



THE GLOBAL INNOVATION LAB FOR CLIMATE FINANCE

Impact and Lessons
Learned, 2014-2019

Published February 2020

Contents

p. 03 Driving Sustainable Investment: The Need for the Lab

p. 10 Lab Impact Highlights: 2014-2019

p. 20 How the Lab Works: From Idea to Impact

p. 33 What's Next?

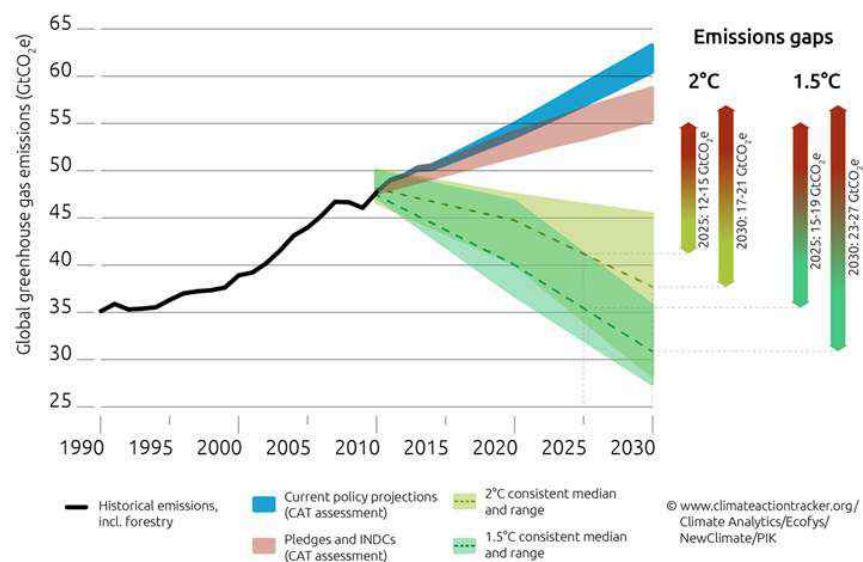
*Case studies of many of the Lab's solutions are highlighted throughout the report.

DRIVING SUSTAINABLE INVESTMENT: THE NEED FOR THE LAB

Sustainable investment is critical to tackle the key global challenges of the 21st century

Climate Change

Meeting the Paris Agreement goals and ramping up ambition in emissions reductions

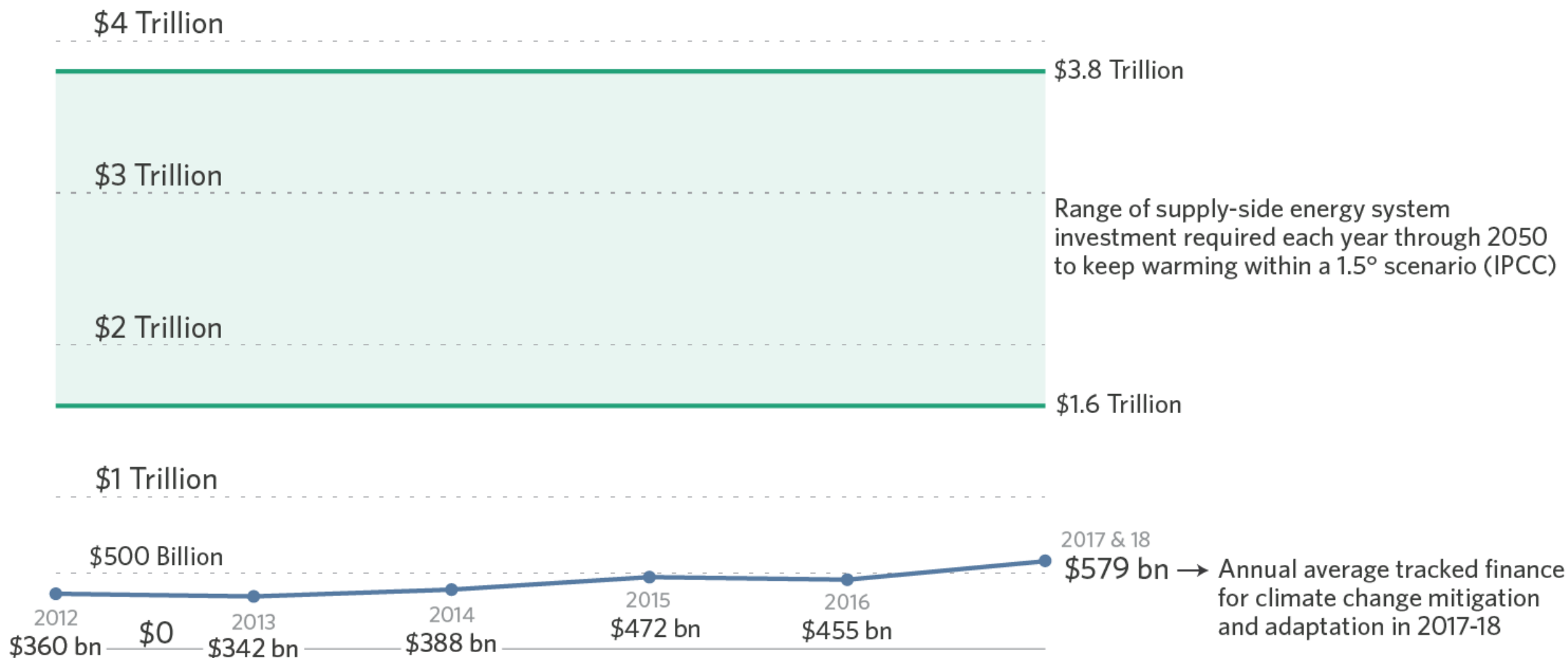


Sustainable Development

Meeting the Sustainable Development Goals



Climate investment is increasing, but falls short of global needs





The Lab identifies, develops, and launches innovative finance instruments that can drive billions in private investment to action on climate change and sustainable development.

41

instruments launched

60+

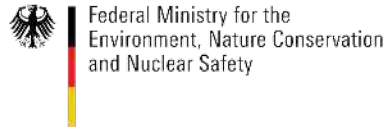
public and private Lab
Member institutions

300+

supporting experts, nearly
half from developing regions

The Lab brings together over 60 institutions to address the sustainable investment gap

FUNDERS



MEMBERS



PAST FUNDERS



SECRETARIAT





\$2.07+ bn

mobilized by
41 instruments for climate
action in developing countries



\$370+ mn

invested by Lab Member institutions

\$1.7+ bn

catalyzed in
additional investment

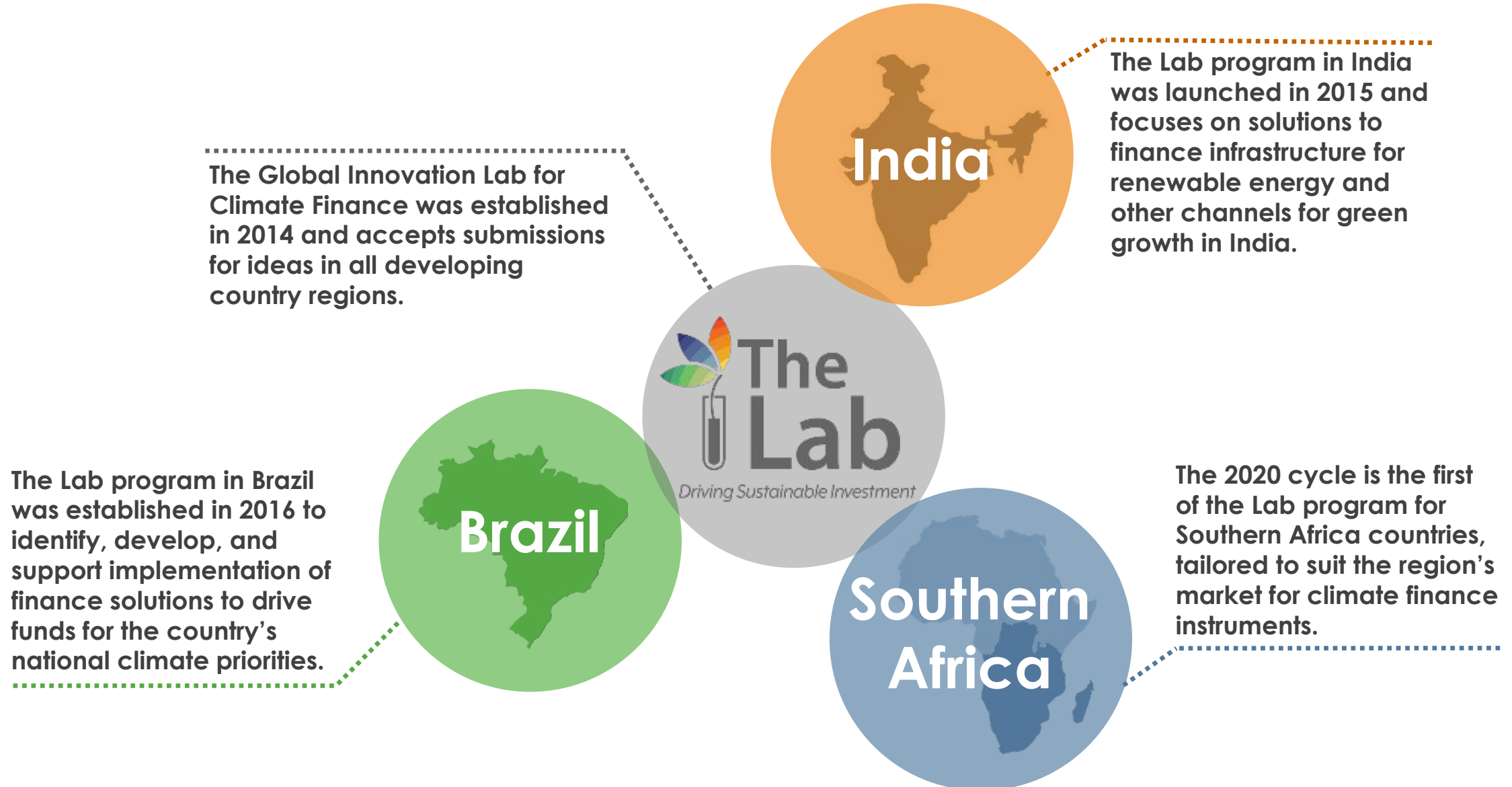


Lab instruments have
mobilized

200x

what funders have invested
in the Lab Secretariat

Global and Regional Synergies



LAB IMPACT HIGHLIGHTS: 2014-2019

Since 2014, the Lab has launched 41 solutions that tackle investment barriers in the **most critical sectors and regions** for action on climate change

Number of Lab instruments:



Renewable
Energy
19



Sustainable
Cities
18



Climate
Risk
12



Agriculture, Forests,
Nature-Based Solutions
10



Energy
Efficiency
8



Energy
Access
7



Asia
20



Africa
16

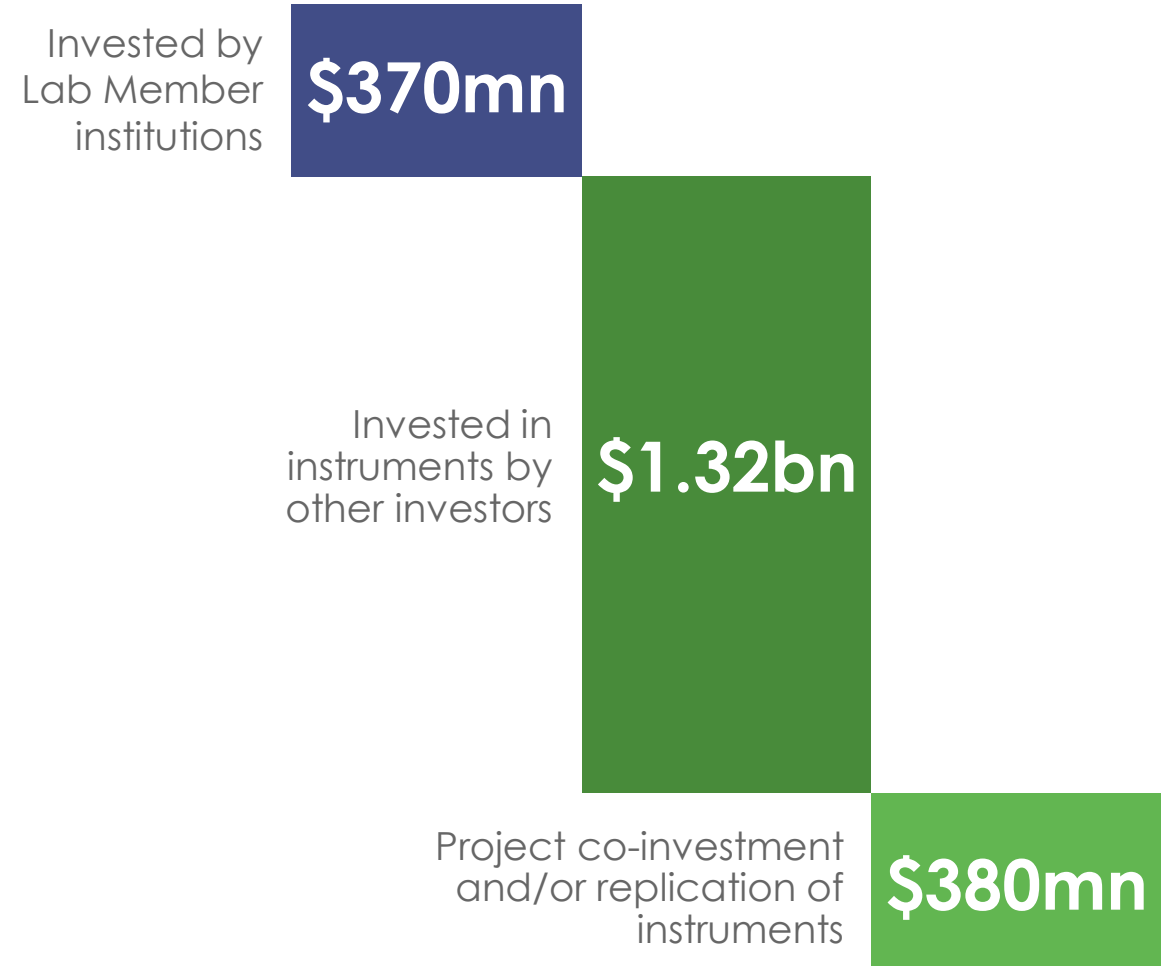


Latin America
15



Global
6

Lab Member
investments have
catalyzed an additional
\$1.7 billion,
more than five times
their original
investments



Lab instruments
have successfully
mobilized over
\$800 million
in investment from
the private sector

More than 90% of measured private finance has come from institutional investors and commercial banks. A small amount has also come from private equity investors.

Private investors also co-invest in projects on the ground, which is more difficult to measure.

Case Study

Mobilizing Private Investment: Climate Investor One

2015 Lab Instrument

Climate Investor One is a “whole-of-life” financing facility for early-stage project development, construction financing, and refinancing to fast-track renewable energy projects in developing countries.

CIO has mobilized private sector investment from:

NWB BANK

LPP
Local Pensions Partnership

MP Pensjon

Aegon

KLP

IMAS
Foundation

Sanlam

IMPACT



Aims to catalyze **~\$2.5+ bn in private sector funds** at construction phase

Reached final close at \$850 mn across Development & Construction Equity funds

Is already invested in several projects including a **116MW** rooftop solar platform and a **42MW** run-of-river hydro platform



Targets **~4,800 GWh** (1,700MW) in electricity generation per year

Will reduce **~1.8 mn tons of CO2e** emissions each year

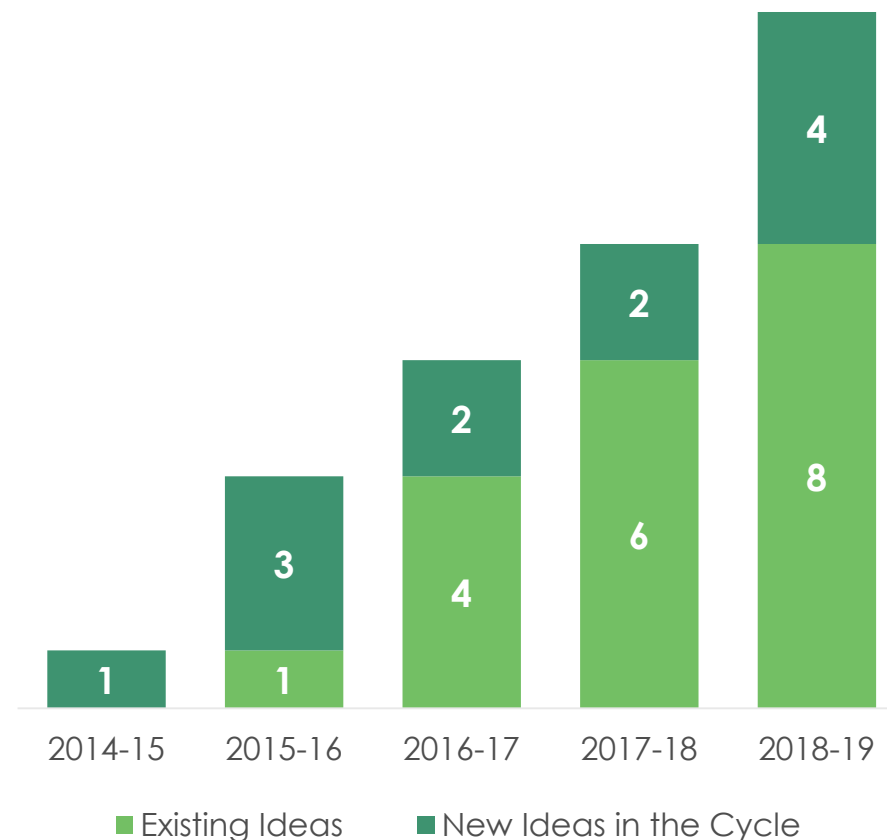
Will serve **~12 mn people** over project lifetimes

The Lab has prioritized innovation in adaptation finance by supporting instruments that tackle critical barriers to investment

To date, 12 Lab instruments address climate change adaptation challenges. They include:

- **The West African Initiative for Climate Smart Agriculture** – A dedicated blended finance fund providing financial and technical support to smallholder farmer organizations and agribusinesses to adopt climate-smart agriculture practices in West Africa
- **Blockchain Climate Risk Crop Insurance** – A standardized, digital index crop insurance platform for smallholder farmers that addresses the impacts of climate change on crop production by making insurance more transparent, efficient, and scalable
- **Restoration Insurance Service Company (RISCO)** – A social enterprise that finances and manages implementation of mangrove restoration and conservation by capturing the financial benefits generated by reducing property damage risks and storing blue carbon

Lab Ideas Addressing Adaptation by Year





Case Study

Financing Adaptation: The Water Financing Facility

2016 Lab Instrument

The Water Financing Facility mobilizes domestic investment into climate compatible water sector projects through the local bond market, to shift the way the water sector is being financed in order to increase global access to water and sanitation.

WFF is setting up a pilot project in Kenya. It has established a first loss reserve fund with the support of the Kenyan Treasury and secured additional guarantees provided by USAID, SIDA, and GuarantCo. The Commercial Bank of Africa will underwrite the first bond issuance, which will allow for financing of further water and sanitation projects.

WFF is also in the process of replicating the facility in other countries; presently Indonesia is being assessed.

IMPACT



Aims to mobilize \$1 bn equivalent in local currencies

\$15.4 mn in investment secured from seven sources

Seeking approximately \$75 mn in total co-financing support

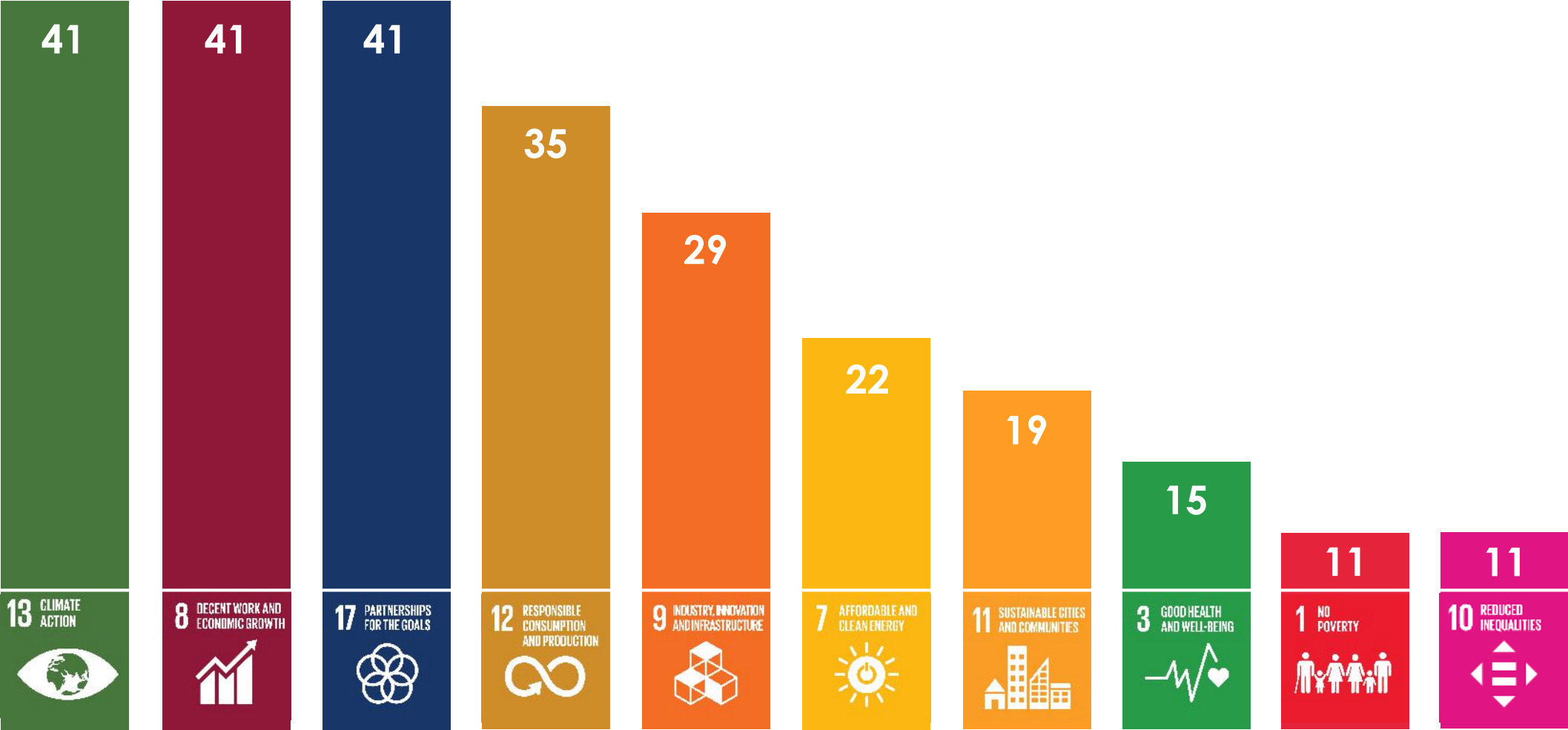


Aims to provide sustainable access to safe water and sanitation to **20 million people**

Target growth to **8 countries**

Lab instruments support the Sustainable Development Goals

Number of Lab instruments by SDG:



Case Study

Supporting the SDGs: Long-Term FX Risk Management

2015 Lab Instrument

Long-Term FX Risk Management provides tools to address currency and interest rate risk – helping overcome major barriers to investment in renewable energy and climate-relevant projects in developing countries. For context, one in eight developing world currencies fall 20% or more against the dollar in a given year; and one in 20 crash by 50% or more.

Proponents TCX provide a vital currency hedging mechanism, with a portfolio of exposure to almost 60 hard-to-hedge currencies in developing countries, allowing climate-relevant projects to access finance. Many of the projects supported contribute to both climate goals and the SDGs.

IMPACT



Hedged **\$250 mn of climate-related investment** in 11 countries

Total currency risk managed **grew 40%** from 2017 to 2018



Examples of supported projects with SDG benefits include:

- M-KOPA, is tackling poverty and access to affordable and clean energy by providing **solar home systems to more than 500,000 low-income households** in Kenya, Tanzania, and Uganda
- InsuResilience Investment Fund in Georgia, is helping to ensure sustainable cities and communities by providing **weather insurance for households that are affected by climate-related extreme weather events**

Recognitions of the Lab's value

The Lab has been formally endorsed by the governments of the G7, India & Brazil.

In 2017, the Lab was included in the Center for High Impact Philanthropy's "Top 11 Best Bets" out of nearly 2,000 submissions to the Macarthur Foundation's 100&Change competition.



 **THE CENTER FOR
HIGH IMPACT PHILANTHROPY**
The University of Pennsylvania

Media coverage in influential outlets

Bloomberg
NEWS

Valor
ECONÔMICO

**The
Economist**

**the
guardian**

 **REUTERS**

BS
Business Standard

FASTCOMPANY


MARKETPLACE

Los Angeles Times

Forbes

FT FINANCIAL
TIMES

**THE
WALL STREET
JOURNAL**

O GLOBO

FOLHA DE S.PAULO
★ ★ ★

HOW THE LAB WORKS: FROM IDEA TO IMPACT

The Lab's three ingredients to success



Public-Private Collaboration

Strengthened partnership between the public and private sectors builds capacity and knowledge to identify and deploy effective climate finance solutions.



Innovation & Transformative Solutions

Innovative, actionable, catalytic, and financially sustainable solutions reduce risks and barriers to investment in sustainable development.



Mobilizing Finance

Catalytic finance from Lab Members and the broader network enables piloting and implementation of transformative solutions.

The Lab process has five steps

1.



Call for Ideas

The Lab publicizes an open call for innovative sustainable investment solutions

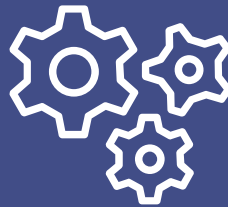
2.



Selection

Lab Members select the most promising ideas to take forward in each annual cycle

3.



Development

Selected ideas benefit from 7 months of analysis, stress-testing, and guidance from experts and investors

4.



Endorsement & Launch

Lab Members vote to endorse and launch the ideas for piloting

5.



Implementation

The ideas move into action and fundraising to launch pilots, with continued support from the Lab network

The Lab's structure fosters cross-sector cooperation and enables solutions to overcome investment barriers

300+ experts from around the world have participated in the five Lab cycles.

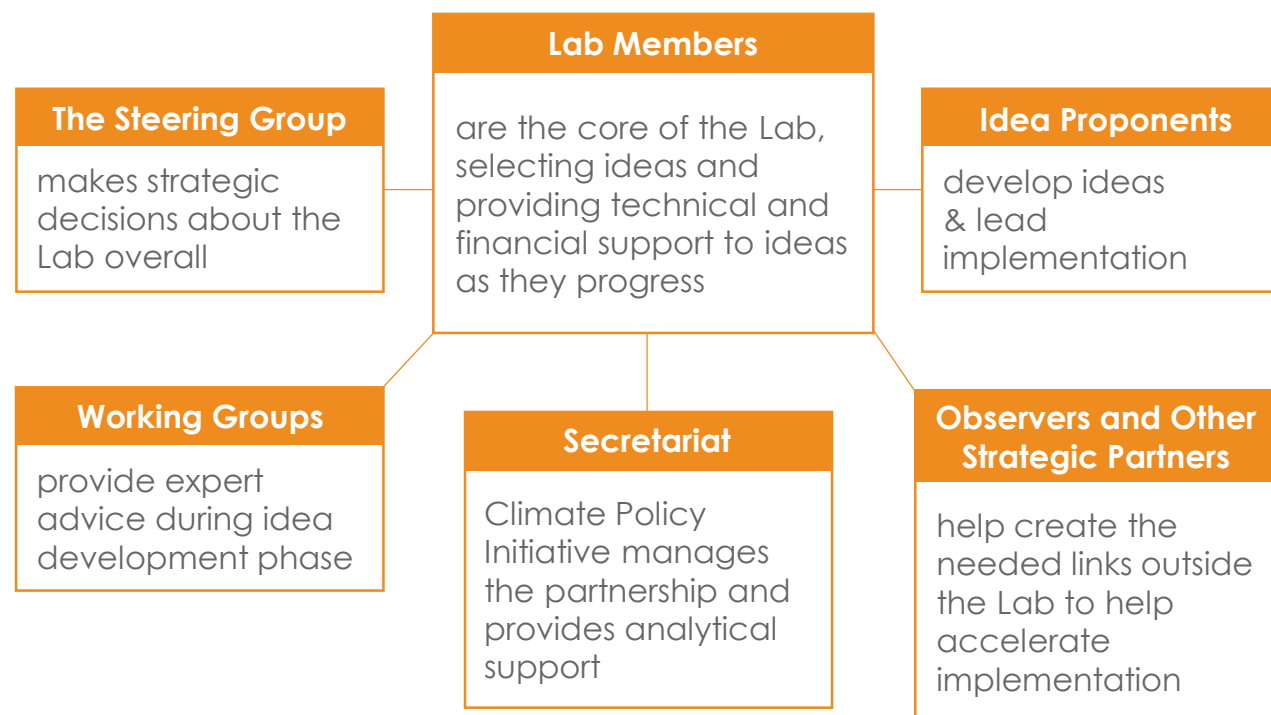
Nearly half of our participating experts come from developing regions. Our regional programs leverage the strengths local networks, market knowledge and depth of context.

Half of the Lab's participants come from the private sector and half from public institutions, including government agencies and ministries, and development banks.

The Lab has strong representation from the financial sector. A quarter of partners are from development banks and another quarter are from financial services.

The Lab also utilizes observers and other strategic partners, who **help create linkages outside the Lab** to funding opportunities and other technical support, including to help scale ideas once proven.

The Lab's Participants



Lab Members from diverse sectors and regions drive innovation



**Karine Bueno,
Head of
Sustainability/
Corporate Social
Responsibility,
Santander**

"The Lab is a great example of how a focused, technical, and collaborative approach can identify and leverage innovative business solutions to some of the great challenges we face as society."



**Alan Synnott,
Managing
Director,
BlackRock Real
Assets**

"It has been exciting to partner with the Lab to support the identification and development of early stage concepts into more developed instruments that now actively mobilize global capital for climate finance. The Lab format brings together a diverse set of stakeholders, skills and perspectives, and through active knowledge sharing, discussion and debate, helps incubate and accelerate the commercialization of viable ideas."

Lab ideas meet four key selection criteria



Actionable

Identifies

1. The type of entity(ies) that could implement it
2. The pathway towards implementation, including the timeframe, activities, and key milestones, and
3. Possible challenges to implementation and related management strategies.



Innovative

Demonstrates the ability to address, directly or indirectly, barriers to private climate finance that

1. Have not yet been addressed or
2. That will be addressed more effectively compared to other instruments in the market.



Catalytic

Demonstrates potential to

1. Mobilize private climate capital within a sizeable market,
2. Be scaled up or replicated in other contexts and,
3. Achieve socioeconomic, development, and environmental impacts.



Financially Sustainable

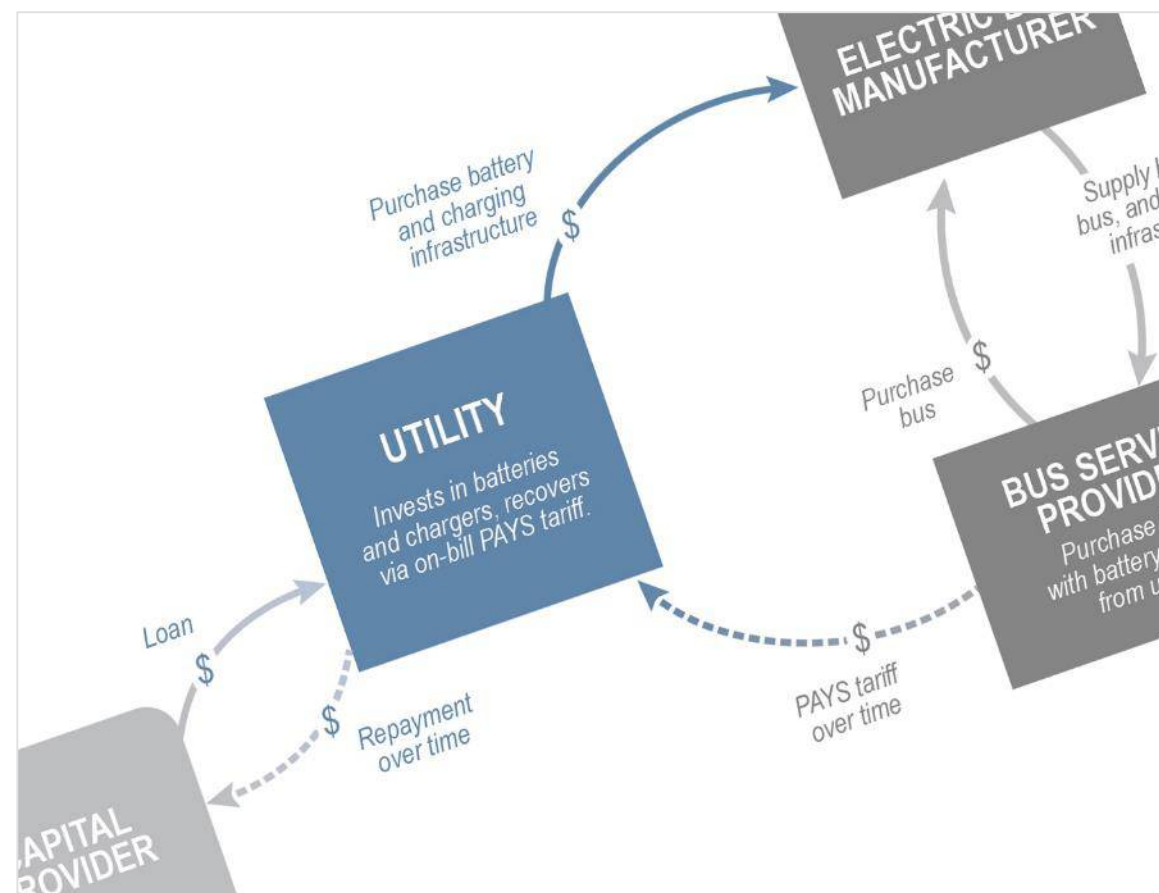
Identifies

1. A strategy to phase out public financial support, thereby achieving market viability and
2. Possible challenges to achieving its intended objectives and related management strategies.

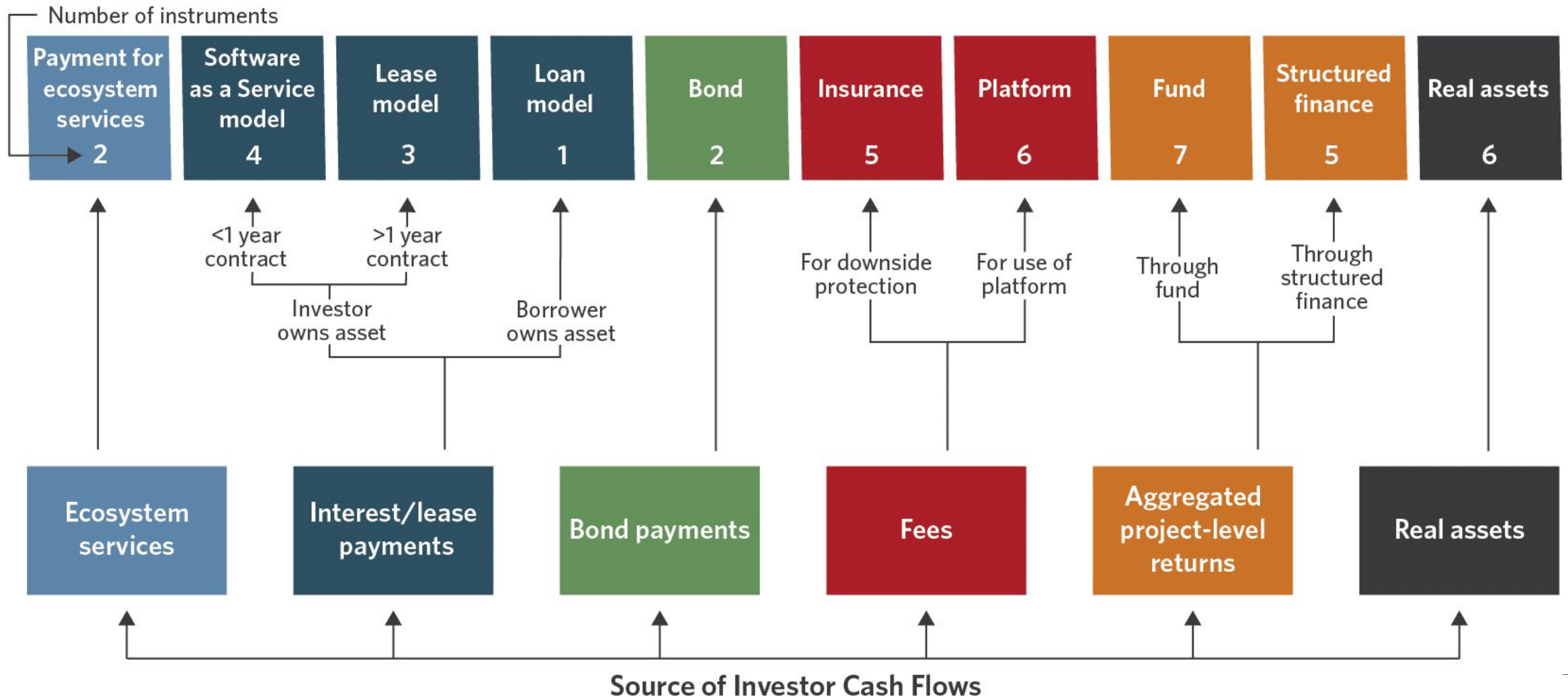
Lab instruments are structured to meet a variety of needs for climate solutions in emerging markets

Lab instruments represent a range of financial innovations that help scale climate action. They are proposed by enterprises, fund managers, and market experts to overcome market barriers to investment.

They use a variety of finance sources: 32 make use of equity, 27 use commercial debt, 18 use preparation-stage grants, 15 use concessional debt, and 12 employ guarantees, among others.



Lab instruments represent a diverse array of financial mechanisms



Proponents are supported throughout the Lab process and beyond



Selected Lab ideas receive \$250k in in-kind analytical and communications support from the Lab Secretariat, Climate Policy Initiative.

Ideas receive guidance and support from high-level Lab Members who contribute expertise, political capital, and financial capital.

After endorsement and launch, Lab instruments benefit from continued support from the Lab Secretariat, including bespoke analytical support and continued connections with the Lab investor network and beyond.

Instruments benefit from the support of a robust Lab network



**Joan Larrea,
CEO,
Convergence**

“By providing early stage analysis and market scoping for bold concepts, the Lab plays a vital role in bringing innovative finance mechanisms to market. More specifically, the Lab has moved forward some very interesting blended finance vehicles that Convergence has been able to engage with at a later stage.”



**Leena Klossner,
Vice President,
Nordic
Development
Fund**

“Supporting the core principles of the NDF strategy, the Lab provides a good channel for NDF to identify innovative climate financing initiatives for further financing and development in the risky early phases. As a clear signal of the importance of the Lab, NDF is proud to hold the position as the institution which, to date, has funded the largest number of early-stage financial instruments developed through the Lab.”



Case Study

From idea to impact: Climate Resilience and Adaptation Finance and Technology Transfer Facility (CRAFT)

2017 Lab Instrument

CRAFT is the first commercial investment vehicle to focus on technologies and solutions for climate adaptation.

Using a blended finance structure, it invests growth equity in companies delivering climate intelligence or physical products and services for resilience.

THE LAB'S ROLE

- Helped develop and refine CRAFT's blended fund structure
- Engaged critical working group audiences to test investment thesis of the fund
- Facilitated intros and pitches to key investors and funders, particularly on the public/DFI side
- Led a deep dive design study examining structures of comparable technical assistance facilities to inform CRAFT's TA delivery mechanism

PROGRESS TO DATE

- **Reached first close** with investments from Lab members The Rockefeller Foundation and KfW as well as Lab observer EIB alongside other public and private investors
- **Identified 20 relevant climate resilience market segments totaling \$130 bn+** of current spending and mapped more than 700 companies within these segments



Sanjay Wagle, The Lightsmith Group and proponent of CRAFT

"The Lab was ideal at the early stage to incubate and develop a nascent idea and formalize it before it was taken out into the world...The questions that Lab advisors asked were the same ones that investors and governments would ask us later."

Case Study

From idea to impact: Sustainable Energy Bonds

2017 Lab Instrument

Sustainable Energy Bonds are a class of bonds to drive impact investment to sustainable energy projects in India by offering debt exposure, sufficient returns, and standardized impact measures.

Target projects include distributed renewable energy (small-scale and off-grid solutions), energy efficiency for buildings and industry, projects for increasing energy access, and projects to encourage sustainable urbanization.

THE LAB'S ROLE

- Reached out to potential investors to understand common impact measures and confirm definitions of measures
- Helped formalize impact measures to give standardized information to investors and engaged with investors and the market

PROGRESS TO DATE

- **Raised \$3 mn from CalCEF** in 2018 towards first issuance to finance:
 - 75% rooftop solar
 - 20% solar pumps and other energy access projects
 - 5% energy efficiency
- **\$15 mn second issuance** anticipated in the near term



Pawan Mehra, cKers Finance and proponent of SEBs

“Lab support was really valuable in helping to formalize impact measures so that we could give needed information to investors. Standardization was crucial. The Lab liaised with investor groups to understand what was needed in this space.”

Case Study

From idea to impact: Green Receivables Fund (Green FIDC)

2017 Lab Instrument

The Green FIDC is a project finance instrument that allows clean energy and energy efficiency projects to secure financing based on future cash flows from energy sales.

In 2019, the team received a \$300k design grant from Convergence and two pilots are underway with private developer Órigo Energia to finance up to 750 MW of distributed and community solar systems helping to drastically reduce energy costs.

The next step is to reach financial close for the pilot Green FIDCs and scale the concept to other sectors.

THE LAB'S ROLE

- Helped Green FIDC navigate development finance and supported fundraising efforts
- Modeled climate and development impacts, helped communicate these effectively
- Provided validation and network to support investor engagement

PROGRESS TO DATE

- **Raised \$10+ mn towards \$25+ mn** close for pilot
- **Secured Convergence design grant** to structure a community solar Green FIDC
- **Ongoing discussions to scale the concept** to energy efficiency and water infrastructure sectors



Paulo Todaro, Albion Capital and proponent of Green FIDC

"The Lab was able to not only provide us with valuable networking, but also guide us to navigate the complexities of aligning concessional and commercial capital effectively."

WHAT'S NEXT?

In 2019, the Lab launched a new class of instruments

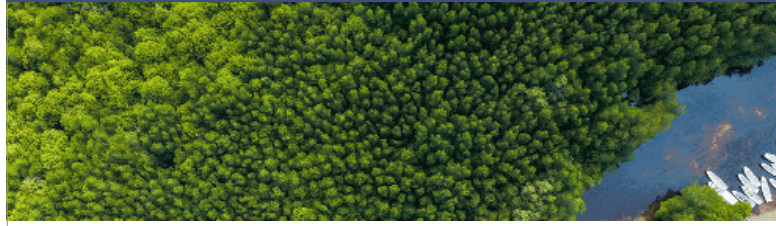
SUSTAINABLE AGRICULTURE



The West African Initiative for Climate Smart Agriculture

A facility to support the uptake of climate-smart agricultural practices through the provision of technical assistance and subsidized-rate loans or guarantees for smallholder farmers' organizations and agribusinesses

BLUE CARBON



Restoration Insurance Service Company

A social enterprise that finances and manages implementation of mangrove restoration and conservation by capturing the financial benefits generated by reducing property damage risks and storing blue carbon

SUSTAINABLE CITIES



The Breathe Better Bond Initiative

A debt instrument for local governments to finance projects that reduce current and projected short-lived climate pollutants in emerging market cities

SUSTAINABLE AGRICULTURE



Blockchain Climate Risk Crop Insurance

An automated weather-indexed crop insurance infrastructure that helps smallholder farmers in sub-Saharan Africa increase resilience to the impacts of climate change, via insurance that is transparent, affordable, and pays out quickly

ENERGY ACCESS



Solar Securitization for Rwanda

Solar-asset backed securities to drive needed finance to accelerate Rwanda's solar sector and make progress towards Rwanda's goal of 100% energy access by 2024

SUSTAINABLE CITIES



Cooling as a Service

A pay-per-service model to decrease energy consumption and HFC gas emissions from cooling systems in cities, by increasing competitiveness of cleaner and more efficient technologies

In 2020, the Lab is incubating mitigation and adaptation ideas in sectors and geographies critical for climate action...

...while also exploring a facility that provides flexible funding, access to networks, and technical & strategic support to enable scale.

Nature-based solutions

Supporting ideas to protect, sustainably manage, and restore natural or modified ecosystems

Sustainable Cities

Supporting sustainable urbanization ideas in partnership with cities networks



India



Brazil



Southern Africa

Sustainable Agriculture

Supporting ideas to mobilize investment that overcomes existing barriers to climate-resilient, low emission agriculture

Sustainable Energy Access

Supporting ideas targeting deployment of renewable energy for productive use



**This report was
prepared by Climate
Policy Initiative,
the Global Innovation
Lab for Climate
Finance Secretariat**



**CLIMATE
POLICY
INITIATIVE**

With deep expertise in finance and policy, CPI is an analysis and advisory organization that works to improve the most important energy and land use practices around the world. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, Europe, Kenya, India, Indonesia, and the U.S.

Climate Policy Initiative, as Lab Secretariat:

- Manages the Lab
- Leads analytical support
- Supports ideas to succeed and scale
- Communicates findings, impacts, and lessons learned
- Convenes the Lab and gathers public and private investors



**THE GLOBAL INNOVATION
LAB FOR CLIMATE FINANCE**
www.climatefinancelab.org

