finance that does not have an explicit development purpose and is not primarily targeted at development outcomes in developing countries. A key tenet underpinning the OECD’s definition is that development finance is expected to catalyze the additional investment in development.⁶ Blended finance is thus the practice of leveraging development capital by mobilizing additional capital that has no development mandate. The term *catalytic capital* has been more narrowly defined by other observers. For example, according to the MacArthur Foundation, catalytic capital is patient, risk-tolerant, concessionary, and flexible in ways that differ from conventional investment, and is an important tool in bridging financing gaps in sustainable development projects, complementing conventional investment, and attracting additional capital.⁷ The MacArthur Foundation views catalytic capital as comprised of a concessionary subset of impact investing and philanthropic grant making. Conversely, the OECD definition of blended finance does not require that development capital, which is expected to be catalytic, be concessionary—it merely requires a development mandate. While there will continue to be differences and overlaps in the various definitions of blended finance and catalytic capital, in this study, we will use these terms loosely, encompassing the range of meanings used in the development finance community.

We use the term *catalytic finance* herein to refer to the practice of combining different sources of capital, designing bespoke instruments and fostering the appropriate ecosystem of actors necessary for the successful achievement of development impact. In order to maximize capital mobilization, the specific practices of catalytic finance will depend on the nature of the project, the capabilities of the agents involved and the particularities inherent to the locale. Catalytic finance projects require the involvement of at least two different agents: an agent providing

⁶ See OECD. (2018). *Making Blended Finance Work for the Sustainable Development Goals*. Retrieved from <http://www.oecd.org/publications/making-blended-finance-work-for-the-sustainable-development-goals-9789264288768-en.htm>

⁷ See MacArthur Foundation. (2019). Catalytic Capital Consortium. Retrieved from <https://www.macfound.org/programs/catalytic-capital-consortium/>

capital with a development mandate and one providing commercial capital (public or private) without a development mandate. Development capital is available both in commercial and concessional form. Concessional loans may be extended at below-market rates of interest, while concessional equity might comprise with asymmetrical returns, or grants with expectation of redemption. Examples include:

- Concessional official development assistance (ODA) allocated by governments either to use nationally or internationally;
- Both concessional and commercial funds provided by MDBs and ODAs like the World Bank or the Inter-American Development Bank;
- Philanthropic capital from foundations like the Gates Foundation or the Rockefeller Foundation;
- Equity investments by impact funds which require lower than market rates of financial return while expecting targeted developmental impact.

Private capital requires market rate returns and often requires some form of risk mitigation or partial guarantees in order to participate in development-related investments. Examples include:

- Investment grade return-seeking entities such as asset owners, foundations and endowments.
- Equity investments by impact funds which require market rate returns.

While SDG-related development projects in underdeveloped countries are potentially suitable opportunities for development-aligned investors, private investment is often lacking due to perceived or actual political risk, exchange rate risk, or ratings below investment grade. A catalytic finance practitioner must be on the lookout for appropriate matching opportunities between the goals of private capital and the needs of development actors. The ORP within the IDB has focused on the task of looking for private capital that might be aligned with development needs, articulating resource constraints, shaping the nature of collaboration and designing the necessary transactions. Matias Bendersky, who led the task of resource mobilization within ORP, said, “Our work in the Resource Mobilization Division requires that we keep one eye trained on IDB Group priorities and initiatives and another on the shifts and trends occurring outside our organization. Our capacity to do this well helps us to anticipate the needs and preferences of donors and investors, tailor financing and partnership instruments to these criteria, and more effectively unlock catalytic capital for development in LAC. This is particularly important given the substantial financing gap that currently threatens the achievement of the Sustainable Development Goals (SDGs) in the region, as well as the middle-income transition of several LAC countries and resulting limits on traditional development financing flows.”

To successfully mitigate the combination of risks and mobilize the maximum amount of capital and to facilitate an alignment of interests, the catalytic agent has to design a suitable combination of a range of financial structuring devices. The most widely used devices and the risks they mitigate are outlined below:⁸

1. **Guarantee:** If an investee fails to perform as envisaged in the transaction agreement, a third party will make up for the losses and compensate the investor so that it does not incur any losses. Some types of guarantees include first loss, partial risk or credit guarantees, and trade finance guarantees. Guarantees shift risk from investors to the guarantor, typically a highly-rated entity willing to underwrite such risks in order to further the developmental mission.
 - **Risks:** The right guarantee from the right party will alleviate concerns an investor may have. Guarantees mitigate potential losses associated with construction and completion risk, political risk, access to follow-on or refinancing capital and other adverse potential events.
2. **Insurance:** Insurance acts in the same manner as a guarantee, but its cost is explicitly borne through the payment of a premium to an insurer. The insurer provides the investors with protection against covered losses. Insurance cover becomes necessary when there is no highly rated entity ready to provide a guarantee. Similar to guarantees, providing insurance is one of the most catalytic instruments in blended finance.
 - **Risks:** This form of risk management is more commonly used when there are outside parties risking the success of a project, such as the risk of political turmoil.
3. **Hedging:** Hedging is intended to offset (partially or completely) the fluctuations in the value of an asset for an investor that cannot assume foreign currency risk, or marks-to-market its portfolio or has some other reason to maintain a stable ongoing asset value. Hedging shifts risks from investors to the hedge provider, typically an international bank, in return for a fee.
 - **Risks:** Hedging is useful when mitigating ongoing risks such as currency, price volatility or interest rate risk. Hedging is often essential in the context of unstable currencies and asset values correlated with commodities or natural resources.
4. **Junior/Subordinated Capital:** A subordinated debt or junior equity structure is used to parse cash flows so that different types of investors can assume differential risks while investing in the same project. The priority of claims in liquidation or bankruptcy makes junior and subordinated debt more risky than senior or secured debt. When there are some investors

⁸ See Blended Finance Taskforce. (2018). *Blended Finance, Better World*. Retrieved from <https://www.blendedfinance.earth/better-finance-better-world>

who are willing to assume a riskier position of priority in the capital structure so as to receive a higher financial return, junior or subordinated debt can reduce risks for senior or secured investors who require a lower risk, lower return investment proposition. This type of structure effectively shifts risk from one class of investors to another.

- **Risks:** Differential priority can mitigate several kinds of risk from construction risk to reputational risk, provided that there is an adequate proportion of available capital ready to assume a broader set of risks. In principle, this structure can be less costly than insurance because re-allocates risks among investors without requiring a third party such as an insurer or a hedge provider.

5. **Securitization:** Securitization consists of the packaging of otherwise illiquid assets into more tradable instruments, such as bonds, usually combined with some degree of pooling and diversification. Securitization allows the investee to tap sources of capital that have a strong liquidity preference. The pooling of assets increases the statistical accuracy of estimated risks and returns, thereby widening the set of investors who are willing to assume investment risks.

- **Risks:** Securitization mitigates risks associated with concentration, illiquidity, time-dependent projects and access to refinancing capital. Since securitization is feasible only with some pooling of assets, this type of risk transfer is generally suitable when many investment projects with similar risk characteristics can be packaged. Securitization involves significant legal costs, which are justified in large transactions by the reduced capital costs of tradable securities relative to illiquid loans.

6. **Contractual Mechanisms:** Contractual mechanisms comprise a commitment by an investment-grade purchaser of the services of the investee project. For example, in the context of project and infrastructure finance, a significant customer may commit to purchase electricity or port capacity at predetermined prices for decades. Such a commitment sharply reduces the revenue risks of the project, rendering the investment project more bankable. A common example is a long-term power purchase agreement for a power plant that is still in development.

- **Risks:** Risks mitigated include commercial and market risk since the contract guarantees that the product will be sold at a certain price. However, the project must demonstrate a clear path to a future revenue stream—if there is significant project completion risk, a contractual mechanism can do little to relieve investor concerns.

7. **Grants:** Grants comprise the provision of capital with no expectation of repayment or compensation. Grants increase the bankability of projects and can underwrite other

sources of capital that require return or minimal risk. Grants can be structured to be contingent or convertible upon preset outcomes, so as to facilitate risk sharing (see Case #1 for an example of Contingent Recovery Grants). Grants are particularly important in the least developed countries or in contexts where market prices for project output would reduce developmental impact.

- **Risks:** Risks mitigated include exploration & development risk, access to capital, bankability, lack of capacity, low ability to pay for services, among others.

Key challenges of leveraging catalytic finance

Due to its complexity, leveraging catalytic finance is not without its challenges, especially in developing countries.⁹

Redirecting Private Capital Flows to Development Needs

The vast majority of private capital flows are invested in high-income countries. Redirecting some of these flows to developmental projects in low and middle-income countries requires costly inducements that must be carefully rationed. Investments in energy, transport, health, education, and water and sanitation generally require significant public sector support in order to be viable. The for-profit nature of most forms of private capital implies that such public sector support might ultimately subsidize private investors at the expense of developmental impact. The innovative finance initiator has the unenviable role of balancing the requirements of capital providers and stakeholders in investee countries.

Local Specificity

Within each region, development needs vary, and so development projects must be tailored to local needs. For example, in Africa, 42% of blended finance is being used for the development of renewable energy, with only 5% devoted to sustainable land use development. In Latin America, 26% of blended finance is for sustainable land use development and 24% for the development of renewables.¹⁰ Varying development needs of each region require often complex, time-consuming solutions. A blended finance catalyst must ensure that the pipeline of transactions conforms to the developmental priorities of the region.

Impact Assessment

⁹ For a survey of challenges facing the appropriate application of blended finance to developmental goals, see Romero, M. J. (2016). Development Finance Takes 'Private Turn': Implications and Challenges Ahead. *Development*, 59(1-2), 59-65.

¹⁰ See Blended Finance Taskforce. (2018). *Blended Finance, Better World*. Retrieved from <https://www.blendedfinance.earth/better-finance-better-world>

The blending of for-profit capital with developmental goals requires that developmental impact be assessed, lest it be sacrificed to the exigencies of generating financial return. Impact assessment is a new and evolving practice in the context of blended finance transactions. It necessarily requires the measurement of non-financial outcomes, which are not commensurable with financial returns.

Access to Capital for SMEs

The private sector in low and middle-income countries is characterized by small and medium sized enterprises (SMEs). By their nature, SMEs have limited access to capital but are often responsible for the bulk of employment in developing countries. The provision of capital to SMEs requires due diligence and credit rating skills which are quite different from those used to evaluate large enterprises. In addition, SMEs often need non-financial inputs (such as training, partnerships and regulatory support) just as much as they need capital. Blended finance for the SME sector has the challenge of raising large scale capital from donors and investors, while simultaneously making small investments at a manageable due diligence cost per investment.

Transparency and Accountability

Relative to public sector projects, blended finance transactions can have reduced transparency and accountability, unless these aspects are built into the design. The complexity and bespoke nature of blended finance can limit the public's understanding of the mechanism. This can fuel criticism if the project does not deliver the expected developmental outcome.

Who is leveraging catalytic finance? Where?

It is estimated that for every \$1 of development capital, \$3 of private capital are mobilized, making intermediaries key actors in the successful use of catalytic finance instruments and in achieving the UN SDGs.¹¹ Effective institutions and organizations acting as intermediaries must have the capability of combining players that have different and complementary risk-reward profiles to create an effective capital stack. Multilateral development banks (MDBs) and bilateral development finance institutions (DFIs) are recognized as the first institutions to use catalytic finance in order to advance their mandate. Because these institutions interact with both the private and public sectors, they can act as a natural conduit between the two.

¹¹ See Blended Finance Taskforce. (2018).

Examples of DFIs and MDBs involved in catalytic finance:¹²

Bilateral Development Finance Institutions (DFIs)

- AFD/Proparco – French Development Agency (France)
- BIO – Belgian Investment Company for Developing Countries (Belgium)
- CDC Group (UK)
- CDP/SIMEST – Società Italiana per le Imprese all'Estero (Italy)
- COFIDES – Compañía Española de Financiación del Desarrollo (Spain)
- DFC – U.S. Development Finance Corporation (United States)
- Finnfund (Finland)
- FMO – Dutch Development Bank (Netherlands)
- IFU – Industrialization Fund for Developing Countries (Denmark)
- JBIC – Japan Bank for International Cooperation (Japan)
- KfW Group/DEG – German Investment Corporation (Germany)
- Norfund (Norway)
- OeEb – Development Bank of Austria (Austria)
- SIFEM – Swiss Investment Fund for Emerging Markets (Switzerland)
- SOFID – Portuguese Development Finance Institution (Portugal)
- Swedfund (Sweden)

Multilateral Development Banks (MDBs) with Private Sector Arms

- ADB – Asian Development Bank
- AfDB – African Development Bank
- AIIB – Asian Infrastructure Investment Bank
- EBRD – European Bank for Reconstruction and Development
- EIB – European Investment Bank
- IDB – Inter-American Development Bank (including IDB Invest)
- ISDB – Islamic Development Bank
- NDB – New Development Bank (BRICS)
- WBG – World Bank Group (including IFC)

Catalytic finance efforts are largely focused in Africa, Asia, and Latin America and the Caribbean, but these stakeholders are employing innovative finance mechanisms across the developing world, with over half geared toward more than one region. Latin America and the Caribbean, in particular, is a region where catalytic finance is likely to be especially fruitful, because macroeconomic development in the region is likely to limit future overseas development assistance and the robust local private sector draws in private capital from lower-growth OECD countries.¹³

¹² See Blended Finance Taskforce. (2018).

¹³ M. Bendersky (2019b).

The IDB Group

The IDB Group is the leading source of development finance for Latin America and the Caribbean. The IDB Group comprises the Inter-American Development Bank (IDB), which has worked with governments for 60 years; IDB Invest, which serves the private sector; and IDB Lab, which tests innovative ways to enable more inclusive growth. The IDB Group uses catalytic finance techniques to pioneer, de-risk, and mainstream innovative business models and technologies to deliver long-term financing for economic, social, and institutional projects. In addition to its loans, grants, and guarantees, the IDB Group conducts unique research, supports local capacity development and builds partnerships that leverages blended financial, social and human capital to address challenges faced by the development finance ecosystem in the context of reduced government capacity and the need to foster joint private-public efforts.

The IDB has 48 member countries, including 26 borrowing countries from the region and 22 non-borrowing countries from outside the region. The borrowing countries collectively have slightly more than 50% of the voting power on the IDB board. This majority control by the investee countries is relatively unusual among MDBs and contributes to broader regional legitimacy and a greater alignment of interest with borrowing countries.

The Office of Outreach and Partnerships (ORP), created in 2008, serves the entire IDB Group as part of the IDB's strategic core, which enables it to work horizontally across all IDB Group divisions and departments to develop and manage institutional partnerships, mobilize financial and non-financial resources, and mainstream efforts to unlock catalytic capital for development, with a focus on private sources. Among its fellow actors in the development landscape, the IDB Group pioneered this model of having a dedicated partnerships office, which has enabled it to mobilize more than US\$36 billion from over 500 partners in just over ten years. Within ORP, the Resource Mobilization Division has been given the mandate of leading efforts on this last point, which in 2019 formally became a key pillar of the IDB's Update to the Institutional Strategy (2020-2023). The IDB is the largest multilateral source of financing for the region. According to the Overseas Development Institute, IDB's disbursements in Latin America and the Caribbean in 2016 (\$12.3 billion) were almost three times larger than those from LAC sub-regional banks combined (\$4.5 billion).¹⁴ In 2018, 117 non-sovereign guaranteed loans originated by IDB Invest were co-financed by the Bank, for a total of \$2 billion. When this amount is added to the \$13 billion in sovereign loan approvals, together with an additional \$234 million in non-sovereign guaranteed loan approvals from trust funds, the IDB's volume of approvals for 2018 totaled \$15.2 billion.

¹⁴ See Engen, L. & Annalisa, P. (2018). A guide to multilateral development banks. *Overseas Development Institute*. Retrieved from <https://www.odi.org/sites/odi.org.uk/files/resource-documents/12274.pdf>

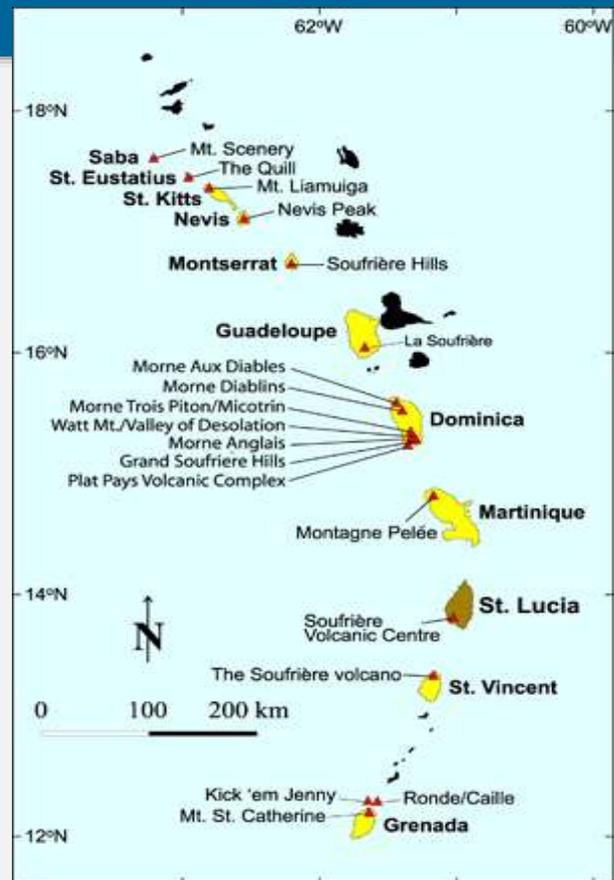
Case Studies

We examine three cases where the IDB Group has designed tailored catalytic finance transactions to address specific local development finance challenges. These cases comprise risk reduction in the financing of geothermal energy, securitization of solar energy, and collective action to facilitate efficient and results-based investment in disease prevention. We examine the methods used in these transactions to decrease actual and perceived risk, and match appropriate sources of capital with pressing development needs. As mentioned previously, the broader lessons from these examples, when scaled up to similar situations, can facilitate the leveraging of private investment in the underdeveloped world that is many times larger than the available public capital. They all involve the curating of diverse sources of capital which would not be feasible in the absence of a mission-driven blended finance sponsor such as the IDB. These cases illustrate the crucial role played by the Office of Outreach and Partnerships within the IDB, whose task is to act as a resource mobilizer, blended finance sponsor and policy entrepreneur.

Case #1 – Sustainable Energy Facility (SEF)

Context

Even though the region enjoys ample access to renewable resources for energy, its energy source has primarily consisted of fossil fuels, mostly in the form of diesel and heavy fuel oil (HFO). As of 2017, 87% of the region's energy production came from imported fossil liquid fuels. Due to significant oil price volatility and dependence on petroleum imports, the fiscal balance of Caribbean countries is subject to considerable instability. This represents a drag on economic growth, limiting the fiscal sustainability of social and infrastructural expenditure. The petroleum dependence also contributes to an adverse environmental impact due to local air pollutants and GHG emissions.¹⁵ Developing an energy sector in a



Source: University of the West Indies, Seismic Research Centre

¹⁵ See Timmons, L. (2017). Caribbean Nations Turn to Renewable Energy. *Council on Hemispheric Affairs*. Retrieved from <http://www.coha.org/caribbean-nations-turn-to-renewable-energy/>

small island that supports economic growth and energy independence is difficult, particularly due to lack of economies of scale, limited resources, limited private investment, lack of track record in new technologies in the local private sector, and exposure to extreme weather events.

Since there are few interconnections between islands, each island's grid must be able to meet peak electricity demands without recourse to regional diversification across energy sources available in spatially dispersed grids. An isolated grid must economically serve both baseload and peak requirements from local sources. Solar and wind technologies' intermittent nature require backup fossil fuel installations when renewable energy is unavailable or coupled investment in expensive utility-scale batteries. The intermittency of these renewable technologies without battery storage renders them impractical alternatives to diesel and HFO generation in small isolated grids.

A potentially important though less common source of renewable energy is geothermal heat. The Caribbean Islands, like most islands, sit on volcanic land. The heat trapped underneath the earth's crust can be a source of energy and energy independence for the region. Geothermal energy, in certain situations, can efficiently provide baseload power. If thermal reservoir depth, heat intensity and fluid characteristics are optimal, then a geothermal electricity plant's capacity factors can exceed 90%, rendering it comparable to coal, diesel and HFO and significantly higher than gas, hydroelectric, wind and solar.

An additional advantage of geothermal sources is higher energy density (or power obtained per unit of land area). Land scarcity poses a key obstacle for other forms of renewable energy development. Wind and solar farms, for example, require a significant amount of land that must be diverted from other uses. Though community rooftop solar avoids that problem, the potential amount of energy it could produce would not be enough to provide adequate electricity for the whole island. Offshore wind, avoiding the use of land by placing wind turbines in strategic locations in the ocean, is also impractical as the Caribbean Sea is routinely exposed to extreme weather events such as hurricanes and tropical storms that could damage the turbines – leaving the islands with no power during a possible emergency.

Since renewable energy development and the transformation of the existing grid is capital intensive, capital investment in a solution that does not eliminate exposure to oil price volatility, address peak loads and provide high energy density is inefficient and incomplete. Geothermal energy can address these three challenges if the characteristics of the underground thermal reservoir are suitable to utility-scale electricity generation. Two challenges pose obstacles to the embrace of geothermal energy. First is the significant upfront capital costs of drilling and the fact that expensive drilling must be performed *ex ante*, before it is known with certainty that the

underground thermal reservoir will be suitable for electricity generation. Efficient locations for tapping geothermal energy are not obvious without extensive geological surveys and exploratory drilling. Drilling, in particular, is expensive and could yield disappointing results if insufficient levels of heat or permeability are found. For this reason, geothermal exploration and development usually requires the support of public or concessional financing during its early stages to reduce the risk associated with the characterization of the resource and to attract private financing. The second challenge is the country's capacity to absorb sovereign debt and develop complex infrastructure with limited access to finances. Multilateral organizations, such as the IDB and the Caribbean Development Bank (CDB), play a key role in providing finance to public institutions for this purpose, nevertheless facing the challenge of national fiscal ceiling limits.

Solution

The Sustainable Energy Facility (SEF) is designed to remove existing financial, technical, and institutional barriers to geothermal energy development in the Caribbean. To make this possible, the IDB and the Caribbean Development Bank (CDB) created the SEF by putting together own resources and leveraging international funds to provide concessional loans, grants, and contingent recovery grants (see Figure 1). The SEF provides grants governments in order to build capacity, improve the regulatory frameworks, perform environmental impact assessments and studies, and conduct surface pre-feasibility activities for geothermal development.

In order to develop geothermal sources of energy, exploratory drilling needs to be conducted which could be expensive and unfruitful. To mitigate the financial risk of exploratory drilling, the facility provides projects with Contingent Recovery Grants (CRGs). A CRG is a type of guarantee: if the exploratory drilling is successful then the grant becomes a concessional loan. However, if the drilling does not reveal a suitable geothermal site, as defined by an independent third party, neither the government nor the developer is required to repay the grant. A CRG allows island governments to perform exploratory drilling with no downside. This structure underwrites the achievement of energy independence for Caribbean islands.

The SEF brings as key solutions:

- CRGs provided to developers for exploratory drilling, before it is known whether the geothermal source is suitable for electricity generation,
- A requirement to create Special Project Vehicles (SPVs) in private-public partnerships to develop the projects and receive the financing, to avoid hindering the fiscal balance of the country, and to ensure that the benefits of concessional funds help to subsidize the cost of energy to consumers, and to transfer know-how into public institutions.

- Collaboration between multilateral organizations combining international and local outreach, maximizing resources and efficiency in execution.

This mechanism is able to dramatically de-risk the exploration of geothermal sources in the Caribbean. Additionally, the SEF requires that its concessionality must be reflected in subsequent electricity bills faced by consumers, reducing by 20-30% the end user cost of energy. This key provision prevents the benefits of concessionality from flowing to private developers.

The SEF solution facilitates the blending of commercial equity sourced from the developer (often provided in kind in the form of access roads, well pads and ancillary investments), with concessional finance from multilateral sources to achieve a pressing development purpose. CRGs minimize the risk of exploration; grants are used to fund capacity building for geothermal analysis and for building environmental and social safeguards. The SPV, created by the government and the geothermal developer, becomes the entity borrowing from the IDB. Its purpose is to finance the assessment of drilling conditions, the development of geothermal plants and the transmission infrastructure, once the resource is proven. The private sector developer will be the majority shareholder, while the government will be the minority shareholder, in which all studies provided by IDB and CDB will become the government's equity. As such, the debt is directed towards the private developer, without increasing the country's debt.¹⁶ According to Christiaan Gischler, IDB-SEF team leader, "For every dollar invested in the Eastern Caribbean geothermal markets, the SEF program leverages another \$10 from donors and a further \$20 from private sector energy developers." This means that the catalytic potential for such an instrument is very high. By de-risking exploration and directing the financial burden towards the private sector developer, the facility opened up the Caribbean to be powered by local geothermal energy, addressing the three energy challenges faced by the region. Because of their particular geography, exposure to oil price volatility, limited space, and need for stable fiscal balance, this type of solution could help redesign the Caribbean energy system in a way that resonates with the UN SDGs.

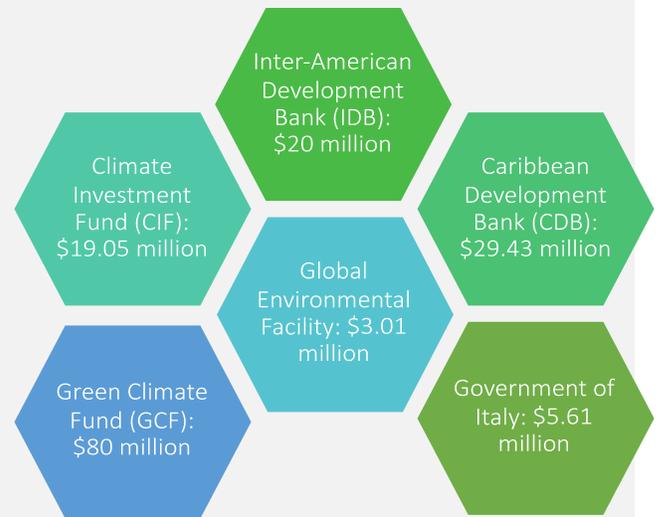


Figure 1: SEF's Participating Organizations

¹⁶ See Inter-American Development Bank. (2018). *IDB and CDB to expand the Sustainable Energy Facility (SEF) for the Eastern Caribbean*. Retrieved from <https://www.iadb.org/en/news/idb-and-cdb-expand-sustainable-energy-facility-sef-eastern-caribbean>

This financing structure is tailored to local resource scarcities and capacity. Intermittency, low energy density, land scarcity, limited private investment, and exposure to extreme climate events all make wind and solar inappropriate in the Caribbean context and inadequate to fulfill the islands' energy needs. Because much of the infrastructure for geothermal is underground, geothermal technology is significantly more resistant to hurricanes, drought, and flooding, making this technology more climate resilient. An additional benefit of the technology is that when necessary it facilitates the reverse transfer of heat from surface to underground reservoir, allowing cooling. The facility not only considers the region's physical resources and characteristics but also recognizes that governments are not able to absorb the necessary debt to develop geothermal assets and conduct drilling. Therefore, the SEF team worked within all constraints to deliver the most tailored solution that would work with this specific region. This required extensive structuring, developing relationships with developers, oversight of site selection and procurement, and the requisite human capital capacity.

The SEF facility was designed for five Eastern Caribbean countries: Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines, aiming to increase energy diversification and energy independence in a region historically stifled by high electricity prices. Energy independence would not only improve the region's economic development, but also support social progress and the attainment of the SDGs. The facility's goal is to develop geothermal energy generation, providing a comprehensive solution along with de-risking financial mechanisms, concessional loans, regulatory support and environmental compliance, and promoting private and public partnership that addresses the needs of a range of stakeholders.

Case #2 – La Jacinta

Context

In the previous case, we observed that exploration presented a different category of risk than the remainder of the project. In the case of utility-scale solar generation, there is a similar differentiation in the type of risk before and after construction. During construction, power and infrastructure assets present significant permitting, construction and commissioning risks. Conversely, post-construction, once an electricity purchaser begins to receive power pursuant to a long term power purchase agreement (PPA), the risk of financing the power asset is transformed into the long-term credit risk of the power purchaser. As the life of photovoltaic generation assets

can range between 25-40 years¹⁷, many financing instruments designed for the shorter duration higher risk construction stage, such as construction loans would be too expensive in the long term and ultimately ineffective. Financing construction through a loan can absorb the higher initial risk but is not efficient in the long run, even if the construction loan rate is a concessional one. Identifying private capital for construction loans with their higher risk profile can present a challenge, especially in unproven regions or with unfamiliar local stakeholders. However, once an appropriate risk-taker such as a public utility power purchaser is identified, the benefits of matching risks to capital providers can serve to catalyze transactions that would otherwise gone unfinanced.

In Latin America at the time, an additional risk associated with the private financing of renewable energy was the absence of a long-term bank lending market for solar generation assets upon project completion. As one of Latin America's most valuable exports in the past, oil has funded a significant portion of the region's development. In this context, the advent of renewable generation into this market can draw skepticism and resistance from those capital providers that require clear opportunities to exit their investment. While a public utility offtaker can provide low credit risk assets, a loan may not be sufficiently liquid to provide easy exit opportunities unless a broad range of market participants are comfortable with the underlying risks.

Solution

La Jacinta, a 50MW (AC) / 64.8MW peak (DC) fixed tilt photovoltaic ("PV") \$102 million power plant, is the first solar facility to be financed by IDB Invest through a B-bond, an IDB innovation and the first cross-border project bond for solar in Latin America and the Caribbean. IDB Invest provided long term financing for construction and operations alongside the Canadian Climate Fund (C2F). C2F is a co-financing fund, managed by IDB Group, that invests in climate-friendly private sector projects in LAC. In the financing of La Jacinta, IDB Invest ultimately combined i) an initial financing through an A/B Loan (its own capital and third party commercial capital) with concessional financing from C2F with ii) a B-bond for the operating facility a few years after completion of construction. The private capital market financing of the B-bond is an innovation that enables the separation of post-commissioning risk from pre-construction financing by facilitating a relatively secure exit for the initial investors.¹⁸ In developed markets, the availability of the project bond financing upon the build and operate stage lowers the cost of financing post-completion, making the pre-completion and more risky phase easier to finance with a construction

¹⁷ See NREL (2020). *Energy Analysis: Useful Life*. Retrieved from <https://www.nrel.gov/analysis/tech-footprint.html>

¹⁸ See E. Nicoletti (2018).

loan. Early stage financing may depend on the ease of late stage financing.¹⁹ In this case, the project-based B bonds represented a more liquid form of exit financing than commercial bank loan products. Historically, IDB Group has not required exits as it holds many assets on its balance sheet long term as part of its development mission. Nevertheless, exiting such assets after the initial catalytic financing frees up its financing capacity for additional development projects. Moreover, as part of its development mission, IDB seeks to broaden and deepen local and international capital markets in the LAC region, and supplying low risk bonds in the solar generation sector facilitates such market development.

Due to the 2005 energy crisis, the government of Uruguay prioritized the diversification of the energy matrix as an issue of national strategy. This led to the introduction of auctions exclusively from renewable energy sources. The La Jacinta Project was awarded with six separate power purchase agreements under an auction program with Uruguay's state-owned public utility. At the time of the award in 2014, there was limited commercial capital available to finance long-term renewable energy assets in Uruguay. IDB Group, together with concessional resources from the Canadian Climate Fund for the Private Sector in the Americas (C2F), financed the construction of six plants, mobilizing financing at tenors that were not available in the market and supporting the establishment of utility scale solar as a bankable asset class in the country. The construction of La Jacinta was completed by FRV, a Spanish developer, and began commercial operations in 2015. FRV subsequently sold its stake to the Chicago-based developer Invenergy in 2017.²⁰

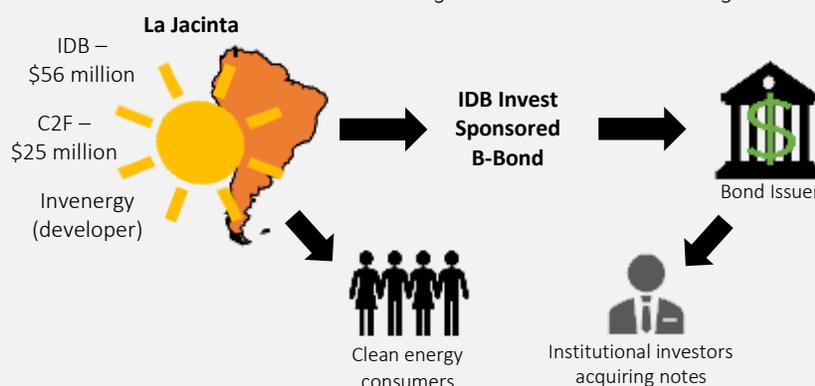
The Canadian Climate Fund for the Private Sector in the Americas was created to aid in the financing of the private sector's effort to build climate adaptation and mitigation projects in Latin America and the Caribbean. The projects targeted by the Fund are projects in need of concessional financing in order to be bankable – specializing in higher risk loans to jumpstart projects. The Fund initially consisted of CAD 250 million contributed by the government of Canada and is managed by the IDB Group. Some sectors that the Fund targets include renewable energy, energy efficiency, and greenhouse emission reduction and climate change vulnerabilities. In June 2019, C2F was expanded to a second phase, with an additional CAD 224 million for projects that enable environmentally sustainable technologies and practices in all sectors, with a special focus on the empowerment of women and vulnerable groups.

¹⁹ For example, venture capital firms (VCs) are able to invest in illiquid investments only if they can expect that eventually, when risks have been reduced, they can exit their investment in the public markets or through sale to strategic investors. This type of exit frees up the balance sheet for future investments.

²⁰ See Sánchez, C. (2017). "FRV concludes an agreement with Invenergy for the sale of La Jacinta solar plant in Uruguay." Energy News 03/23/2017. Retrieved at <https://www.energynews.es/en/frv-concludes-an-agreement-with-invenergy-for-the-sale-of-la-jacinta-solar-plant-in-uruguay/>

The project's income stream was ensured through a 26-year purchase power agreement (PPP) with the government-owned utility, Administración Nacional de Usinas y Transmisiones Eléctricas (UTE).²¹ The IDB Group and the Canadian Climate Fund for the Private Sector in the Americas (C2F)²² co-financed the construction of the solar plant, providing an A/B Loan of \$56 million and \$25 million, respectively.²³ Once operating, the project was refinanced in 2018 under IDB Invest's A/B bond format with the terms of the C2F blended finance loan amended to support the investment grade issue rating. The transaction marked the first cross-border solar project bond in Latin America crowding-in US\$68 million from institutional investors. At 24.5 years, it is the longest dated non-sovereign bond in Uruguay.

Figure 2: La Jacinta's Blending Mechanism



The Jacinta financing reflects an innovation in the market that could be replicated in other countries developing similar projects. Unlike many other countries in South America, Uruguay is not an oil-exporting country and has in fact been one of the biggest proponents of renewable energy.

Financing through A/B bonds has proven successful when dealing with projects with longer terms and very clear future income streams. Prior to the development and financing of La Jacinta, IDB Invest had utilized the B bond structure in two other projects in the region, though in those earlier cases there was no blending of commercial and concessional funding. In 2013, IDB Invest pioneered this strategy and financed a 305MW hydropower plant in Costa Rica, combining a \$200

²¹ See Invenergy. (2018). *Invenergy Issues Second Investment-Grade Rated Project Bond in U.S. Private Placement Market in Uruguay for La Jacinta Solar Farm*. Retrieved from <https://invenergyllc.com/news/invenergy-issues-second-investment-grade-rated-project-bond-in-u-s-private-placement-market-in-uruguay-for-la-jacinta-solar-farm>

²² See Inter-American Development Bank. (2019). *Canadian Climate Fund for the Private Sector in the Americas*. Retrieved from <https://www.gihub.org/resources/financial-facilities/canadian-climate-fund-for-the-private-sector-in-the-americas/>

²³ See IDB Invest. (2019). *La Jacinta Long-Term Bond*. Retrieved from <https://idbinvest.org/en/projects/la-jacinta-long-term-bond>

million A-loan with a \$135 million B-Bond issuance. Later on, in 2016, a similar financing structure was utilized in Uruguay to provide capital to the Campo Palomas wind farm. This kind of financing is in line with the risk profile of projects of this nature. After absorbing higher initial construction risk through a loan, once the asset eliminates construction risk it becomes safe enough for commercial capital bonds, making these kinds of projects a very efficient blended finance instrument.

Utilizing bonds within a blended finance structure therefore encourages private investment in projects with long timelines like infrastructure and power assets. La Jacinta's 25-year timeline is one of the longest tenors for a project bond in the region.²⁴ Because commercial banks and institutional investors commonly prefer more liquid and shorter-term investments, a bond backed by a credible organization like IDB Invest is able to attract investors that previously had lower risk appetites and higher liquidity preferences. Additionally, by demonstrating profitability and a safer pipeline, IDB Invest was able to crowd in more local private investors who are used to investing internationally in developed markets. La Jacinta's bond was classified as a green bond and given a GB2 rating.²⁵ Providing investment grade and "green" investment opportunities for local investors, they are able to invest in their own economies.

La Jacinta's financing was beneficial to its multiple stakeholders. With a limited amount of capital to invest from IDB Invest, being able to share expenses and risks with other organizations frees up capital to be invested in other projects, creating a more efficient ecosystem. Not only was the project de-risked by the blending and packaging of the A/B loan and the subsequent B bond, but IDB Invest kept 10% of the financing on its balance sheet, providing an extra level of assurance that the IDB believed in the project. In addition, the LAC region has considerable untapped renewable resource availability, for which this investment provides an illuminating example. By developing La Jacinta, clean energy is being provided to Uruguayan citizens, and now close to 30% of the country runs on renewable energy. The project goals are aligned with SDGs 7, 8, 9, 12, 13 and 17.

²⁴ See Nicoletti, E. (2018).

²⁵ See Moody's. (2017). *Announcement: Moody's assigns GB2 (Very Good) Green Bond Assessment to Jacinta Solar Farm Finance Ltd.'s \$64.75 million senior secured notes*. Retrieved from https://www.moodys.com/research/Moodys-assigns-GB2-Very-Good-Green-Bond-Assessment-to-Jacinta--PR_376809



Context

Public health initiatives in developing countries are particularly difficult to finance using a combination of public and private capital. This is because a large part of the return on public health investment comprises positive externalities that indirectly benefit broad and diffuse segments of society, making it difficult for private capital to benefit directly from the broad social returns to such investment. Nevertheless, as evidenced by the recent COVID-19 pandemic, inadequate public investments in health systems can dramatically exacerbate the adverse impact of disease outbreaks. The COVID-19 pandemic and the response to limit its spread has caused a global economic recession in 2020. Similarly, the incidence of malaria, a disease endemic to many tropical and subtropical regions, can

adversely impact some economies' GDP by as much as 5-6%, due to decreased labor productivity, increased public health costs, and subsequent negative effects on the socioeconomic state of society.²⁶ The elimination of malaria demonstrably increases lifetime male and female educational attainment and literacy rates.²⁷

The diffuse benefits of public health investment make it difficult to persuade investors with a fiduciary duty to earn market returns to commit funds in malaria elimination initiatives. In such a situation, private mission-driven philanthropic sources can be tapped to augment government expenditure. A key innovation developed in this case involved third party verification measurement of performance, combined with a donor-funded monetary incentive for public health agencies to exceed planned targets.

²⁶ See Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs. (2019). *Malaria. Voices for a Malaria-Free Future*. Retrieved from <https://www.malariafreefuture.org/malaria>

²⁷ See Lucas, Adrienne M. (2010). Malaria Eradication and Educational Attainment: Evidence from Paraguay and Sri Lanka. *American Economic Journal*, (2)2, 46-71 and also Barreca, Alan I. (2010). The Long-Term Economic Impact of In Utero and Postnatal Exposure to Malaria. *Journal of Human Resources*, (45)4, 865-892.

According to the World Health Organization, in 2017 there were an estimated 219 million cases of malaria around the world and an estimated 435,000 resulting deaths. Although annual malaria cases in LAC represent a very small proportion of these cases, they increased dramatically between 2015 and 2017.²⁸ The disease remains a latent threat in these countries that provide a comfortable climate for carrying mosquitoes, suffer from substantial poverty, have high migration internally and from neighboring countries, and whose geographies are widely dispersed with large rural areas. All of these factors make cutting the transmission of the parasite in humans a challenge.

Though Argentina and Paraguay were recently certified to have eliminated the disease, joining Uruguay and Chile in that distinction, Venezuela faced a nine-fold increase in malaria cases, up to 412,000 in 2017, accounting for nearly half of all cases in the region.²⁹ In Mesoamerica, cases were reduced by almost 90% between 2000 and 2015, but progress has since plateaued and the number of cases detected has been increasing.³⁰ In 2016, the LAC region spent \$210.3 million on malaria elimination, of which 82.1% came from government spending. The capital spent on malaria programs only represent 0-1% of government health spending.³¹ Because of the important gains, this is the next sub-region where elimination is possible in the short-term.

There have been a number of organizations working toward the common goal of eliminating malaria in the region, including foundations such as the Bill & Melinda Gates Foundation, The Global Fund to Fight AIDS, Tuberculosis and Malaria, and agencies such as the United States Agency for International Development (USAID). However, given the difficulties of coordination, there is a long history of organizations working on their own missions and tackling the issue with their own specific and limited resources.

Clearly, a collective action approach was required to eliminate malaria in the region. IDB constructed the Regional Malaria Elimination Initiative (RMEI) in order to optimize every dollar invested towards the elimination of malaria. RMEI is a results-based financing model. For this specific initiative, national governments provide 75% of the initial expenditure while the remaining 25% is provided through grants from partner organizations. If the country achieves preset elimination targets, then the partner organizations provide an additional performance incentive of 20% to be used for discretionary health care expenditure. The partner organizations must place

²⁸ See World Health Organization. (2018). *World Malaria Report 2018*. Retrieved from <https://www.who.int/malaria/publications/world-malaria-report-2018/en/>. Estimated cases increased from 573,200 in 2015 to 975,700 in 2017.

²⁹ See Long, G. (2019). Venezuela crisis: malaria spreads as economy implodes. *Financial Times*. Retrieved from <https://www.ft.com/content/d980c25a-4fbc-11e9-8f44-fe4a86c48b33>

³⁰ See IDB. (2019). *Program to eliminate malaria in Mesoamerica identifies 183 active outbreaks*. Retrieved from <https://www.iadb.org/en/news/program-eliminate-malaria-mesoamerica-identifies-183-active-outbreaks>

³¹ See Haakenstad, A. et al. (2019). Tracking spending on malaria by source in 106 countries, 2000–16: an economic modelling study. *The Lancet*, (19)7, 703-716. doi: 10.1016/S1473-3099(19)30165-3

the highest focus on impact measurement. RMEI works with an independent academic verifier to set credible goals and to accurately measure progress. Tracking the impact results and sensible goal setting is relatively complicated; a credible academic party with significant experience in the industry improves the reliability of results and the realistic possibility of accomplishing the predetermined goals.

Solution

The Regional Malaria Elimination Initiative (RMEI) is constructed to crowd in donor resources and domestic financing to ensure that malaria elimination remains a top health objective in Central America and the Caribbean. The RMEI Project is developed over a five-year period with two execution phases. Phase one, to be concluded in 2020, focuses on accelerating the progress to achieve zero local malaria transmission patients. The second phase, ending in 2022, seeks to guarantee that malaria remains eliminated.³² A public-private alliance fostered by IDB in 2019 has already committed \$102.2 million to finance the work of this initiative. The alliance comprises the IDB; the governments of the countries of Central America, Mexico, Colombia and the Dominican Republic; the Carlos Slim Foundation; the Bill & Melinda Gates Foundation; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Pan-American Health Organization; the Council of Ministers of Health of Central America (COMISCA); the Clinton Health Access Initiative (CHAI); and the Mesoamerica Integration and Development Project.³³

The capital was pooled through a blended financing mechanism and each organization's financing is meant to fulfill a different set of goals. For example, the IDB's goal is to increase the participation of other countries; the Gates Foundation's contribution is provided through a result-based payment system; the Global Fund provided a multi-country grant that is intended to strengthen the commitment of governments and partners in addressing cross-border issues; and the Carlos Slim Foundation's capital is to be utilized to expand the initiative's reach to Mexico and Colombia. Together, the organizations are using their financing to crowd in more capital, ensure results, and expand the initiative to cover more regions. Each entity's own goals are aligned with specific aspects of the initiative's program.

³² See Inter-American Development Bank. (2019). *Malaria elimination could avoid between 50,000 and 80,000 new contagion cases every year in Colombia*. Retrieved from <https://www.saludmesoamerica.org/en/node/984>

³³ See Inter-American Development Bank. (2019). *Program to eliminate malaria in Mesoamerica identifies 183 active outbreaks*. Retrieved from <https://www.iadb.org/en/news/program-eliminate-malaria-mesoamerica-identifies-183-active-outbreaks>

RMEI: Catalytic Finance Structure	
<u>Counterparty</u>	<u>Counterparty Goals</u>
Inter-American Development Bank	<ul style="list-style-type: none"> • Mobilizing domestic financing alongside donor capital • Make malaria elimination a top health priority in the region • Close technical and financing gaps • Facilitate a locally-tailored approach • Provide capital to participating countries • Motivate other governments to join the facility
Bill & Melinda Gates Foundation	<ul style="list-style-type: none"> • Make malaria elimination a top health priority in the region • Close technical and financing gaps • Strengthen public health systems in the region
Carlos Slim Foundation	<ul style="list-style-type: none"> • Close technical and financing gaps • Strengthen public health systems in the region • Support the core of the initiative and expand to nearby countries like Mexico and Colombia
Global Fund to Fight AIDS, Tuberculosis & Malaria	<ul style="list-style-type: none"> • Make malaria elimination a top health priority in the region • Strengthen the commitment of partner governments to address cross-border health concerns • Close technical and financing gaps

RMEI was modeled on an earlier collective action success known as the Salud Mesoamerica Initiative (SMI). Beginning in 2012, SMI is a \$176.14 million public-private partnership between the IDB, the Bill & Melinda Gates Foundation, the Carlos Slim Foundation, the Government of Canada, the Government of Spain, and the governments of eight Mesoamerican countries and the state of Chiapas, Mexico. The initiative aims to assist governments in the region in reducing inequities in maternal and child health in Mesoamerica, targeting the poorest 20% of the population. The initiative utilizes an innovative results-based financing model, which links funding to verified pre-determined outcomes. It provides technical assistance to ministries of health to meet established goals and, once countries achieve 80 percent of those targets, they are provided an incentive equivalent to 50 percent of their initial contribution. The results-based financing structure uses an independent third party, the Institute for Health Metrics and Evaluation at the University of Washington to collect and analyze survey results and measure coverage of key interventions in nutrition, immunization, and maternal and child health.

To date, SMI has helped improve the health status of more than 1.8 million women and children under five years of age. By the end of 2019, progress had been noted in all participating countries, six of which had achieved established targets and obtained a cash incentive and all of which have approved health policies and increased funding allocations targeting low-income populations. And

beyond generating health progress, SMI helped prove that this incentive-based model accelerates the effective implementation of programs, especially when compared to traditional development funding. As a result, the Initiative served as an early blueprint for the mission-driven, impact verified, collaborative effort embedded in the RMEI. This verified, outcome-based approach proved sufficiently persuasive that all parties agreed to pool resources and replicate the method in the expanded Regional Malaria Elimination Initiative (RMEI).

This specific model is also useful in terms of efficient use of resources. Before Salud Mesoamerica and RMEI, there were already multiple organizations working on the elimination of malaria but working separately. By bringing together multiple stakeholders and creating an impact assessment infrastructure, IDB facilitated the pooling of private mission-driven funding with public expenditure, leading to more efficient capital utilization. Instead of everyone following their own exclusive missions, having a unified plan can lead to the more effective and quicker elimination of malaria in Latin America and the Caribbean. This type of collaborative effort will be required to address the heightened public health challenges in the wake of the COVID-19 crisis.

Key Elements of Effective Catalytic Finance

The challenges of innovating financing and the cases studied suggest certain key elements of effective catalytic finance capacity that facilitated effective transactions for IDB. These include:

- 1. Access to Diverse Sources of Capital:** In all three cases, the IDB was able to curate diverse sources of capital, including philanthropic grants, concessionary loans, secured debt and commercial loans. This variety of sources is usually only available to development banks with long-term investments in a range of partnerships that encompass a wide variety of stakeholders, both in the borrowing and lending regions. In all cases, extensive communication and coalition-building were necessary elements of success, which could only be facilitated by dedicated attention to the value of long-term relationships.
- 2. Access to Specialized Skills:** A key capacity utilized by the IDB was the sourcing of specialized skills in financial structuring, in tailoring legal requirements to the capacities of local governments and in screening and monitoring of service providers. This investment in specialized skills mirrors the recognition that financial capital may not be the binding constraint that limits the application of blended finance. Rather, it is the aggregation and networking of the requisite human capital that is the key to effective scaling up of blended finance solutions.

3. **Mission-driven Organization:** The IDB has a mission to advance sustainable development in the LAC region. When blended finance transactions clearly align with this mission, the development bank has the ability to pursue them even though the operational cost of organizing such transactions virtually eliminate any revenue that might be generated from the deployment of bank capital. A commercial bank facing pressure to generate short-term profits is unlikely to pursue such transactions due to the significant and long-term investment in required relationships and specialized human capital.
4. **Policy Entrepreneur:** A dedicated group, the Office of Partnerships within the IDB, is tasked to act as the catalytic agent to mobilize resources and capital from within and outside the IDB. The culture and incentives for such a catalytic agent must be different from those of both commercial capital providers and philanthropic foundations.
5. **Local Knowledge:** The IDB's majority control by investee countries is complemented by a significant local presence. The IDB Group employs 49% of its staff in country offices with the remainder at headquarters, a relatively high proportion among MDBs. It is one of the few MDBs with country offices in every member borrowing country³⁴. This local capacity is crucial to reducing the information asymmetry that complicates tailored financing solutions.
6. **Local Legitimacy:** Catalytic finance tools require the investment of local reputational capital by the policy entrepreneur. Although contracts are structured to reduce a broad range of risks, there usually remain significant risks which contracts are unable to insure against (referred to as the problem of 'incomplete contracts' in the economics literature). For example, in cross-border projects, unanticipated geo-political risks such as trade wars could sharply reduce expected cash flows. A blended finance initiator who is viewed as having interests aligned with investee countries will command greater trust in any resulting re-negotiation and is therefore more likely to achieve the most efficient outcome. The IDB has a relatively high share of votes controlled by regional member countries³⁵. In addition, its relationships with the government ministries within countries minimize frictions in project implementation. This local legitimacy can make the process of organizing collective action much more efficient for the IDB.

³⁴ See page 25 of Engen, L. & Prizzon, A. (2018). A Guide to Multilateral Development Banks. *ODI*.

³⁵ Among MDBs with a mix of regional and non-regional shareholders, the IDB's proportion of voting shares controlled by regional members ranks among the top 5. See Figure 6, page 20 in *ibid*.

Conclusion

Using catalytic finance to crowd in private investment requires trusted access to diverse sources of capital, a variety of human capital not often present in one entity, locally tailored solutions, strong local legitimacy, and a singular focus on the mission of financing sustainable development. MDBs with a significant investment in partnerships with a broad range of stakeholders can collate the key elements necessary to deploy blended finance tools in an effective manner. Catalytic finance can be an effective tool only if it can be tailored to the specific needs of a country. With the support of a policy entrepreneur, it can attract private capital not only for a single project but for a pool of like projects, with concomitant reductions in the cost of capital. The diffuse positive externalities of investments in public health can be encouraged by crowding in appropriate mission-driven capital. By addressing a combination of market failures, existing risks, perceived risks, and the financial infrastructure of a country, catalytic finance is able to make it commercially viable for both international and national private investors and donors to participate in developing the natural and human capital of emerging markets.

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