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## Global Innovation Lab for Climate Finance Phase 2 Synthesis Report

24 November, 2014



**The Lab** is a global initiative that supports the identification and piloting of cutting edge climate finance instruments.

It aims to drive billions of dollars of private investment in developing countries.

Analytical and secretariat work of The Lab is funded by the UK Department of Energy & Climate Change (DECC), the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), and the U.S. Department of State.



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# Contents

INTRODUCTION	4
PHASE 2 ANALYTICAL FRAMEWORK	5
PHASE 2 ANALYSIS OF THE LAB INSTRUMENTS	7
Renewable Energy Platform for Institutional Investors (REPIN)	7
Climate Development & Finance Facility (CDFF)	8
Debt Fund for Prepaid Energy Access	8
Global Renewable Independent Power Supplier (GRIPS)	9
Agricultural Supply Chain Adaptation Facility (ASCAF)	10
Long-term Currency Swap	11
Insurance for Energy Savings	11
SECOND LAB ADVISOR MEETING	12
NEXT STEPS FOR ANALYSIS	12
CONCLUSION	13
APPENDIX	14

## INTRODUCTION

Private investors – often supported by public policy and finance – are already channeling significant amounts of money into the low-carbon economy in many countries around the world. These projects are bringing energy to communities, improving agriculture yields for small farmers, spurring economic growth, and helping countries mitigate and adapt to climate change. However, much more investment is needed to tackle the scale of the climate challenge.

The Global Innovation Lab for Climate Finance (The Lab) is a global initiative that aims to drive billions of dollars of private investment into climate change mitigation and adaptation in developing countries. The Lab supports the identification and piloting of cutting edge climate finance instruments that can drive this investment and unlock new opportunities for action.

### THE LAB BRINGS TOGETHER PUBLIC AND PRIVATE PARTNERS

The idea for The Lab emerged in April 2013, when the United States brought Ministers from donor countries together to discuss how best to co-ordinate efforts to mobilize climate finance. In addition to launching work across development finance institutions, export credit agencies, and multilateral development banks, they agreed to work together to establish a global ‘public-private platform’ to develop innovative climate finance instruments. The governments of the United Kingdom, the United States, and Germany<sup>1</sup> have worked in close collaboration with other partners, including five other major climate finance donors<sup>2</sup> to develop The Lab, in consultation with development institutions and representatives of major financial sector institutions.

The Lab is guided by 22 Principals and their Advisors, who are senior, high-level experts in climate finance.<sup>3</sup> Members include representatives from governments, pension funds, investment banks, project development, and development finance institutions across the world. Climate Policy Initiative (CPI) is acting as The Lab’s secretariat and – in collaboration with Bloomberg New Energy Finance (BNEF) – provides analytical support to The Lab’s Principals and Advisors.

<sup>1</sup> Representatives from these three governments constitute The Lab’s Project Management Group.

<sup>2</sup> Denmark, France, Japan, the Netherlands and Norway.

<sup>3</sup> Visit <http://climatefinancelab.org/lab-members/> for a complete list of Lab Principals and Advisors.

**Table 1: The seven instruments assessed in Phase 2**

CATEGORY	INSTRUMENT	GOAL
Aggregation Platform	Renewable Energy Platform for Institutional Investors (REPIN)	Simultaneously stimulate renewable energy deal flow and engage institutional investors in the financing of renewable energy projects.
Primary Deal Flow	Climate Development & Finance Facility (CDFF)	Promote development and finance of climate mitigation projects.
	Debt Fund for Prepaid Energy Access	Bring renewable energy to more than five million off-grid homes in five years.
	Global Renewable Independent Power Supplier (GRIPS)	Replace off-grid industrial diesel generators with commercially mature and cost-competitive renewable alternatives, including storage.
Adaptation/Climate Resilience	Agricultural Supply Chain Adaptation Facility (ASCAF)	Catalyze private investments in measures that would improve the climate resilience of agricultural value chains.
Risk mitigation	Long-term Currency Swap	Catalyze renewable energy investment in developing countries by mitigating exchange rate risk and supporting the development of commercial currency swap markets.
	Insurance for Energy Savings	Provide assurance that energy efficiency projects will generate financial savings.

### LAB ANALYSIS AND MILESTONES

The Lab aims to add value by quickly moving from talk to action to develop implementation-ready projects that address both investors’ and recipient countries’ needs. Since its inauguration, The Lab has concluded two distinct analytical phases. An international ‘call for ideas’ attracted more than 90 proposals, which were screened by The Lab against its four overarching objectives: their actionability, innovativeness, as well as catalytic and transformative potential (Phase 1). Based on these findings, Lab Principals selected seven instruments for in-depth analysis in Phase 2 at the Lab inaugural meeting on June 3<sup>rd</sup> 2014 in London.

The Lab Secretariat presented the results of Phase 2 analysis at the Lab Advisor Meeting on 20 October 2014 in Venice, where Lab Advisors, in consultation with their Principals, selected four from seven instruments to move forward to Phase 3 of The Lab’s work. These were:

- ☒ Agricultural Supply Chain Adaptation Facility
- ☒ Climate Development & Finance Facility
- ☒ Energy Savings Insurance
- ☒ Long-term Currency Swap

### NEXT STEPS FOR PHASE 3

Detailed analysis will continue on the selected instruments through to April 2015, utilizing more refined analytical tools to address questions left open in Phase 2. This process will be

informed by the San Giorgio Group case study approach<sup>4</sup> and will include stakeholders' analysis, financial modeling, and risk assessments. The final aim is to suggest improvements on the instrument design, identify remaining risks that have to be addressed, and outline pathways for implementation.

Going forward, The Lab's success will increasingly be defined by its ability to deliver the promise of moving from talk to action. Securing timely and meaningful financial commitments from donors, other Lab members and private sector, is critical to achieving this end. In spring 2015, Lab Principals will be asked to endorse their top instruments and consider recommendations on how, and where, the most promising instruments could be specifically piloted through Lab-backed public-private partnerships. Figure 1 summarizes The Lab's work timeline.

**Figure 1: Timeline of The Lab's analysis and instruments assessed in Phase 1 & 2**

MAY	<ul style="list-style-type: none"> <li>'Call for Ideas' - resulted in over 90 proposals</li> <li>Instruments and approaches were selected based on potential to fulfil the four overarching Lab criteria: Actionable, Innovative, Catalytic and Transformative</li> </ul>
JUNE	<ul style="list-style-type: none"> <li><b>Inaugural Lab Meeting - 3 June 2014</b></li> <li>Selection of shorter list of seven instruments</li> <li>List of analytical questions</li> </ul>
JUNE-SEPT	<ul style="list-style-type: none"> <li>In-depth analysis of seven short-listed instruments</li> <li>Preparation of Lab Advisor Meeting</li> </ul>
SEPT-OCT	<ul style="list-style-type: none"> <li><b>Lab Advisor Meeting - 20 October 2014</b></li> <li>Selection of four instruments</li> <li>Refined analytical questions</li> </ul>
OCT-MARCH	<ul style="list-style-type: none"> <li>In-depth analysis four selected instruments</li> <li>Dedicated Communication and Outreach</li> <li>Preparation of Final Lab Meeting</li> </ul>
MARCH-APRIL	<ul style="list-style-type: none"> <li><b>Final Lab Meeting - 16 April 2015</b></li> <li>Selection of final instruments</li> <li>Recommendation regarding implementation plan</li> </ul>
SPRING 2015	<ul style="list-style-type: none"> <li>Piloting of instruments</li> <li>Evaluation of progress to-date</li> <li>Organization of second Lab cycle as appropriate</li> </ul>

The Lab's work has continued to receive widespread attention. The Lab Secretariat presented an overview of The Lab's work and process at the Capital Markets Climate Initiative and at the Climate Finance Ministerial in the margins of Climate Week in New York, both in September 2014. In October 2014, the Secretariat hosted a webinar, which introduced The Lab's work and objectives, reaching several hundred practitioners from the public and private sector.

<sup>4</sup> See <http://climatepolicyinitiative.org/wp-content/uploads/2014/07/SGG-Inaugural-120105.pdf> for a description of this approach.

The Lab remains committed to reach out to stakeholders worldwide and sharing its insights with others to scale up climate finance. It is with that aim that this report has been developed, and specifically, with the goal of sharing lessons from Phase 2 of The Lab's analysis.

The remainder of this report is structured as follows: In the next section, we detail the methodological approach for Phase 2. Section 3 provides a synthesis of the analytical results from Phase 2. Section 4 elaborates on the selected instruments and Section 5 sketches out the next analytical steps. We conclude in Section 6.

## PHASE 2 ANALYTICAL FRAMEWORK

The Lab's Phase 2 of analysis commenced in June 2014 and concluded with the Second Lab Advisor Meeting on 20 October 2014 in Venice. During this phase, and with invaluable guidance from working groups, The Lab's analytical provider Climate Policy Initiative in collaboration with Bloomberg New Energy Finance, applied a common analytic framework to assess each instrument's alignment with the four overarching criteria of The Lab:

- ☒ **Actionable**, the instrument must be implementable in a few years without facing major regulatory or political barriers, with a clear pathway to implementation/action plan in place;
- ☒ **Innovative**, the instrument must be able to address risk, cost and liquidity gaps between low-carbon, climate-resilient investments and the high-carbon alternatives with new or enhanced tools;
- ☒ **Catalytic**, in terms of private sector engagement and ability to mobilize private capital at scale;
- ☒ **Transformative**, by having a significant impact on climate change mitigation and/or adaptation, demonstrating ability to promote structural changes in investment practices by uniquely addressing market barriers, and providing business models that can be replicated and scaled up.

To guide Phase 2 analysis, the analytical provider developed a detailed list of qualitative and quantitative evaluation indicators via a three-step process: (1) scoping, (2) desk-based research and (3) interviews and outreach (see Figure 2).

Analysis considered the context in which each proposed instrument would eventually operate, including policy frameworks, planned timeframes, and types of public finance/support needed as well as the technology/service stage to which the instrument is applied. Beyond that, analysis scoped potential private finance providers and stakeholders. The innovativeness of each instrument was assessed by identifying common barriers to private finance across varying financial, technology and policy contexts. Analysis also considered potential implementation challenges such as unforeseen transaction costs or reliance upon non-existing infrastructure or capacity.

The last step included review by working groups, which included experts beyond The Lab membership. This helped to ensure that analysis took into account issues such as recipient demand and/or needs and how well each instruments targets these.

## PHASE 2 ANALYSIS OF THE LAB INSTRUMENTS

This section provides a brief overview of all seven instruments analyzed in Phase 2, and summarizes how each of them could contribute to channeling private climate investments into developing countries.<sup>5</sup> It also summarizes analytical findings, the value add of The Lab in Phase 2, and outlines the main

points for discussion that were raised during The Lab Advisor Meeting in October.

Table 2 presents the results of the indicator assessment conducted across all seven instruments. The table aims to present at a glance the results of the assessment analysis performed in Phase 2. While common indicators and measures were applied across the seven instruments we stress that results are not directly comparable due to varying analytical scopes for specific instruments, and differences in their stage of development (which is particularly reflected in the magnitude of financial estimates).<sup>6</sup>

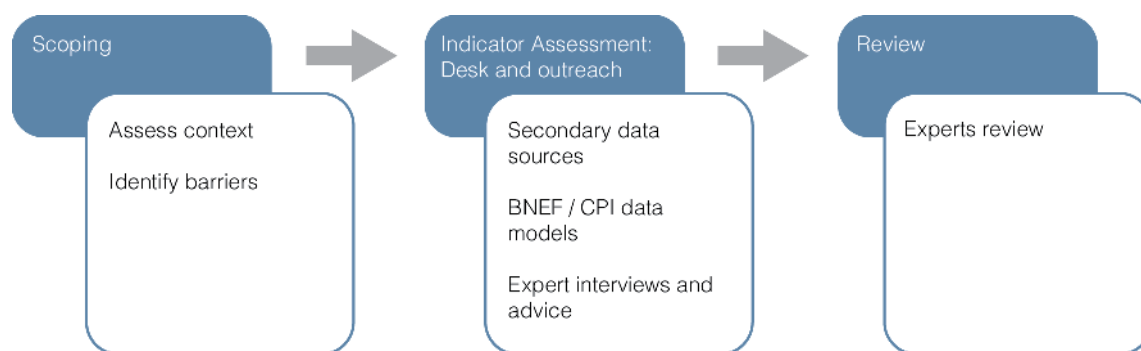
**Table 2: Indicator assessment summary**

CATEGORY	INSTRUMENT	OVERARCHING LAB CRITERIA							
		Innovative		Actionable		Catalytic		Transformative	
		Instrument-specific barriers addressed	Innovativeness of instrument	Time to implementation	Strength of implementation plan	Private Finance mobilized (USD)	Public Finance required (USD)	Market potential in 2030 (USD)	Mitigation impact potential
Aggregation Platform	Renewable Energy Platform for Institutional Investors (REPIN)	Moderate	Moderate/High	6-18 months	Moderate	1.25 billion	200 million	300 billion	508 MT CO <sub>2</sub>
Primary Deal Flow	Climate Development & Finance Facility (CDFF)	Moderate/High	High	3-6 months	High	2 to 2.2 billion	150 million	155 billion	221 MT CO <sub>2</sub>
	Debt Fund for Prepaid Energy Access	Low/Moderate	Moderate/High	> 24 months	Low	300 to 500 million	>20 million	0.3 to 3 billion (p.a.)	> 26-52 MT CO <sub>2</sub> (p.a.)
	Global Renewable Independent Power Supplier (GRIPS)	Moderate	High	24-36 months	Moderate/High	145 million	145 million	7.2 billion	2.5 MT CO <sub>2</sub> (p.a.)
Adaptation/Climate Resilience	Agricultural Supply Chain Adaptation Facility (ASCAF)	High	Moderate/High	12-18 months	Moderate	6 to 12 million	Guarantees and technical assistance	2.5 to 4.4 billion	n.e.
Risk mitigation	Long-term Currency Swap	Moderate/High	Moderate	12 months	High	1.5 to 3.5 billion	200 to 500 million	450 billion	3.4-10.5 MT CO <sub>2</sub> (p.a.)
	Insurance for Energy Savings	Moderate	Moderate/High	6-12 months	High	20 to 60 million	12-25 million	10 to 100 billion	27-234 MT CO <sub>2</sub> (p.a.)

6 Please visit <http://climatefinancelab.org/ideas/> for the full indicator assessment of each instrument, including important contextual information.

5 Find an overview table in the appendix.

Figure 2: The Lab's analytical approach in Phase 2



## RENEWABLE ENERGY PLATFORM FOR INSTITUTIONAL INVESTORS (REPIN)

### INSTRUMENT OVERVIEW

PROPONENT	European Investment Bank
GOAL	Simultaneously stimulate renewable energy deal flow and engage institutional investors in the financing of renewable energy projects
DESCRIPTION	A platform of context-specific financial structures that would facilitate transactions between project lenders and institutional investors
TARGET SECTOR	Renewable energy
PRIVATE CAPITAL TARGETED	Institutional Investors and commercial banks
GEOGRAPHICAL SECTOR	Middle income countries
PILOT	South Africa
CATEGORY	Aggregation platform

### THE LAB'S ANALYSIS FOR THE RENEWABLE ENERGY PLATFORM FOR INSTITUTIONAL INVESTORS

Early research and consultation considered similar aggregation platforms and identified lessons learned and best practices. Lab analysis expanded the scope of initial work by the proponent (focused on implementing REPIN in Western Europe); to identify and map relevant stakeholders that would underpin REPIN's implementation in a set of developing and emerging economies. Since REPIN targets middle-income countries, scoping market analysis focused on India, Mexico and South Africa. The Lab developed a preliminary financial model for the pilot stage in South Africa, evaluating REPIN's short-term market potential and the potential need for public support. The Lab also explored potential institutional structures and financial arrangements, and elaborated preliminary options for transaction designs.

### SUMMARY OF ANALYTICAL FINDINGS

REPIN's main strength is its potential to mobilize significant private resources towards renewable energy investments in emerging economies in a relatively short amount of time by

facilitating transactions between willing institutional investors looking for long-term, low-risk assets, and commercial banks eager to recycle their lending capacity towards new projects. Analysis found that policy frameworks for such investments are already in place in some emerging economies and transactions are occurring but pace and scale could be greatly increased by REPIN. Analysis shows that several implementation hurdles remain due to the scope and complexity of the instrument. To overcome those, REPIN would require strong institutional support from various stakeholders and, particularly in its initial phases, from the public sector.

### DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

Discussion focused on REPIN's likely requirement of credit enhancement in order to offer refinancing loans at commercially attractive rates, and the recycling of proceeds. Advisors considered that the exact strategy and stakeholders for credit enhancement required further consideration but noted that during the pilot phase, credit enhancement would potentially need to be provided by the public sector. In terms of how banks could be incentivized (or required) to re-invest freed-up finance in renewable energy projects, Advisors considered that guaranteeing this 'recycling of proceeds' would be crucial to ensure REPIN contributed to 'scale-up'. The proponent clarified that existing demand from local banks to refinance existing loans and strong government support for new renewable energy projects in South Africa, is creating a favourable environment for a sizeable pilot there.



## CLIMATE DEVELOPMENT & FINANCE FACILITY (CDFF)

### INSTRUMENT OVERVIEW

PROPONENT	The Netherlands Development Finance Company (FMO)
GOAL	Promote development and finance of climate mitigation projects
DESCRIPTION	Creation of a new entity, managed by FMO, to provide fast-track finance using three separate facilities for different phases of the project life-cycle; <ul style="list-style-type: none"> <li>• development finance facility;</li> <li>• construction finance facility; and</li> <li>• re-financing platform.</li> </ul>
TARGET SECTOR	Energy; Forestry; Transport
PRIVATE CAPITAL TARGETED	Private Equity and Institutional Investors
GEOGRAPHICAL SECTOR	Low-income and Lower middle-income countries
PILOT	10 projects
CATEGORY	Primary Deal Flow

### THE LAB'S ANALYSIS FOR THE CLIMATE DEVELOPMENT & FINANCE FACILITY

The Lab's analytical input helped refine the design and structure of the Climate Development & Finance Facility. Experts from the instrument working group suggested different private investors' risk profiles could be better targeted by splitting the CDFF into three different facilities. A detailed instrument financial flowchart, including a possible operating structure was designed. Based on desk research on other instruments and expert interviews, The Lab identified possible implementation challenges and potential ways to address them. Key stakeholders, including potential investors and beneficiaries were identified and interviewed during the work. The Lab also provided an initial market analysis on potential low- and middle-income markets for deployment of the instrument.

### SUMMARY OF ANALYTICAL FINDINGS

The proposed instrument provides an innovative combination of fast-track project development support with better and more timely capital for private sector climate mitigation projects. Analysis confirms that this addresses the needs of project developers, policy makers, and private investors alike. The target country group of low- and lower middle-income countries represents a significant market in which the CDFF can reduce the complexity and delays in project development that emerge from DFI and other investors' exposure limits to individual projects. For the proposal to succeed, the instrument will require donor capital to initiate start-up and project development, a partnership arrangement with other DFIs offering commercial finance, an effective governance arrangement across the facility

and lastly, a strategy to market with suitable value propositions to attract private investors.

### DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

The discussion focused on how to attract private investors to the CDFF and how to guarantee an efficient governance structure. Concerning the first point, institutional investors could be attracted by providing donor capital in the most efficient way. Concerning the second point, since a fund manager would be in charge of all three facilities, managing potential conflict of interest within this instrument would be crucial. FMO stated that it would be possible to build a consortium within six months, and have a pilot project ready in 12 months.

## DEBT FUND FOR PREPAID ENERGY ACCESS

### INSTRUMENT OVERVIEW

PROPONENT	Azuri Technologies
GOAL	To bring renewable energy to more than five million off-grid homes in five years
DESCRIPTION	Increase deployment of pre-paid, off-grid, renewable energy systems through access to necessary working capital to energy service companies who have a proven track record in the market, via a combination of asset finance and consumer credit
TARGET SECTOR	Off-grid renewable energy
PRIVATE CAPITAL TARGETED	Commercial banks and Institutional Investors
GEOGRAPHICAL SECTOR	Low income countries
PILOT	Sub-Saharan Africa
CATEGORY	Primary Deal Flow

### THE LAB'S ANALYSIS FOR THE DEBT FUND FOR PREPAID ENERGY ACCESS

Lab analysts first conducted a literature review and engaged in a discussion with experts on similar instruments and potential lessons learned to put the Debt Fund for Prepaid Energy Access into context. In a next step, stakeholders were identified and potential roles of public and private investors defined. The Lab developed a detailed instrument flowchart with financial structure in consultation with commercial banks and DFIs. The refined financing structure of the instrument will better target low risk appetites of private investors and some development banks. To prepare the pilot, Lab analysis included scoping the off-grid energy service market in Sub-Saharan Africa and estimating the short-term market potential until 2020.

### SUMMARY OF ANALYTICAL FINDINGS

The Debt Fund for Prepaid Energy Access addresses a key



barrier to scaling up energy access by providing working capital to energy service companies. The Lab identified interest from private investors and development banks to invest, however, analysis showed several implementation challenges to overcome in order to get the Debt Fund to pilot stage. The Debt Fund will require a detailed corporate structure and governance arrangements in order to become operational in a pilot stage. The analysis also highlighted the importance of a clear financing structure to attract potential investors. As the Debt Fund relies on consumer creditworthiness to attract investors, it would also need to develop a credit rating metric for the asset/consumer portfolio of companies to minimize default risk. In addition, the Debt Fund will have to identify crucial stakeholders, including DFIs, and secure a favorable policy environment.

#### DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

The proponent emphasized that one of the Debt Fund's advantages in targeting investors is its short payback period of only two years. This property would allow investments on a continuous basis. The fund would also be able to provide energy at a commercially attractive rate to customers comparable to conventional electricity generation. The discussion illustrated that foreign exchange risk remains an issue – which the Debt Fund would pass on to customers. In line with The Lab's analytical findings, the rating metric for customer creditworthiness would require further development and additional input from Lab experts. In addition, the exact financial structure was discussed and questions raised about how first-loss would be covered and which stakeholder would provide the loan guarantees.

### GLOBAL RENEWABLE INDEPENDENT POWER SUPPLIER (GRIPS)

#### INSTRUMENT OVERVIEW

PROPONENT	Deutsche Bank
GOAL	To replace off-grid industrial diesel generators with commercially mature and cost-competitive renewable alternatives, including storage
DESCRIPTION	A new private sector entity will develop, build and own a diversified pool of decentralized renewable energy assets
TARGET SECTOR	Off-grid renewable energy
PRIVATE CAPITAL TARGETED	Project sponsors, institutional investors, family offices
GEOGRAPHICAL SECTOR	Initially Sub-Saharan Africa
PILOT	Nigeria, Kenya and South Africa
CATEGORY	Primary Deal Flow

#### THE LAB'S ANALYSIS FOR THE GLOBAL RENEWABLE

#### INDEPENDENT POWER SUPPLIER (GRIPS)

Lab analysts began by clarifying the structure originally proposed by proponents, and refining its objectives, making GRIPS easier to market to investors by targeting better their investment requirements. The Lab conducted desk research on similar instruments identifying potential lessons that could be applied. The Lab also identified the most suitable countries for a pilot implementation and potential public sector sponsors to support the initiative. For these potential markets, The Lab executed a high-level analysis, crossing several indicators and data sources and a longer-term assessment of the business model's replicability in other regions.

#### SUMMARY OF ANALYTICAL FINDINGS

GRIPS represents a promising, concrete investment opportunity for developing off-grid supplies of renewable energy and storage in developing countries. Analysis shows that the instrument aims to provide a viable business case with significant development co-benefits. GRIPS' strength lies in its new approach to financing power used, rather than power produced. The Lab analysis also revealed several barriers and implementation challenges for GRIPS, including comparatively high fossil fuel subsidies in some markets that undercut the ability for newer technologies to be competitive, among other regulatory and policy hurdles. Lab analysis suggests that in order to be fully applicable, GRIPS would need to identify a portfolio of reliable industrial off-takers, secure public support of the initiative in pilot countries and engage with the local supply chain and work force.

#### DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

At the meeting, the proponent illustrated how the concept could help replace diesel generators including at night time. Participants agreed that GRIPS presents an innovative business model that could be scaled up for financing renewable assets in developing countries. An important point was that GRIPS would operate like a utility provider and initially focus on providing services to businesses, with the potential to target individual customers in the future. The discussion identified regulatory issues as an issue for continued consideration. This holds especially true in countries with centralized energy production. A last point concerned the appropriate legal structure. Meeting participants discussed whether the equity-funded approach to GRIPS could be transferred into a YieldCo legal entity, which could be additionally attractive for institutional investment.

## AGRICULTURAL SUPPLY CHAIN ADAPTATION FACILITY (ASCAF)

### INSTRUMENT OVERVIEW

PROONENTS	Inter-American Development Bank (IDB) and Calvert Investments
GOAL	Catalyze private investments in measures that would improve the climate resilience of agricultural value chains
DESCRIPTION	Value chain finance mechanism structured as trust fund through which Multilateral Development Banks provide supply chain financing via partner agribusiness corporations to small-to-medium size producers and/or processors for investments
TARGET SECTOR	Agriculture & forestry
PRIVATE CAPITAL TARGETED	Agribusiness corporations; small-to-medium size producers/processors
GEOGRAPHICAL SECTOR	Low & middle-income countries
PILOT	Latin America and Caribbean
CATEGORY	Adaptation/Climate Resilience

### THE LAB'S ANALYSIS FOR THE AGRICULTURAL SUPPLY CHAIN ADAPTATION FACILITY (ASCAF)

Lab analysts conducted a literature review to compare key features of the ASCAF against existing initiatives targeting agricultural supply chains, and to identify the lessons learned. The Lab mapped relevant stakeholders for the ASCAF and their roles, developed a preliminary design for the institutional set-up and clarified necessary financial arrangements. It also identified potential target value chains, possible partner corporations, and more clearly outlined the approach for determining the eligibility of climate-resilient investments. To determine ASCAF's potential in the Latin American and Caribbean region The Lab provided a preliminary market analysis on a sample of four crops (coffee, soybean, maize and sugarcane).

### SUMMARY OF ANALYTICAL FINDINGS

ASCAF intends to tackle small-to-medium size producers/processors' inability to access medium and long-term credit as well as their information and capacity gaps. It does so by assuming the first-loss position that MDBs and other market-based lenders are not able or unwilling to take, and by targeting corporations' credit analysis and agricultural extension capacity gaps. The Lab analysis showed that key implementation hurdles included engaging suitable and interested corporations, obtaining farmers' buy-in to generate the Facility's deal flow, and determining an appropriate portfolio of climate-resilient investments eligible for ASCAF support. The Lab analysis suggests that the establishment of an effective monitoring and evaluation system would be critical to avoid the financing

of business as usual or 'maladaptation activities'. As ASCAF relies on donor resources to set up the Facility, securing these resources would be important to supporting its credit enhancement and technical assistance components.

### DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

The instrument proponents, IDB and Calvert Investment, stressed that they have human resources to dedicate to further develop the design of the Facility. In particular, Calvert Investments offered to take on the task of supporting the agribusinesses engagement process. IDB informed Lab Advisors that it has \$5 million from the Global Environment Facility that could be used, but that additional funds would be required to achieve scale. There were also questions about how ASCAF differs from existing instruments, how it could be combined with insurance mechanisms, and which adaptation measures would be eligible for financing.

### LONG-TERM CURRENCY SWAP

### INSTRUMENT OVERVIEW

PROONENT	World Resources Institute, International Finance Corporation (IFC), The Currency Exchange Fund (TCX)
GOAL	Catalyze renewable energy investment in developing countries by mitigating exchange rate risk and supporting the development of commercial currency swap markets
DESCRIPTION	The pilot of this instrument aims to facilitate the issuance of \$1-2 billion in notional value of long-term currency swaps through two facilities that address market risk and counterparty credit risk in swap transactions.
TARGET SECTOR	Renewable energy
PRIVATE CAPITAL TARGETED	Private debt and equity
GEOGRAPHICAL SECTOR	Asia, Middle East, Latin America and Sub-Saharan Africa
PILOT	TBD
CATEGORY	Risk mitigation

### THE LAB'S ANALYSIS FOR THE LONG-TERM CURRENCY SWAP

The Lab analysis sought to understand the main barriers to currency swap transactions in developing countries and proposed solutions to address the most important. These include counterparty risk which is a large barrier for investors and banks seeking to engage in a swap transaction, as well as market risk, which limits tenors and the availability of swaps in less liquid currencies. A proposal was made for two facilities which would address counterparty and market risk through a financial instrument supported by a first loss tranche. Two

experienced institutions - TCX and IFC, were identified to act as implementing entities for a potential pilot.

### SUMMARY OF ANALYTICAL FINDINGS

The Long-term Currency Swap provides a practical solution to the problem of exchange rate risk. Lab analysis showed that employing this instrument could facilitate greater flows of foreign capital to developing countries, lower the cost of capital and improve debt tenors. In doing so, the instrument would lower the cost of renewable energy and increase investment levels. The market for this instrument is very large and two experienced and suitable institutions are interested in implementing this instrument, which is a positive factor and considerably decreases implementation risks. The analysis also clarified some hurdles that remain for implementation. To implement this instrument, donor contributions would be needed to cover first loss tranches for the facilities. Public and private equity would also need to be raised to capitalize the facilities and grant funding would be needed to develop models and support market analysis.

### DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

Foreign exchange risk was discussed as an overarching barrier present in many emerging markets. Participants therefore considered an instrument addressing this general obstacle to climate finance could enhance efforts to unlock scaled-up investment. IFC and TCX were welcomed as potential implementing agencies, amidst general agreement that both institutions have a proven track record. During the discussion, there was consideration of whether TCX would find counterparties for swaps in developing countries. Other points concerned the instruments' relevance in countries with a black market for currency and the leverage that can be achieved with the current set-up. Further discussion addressed how first-loss guarantees could be expanded should they be exhausted.

## INSURANCE FOR ENERGY SAVINGS

### INSTRUMENT OVERVIEW

PROPONENT	Danish Energy Agency
GOAL	To provide assurance that energy efficiency projects will generate financial savings
SUMMARY OF INSTRUMENT	Proposes a package of financial measures, including a new insurance product that covers the expected financial value of the energy efficiency investments, and the ability to facilitate credit lines from development banks that would provide long-term capital and reduce the cost of financing of the projects
TARGET SECTOR	Energy Efficiency
PRIVATE CAPITAL TARGETED	SMEs in selected sectors (agroindustry)
GEOGRAPHICAL SECTOR	Emerging markets
PILOT	Mexico
CATEGORY	Risk mitigation

### THE LAB'S ANALYSIS FOR THE INSURANCE FOR ENERGY SAVINGS (IES)

The Lab reviewed the proponent's original design and structure and conducted a literature review of similar instruments to identify potential lessons learned and guide mapping of possible stakeholders. The Lab facilitated dialogue with potential reinsurers for the instrument. Since planning was well underway for a pilot in Mexico, The Lab performed a more detailed market analysis of Mexico. To evaluate replication potential, The Lab also performed a market and more general policy analysis for Brazil, Russia, India, China and South Africa (BRICS) as well as other emerging economies, also taking into account the development of markets for energy service companies in these countries. Working group experts assisted with identifying in detail the main replication barriers.

### SUMMARY OF ANALYTICAL FINDINGS

The IES instrument could effectively address technical and financial risks and enhance access to financing energy efficiency measures for small and medium sized enterprises in developing countries. Lab analysis shows that while supportive regulatory environments will enhance the impact of the instrument, success ultimately depends on the engagement of an appropriate implementing institution at the country level. Interested donors could provide strategic, complementary support to the program by fast-tracking pilot investments in different regions, which would in turn, help to demonstrate the effectiveness of the mechanism. The Lab analysis highlighted that entry costs and complex regulatory environments could impede implementation at scale. Furthermore, a reluctance by insurers to take up an

instrument perceived as too complex may present an obstacle.

## DISCUSSION POINTS AT THE LAB ADVISORS' MEETING

The instrument's proponent explained that the pilot in Mexico is on track and that the instrument is part of a package of measures that also includes concessional finance. The role of The Lab in the next phase was generally seen in supporting replication design and implementation efforts. The potential for standardization was acknowledged to be a key advantage of this instrument and scaling up. The discussion also raised the question of how insurers can provide an integrated product, which includes both insuring and licensing energy savings.

## SECOND LAB ADVISOR MEETING

Building on The Lab's analytical work and assessment in Phase 2, Advisors in consultation with their Principals selected four from seven instruments to move forward to Phase 3 for further detailed analysis and development. For each of the seven instruments in turn, lead analysts provided an overview of each instrument followed by a brief reply from proponents and a roundtable discussion.

A general discussion following the individual presentations considered the challenges in selecting three to four out of seven diverse instruments, each at different stages of analysis of development, to progress to the next phase. Discussion focused on the particular role of The Lab in progressing instruments. Material considerations included the role and 'value add' of The Lab in: developing concepts through to design; identifying potential donors to fund start-up phases for pilots; facilitating access to development resources and other fundraising sources; establishing take-to-market strategies; supporting efforts to replicate and scale up pilots in different regions (with different implementers and backers); creating in-roads to local institutions, businesses and financial systems; and providing instrument inputs to the Global Climate Fund (GCF).

Based on these considerations, and taking into account the four overarching Lab criteria, Lab Advisors in consultation with their Principals selected the four instruments to proceed to Phase 3:

- ☒ Agricultural Supply Chain Adaptation Facility;
- ☒ Climate Development & Finance Facility;
- ☒ Energy Savings Insurance; and,
- ☒ Long-term Currency Swap.

All four of these instruments benefit from a strong backing by proponents and other stakeholders; some have already received early financial commitments. In addition, Lab Advisors felt confident that The Lab's analytical inputs of Phase 3, skills, and networks, could strongly support moving these instruments from designs, to pilots, and even to successful replication.

Lab members agreed that participation of working groups and external experts in The Lab's analysis had positively impacted all seven instruments – even if not selected for Phase 3. The Lab remains committed to the three instruments not forwarded to Phase 3 and will support their further development where possible.

## NEXT STEPS FOR ANALYSIS

The Lab will continue to refine its analysis in Phase 3 for each of the four selected instruments. Detailed analysis will focus on questions left open in Phase 2, utilizing more refined analytical tools. The final aim is to improve the instrument design, identify remaining risks that must be addressed to arrive at bankable instruments, and ultimately, to outline pathways for implementation. Phase 3 in-depth analysis will be informed by elements of the San Giorgio Group case study approach,<sup>7</sup> including stakeholder analysis, financial modeling, and risk assessments as outlined in Figure 3.

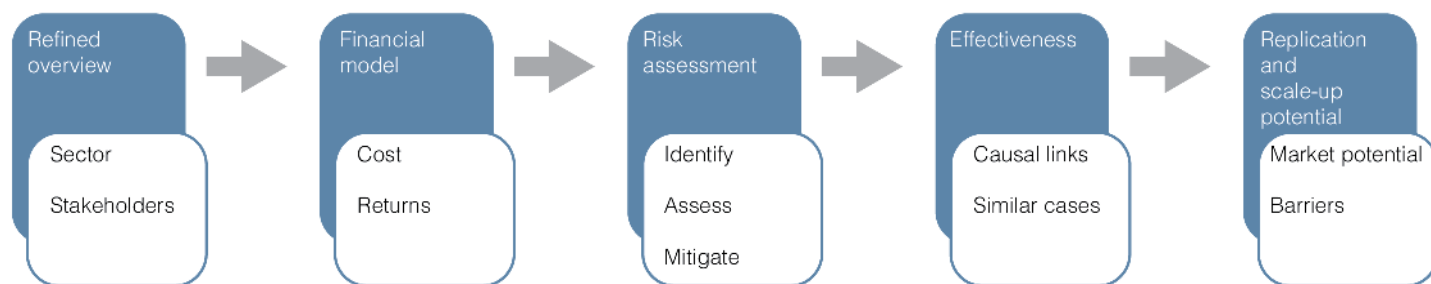
The Lab will tailor its approach to meet the specific needs and maturity of each instrument. For less mature instruments, assessment will therefore focus on refining the instrument design and developing implementation pathways for a pilot program, for which both geographical and sectoral scope must be clearly defined. For more mature proposals (for example, where planning for pilots is already underway), the focus will be on evaluating the pilot's success and potential for replication.

This needs-based approach will be undertaken in close consultation with instrument proponents and potential implementing entities and will be supported by inputs provided by experts, Advisors and Principals. This will help ensure that implementation plans take account of lessons from the analysis as well as stakeholders' experience and suggestions. The Lab is committed to reach out to and engage other stakeholders who are interested in a specific instrument, with the aim of facilitating crucial buy-in of other partners.

As instruments progress on their individual pathway to implementation, The Lab will also aim to ensure that stakeholders from recipient countries are increasingly engaged in the process. Incorporating their views feed back into the analysis is an important element to best address target countries' needs and make pilot implementation a success.

<sup>7</sup> See <http://climatepolicyinitiative.org/wp-content/uploads/2014/07/SGG-Inaugural-120105.pdf> for a description of this approach.

Figure 3: The San Giorgio Group case study approach



## CONCLUSION

The Global Innovation Lab for Climate Finance has been working to identify and support the development of climate finance instruments that will help channel private capital into low-carbon investments in developing countries. In times of slowing climate investments, The Lab responds to the urgency of the climate challenge by accelerating the development of promising climate finance proposals that are underpinned by robust analysis and can be implemented quickly.

The Lab is a truly global public-private initiative: While its development was led by three donor governments, it is backed by other major donor governments and financial institutions, and has attracted the participation of high-level climate finance experts from various sectors, from developed and developing countries. The Lab is committed to drawing on existing experience and expertise from around the world in order to inform well designed, bankable financial instruments. Once piloted and implemented, these instruments will prove the value of new and innovative approaches to help build new markets, attract new investors, and unlock billions of dollars in new climate-friendly investment in developing countries.

Phase 3 analysis will be finalized by spring 2015, when Lab Principals are expected to endorse their top instruments and to consider recommendations on how, and where, the most promising of these could be specifically piloted through Lab-backed public-private partnerships.

As Phase 3 analysis nears completion and planning for implementation and/or replication ramps up, it will become increasingly critical to secure real financial commitments and the buy-in from both public and private stakeholders. Lab members and the Secretariat are committed to building support within their organizations and networks, to ensure that The Lab does move from talk to action, with appropriate political, financial and administrative support, and within time frames that count.

## APPENDIX

Table 3: Overview of instruments

CATEGORY	INSTRUMENT	PROPONENT	PRIVATE CAPITAL TARGETED	GOAL
Aggregation Platform	Renewable Energy Platform for Institutional Investors (REPIN)	European Investment Bank	Institutional Investors and commercial banks	Simultaneously stimulate renewable energy deal flow and engage institutional investors in the financing of renewable energy projects.
Primary Deal Flow	Climate Development & Finance Facility (CDFF)	Dutch Development Bank (FMO)	Private Equity and Institutional Investors	Promote development and finance of climate mitigation projects.
	Debt Fund for Prepaid Energy Access	Azuri Technologies	Commercial banks and Institutional Investors	Bring renewable energy to more than five million off-grid homes in five years.
	Global Renewable Independent Power Supplier (GRIPS)	Deutsche Bank	Project sponsors, institutional investors, family offices	Replace off-grid industrial diesel generators with commercially mature and cost-competitive renewable alternatives, including storage.
Adaptation/ Climate Resilience	Agricultural Supply Chain Adaptation Facility (ASCAF)	IDB and Calvert Investments	Agribusiness corporations Small- to medium- size producers / processors	Catalyze private investments in measures that would improve the climate resilience of agricultural value chains.
Risk mitigation	Long-term Currency Swap	World Resource Institute	Private debt and equity	Catalyze renewable energy investment in developing countries by mitigating exchange rate risk and supporting the development of commercial currency swap markets.
	Insurance for Energy Savings	Danish Energy Agency	SMEs in selected sectors (agroindustry)	Provide assurance that energy efficiency projects will generate financial savings.