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The effectiveness of climate finance: a review of the Scaling-up Renewable Energy Program

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The effectiveness of climate finance:

A review of the Scaling-up Renewable Energy in Low Income Countries Program

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The Scaling-up Renewable Energy in Low Income Countries Program (SREP) was designed to address a gap in the international climate finance architecture by ensuring that finance is directed to assist low income countries in adopting low carbon energy technologies and using renewable energy to improve energy access. It is too early a stage in the SREP's implementation to make definitive conclusions on its effectiveness. Program implementation has been relatively slow. It seems however that many of the programs in which it is investing are poised to result in important increases in renewable energy installed in country and the number of people with access to energy, although to date energy access has not been prioritised to the extent originally envisaged. The SREP's programmatic approach, with significant resources dedicated to bringing stakeholders together to agree priorities and address institutional and capacity related issues, is in many ways a particular strength. The relatively high anticipated co-finance and leverage ratios for SREP funding are an indication of the effectiveness of national planning and programming processes. The extent to which the SREP's flexible instruments have expanded the range of investment opportunities in target countries is not clear, however, and speaks to the difficulty of delivering finance at scale to increase access to energy in low income countries.

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Abbreviations

ADB	Asian Development Bank
AEPB	Alternative Energy Promotion Board
AEPC	Alternative Energy Promotion Centre
AfDB	African Development Bank
AMC	Advanced Market Commitments
CIF	Climate Investment Fund
CIF AU	Climate Investment Fund Administrative Unit
CTF	Clean Technology Fund
EFPI	Energy For the Poor Initiative
FIP	Forest Investment Program
GCF	Green Climate Fund
GDC	Geothermal Development Company
GEF	Global Environment Facility
GHG	Greenhouse Gas
IATI	International Aid Transparency Initiative
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
LDC	Least Developed Country

M&E	Monitoring and evaluation			
MDB	Multilateral Development Bank			
MEPI	Multi-dimensional Energy Poverty Index			
MOSTE	Ministry of Science Technology and the Environment			
NGO	Non-government organisation			
NRREP	National Rural and Renewable Energy Program			
OBA	Output Based Aid			
OECD	Organisation for Economic Cooperation and Development			
PPCR	Pilot Program for Climate Resilience			
RDB	Regional Development Bank			
RE	Renewable energy			
SCF	Strategic Climate Fund			
SECO	State Secretariat for Economic Affairs			
SME	Small and medium-sized enterprises			
SREP	Scaling-up Renewable Energy in Low Income Countries Program			
UN	United Nations			
UNDP	United Nations Development Program			
UNEP	United Nations Environment Program			
UNFCCC	United Nations Framework Convention on Climate Change			

Summary

	FUND PURPOSE AND OBJECTIVES / THEORY OF CHANGE						
To use grant and concessional finance to demonstrate the viability of low carbon development pathways in the energy sectors of pilot low-income countries by creating new economic opportunities and increasing energy access through renewable energy.							
	 Resource mobilisation While the SREP is larger than many other climate funds, it is the smallest of the Climate Investment Funds Grant and capital resourcing means that it is more able to invest in the low-income countries it targets, where risk is higher 	- US\$ eq. 519 million pledged from eleven donors (97% deposited).	INSTRUMENTS The SREP has partic provided as grants a				
	2. Voice and administration		ular nd/o				
	 Equal representation of developed and developing countries on the governing Sub-Committee. Observers representing civil society, indigenous peoples and the private sector also make inputs and engage in design Key documents and minutes are made publicly available, although information on private sector investments remains confidential. 	- Sub- Committee contains six members each from donor and recipient countries.	flexibility in the range or concessional loans. Th				
3. Investment Strategy and Allocation							
	 Interest from potential recipient countries exceeded available resources substantially. An expert group led screening process resulted in the selection of pilot countries National governments work in collaboration with regional MDBs to prioritise investment options and propose a vision for use of SREP funds; civil society and private sector actors have had the opportunity to engage in many cases 						
	4. Disbursement and Risk Management		ivai				
	 Disbursement is significantly delayed. Over-programming is now allowed in order to encourage the acceleration of the project pipeline The SREP relies on MDBs safeguard policies to manage social and environmental risks; these are relevant given the portfolio includes some large scale centralised investments. 	- Only US\$ 4.2 million disbursed as of December 31, 2013.	lable to it. The majori -finance from wider p				
	5. Monitoring, evaluation, and learning		ity c bubl				
	 A simplified two tier results framework requires reporting on direct impacts on renewable energy production (GWh) and the number of individuals and businesses benefiting from improved energy access. Assessments of enabling environments for investment in renewable energy have also been commissioned. 	 Project implementation is in the very early stages. Annual reporting on results is due to begin in 2014. 	of funding is anticipated to ic and private sources.				
			be				

6. Scale

- Scaling-up renewable energy and energy access require different kinds, and scales, of investment. MDBs are investing in sub-programs or services that will engage smaller scale actors.
- Tensions around the access impacts of larger scale investments in centralised energy.

7. Enabling environments

- Each SREP pilot country had a different starting point in terms of enabling environments for investments in renewable energy and energy access. The investment plan preparation process has provided an initial opportunity for considering deficiencies.
- SREP flexibility to offer both grant and concessional finance is crucial in allowing it to fund technical assistance and capacity building components. All projects include these in some form.

8. Catalytic outcomes

- Catalysing private action is a key tenet of the SREP's approach. Investment plans are in general thorough in addressing the specific barriers that must be overcome to achieve this. Models for private sector engagement differ in each case, with varying focuses on addressing risks, costs or capacity building. It remains to be seen the extent to which planned leveraging is achieved in practice.
- A US\$ 90 million pool of additional funding has been allocated through the SREP private sector set aside specifically targeted at encouraging private sector leadership in the renewable energy sector.

9. Innovation

- The SREP is not particularly innovative in terms of the technologies supported, other than in cases where there is no prior experience of implementing a technology in a particular country.
- The extent to which the fund is able to engage with wider global partners could be an important factor in encouraging innovation in energy access delivery approaches.

10. National ownership and sustainability

- It is a central intention in the SREP's design that the fund be country-led and build on national policies. The commitment of recipient governments to mainstream renewable energy development in their energy plans was therefore a major factor in the pilot country selection process.
- The investment plan development process has provided an opportunity for national leadership and engagement with relevant institutions and stakeholders, although concerns have been raised in some cases over the extent to which resulting investment plans reflect MDB priorities over those of governments.

ROLE IN THE GLOBAL CLIMATE FINANCE ARCHITECTURE

The SREP was designed to address a gap in the international climate finance architecture by ensuring that finance is directed to assist low income countries in adopting low carbon energy technologies and using renewable energy to improve energy access. It is too early a stage in the SREP's implementation to make definitive conclusions on its effectiveness. It seems however that many of the programs in which it is investing are poised to result in important increases in renewable energy installed in country and the number of people with access to energy, although to date energy access has not been prioritised to the extent originally envisaged.

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Introduction

The Scaling-up Renewable Energy in Low Income Countries Program (SREP) is a dedicated multilateral climate fund for mitigation in developing countries. It is a component of the Climate Investment Fund (CIF), administered by the World Bank and implemented in partnership with Regional Development Banks (RDBs): The African Development Bank (AfDB), Asian Development Bank (ADB), Inter-American Development Bank (IDB), European Bank for Reconstruction and Development (EBRD), and the International Finance Corporation (IFC). It works without the direct guidance of the United Nations Framework Convention on Climate Change (UNFCCC), with a governing committee that includes representatives of both developed and developing countries. Like all of the CIF programs, it is intended to sunset once the newly established Green Climate Fund is operational under the UNFCCC.

The SREP is designed to provide concessional and grant-based public finance to a select group of low income country pilot programmes, with the aim of 'demonstrating the viability of low carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through renewable energy' (CIFs 2009). The SREP seeks to maximise the impact of its relatively modest capitalisation by attracting co-finance from other sources, including multilateral development banks (MDBs), recipient governments, and the private sector.

Nearly five years after its establishment the SREP remains in the early stages of implementation. Investment plans have been endorsed for ten pilot countries but only a handful of projects have received full approval. This is therefore an early stage review that largely reflects on the process through which its programming has evolved and on planned rather than delivered activities, and its findings should be interpreted in this context. Our review suggests that a particular value add of the SREP has been the thorough analytical basis that it has brought to country programming, and supporting pilot country governments to make a full assessment of the renewable energy resources available to them and the barriers --financial or otherwise--that must be addressed to allow their development.

Our review is based on a framework for reflecting on the effectiveness of international climate finance (Nakhooda 2013), developed through an iterative process of research, analysis and engagement, building on our longstanding programme of work monitoring dedicated public climate finance. It is part of a series of studies of the effectiveness of multilateral funds dedicated to addressing climate change, released as working papers to stimulate discussion and feedback. These papers will be revised and refined to respond to comments received, and new developments.

Objectives, Framework, and Methodology

As the international community seeks to scale up the delivery of climate finance, there is great interest in understanding what it takes to spend international climate finance effectively. The goal of this assessment is not to present a comprehensive evaluation of the SREP. Instead, we seek to provide an evidence-based overview of its operations and achievements, and identify key challenges encountered (and why), and lessons learned for the effective delivery of climate finance. This paper presents a qualitative analysis of the achievements of climate funds complemented with relevant quantitative data, that is cognisant of the context and constraints within which funds operate.

The assessment framework (see figure 1) starts by considering the driving objectives of a multilateral climate fund, setting it in its historical context and the range of financing instruments that it has been able to offer. The context, objectives and instruments that a fund offers fundamentally shape what it is able to achieve. We then analyse five interlinked components of effective spending, considering the integrity, efficiency and transparency of associated processes: (1) resource mobilisation, as the availability of resources fundamentally affects what a fund is able to support, and the range of outcomes and objectives it is able to achieve (2) the governance of a fund, as this is likely to shape trust in an initiative, and the extent to which it operates in a transparent, inclusive and accountable way (3) the investment strategy and fund allocation process, which is one of the key outcomes of an effective governance structure, and essential to understanding the formal processes and informal influences that affect how funding decisions are made (4) the disbursement of funding and risk management in support of approved programmes, which is a key issue of interest and provides insights into the mechanics of supporting robust activities, and on how to avoiding negative impacts and (5) the monitoring, evaluation and learning processes, in order to understand the systems that funds have established to understand impact and strengthen performance.

Next, we present a detailed review of the active portfolio of the fund, in order to inform subsequent analysis of the effectiveness of its outcomes, using fund self-reporting complemented with data collected on http://climatefundsupdate.org. The review considers the recipients of funding (type of institution; geographic distribution); the scale at which funds have worked; Instruments through which funding was delivered (such as grants, performance based grants; concessional loans, guarantees, equity); and the types of technologies and approaches that have been supported.

Driving logic and objectives of the fund					
Spending	 Mobilisation Governance Allocation Disbursement 	• Instrume			
	5. Monitoring, evaluation and learning	ents			
Outcomes	6. Scale				
	7. Enabling environments				
	8. Catalytic outcomes				
	9. Innovation				
	10. National ownership				
Role in the international climate finance architecture					

Figure 1: Framework for assessing the effectiveness of international climate finance

On the basis of the portfolio review, we consider five interlinked components that are likely to shape the **outcomes** of global climate funds. We analyse whether the fund has been able to work a variety of (6) scales from global to local, and support both small and large size projects that can be replicated and scaled up. We also consider the fund's approach to engaging with (7) enabling environments, and whether it has been able to address underlying policy, regulation and governance that affects the long term viability of low carbon and climate resilient interventions. Next, we review the (8) catalytic effects of the fund, particularly with respect to the private sector, recognising the diversity of ways in which investment and implementation capacities may be harnessed in support of low carbon climate resilient development. Recognising the central importance of finance for (9) innovation to global efforts to respond to climate change, we analyse the extent to which climate funds support innovative technologies and approaches, including at the local level. Finally, we consider the role of the fund in fostering (10) national ownership and leadership, seeking to understand the role that national institutions have played in identifying funding priorities, and how well its funding has been aligned with emerging national climate change and development priorities.

In completing this analysis, we drew on primary interviews with stakeholders in the fund, particularly members of its governing board, and complemented it with selective examples from the portfolio review that illustrate the various approaches that have been taken. We have built on IIED's research on the impact of the SREP in Ethiopia and Nepal, and interviews with stakeholders in other recipient countries – particularly Kenya. Where data availability allowed it, we complemented our qualitative analysis with quantitative analysis. Finally, we analysed the role of the fund in the global international climate finance architecture.

The Context for Establishing the Scaling up Renewable Energy Program and its Driving Logic and Objectives

The SREP is a sub-component of the Strategic Climate Fund (SCF), together with the Forest Investment Program (FIP) and Pilot Program for Climate Resilience (PPCR). The SCF, along with the Clean Technology Fund (CTF), make up the Climate Investment Funds (CIF), established in 2008 in response to the G8¹ countries' request for the World Bank and other Multilateral Development Banks (MDBs) to support the transition towards clean energy (G8, 2005). The SREP was established under the SCF one year later, in December 2009. The CIF is an interim institution, tasked with providing new policy approaches and finance until a mechanism of scale is operating within the UNFCCC system. To this end, a sunset clause was included in the original SCF design document linked to governments reaching agreement on the future of the climate change regime, now understood as the full functioning of the Green Climate Fund, which it is hoped will be operational by late 2014.

The SREP is one of three mitigation-focused funds within the CIF. It was established in recognition of the dual challenge low income countries face of the need to increase the availability of electricity and other commercial fuels to enable economic development as well as the urgent need to expand access to the estimated 1.5 billion people (in 2009, now 1.3 billion) without access to modern energy services, who are largely dependent on biomass fuels for energy services (CIF 2009). Like the Clean Technology Fund, the SREP aims to scale-up private sector investments in renewable energy by overcoming economic and non-economic barriers. The SREP, however, was set up with a focus on lower income countries and on increasing access to energy.

It provides funding to pilot programmes in developing countries, with the stated objective of 'demonstrating the viability of low carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through renewable energy' (CIF 2009). SREP country programmes are intended to help overcome barriers to renewable energy investment including weak enabling environments, a lack of access to capital, a disengaged private sector and a lack of affordability by 'combining private and public sector actions to scale-up private sector investments in renewable energy' (CIF 2009). Programme design is intended to focus on activities with transformational effects by

¹ Canada, France, Germany, Italy, Japan, Russia, USA and UK

improving market and financial conditions and investor confidence, and encouraging the greater levels of private and public investments required to replicate renewable energy projects at scale.

A. Instruments

The financing instruments available to a fund determine the types of activities and partners it can engage with, and should therefore align closely to the fund's objectives. The SREP offers grant-based and concessional finance instruments. Although a potential shortlist of financing modalities was provisionally suggested when the SREP was established, this is not a closed list and other instruments can be used with the approval of the SREP Subcommittee. Implementing MDBs are able to blend SREP resources with other sources of finance to achieve a target level of concessionality on a case-by-case basis (CIF 2010a).² The modalities used for financing projects vary depending on the nature of the project, and particularly on whether the initiative is public or private sector led.

PUBLIC SECTOR MODALITIES

Concessional finance

An important consideration for financing public sector initiatives is that any concessional financing provided should act to crowd in, rather than crowd out, private sector investments. Poorly judged concessional financing of public sector investments can act to displace private investments that would have taken place otherwise.

Efforts have been made to ensure that accessing the SREP does not have negative financial implications for recipients. Country access to loans from the SREP is determined by their International Development Association (IDA) debt distress risk rating. Countries with high or medium risk ratings are restricted to grant-based financing, while low risk countries can access concessional finance, depending on the nature of the project (See Figure 2).³ Concessionally financed projects must be revenue generating and anticipated to achieve a rate of return higher than the discounted loan rate⁴, the rationale being that for such a project the net present value of a concessional loan will be higher than if they were to receive a grant (CIF 2010a). All concessional loans include a grant component equal to the difference between the face value of the loan and the present value of future debt servicing costs.

² SREP financing will not be blended in every case, only where it is deemed appropriate.

³ Of the eight currently approved SREP pilot countries, five were classified most recently as having a low debt distress risk rating (Ethiopia, Honduras, Kenya, Liberia and Tanzania), while three were classified as having a moderate risk rating (Mali, Maldives and Nepal).

⁴ Varies case-by-case. Assume 6.33% for harder loans, 6.43% for softer loans (CIFs 2010a)



Figure 2: SREP decision-making tree for public sector financing modalities. Source: CIF (2010a)

Investment plan/project preparation grants

Grants are provided to selected pilot countries to support the preparation of investment plans, in collaboration with MDBs, for submission to the SREP Sub-Committee; particularly important in cases where capacity may be limited initially. Pilot countries may also receive grants to support the preparation of co-financed SREP projects for submission, e.g. for initial physical surveys or required technical assistance.

Grant instruments

Grants allow the SREP to fund activities that will not generate revenue, or to reduce the initial cost or risk barriers that would otherwise impede public investments in renewable energy and energy access. The type of grant instrument used depends on the nature of the barrier to be overcome. If access to finance in the targeted sector is a key challenge then upfront capital grants may be most appropriate. Alternatively, if finance is available, the promise of future grant financing provided as performance-based payments may be enough for project implementers to access initial capital from elsewhere (CIF 2010a). Generally, however, the SREP only provides part of the finance, and additional co-finance must also be raised. Upfront grants act to decrease costs for investors, while performance-based payments might include Output Based Aid (OBA), for example by providing subsidies to service providers for establishing new grid connections, or Advance Market Commitments (AMCs) for renewable energy. These measures aim to increase demand for RE.

Grants are also available for capacity building and advisory services. Proposals for these should be incorporated into pilot country investment plans.

Guarantees

Guarantee instruments are available under the SREP to allow investments to proceed where an unacceptable level of risk would otherwise rule them out. Two forms of guarantee were initially proposed (CIF 2010a): (i) loan guarantees covering losses on account of debt service default for lenders up to an agreed portion of their actual loss; (ii) contingent finance disbursed to projects where renewable energy technologies under-perform, or where insurance is unavailable to cover such an eventuality.

PRIVATE SECTOR INVESTMENTS

SREP financing to support private sector investments is not offered on uniform terms, in recognition of the differing investment contexts in every case. Rather, SREP support to private sector investments should be guided by a set of defined principles (Box 1).

Box 1: Principles to guide SREP private sector investments

- Minimum concessionality: Investments should be tailored on a case-by-case basis to address the specific barriers and risks identified for the project in question with the minimum possible level of concessionality.
- Avoiding distortion and crowding out: SREP funds should not act to discourage renewable energy investments that would have happened otherwise, or set unreasonable expectations for the market.
- Leverage: SREP funding should be structured in a way to encourage the highest level of additional investment from MDBs and private investors.
- Financial sustainability: Funding should only be granted where there is clear potential for the sustainability of the market in question beyond the lifetime of the SREP investment, or at least that the investment will significantly reduce the level of subsidisation required in the future.

Source: CIF (2010a)

A range of instruments is available to support private sector investments through the SREP. **Grants** are only available where the proposed investment has clear demonstration effects beyond the private sector company itself. They can be used to fund capacity building and advisory services, project preparation grants, and investments themselves where all other forms of financing are inadequate. **Concessional loans and equity** are available for private sector investments with the potential to be replicated in the future without, or with reduced, public sector support. Finally, **guarantees and risk sharing products** are available to the private sector for the same reasons as for public sector projects.

The three funds under the SCF introduced a competitive private sector set aside in 2013. In the SREP's case, US\$ 90 million of concessional funds were set aside to contribute to financing innovative projects and programmes in the first six pilot countries (Ethiopia,

Honduras, Kenya, Maldives, Mali and Nepal), with project selection to be carried out by an expert board on a competitive basis.

The wide range of instruments available under the SREP is a key feature of the fund and should allow finance to be tailored to country and project contexts. Details on the precise financing modalities requested for projects are largely restricted until the projects are submitted for Sub-Committee approval. Given the relatively small number of projects that have reached this stage, it is too early to reach conclusions on the balance of instruments that the SREP will use.

B. Spending

1. Resource mobilisation approach

Since its establishment in 2009 US\$ eq. 519 million has been pledged to the SREP by eleven donor governments, which is equivalent to US\$ 551 million in 2008 dollars (see Table 1). 97% of this pledged amount had been received by the fund as of December 31, 2013. The UK, the Netherlands, Norway and Switzerland were amongst the first contributors to the Fund. The UK provides its US\$ eq. 163 million contribution, which represents 31% of the Funding presently available, as a capital grant. The remaining US\$ eq. 356 million pledged has been provided as grants.

The SREP was created in response to concerns that a focus on low cost emission reduction opportunities at scale through the CTF might result in a lack of emphasis on opportunities to improve the sustainability of efforts to extend access to energy for the poor, and in poor countries. The SREP was the last of the SCF sub-funds to be designed and operational, with an initial capitalization target of \$250 million which was not reached until early 2010. It remains the smallest of the CIF programs. The amount of funding that it has received has increased over the years, in part as a result of renewed global attention to the need to ensure "Sustainable Access to Energy for All". The technical and financial role of the SREP in helping to meet the goals of extending access to energy was recognized in many countries' pledges.

			Pledges Ou	standing and Contribu	tions Finalized	Historical Value	Current Value		
Contributor	Contribution Type	Currency	Pledges Oustanding	Contributions Finalized	Total	in USD eq.ª (1)	in USD eq. b (2)	FX changes (3) = (2) - (1)	Receipts in USD eq. ^b
Australia	Grant	AUD	-	12	12	10	12	2	12
Denmark	Grant	DKK	-	61	61	12	12	(1)	12
Japan ^c	Grant	USD	-	40	40	40	36	(4)	36
Korea	Grant	KRW	-	6,565	6,565	6	6	0	6
Netherlands	Grant	USD	-	76	76	76	76	-	76
Norway	Grant	NOK	-	540	540	97	91	(6)	85
Spain	Grant	EUR	-	3	3	4	4	(1)	4
Śweden	Grant	SEK	-	285	285	44	44	Ĭ	44
Switzerland	Grant	USD	-	26	26	26	26	-	26
United Kingdom	Capital	GBP	-	100	100	186	163	(23)	163
United States ^d	Grant	USD	9	41	50	50	50		41
						551	519	(32)	503

Table 1: SREP Contributions as of December 31, 2013

a Represents pledges valued on the basis of exchange rates of September 25, 2008, the CIF official pledging date.
 b Represents realized amounts plus unrealized amounts valued on the basis of exchange rates as of December 31, 2013.
 c The USD 40 million pledge was committed in JPY in the amount of JPY 3.7 billion.
 d The total pledge made by the United States to the CIF is USD 2 billion; the allocation across the programs is indicative.

Source: 2013 CIF Annual Report

The UK's provision of funding as a capital contribution means that the SREP may have debt repayments to make, and therefore has implications for the level of risk that it can take on in its programming. Nevertheless, the fact that most SREP contributions are grants has

allowed it to make higher risk investments in low income countries, and offer higher amounts of grant and concessional finance.

Take away messages

- The SREP is the smallest of the Climate Investment Funds, though it
 has recently received additional support in the context of efforts to
 support access to sustainable energy for all
- Its largely grant capitalisation enables activities in higher risk programs in low income countries using a range of instruments including both loans and grants

2. Voice and administration

Governance of the Fund

The World Bank coordinates the CIF Partnership – a collaboration between MDBs⁵ and the World Bank Group [including the International Finance Corporation (IFC)]. CIF governance involves the MDB Group; the IBRD as Trustee; an Administrative Unit from the World Bank; and Trust Fund Committees for the CTF and SCF as the two primary funds. Separate Sub-committees oversee the operations and activities of each of the SCF's programmes. The SREP Sub-Committee meet twice a year and make decisions based on consensus of 'voting' members, although unanimity is not required as dissenting members who do not wish to block a decision may record objections by attaching notes or statements to the decision in question (CIF 2011). Decisions may also be made by letter on a no objection basis.

The formal representation and voice of contributor and recipient countries in multilateral funds, and the balance between these groups, is a key factor when considering the extent to which a fund can be seen to be operating in a transparent, accountable and inclusive way (Ballesteros et al. 2010). Donor and recipient countries have equal representation on both the SCF Trust Fund Committee and the SREP Sub-committee, with, respectively, eight and six representatives from each group sitting on the two committees. The CIF Administrative Unit and a committee of representatives of the MDBs that partner in the delivery of CIF funded programs also participate in decision-making processes, though they do not vote in decision-making.

Eight observers have been appointed for the SREP Sub-committee, with four from civil society, two from the private sector, and two representing indigenous peoples. Representatives of the Global Environment Facility (GEF), the United Nations Development Program (UNDP), the United Nations Framework Convention on Climate Change (UNFCCC), the Green Climate Fund (GCF) and the Energy for the Poor Initiative (EFPI) may also attend. These observers can add items to committee agendas, recommend external experts, and request verbal interventions during discussions. Including observers strengthens transparency and accountability but they do not have any formal opportunity to participate in decision-making. Nevertheless, observers report that the Fund's meetings have been open and engaging, and have included keen discussion on issues of interest to

⁵ African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IDB)

civil society including transparency. The UNDP, UNEP and other UN agencies were active participants at the outset of the SREP design process. In practice, while some SREP programs complement UN agency managed initiatives, SREP does not directly fund UNEP or UNDP administered programs. Over time, the participation of these institutions in the Fund has reduced.

Transparency

Most decisions, comments and financial information under the SREP are publicly available on the CIF website, and information is more clearly available than for a number of other multilateral funds. However, in accordance with the polices of MDB private sector arms and rules of business confidentiality, full details of private sector projects are not made available. In addition, MDBs follow their own disclosure policies with the SCF Sub-Committees relating to information on their implementing activities. In particular the lack of disclosure of draft working documents and minutes of meetings between the MDB Committee and the CIF AU, while logical, add a layer of opacity for those seeking to understand how the MDB Committee works in practice and its role in the formulation of programmes (ICF International 2013). The CIF, including the SREP, began publishing data in International Aid Transparency Initiative (IATI) compliant formats in 2013.

Fund administration

The administrative unit of the CIF is housed in the Climate Change Group of the World Bank. It has grown from a small team of four people at the outset to more than 30 people over the past three years. Additional staff capacity has been needed to respond to the growing scope of the CIF's programmes, as well as increasing demands from committee members and stakeholders. As of December 31, 2013, US\$ 62 million had been spent on administration costs for the SCF as a whole, representing 6% of approved funding to date. US\$ 5 million has also been spent under the SREP for MDB fees: 6% of the total approved spending under the programme (CIF 2014a).

Take away messages

- Developed and developing countries are represented equally on the SREP's governing committee.
- The Sub-Committee includes observers representing civil society, indigenous peoples and the private sector. Although they have no voting power, observers are actively engaged in meeting discussions.
- The SREP makes most key documents publicly available, although information on private sector investments remains confidential.

3. Investment strategy and allocation

The first phase in the allocation of SREP funding was the identification of target countries to be invited to develop investment plans. Only LDCs eligible for MDB concessional financing and engaged in active MDB country programmes qualified for SREP financing. They were also expected to not be receiving funds from the CTF (CIF 2009). An Expert Group was tasked with proposing an initial list of potential target countries, with its suggestions to be based on a set of key objective considerations for each country (See Box 2).

Box 2: Criteria to be considered by the Expert Group in the selection of recommended country and regional pilots

- Existence of/willingness to adopt supportive regulatory structures and institutions
- An enabling regulatory environment that promotes business
- Sector-wide energy development strategies that are open to integrating renewable energy into energy access
- Good governance within the sector
- Potential capacity for implementation, possibly including a track record of implementing RE projects with private sector involvement
- Regional balance
- Natural conditions for developing renewable energy

Source: (CIF 2010b)

The initial SREP selection process was complex, and therefore took some time to complete. Thirty-two countries submitted expressions of interest in the SREP, and these countries were given priority consideration by the Expert Group. Based on the criteria in box 2, the Expert Group suggested in 2010 a list of six country pilots: Ethiopia, Honduras, Kenya, Maldives, Mali and Mongolia, with Armenia, Liberia and Nepal as "additional" reserve pilots (CIF 2010c). Based on these suggestions, on June 22, 2010, seven months after the Fund's establishment, the SREP Sub-Committee endorsed the following list of six initial pilots to develop investment plans for the SREP: Ethiopia; Honduras; Kenya; Maldives; Mali; and Nepal. Some sub-committee members raised concerns about the selection process. For example the Solomon Islands noted a lack of depth in the Expert Group report, while the Member from Nicaragua similarly objected; on the basis that Nicaragua had not been selected despite being the second poorest country in Latin America and Caribbean and having displayed considerable efforts in the renewable energy sector (CIF 2010d).

In response, the Sub-Committee invited the Expert Group to identify a further six pilot countries to be included on a reserve list in case further SREP funding became available, to include the three countries previously recommended by the Expert Group (Armenia, Liberia and Mongolia) as well as a further three, with Tanzania, the Pacific Region (comprising the Solomon Islands and Vanuatu) and Yemen subsequently suggested and endorsed.

Project cycle

In the next phase of the funding allocation process, pilot countries developed investment plans for consideration by the SREP Sub-Committee. Investment plan preparation grants of between US\$ 0.21 - 0.38 million were approved to support this process in each country. MDBs conducted joint programming missions to support the respective country governments in this process. Investment plans should describe the strategic goals of the proposed SREP country programmes and demonstrate their fit with national energy plans, and outline concepts for specific projects under the programmes, including any technical assistance required and indicative funding amounts (CIF 2009).

Stakeholders interviewed stressed the value of the SREP planning process, and particularly the opportunity to bring multiple stakeholders together, including from the private sector. For example in Nepal, the SREP investment plan was able to build on ongoing efforts to promote investment in renewable energy, and the MDBs were able to work with the government and other stakeholders to agree priorities for both on-grid and off grid renewable energy programs (Rai, Appunn and Smith 2013). Indeed the investment plan drafting exercise for SREP pilot countries has been more participatory than is traditional for MDB-government planning processes, in which outside groups are often not invited to what is seen as a primarily private conversation on financial arrangements. The involvement of stakeholders may have been limited in some cases simply by the dearth of civil society organisations actively engaged with renewable energy and access issues in certain pilot countries. Some observers note the potential for greater partnership with other organisations that have experience with capacity building and policy support in recipient countries, including UN Agencies.

Once prepared, Investment Plans are submitted to the SREP Sub-Committee for endorsement. Sub-Committee members often provided extensive comments and requested amendments to the Investment Plans, in particular to request clarification on how plans fit with the SREP objectives.⁶ Ten country investment plans have been endorsed to date.⁷ The two remaining countries/regions on the reserve list are currently developing their plans. At its October 2013 meeting, the Sub-Committee agreed to initiate a process to make SREP funding available to more countries. Expressions of interest from prospective new pilot countries were considered at the June 2014 Sub-Committee meeting, with 14 out of 40 countries expressing interest invited to prepare investment plans.

Once a country's investment plan has been endorsed it can start to prepare detailed project proposals, in collaboration with the World Bank and its regional development bank. Project preparation grants are available to support this process, for instance for exploratory technical studies for renewable energy investments. Requests for project funding are submitted to the SREP Sub-Committee for approval, on a no objections basis. Again, Sub-Committee Members often raise issues for clarification or justification.⁸ As of March 2014, only nine projects had reached this stage of approval.

 $^{^{6}}$ A particular point of discussion has been the need for clarity on how investments will achieve transformational change in the renewable energy sector. In practice, SREP investments often result in a step change to installed energy capacity in the countries they support (given low installed energy). We will discuss this point further in our discussion of outcomes of the SREP.

¹ Armenia and the Solomon Islands were approved most recently at the June 2014 Sub-Committee meeting.

⁸ Project preparation grants do not require MDB approval.

Take away messages

- The SREP was met with a very high level of interest from potential pilot countries, with far more submitting expressions of interest than could be accommodated.
- The investment plan development process has been a key element of the SREP, and involves the leadership of national governments working in collaboration with regional MDBs to prioritise investment options and propose a vision for use of SREP funds.

4. Disbursement and risk management

A key issue of concern for both contributors and recipients of multilateral finance has been how to disburse funds as quickly and efficiently as possible.⁹ This concern is of particular interest for climate finance given the complexity of projects and the urgency of action. The efficiency of disbursement is linked to the integrity of the allocation processes described above. There may be trade-offs between rapid disbursement, however, and ensuring that programs are well designed and meet intended outcomes. We therefore consider the disbursement of SREP funds, and the systems that are in place to manage risks and ensure that projects do not have negative environmental or social impacts.

Transparency and efficiency of disbursement

SREP disbursement data is published biannually at the aggregate fund level, as well as at project and country levels. As of December 31, 2013, only US\$ 3.59 million had been disbursed for five investment plan preparation grants, four project preparation grants and two project implementation grants (CIF 2014b). A further US\$ 0.61 million had been disbursed for private sector projects in Ethiopia and Tanzania, although details on these are withheld for business confidentiality reasons, and it is not clear whether this amount is for project preparation or implementation. The total cumulative disbursed by this point. As is clear from figure 3, substantial disbursements from the fund are not projected to begin until 2015, so it may be too early to comment on the efficiency of the fund's disbursement process. Nevertheless, the delays experienced for preliminary disbursements, which are primarily for project preparation, may be a cause for concern.

⁹ Disbursements are cash payments from MDBs to recipients.



Figure 3: SREP Disbursements: Actual and Projected (US\$ millions) as of December 31, 2013. Source: CIF (2014b).

Management of the SREP pipeline

Over time the administrative unit of the CIF has been tasked with more active pipeline management responsibilities, keeping tabs on when projects are likely to be ready to be approved, and projects that are delayed. It has introduced a "traffic light system" that indicates whether projects are on track for approval, slightly behind schedule or substantially delayed. The traffic light report also provides implementing entities space to offer an explanation for delays that may be incurred.

As of September 2013, only four of the nineteen projects being tracked were given a 'green' traffic light indicator, meaning the Sub-Committee approval was expected in less than 18 months from their submission (CIF 2013a). The two projects awaiting MDB approval both had 'red' signals, indicating that this was expected to take more than 9 months.

The experience so far has been that preparing projects for approval has taken longer than originally anticipated. For instance, of the eighteen projects expected to be submitted for approval in FY 2013, only three were delivered to the Sub-Committee on schedule. Reasons cited for continuing delays in the most recent semi-annual operational report were varied, including changing political situations; changes in economic/market conditions; difficulties in site selection for renewable energy investments; stringent MDB requirements; and a lack of knowledge and experience by implementing agencies. The *Clean Energy SMEs Capacity Building and Investment Facility* project in Ethiopia, for example, was reportedly delayed as a result of Ethiopian Central Bank policy directives, which reduced liquidity in the financial sector and therefore interest on the part of local banks to develop new products and services (CIF 2013a).

Despite all eight pilot investment plans having now moved to project development, the SREP approval ratios are low. As of January 2014 only 23% of the total indicative allocation under the eight endorsed investment plans had been approved by the Sub-Committee, consisting of US\$ 65.2 million for six projects and US\$ 13.7 million for investment plan and project preparation grants. Exceptions include Kenya and Nepal where 50% of expected projects are now approved; but for the remaining pilot countries it is less than 10%. This figure is expected to improve in 2014, with MDBs envisaging that 17

projects with SREP funding totaling US\$ 160.8 million will be submitted for Sub-Committee approval (CIF 2013a).

A key factor affecting the speed of progress for pilot country programming is the degree of agreement that can be reached between the regional MDB and government during the investment plan preparation process. In Kenya for instance, interviews suggested good alignment with government and MDB programming to focus on scaling up geothermal energy. Prior efforts to strengthen policies had been made, and preparatory activities had already been undertaken by the government. This meant that the Menengai geothermal project could be approved almost instantly upon endorsement of the country investment plan. Proponents stress the importance of the concessional funding from the SREP to the execution of the deal. Another has been the extent to which MDB internal management systems are set up to support programming.

Steps are now being taken to improve the cycle. Approval calendars will be updated on a quarterly basis to include projects and programs that have met a defined list of "readiness criteria". For public sector projects this will include the approval of a project concept (or equivalent) by the pertinent MDB's management; completion of a feasibility study if needed; and inclusion in the government borrowing plan where relevant. Requirements in addition to the approval of the concept note for private sector projects and programmes include the assignment of an operation leader and inclusion of the program in the MDB's project tracking system (CIF 2013b). Second, the fund will seek to accelerate the project approval process by allowing for over-programming in the pipeline of up to 20%.

Safeguards and risk management

Projects inevitably involve a degree of risk, and it is important that a fund has in place the appropriate measures to maintain an acceptable level across its portfolio. The SREP relies on the environmental, social and fiduciary policies of the implementing MDBs to safeguard it against risk. In cases where multiple MDBs work on the same projects, a harmonised approach that is intended to use the more stringent set of standards has been adopted, although how this provision has been interpreted in practice is not clear (CIF Evaluation 2014). Since the SREP is actually poised to fund some relatively large scale investments in geothermal energy in Kenya and hydropower in Ethiopia, for example, this is an issue of substantial relevance.

Since 2012, the CIF has been working to improve its risk management systems. The CTF and SCF Trust Fund Committees agreed to recruit a risk management specialist and to task a risk management working group made up of representatives from the CIF Administrative Unit, risk management specialists from the MDBs, the Trustee and the independent risk management specialist, Booz Allen Hamilton, to identify top-tier risks and to propose a strategy for their management. The strategy resulting from this process suggests that better information management will be essential to manage risks, and builds the case for enhanced portfolio management.

Take away messages

 Disbursement of SREP funds has been significantly delayed for a variety of reasons including changing political, market or economic conditions, technical difficulties associated with implementing renewable energy technologies, and stringent MDB requirements.

- Over-programming may help to accelerate the project pipeline.
- Environmental and social safeguards are of high relevance to the SREP portfolio given that it includes a number of potentially high impact interventions

5. Monitoring, evaluation and learning

Key elements of the framework

Monitoring and evaluation (M&E) of fund activities is essential for improving the effectiveness of spending and justifying the use of scarce public resources for climate finance, as well as for reasons of transparency and accountability.

In common with the rest of the CIF funds, the SREP's M&E system operates through a results framework, now in its second iteration. The framework, which was developed in consultation with MDBs and external stakeholders, is designed to allow the assessment of the impact, outputs and outcomes of SREP activities, in relation to the SREP 'logic model' (Figure 4), which illustrates the fund's theory of change. The logic model describes the anticipated 'cause and effect chain of results from inputs and activities through to project outputs, program outcomes, and national/international impacts' (CIF 2012a, p.5). It has also been revised from the original version in order to focus more specifically on the key operational objectives of the fund.

Global - CIF Final Outcome Improved low carbon, climate resilient development						
<u>Country</u> - SREP Transformative Impact	Co-benefits: •Avoided GHG emissions •Improved Health •Employment opportunities					
Country - SREP Program Outcomes	Increased access to clean energy	Increased supply of renewable energy (RE)	Co-benefits: •Increased reliability •Reduced costs of RE			
Project/ Program – SREP Indicative Outputs & Outcomes	r Grid-extension busines Scale up of grid-connect	Market expansion for modern energy sources for ses, communities and households Improved (transmis	New mini-grids I grid infrastructure ssion, storage)			
Project/ Program - SREP Indicative Activities	•Financir	Community energy provision <u>Renewable Energy</u> •Infrastructure •Capacity ng (grants and highly concessional loans)				
Program – SREP Inputs	New & additional re	sources supplementing existing OD	Aflows			

Figure 4: SREP revised logic model. Source: CIF (2012a)

The SREP results framework is structured around statements of results expected to flow from the logic model at the programme outcome and transformative impact levels, and lists

indicators for each of these upon which success can be measured. Baselines, targets, assumptions and means of verification are detailed below each indicator in the framework.

At the transformative impact level, success cannot be achieved through SREP activities alone, and the framework recognises that 'a truly national effort' (*Ibid.* p.7) is needed to achieve the goal of 'support(ing) low carbon development pathways by reducing energy poverty and/or increasing energy security' (*Ibid.*). The framework includes three indicators at this level:

- A national measure of 'energy poverty', such as the Multi-dimensional Energy Poverty Index (MEPI) or an equivalent
- Annual electricity output from renewable energy, in GWh
- Increased public and private investments in targeted subsector(s) per country per year (\$).

SREP activities are expected to increase the supply of renewable energy and increase access to modern energy services, as measured by two indicators:

- Annual electricity output from renewable energy as a result of SREP interventions (GWh)
- Number of women and men, business and community services benefitting from improved access to electricity and fuels as a result of SREP interventions.

Project documentation submitted for Sub-Committee approval is expected to detail how the project will contribute towards at least one of the two programme (i.e. country) level outcome indicators: renewable energy production or energy access. It should also detail how the project will contribute to co-benefits at the transformative impact level, for instance in terms of GHG emissions, health or employment, and at the outcome level, in terms of reliability or economic viability for example.

The results framework approach was developed on the principle that it would be a living document, open to adjustments where necessary. It is recognised that field-testing is required to test the assumptions underlying the logic model and results framework and that further revision may be necessary as a result of this process.

Accessibility and practicality

It is the responsibility of the regional MDBs to monitor and evaluate the outcomes of SREP projects and report to the SREP Sub-Committee through the CIF Administrative Unit. Pilot country governments have played an important role in the process and are responsible for reporting at the investment plan level. The results framework approved originally in 2010 prompted considerable push-back from pilot countries. In particular, the investment plan preparation processes for Honduras, Kenya, Mali and Nepal led to concerns being raised over the complexity of the original framework, which consisted of 22 indicators, and the need to avoid placing unfeasible M&E demands on pilot countries. The key criticisms of the original framework included a lack of clarity about its results chains; excessive indicators; a lack of data that was being collected making it difficult to establish baselines; and difficulties in application and aggregation (CIF 2012a).

Drawing on these experiences, and after consultation with the MDBs and country counterparts, the revised SREP results framework was proposed to the SREP Sub-Committee in June 2012. The revised framework reflected a focusing down on the SREP's

core objectives, with the number of indicators reduced from 22 indicators to 5. This streamlining was intended to more clearly define results chains and reduce the complexity and burden of country M&E requirements. A key design principle behind the revised framework was that it should be flexible, allowing it be applied pragmatically depending on country circumstances. One developing country observer to the Sub-Committee commented that the revised results framework seems to reach an appropriate common ground in terms of the reporting pressure it places on the country versus the requirements of the fund to ensure money is spent effectively, and means that SREP funding is not too costly or conditional for recipient governments in relation to the levels of money being invested. However the simplification process has arguably resulted in a lack of emphasis on institutional issues (CIF Evaluation 2014).

The response to the initial difficulties encountered with the results framework and subsequent efforts to streamline the results indicators is promising and demonstrates an intention by the SREP to respond actively to lessons from implementation. It is too early to judge how the results framework will function in practice, as the full project implementation phase of the SREP is yet to begin. With annual reporting on project results due to begin in 2014, Buchner et al. point out that we do not yet know the quality of the data that the SREP M&E system will produce, particularly given that 'the results frameworks were elaborated largely *after* the approval of investment plans' (2012, p.17, emphasis in original), but that the M&E systems for the SREP and the CIF in general have the potential to be a best practice example for other organisations in the climate finance field. Projected results suggest that the impact of programs on installed renewable energy will be substantial, but the expected impacts on electrification have been subject to some debate (CIF Evaluation 2014).¹⁰

Take away messages

- Monitoring and evaluation of the SREP is based around a two tier results framework, which has been simplified in order to avoid placing excessive reporting burdens on recipient governments.
- SREP projects are expected to report on their direct impacts on renewable energy production (GWh) and the number of individuals and businesses benefiting from improved energy access.
- Annual reporting on SREP project results is due to being in 2014: no results are reported to date

¹⁰ The 2014 CIF Evaluation suggested that SREP programs are likely to have only a modest impact on electrification in pilot countries, with some exceptions, but this finding was disputed by the CIF AU and MDBs.

C. Outcomes

By March 2014, the SREP Sub-Committee had approved US\$ 74.65 million for nine projects and a further US\$ 12.8 million for nine investment plan grants and thirteen project preparation grants. The nine approved projects focus on the development of geothermal capacity and strategies, respectively, in Kenya and Tanzania; small-scale hydropower and biogas in Nepal; off-grid lighting technology in Ethiopia; multiple off-grid renewable energy technologies in Mali; and the strengthening of policies and regulatory frameworks for renewable energy and the improvement of market conditions for clean cook stoves, respectively, in Honduras.

Only three of these projects had received final MDB approval: the 'Menengai Geothermal Development' project in Kenya (US\$ 17.5 million grant and US\$ 7.5 million credit through the AfDB), the 'Strengthening the Renewable Energy Policy and Regulatory Framework (FOMPIER)' and 'Sustainable Rural Energisation (ERUS)-cookstoves' projects in Honduras (two grants through the IDB for US\$ 0.9 million and \$US2.9 million, respectively).

Figure 5 below illustrates the breakdown of technologies to be supported by the projects proposed in the eight pilot programme investment plans approved to date. A large proportion of funding will support interventions designed to boost the implementation of multiple renewable energy technologies. Of projects targeting single technologies, three large-scale geothermal projects in East Africa are prominent. 68% of approved funding to date has been for grants, with concessional loans for the Kenyan geothermal and Nepalese small-hydropower projects representing the remaining 32%.

In terms of expected outcomes, 16 out of 21 projects under SREP investment plans include renewable energy generation targets, with a cumulative target of almost 950 MW^{11} . 8 projects include energy access targets, with improved access targeted, variously, for 10,051,000 individuals and 960,000 households (CIF 2013a). The Tanzanian geothermal development project accounts for 7,000,000 of these targeted individuals. The extent to which this project will directly increase access to energy for those who presently lack it has been questioned.

¹¹ This figure is an aggregation of individual project targets, as listed in the October 2013 SREP Semi-Annual Operational Report.



Figure 5: Planned SREP portfolio, based on endorsed investment plans (as of March 2014)



Figure 6: Geographic distribution of indicative funding allocations under endorsed SREP investment plans (as of March 2014)

Informed by this portfolio review, we now turn to consider the outcomes of the SREP. Much more information was available on processes for spending climate finance than on outcomes given the very early stage of programme implementation. Our analysis is based primarily on planned activities, as assessments made on the basis of the small pool of approved projects are unlikely to be representative of the future SREP project portfolio. It is therefore restricted to likely outcomes of the SREP and as such is very much tentative and indicative. Our analysis considers the planned activities of the first eight pilot countries, excluding the recently approved investment plans for Armenia and the Solomon Islands.

6. Scale

In understanding the effectiveness of climate finance, it is helpful to consider whether the fund in question has been able to work at a diversity of levels (from national to sub-national and community level), as well as the extent to which the fund has been able to support projects of a variety of sizes, and the implications of the approach taken (particularly with respect to the needs of poorer and more vulnerable communities). Scale is a particularly important consideration in the SREP's case as meeting the fund's objective of increasing energy access for the poor will rely on it being able to engage on a different scale than is commonplace for MDBs; providing energy services to remote, disconnected communities necessarily requires a large number of small, local interventions far removed from the large-scale investments by which major grid-connected energy projects are generally financed. MDBs systems are often better suited to managing larger scale programs, and the complexity and transaction costs of smaller programs can be a deterrent.

Level of engagement

SREP programs are coordinated at the national level, most commonly by Ministries of Environment or Energy. At the project level, the diversity and level of actors to be engaged varies. Several programs use SREP funds to support large-scale grid-connected renewable energy at national level. This has been an issue of some debate and concern in approving SREP programs. This tension played out in the Ethiopian SREP program, where government stakeholders chose to prioritise large scale grid connected renewable energy that could be exported to neighbouring countries and generate revenue, over potential investments in decentralised energy that would increase access to energy (Rai et al. 2013).

Some projects seek to channel funding to smaller actors through intermediary institutions or instruments. SREP funding for the proposed Nepalese 'Mini and Micro Initiatives' project would be directed through the Government of Nepal to a national renewable energy fund. This would then provide subsidies or credits to local financial and microfinance institutions, which would in turn provide financing to local renewable energy enterprises or directly to micro energy projects owned by users. Projects may also create opportunities for engagement with actors at a variety of scales through intermediary technical advice or capacity building facilities. The majority of SREP funding for the Tanzanian Renewable Energy for Rural Electrification project will be used to establish a Transaction Advisory Services Facility (TASF). Its objective is to provide technical and business skills to local entrepreneurs and cooperatives and local market and regulatory knowledge to international companies seeking to establish renewable energy-powered mini- and micro-grids and stand-alone solar PV systems in rural areas.

Project size

SREP contributions to projects under endorsed investment plans vary in size from US\$ 1.7 to 50 million, with 71% in the US\$ 10-25 million range. They are substantially smaller than CTF projects, reflecting in turn the smaller size of the SREP capitalisation. The size of projects within country pilot programs also varies (see figure 7). Honduras, for example, has proposed projects worth US\$ 16.7 million and US\$ 10.2 million for supporting grid-connected renewable energy development and sustainable rural energisation through clean

cook stoves, respectively, as well as a US\$ 1.7 million project for strengthening the renewable energy policy and regulatory framework. Other pilot programmes have more concentrated funding allocations: Tanzania proposes to use its US\$ 50 million indicative allocation to fund two US\$ 25 million projects focusing on geothermal power development and increasing rural energy access through renewable energy.



Figure 7: Project size diversity under endorsed SREP pilot programs. Source: CIF 2013a

Concerns have been raised in some cases over the apparent prioritisation of larger centralised grid-connected renewable energy projects over energy access projects in pilot country investment plans. The investment plans of Kenya, Ethiopia and Tanzania, for instance, all seek to channel large portions of their allocated funding to scale-up on-grid geothermal energy capacity. In Kenya's case, the independent expert review of the Investment Plan questioned the extent to which the country's proposed 400MW Menengai Geothermal Development would contribute directly to poverty reduction or energy access (Bangens, 2011). Similarly, Switzerland raised concerns over the Ethiopian Investment Plan's intention to use SREP funds to support the development of large centralised, grid-connected geothermal and wind projects, which it predicted would likely contribute to increasing energy exports rather than directly addressing the needs of the more than 90% of the population without electricity access (SECO 2012). The countries maintain in both cases that the geothermal projects will have strong development and poverty alleviation benefits, and Kenya has added specific grid connection targets to its geothermal plan to address concerns that it will not improve energy access.

Take away messages

- The financial and delivery approaches required for large scale renewable energy production are different than those required for more decentralised approaches and to extend access.
- Establishing the poverty and social impact of SREP finance for large scale grid connected energy has been a point of contention.
- While MDBs are not directly funding small-scale access projects, they

are facilitating sub-programs or services that will engage at the smaller scales.

7. Enabling environments

At the November 2013 United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties in Warsaw, Nicholas Stern went as far as stating that "government-induced policy risk is the biggest barrier to private investment" in low carbon pathways (Stern, 2013). Policy, regulatory and governance frameworks are crucial contributors towards the viability of investments in renewable technologies and other low carbon activities. Strengthening these frameworks should be a priority for an effective climate fund.

Enabling environments are a central consideration in the SREP's design, as illustrated in the first two criteria for selecting pilot countries:

"i) the existence of, or a willingness to, adopt, within an appropriate time frame, supportive regulatory structures and institutions, (...) This could include policies and regulations promoting renewable energy, such as feed-in tariffs, tax incentives, subsidies, concessional financing or renewable portfolio standards.

ii) an enabling regulatory environment that promotes business, (...) this can include policies that support private sector participation, public-private partnerships, and availability of financing for renewable energy technologies, (...) or willingness to develop, local capacity along the renewable energy supply chain, including manufacturing, training, and operations and maintenance." (CIF 2010b, p.6)

The starting points in terms of enabling environments varied by country, and progress has therefore been mixed. In Kenya, for instance, a feed-in tariff policy for renewables already existed when the SREP began its engagement, meaning that the pilot programme could start from a strong base. Nevertheless, even in countries such as Mali and Nepal that lacked strong institutional frameworks, there was political will to target enabling environments for renewable energy, and, as listed above, this was a factor in pilot country selection. Broader investment policies for renewables will take time to develop, so with the SREP having only been operational for four and a half years it would be unrealistic to expect too much progress on this front at this stage. The SREP also invested in an initiative to develop indicators for assessing enabling environments for renewable energy and energy efficiency in partnership with the World Bank.

The SREP investment plan development process provides an initial opportunity for addressing enabling environments, involving as it does taking a step back and assessing country contexts for renewable energy and energy access and identifying the key barriers to be addressed. In some cases, investment plans appear to have been developed in consultation with a fairly wide range of relevant stakeholders to gain insights on the factors holding back investments in targeted sectors. In Honduras, for example, the development process included interviews with stakeholders from a range of government agencies, international cooperation agencies, the private sector (including national commercial banks), and project developers. These stakeholders were also engaged in the joint mission of the MDBs. A further public consultation phase allowed the stakeholders above, as well as relevant NGOs, to provide comments on the draft Investment Plan (GoH, 2011). Some countries have been criticised for not consulting a wide enough spread of stakeholders in

their investment plan development processes. The independent expert reviewer for Ethiopia's IP, for instance, described the two-day public consultation as "dominated by government figures and public and private interests in renewable energy" (CIF 2012b).

The flexibility to offer both grant and concessional finance means there is a greater opportunity to fund capacity building and technical assistance activities through the SREP than exist for the CTF, for instance. The projects proposed in endorsed SREP investment plans generally consist of both financial and capacity building/technical assistance components, meaning that they are designed to not only provide funding for investments but also to ensure that the institutional context in which the project takes place will allow for the outcomes to perpetuate sustainably once the project has finished. The SREP Design Document in fact states that a "SREP program should consist of both renewable energy investments, …, and technical assistance, together with support for policy changes to greatly increase the use of renewable energy" (CIF 2009, p.4).

A small number of projects are focused exclusively on enabling environments. For instance, the US\$ 1.7 million grant approved for the 'Strengthening the RE Policy and Regulatory Framework (FOMPIER)' project in Honduras aims "to support the development and implementation of policies, laws, regulations, rules, standards and incentive schemes aimed at improving the integration of renewable energy in the energy sector by reducing risks and transaction costs and encouraging investment in renewable energy" (GoH, 2011, p.12).

The design and objectives of the SREP provide ample opportunities to positively influence enabling environments in pilot countries and there are some signs that these opportunities are being taken advantage of. However, the early stage of project approval and implementation restricts our ability to draw lessons from experience in practice.

Take away messages

- Each pilot country began from a different starting point in terms of enabling environments for renewable energy, and this influenced the pace of progress.
- The investment plan preparation process provides an initial opportunity for considering deficiencies in country enabling environments.
- The SREP's flexibility to offer both grant and concessional finance is crucial in allowing it to fund technical assistance and capacity building components. All projects include these in some form.

8. Catalytic outcomes

Reflection on the catalytic impacts of climate finance provides a lens through which to consider the diversity of ways in which public finance can mobilise action and investment, particularly the private sector, and captures indirect linkages and effects. In essence, the core remit of the SREP revolves around catalytic outcomes. One of its central objectives is to use a limited pool of carefully targeted public finance to help reduce the costs and risks or increase the returns associated with investments in renewable energy and energy access projects in a select group of low-income pilot countries. It is hoped that this will result in

the transformation of the markets for these activities and a take-off of sustainable private and public sector spending. The success of the Fund therefore rests heavily on the extent to which pilots are successful in overcoming these barriers and catalysing involvement from a wider pool of actors and stakeholders. There is, however, a need to consider whether such approaches will allow the SREP to address its access objectives. Furthermore, the SREP is working in countries with significant political risk, and a challenging overarching investment framework. SREP finance alone cannot address these challenges.

SREP funding is based on a co-financing model. Pilot programme investment plans detail anticipated funding arrangements for each project, which usually involve the SREP component contributing a relatively small part of overall funding, with the remainder being provided by MDBs, national governments and the private sector to varying degrees. SREP funding constitutes 12% of the total expected investments under the eight endorsed IPs (see figure 8). The amount of planned co-financing varies by project (see figure 9) with the average SREP funding-to-co-finance ratio only slightly higher for renewable energy than energy access projects. Interestingly the SREP leverage ratios are estimated to be 1:10, reportedly amongst the highest for the CIF, although this figure is skewed somewhat by two large geothermal investments (CIF 2014c).



* Includes commercial bank loans, other development partners, NGOs and funding gaps to be filled.

Figure 8: Indicative financing of SREP investment plans (US\$ millions). Source CIF 2013a



Figure 9: Co-financing of SREP projects. Source: CIF 2013a

Models for engaging the private sector

SREP investment plans are in general detailed in explaining the specific constraints that each pilot country faces in their targeted sectors, as well as the specific role that SREP funding will play in overcoming these. The model upon which SREP funding is expected to leverage private investment varies by project. In some cases, SREP funds are used to finance a specific initial investment that the private sector deems too risky to fund itself. The Kenyan Menengai Geothermal project (see Box 3) provides an example of this leverage model.

The Nepalese Extended Biogas project will seek to scale-up private investments in largescale off-grid biogas investments by employing a somewhat different model. The Nepalese government, through its Alternative Energy Promotion Centre (AEPC), will subsidise the upfront capital costs for commercial enterprises wishing to purchase biogas systems for cooking and heating applications or electricity generation, up to approximately 30% of the total investment cost. SREP funds will then be used to reimburse the AEPC up to 20% of the total sub-project cost once the system is commissioned and operational; a performancebased payment arrangement. A portion of the project's SREP allocation will be used for technical assistance, including for the competitive identification of investors looking to participate in the program and capacity building for those companies whose proposals are selected. Concerns were initially raised by Nepalese banks, seeking to reduce liquidity and exchange rate risk barriers to investing in renewable energy, over a lack of actionable information from the government and MDBs regarding the country's nascent SREP programme (Rai, Appunn and Smith 2013). The delays associated with SREP processes were a further concern for Nepalese private sector actors, who necessarily operate on shorter decision timeframes than those typical of MDB-run projects.

Box 3: Kenya Menengai case study

80% of funding for Kenya's endorsed SREP investment plan will be directed towards the development of the Menengai geothermal field. US\$ 25 million has been approved for delivery through the AfDB for the first phase, while a further US\$ 15 million is awaiting approval for delivery through the World Bank. The model to be employed involves the use of the initial AfDB SREP funding to absorb the early risk of drilling pilot wells in order to fully assess the potential of the field. The second World Bank phase will support the establishment of steam production. Once established, steam production will remain in the control of the government through the publicly owned Geothermal Development Company (GDC), and will be sold on to the private sector for electricity generation.

This model has generated considerable interest from the private sector¹², as it allows investors to wait until the resource has been proven before committing funds; the risks associated with exploratory drilling are too high to attract private investment otherwise. Although not predicted in the Kenyan investment plan, US\$ 478 million of private sector finance is now expected to be leveraged, and this interest has allowed the GoK to increase the ambition of the project from the 200MW facility originally proposed in the investment plan to the current goal of a 400MW facility.

The public-private partnership model employed in this case pre-dated the SREP's involvement in the Kenyan geothermal sector, but SREP funding has allowed it to be implemented at scale. The 400MW development will have a substantial impact on Kenya's energy supply, which currently stands at approximately 1300MW.

The SREP investment plan development process in Kenya provided an opportunity for private sector entities in the energy sector to engage with government and raise their views about the factors holding back investment in geothermal, which, along with the high-risk initial investment required, included feedback that the national feed-in tariff, introduced in 2008, was at too low a level to incentivise investment. A review of the feed-in tariff was a recommendation of the SREP consultation process (among others), and this was carried out in 2010.

Sources: Governments of United Kingdom/Australia (2011); Government of Switzerland (2011); Kolikho and Rivard (2013); AfDB (2011)

In some cases, questions have been raised over the predicted leverage ratios set forth in country investment plans. For instance, Tanzania's investment plan, approved in 2013, includes a geothermal project for which US\$ 25 million of SREP funding is predicted to leverage US\$ 460 million from the private sector (including through commercial bank loans). Contributors sought evidence to support this expectation for such a high leverage ratio, with Switzerland for example endorsing the plan but stressing that "the mere mentioning of this [private sector] funding in a financing table of the investment plan is not enough". Other IPs have been criticised for not targeting the private sector enough. The two grid-connected geothermal and wind projects in Ethiopia's plan, for instance, were challenged by donors over their whole reliance on public funding when there may have been an opportunity to encourage private sector involvement. The GoE justification for this arrangement is that power is a public good and as such the responsibility to invest in its provision rests on the government rather than the private sector (Rai et al. 2013).

¹² See '20 companies line up to develop Menengai steam wells', Business Daily, December 7, 2011. <u>http://www.businessdailyafrica.com/20+companies+line+up+to+develop+Menengai+steam+wells+++/-/539546/1285882/-/u1mmix/-/</u>

The SREP is also supporting some activities with smaller companies. Ethiopia's proposed US\$ 4 million 'Clean Energy SMEs Capacity Building and Investment Facility', for example, will seek to build the capacity of targeted SMEs selling energy access devices (such as clean cook stoves), efficient energy conversion systems for institutions or sustainable fuels, as well as establishing a financing facility to support their development (GoE).

Private sector set aside

In 2013, a cross-SCF competition was launched with the explicit intention of engaging the private sector. US\$ 90 million was advertised as available through the SREP 'private sector set aside' for projects led by private sector clients working through MDB private sector arms or by public sector entities who would then "channel all funds to private sector recipients, through innovative, competitive mechanisms such as competitive allocation of subsidies to private sector entities, public-private partnerships, or results-based financing" (CIF 2013c, p.2).

Box 4: Endorsed private sector set aside projects

Four projects were endorsed in the October 2013 Sub-Committee meeting to decide on the allocation of the initial round of the SREP private sector set aside:

- Strengthening of the Honduras Renewable Energy Financing Facility (Honduras) – US\$ 15 million (IDB)
- Scatec solar photovoltaic 33 megawatt (Mali) US\$ 25 million (AfDB)
- Kopere Solar Park (Kenya) US\$ 11.6 million (AfDB)
- ABC business models of off-grid energy access (Nepal) US\$ 8 million (World Bank)

Source: CIF (2014a)

Project proposals were encouraged to focus on proven technologies, while maximizing innovation in aspects such as financing models and project approaches, and should demonstrate wider private sector support and engagement. Approvals would be based primarily on the proposed projects likely advancement of SREP programme objectives, but also, importantly, on their alignment with country investment plans. Twelve proposals were submitted for consideration by an expert panel, which ranked them and presented a priority list of six projects to the SREP Sub-Committee. The Sub-Committee endorsed four projects to be developed by MDBs for approval in October 2013 (see Box 4). Around US\$ 30 million is now available for a second round of proposals.

Take away messages

 Catalysing private action is a key tenet of the SREP's approach. Investment plans are in general thorough in addressing the specific barriers that must be overcome to achieve this.

- Models for private sector engagement differ in each case, with varying focuses on addressing risks, costs or capacity building.
- It remains to be seen the extent to which planned leveraging is achieved in practice.
- The SREP private sector set aside will provide a US\$ 90 million pool of additional funding specifically targeted at encouraging private sector leadership in the renewable energy sector.

9. Innovation

It is useful to consider how international funds have supported a broad continuum of approaches to innovation, including innovative technologies, deployment approaches and financing models, as well as capacities and institutions (including at the local level).

The SREP is intended to support 'proven "new"¹³ renewable energy technologies' (CIF 2009), which in this instance is restricted to solar, wind, bioenergy, geothermal and hydropower (at capacities of under 10MW per facility). The focus of the fund is not on proving the effectiveness of innovative new technologies, but rather to use innovative deployment approaches to demonstrate the viability of the above suite of existing technologies in low-income country contexts where investments have so far been impeded by barriers of risk or cost. The deployment of these proven technologies may be innovative in particular country contexts, however, when a country has no or little prior experience of their application, for example with Nepal's inclusion of municipal waste to electricity and mini-grid solar power technologies in its investment plan (Rai, Appunn and Smith, 2013).

A novel dimension of SREP engagement with pilot countries with respect to technology has been the opportunity the investment plan preparation process provides for each country to assess the entire suite of renewable energy options available to it and the investments required to capitalise upon them, as well as assessing the opportunities to match these investments with funders. This has proven a valuable experience for pilot countries, which may not have had the opportunity to do so without SREP funding. The flexibility of the fund in terms of instruments that it can use does allow some freedom in the approach it can take in each project or programme context.

Knowledge sharing and learning among partners, including at local level, is likely to be an important factor in supporting innovation at the small-scale, decentralised level of delivery necessary for improving energy access. There are opportunities for SREP programming to engage wider partners in the energy access sphere, including the SE4All Initiative. Refocused efforts in this area could prove valuable as the fund moves into implementation.

¹³ As defined at the International Renewable Energies Conference held in Bonn, Germany, in June 2004.

Take away messages

- The SREP is focused on scaling up viable technologies; in some of the countries where it is engaging there has not been prior experience of implementing a particular technology. Innovation does not appear to have been a strong emphasis of the SREP.
- The ability of the fund to engage with wider global partners could be an important factor in encouraging innovation in energy access delivery approaches.

10. National ownership

The role of national institutions in conceptualising programmes and engaging with the fund

National ownership and leadership is a key consideration in understanding the effectiveness of international climate funds (Chaum et al. 2011; OECD 2012). The programmatic nature of the SREP creates a platform for the proper engagement and leadership of pilot country governments and the opportunity to consider the best way to align SREP programming with national climate and energy strategies. National governments are central players in the development of investment plans, in partnership with regional MDBs, and grant funding is available to support this process where capacity building is required. Further, the fact that the SREP pilots were selected from a group of countries that had proactively submitted expressions of interest was a positive starting point in terms of country ownership and engagement.

Alignment with national climate related initiatives and strategies

Fund activities designed in alignment with existing country strategies and initiatives are likely to elicit higher-level buy-in from government institutions and be more efficient in achieving outcomes than more ad hoc, 'bolt-on' measures. Investment plans under the SREP should detail the planned activities in the context of existing national strategies for climate change, energy and development. Box 5 briefly illustrates this exercise in the case of Nepal. The investment plan process means that in order to receive funding, each country must develop a plan demonstrating a common vision, a process necessarily involving the prioritisation of possible interventions. Clearly, the activities finally approved will reflect a balance between the proposals by countries in partnership with MDBs and the inputs and suggestions of fund contributors through the Sub-Committee.

Some observers comment that investment plans proposed often seemed to build on the programming priorities of the MDBs. In some cases this did not appear to be an issue with national governments, for instance in Kenya, Nepal and Mali. On the other hand, the Government of Ethiopia, for instance, did not agree with the AfDB's initial proposal following the Ethiopian Joint Mission, and requested UN agency observers to help reformulate the approach. The relative delays in project finance approvals for Ethiopia are partly due to this initial disagreement over investment prioritisation. Contrastingly, the approval for Kenya's geothermal project came almost immediately after the approval of its investment plan, reflecting the alignment of MDB and government priorities in this case.

Box 5: SREP programme alignment and coordination in Nepal

The SREP IP development process in Nepal in 2011 coincided with the country's move to create a National Rural and Renewable Energy Program (NRREP), with the goal of streamlining funding for alternative energy in rural communities through one focal mechanism. A thorough consultation process between the GoN and MDBs meant that the SREP investment plan was able to augment the establishment of the NRREP and other on-going developments in the sector. The NRREP is expected to provide US\$ 180 million to accompany the US\$ 40 million initial SREP allocation. The GoN established a steering committee for the IP development process including key representatives from Ministries of Finance, Environment, Local Government and the National Planning Commission. Observers comment that the government exhibited strong leadership during this consultation process, although some stakeholders have suggested that the MDBs were the primary driving force.

The coordination of the SREP program will be coordinated through the key institutions already involved in the implementation of the NRREP and the GoN's wider energy development plans, primarily the Ministry of Science, Technology and the Environment (MOSTE) and the semi-autonomous Alternative Energy Promotion Centre (AEPC). However, some observers have called for a clearer delineation of responsibilities, as a wider group of institutions, including the Ministry of Finance, a new Central Renewable Energy Fund and more than eight other institutions are also involved. It is possible that an autonomous Alternative Energy Promotion Board (AEPB) will be established to manage both the NRREP and the SREP.

Sources: Rai, Appunn & Smith (2013), GoN (2011), Upadhyay (2011)

Engagement with key institutions at national level

It appears that the development of country programmes has tended to involve fairly extensive consultation with a range of government institutions and external organisations. Country investment plans include summaries of the stakeholder consultations carried out in their development, as well as the ways in which comments from stakeholders were addressed. MDB scoping and joint missions to countries have involved engagement with a range of government and non-government agencies. 57 stakeholder organisations were invited to a Stakeholders' Consultation Workshop for instance to discuss Ethiopia's strategic priorities for renewable energy development during the country's investment plan development phase (Rai et al. 2013). In Kenya, observers comment note that the SREP has brought the Ministry of Environment, Ministry of Energy, Geothermal Development Company and Kenya Power together to work on the implementation of the Menengai geothermal project. They highlight the benefits that public servants at the technical level will gain by this interaction across institutions and expect the arrangement to continue, assuming that the high-level support for geothermal development in the country remains.

Take away messages

- The commitment of recipient governments to prioritise renewable energy development in their energy plans was a major factor in the pilot country selection process, in an effort to ensure ownership
- The investment plan development process has provided an opportunity for government leadership and engagement with relevant

institutions and stakeholders, although concerns have been raised in some cases over the extent to which resulting investment plans reflect MDB priorities over those of governments.

Conclusion: Role in the global finance architecture

The design of the SREP sought to address a gap in the international climate finance architecture. Many other mitigation funds, including the Global Environment Facility and the Clean Technology Fund, are increasingly focused on the need to achieve large scale emission reductions at the lowest possible cost, particularly in fast growing countries with high abatement potential. The original intent of the fund was to ensure that dedicated finance would also be directed to programs that help low income countries adopt low carbon energy technologies and use renewable energy technologies to support access to energy.

The SREP remains in its very early stages of implementation, and it is too early to reach definitive conclusions on its effectiveness. Program implementation has been relatively slow. Many of the programs in which it is investing are nevertheless poised to result in important increases in the share of renewable energy installed in country, and the number of people with increased access to energy. The programmatic approach that the SREP has taken, with significant resources dedicated to bringing stakeholders together to agree priorities and address institutional and capacity related issues, is in many ways a particular strength.

In practice, however, while the SREP has focused on renewable energy deployment, particularly in low income countries, not all programs have had a particularly direct emphasis on extending access to energy. Indeed expected outcomes with regards to increased electrification are relatively modest. This reflects to varying degrees national governments' priorities in accessing the fund, the relative financial and economic viability of more centralised programs, as well as the particular competencies of the MDBs which are often better suited to supporting larger scale programs. The fact that co-finance and leverage ratios appear higher for SREP programs than for any of the other CIF sub-funds on some level reflects the strong interest that viable programs in difficult implementation environments generate from donors and other contributors.

On the one hand, the success of SREP programming in bringing other donors on board is to be recognised as an indicator of the effectiveness of national planning and programing processes. On the other, the extent to which the SREP's flexible instruments have succeeded in "widening the playing field" and expanding the range of investment opportunities in its target countries is much less clear. The experience of the SREP therefore speaks to the difficulty of delivering finance at scale to increase access to energy in low income countries.

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