Working paper

The effectiveness of climate finance: a review of the Clean Technology Fund

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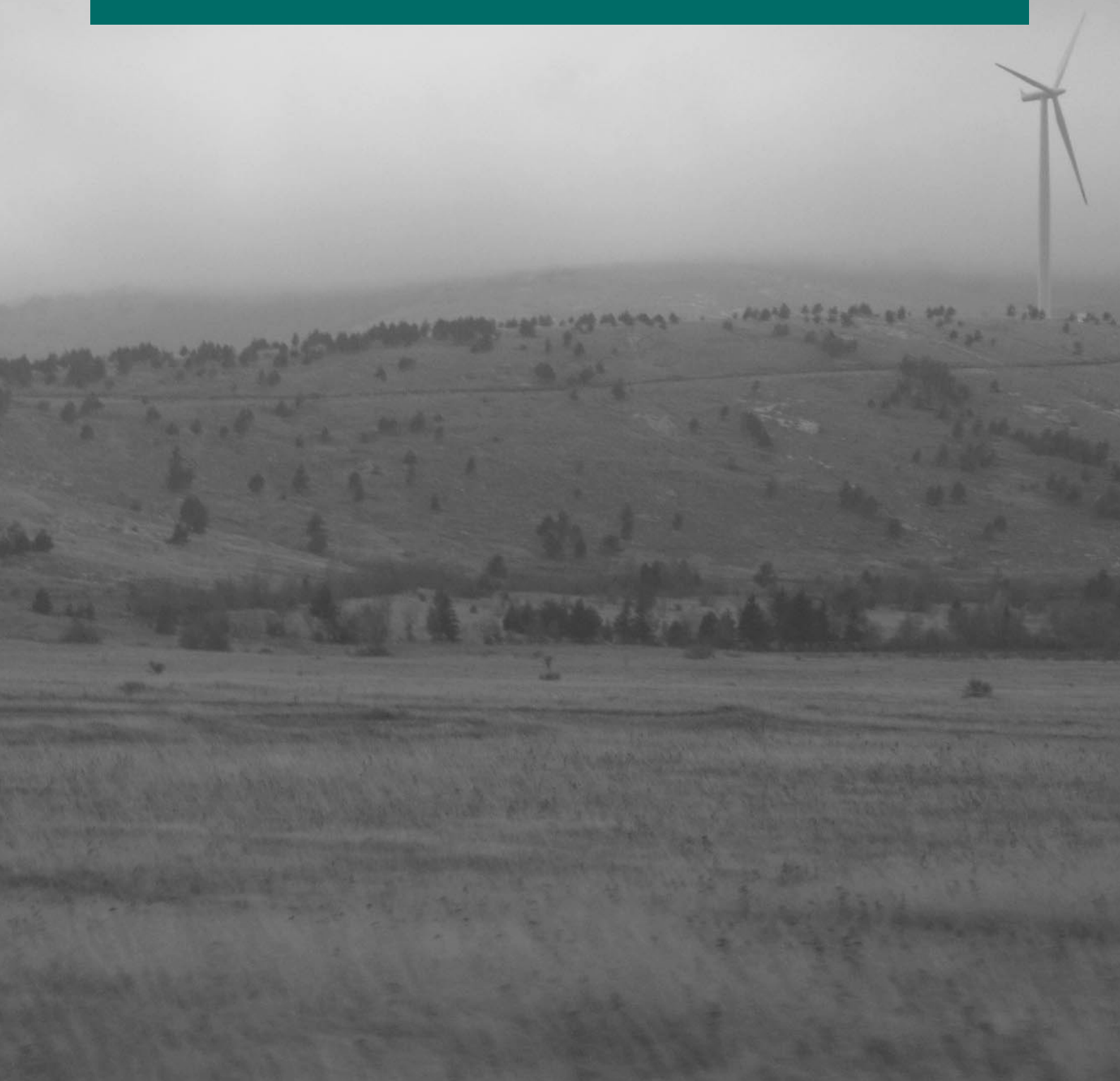

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Abstract

The Clean Technology Fund (CTF) is presently the largest multilateral mitigation fund, with a capitalisation of USD 5.2 billion in grants and concessional loans. Its objective has been to harness the private sector in pursuit of "transformational change" in developing countries towards low carbon development strategies. Its focus is on financing the deployment of low carbon technologies at scale. The experience of the CTF offers important insights into what it takes to use diverse financial instruments at scale to support developing countries to respond to climate change. In addition to seeking to foster innovative approaches to delivering finance at the minimum level of concessionality possible, the CTF has made investments that seek to reduce the costs of promising new technologies. Its experience reinforces the importance of grounding programs in country context with due attention to issues of institutional capacity and preparedness. This working paper is one of a series of Overseas Development Institute (ODI) studies of the effectiveness of international climate funds using a common analytical framework. It will be revised to reflect feedback received and new developments.

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Summary

FUND PURPOSE AND OBJECTIVES / THEORY OF CHANGE
The Clean Technology Fund seeks to harness the private sector in pursuit of "transformational change" in developing countries towards low carbon development

SPENDING

1. Resource mobilisation

Relatively successful in raising funds from donors through informal channels, without a formal resource mobilisation strategy; this success reflects the trust that contributor countries place in it. While deposits have been slow to follow pledges: the majority of committed funding is now received. The capitalisation of the CTF with loan contributions means that it has debt to service, and affects risks it can take in its investments.

- 9 governments have pledged USD 4.8 billion
- funding has increased by USD 531 million since 2008

2. Voice and administration

Evolved from a relatively closed decision-making space to become much more inclusive and transparent. It has invested in improved information sharing and learning. Developing and developed countries have both shaped the development of the fund, but developed countries have generally been more vocal. Trust fund committee meetings are used to address more contentious decisions. The MDBs have shaped its substantive priorities. Civil society and private sector observers must make good use of increased formal space for inclusion (and mobilise their peers to engage).

- 8 developed and 8 developing countries on committee
- USD 31 million annual budget (or about 1% of funding approved to date)

3. Investment Strategy and Allocation

Funding available on a first come, first served basis. Could only work in ODA-eligible countries with an active MDB programme underway, to build on MDB networks, experiences and initiatives. Has resulted in a rush to seek resources for programmes that may not reflect national needs and circumstances well. Experience reinforces importance of ensuring adequate engagement and deliberation early in programme design. Highlights the need for flexibility: circumstances change, when trying to implement larger scale programmes over longer periods of time.

4. Disbursement and Risk Management

While programme approval has been quick, implementation and disbursement has been slow. Reporting on CTF spending and operations has improved, though it does not include information on private sector programmes. Disbursement has been slower than approval, but has increased substantially in 2013. Risk assessment frameworks to strengthen the discipline of fund management are being introduced. Care is needed to ensure that risk management efforts do not unduly constrain creativity and innovation.

- USD 575 million disbursed to 23 projects and programmes by September 2013 i.e. 27% of approved funding

5. Monitoring, evaluation, and learning

Agreement on the CTF results framework has been an extensive and complex process. The CIF has been responsive to partner country concerns in simplifying its framework, to a final set of 5 outcome indicators. Real time reporting has begun in 2013. Resulting information has the potential to inform risk management initiatives. Further work is needed to strengthen data collection systems, ensure consistent boundaries are used, and assessment methodologies are robust. There is a continued need to strengthen processes to learn from the experience of the CTF, through frank and objective reflection

Emission reductions: 10 million tonnes of C02e (this is 2% of target)
Leverage: USD 3.5 billion co-financing (33% from the private sector). 21% of total co-financing expected.
Energy Efficiency: 2,626 MW (28% of target).
RE: 6,800 GWh (5% of targets).

INSTRUMENTS

The fund experiments with an innovative range of different instruments for delivering concessional finance to reduce the costs associated with decarbonization of public expenditure on infrastructure in the energy, transport and built environment sectors.

OUTCOMES

6. Scale

The CTF has made some efforts to engage subnational institutions, particularly cities as part of efforts to finance sustainable transport solutions. The focus on finding ways to move large sums of funding and the transaction costs associated with smaller projects have reinforced a focus on larger projects. By working through financial intermediary institutions in developing countries, it has sought to reach small and medium size private sector actors. More work is needed to understand the impacts and outcomes of such efforts.

7. Enabling Environments

In many of the countries where the CTF has sought to engage, the policies, regulations and governance that would drive investment in low carbon technologies are evolving and not yet well established. CTF investments are therefore situated in a complex context. The CTF experience suggests that a lack of strategic engagement with considerations related to policies, regulations, and institutional capacity can disrupt implementation. Some programmes have strategically combined resources for policy engagement and technical assistance (for example grant resources from the GEF) with investment programmes financed through the CTF. These programmes seem poised to have significant long term impacts. It reinforces the importance of investing in institutional capacity and preparedness (readiness) to implement and execute programmes to realise transformational change.

8. Catalytic outcomes

CTF programmes have supported public private partnerships and financial intermediary programmes, which have generated some positive results. A new global private sector programme with more flexible arrangements to structure finance for the private sector has been proposed. There will be a need to clarify the added value of proposed sub-programmes to on-going programing through CTF investment plans, and maximise synergies. There is a continued need to understand how CTF finance adds value, recognising that a sole focus on leverage has the risk of creating incentives to invest in projects where this may be less clear.

9. Innovation

The relatively similar approaches taken to engaging the private sector suggest a need for more innovation and creativity. Efforts are being made to increase the use of the full suite of instruments that the CTF has at its disposal, and several new initiatives to this end have been launched; it is too early to comment on their likely impact. Funding has been used to accelerate near commercial technologies such as CSP. There are some tentative indicators of progress in reducing technology costs. These experiences emphasise the importance of concerted and coordinated efforts to deliver finance, and learning.

10. National ownership and sustainability

The CTF engages ministries of finance and energy, which is an important opportunity to make climate change more central to economic decisions and planning. It takes time and iteration for government counterparts and implementing entities to reach shared understandings of climate change objectives. There is a recognised need to deepen stakeholder engagement and commitment to proposed programmes and plans. Attention to climate change has increased over time in recipient countries, and policy responses are evolving. CTF programming can help shape and inform those priorities, but will also need to adjust to align.

ROLE IN THE GLOBAL CLIMATE FINANCE ARCHITECTURE

The CTF is to sunset once a new international climate finance architecture is effective. While the imminent operationalisation of the Green Climate Fund raises questions about its future, countries have continued to pledge funding in 2013. The CTF has successfully mobilized new resources, both finance and capacity, from the MDBs. Better coordination with other actors in the global climate finance architecture, notably the GEF, would be valuable. GEF investments in enabling environments can (and indeed in many cases have) complemented CTF investments in deployment and mobilisation in ways that are mutually reinforcing and increase the likelihood of transformational change. Ensuring that lessons and understanding the CTF experiences are captured and effectively shared is therefore critical to understanding how concessional climate finance may be used most effectively to mobilize both public and private finance from international and domestic sources.

Acronyms

ADB	Asian Development Bank
AFD	French Development Agency
AfDB	African Development Bank
BEE	Bureau of Energy Efficiency
CEIF	Clean Energy Investment Framework
CIF	Climate Investment Fund
CSP	Concentrated solar power
CTF	Clean Technology Fund
DFID	Department for International Development of the United Kingdom
DPL	Development policy loan
EBRD	European Bank for Reconstruction and Development
G8	Group of 8 (Canada, France, Germany, Italy, Japan, Russia, the UK and US)
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIZ	German Society for International Cooperation
GWh	Gigawatt Hour
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
KfW	German government-owned development bank (formerly KfW Bankengruppe)
MASEN	Moroccan Agency for Solar Energy
M&E	Monitoring and evaluation
MDB	Multilateral Development Bank
MENA	Middle East and North Africa
MW	Megawatt
NGO	Non-Governmental Organisation
ODA	Overseas Development Assistance
ODI	Overseas Development Institute
RDB	Regional Development Bank
TFC	Trust Fund Committee
UK	United Kingdom
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
WRI	World Resources Institute

Introduction

The Clean Technology Fund (CTF) is the largest dedicated multilateral climate fund for mitigation in developing countries. It is one of the Climate Investment Funds (CIFs), administered by the World Bank, and implemented in partnership with the World Bank Group and Regional Development Banks (RDBs): the African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IADB).

The CTF is structured to offer public finance at the lowest possible level of concessionality to realise implementation of projects that will deliver emission reductions with a potential for "transformation". Its focus is on supporting private sector action and investment. It is intended to leverage the implementing capacities, expertise and networks of the Multilateral Development Banks (MDBs) to deliver climate change outcomes at scale. Its investments are intended to avoid greenhouse gas (GHG) emissions, mobilise increased finance for low carbon development already in place, increase the supply of renewable energy, access to public transport or improve energy efficiency.

It operates 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, and works with a relatively small subset of countries. Its establishment preceded, but arguably added fuel to, efforts to create a new financial instrument under the UNFCCC in the form of the newly established Green Climate Fund (GCF). Like all of the CIFs, it is intended to sunset once the GCF is operational.

Five years after the CTF's establishment much has been learned about the complexities of deploying large volumes of climate change finance. While there is significant progress to claim, the CTF confronts many operational challenges. Although the fund made a rapid start, approving more than nine investment plans within the first year of its establishment, implementation has been complex.

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 program of work monitoring dedicated public 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 CTF. 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 level 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.

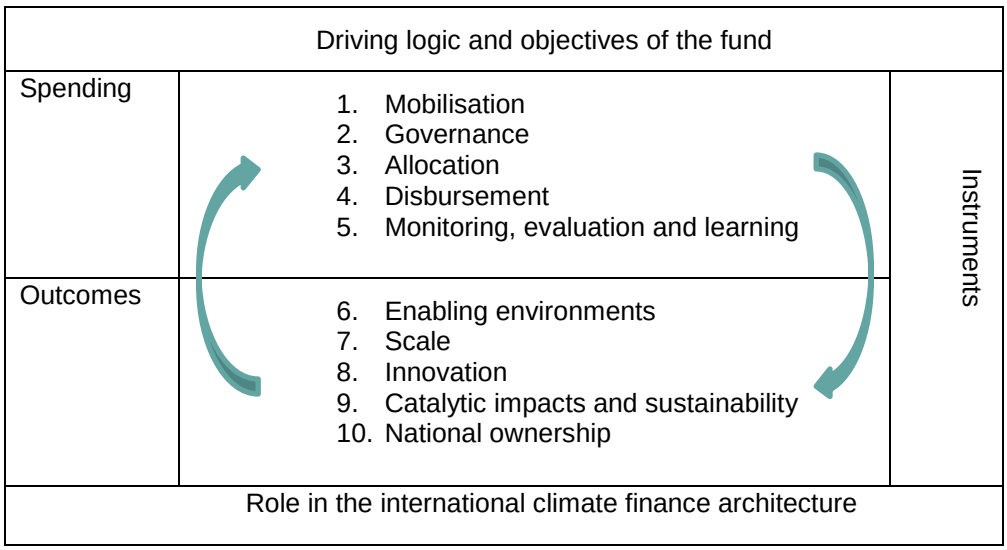

Figure 1: Framework for assessing the effectiveness of international climate finance

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 funds 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 in 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, and complemented it with selective examples from the portfolio review that illustrate the various approaches that have been taken. Both authors also bring substantial personal experience with the CTF to bear on this analysis. Smita Nakhooda served as civil society observer to the Fund from 2009 – 2012 as a representative of the World Resources Institute (WRI), and Amal-Lee Amin worked on the inception of the CTF in her former capacity as a representative of Department for International Development of the United Kingdom (DFID), and then as the IADB focal point for its programming. The study therefore builds on WRI's longstanding program of work on international climate finance and engagement with the CTF. Our personal experiences with the establishment and operationalization of the fund undoubtedly shape our understandings of its effectiveness. Nevertheless, we have sought to be as objective as possible in this analysis, but deepening it with inductive insights from our experiences.

Where data availability allowed it, we complemented our qualitative analysis with quantitative analysis. We incorporated insights from the interim report of the team completing and independent review of the CIFs under the guidance of the evaluation groups of the MDBs (IFC 2013). Finally, we analysed the role of the fund in the global international climate finance architecture.

The Context for Establishing the Clean Technology Fund, and its Driving Logic and Objectives

The CTF has its origins in efforts to engage the MDBs to do more on climate change. When the world's leading industrialised nations met at the Gleneagles G8 Summit in 2005, they agreed an action plan on Climate Change, Clean Energy and Sustainable Development emphasizing the role of MDBs in helping developing countries respond to climate (ICF 2013, Nakhooda 2011). They tasked the World Bank with mobilising an 'investment framework for clean energy', recognizing that the MDBs' technical expertise, development policy advice and investment support could catalyse a transition to sustainable energy in a carbon-constrained world. Each of the MDBs developed internal responses to the Gleneagles Communiqué. The World Bank for its part embarked on a process to develop a Clean Energy Investment Framework, which emphasised its need for access to additional concessional resources in order to scale up its efforts (CEIF 2006).

The CTF was eventually established in 2008 in response to a joint pledge of USD 5 billion from the governments of the United Kingdom (UK), the United States (US) and Japan to pool their efforts to "help developing countries bridge the gap between dirty and clean technology… and boost the World Bank's ability to help developing countries tackle climate change" (Paulsen, Darling and Nukaga 2008).

A design process that also engaged the RDBs that had been part of the Gleneagles Clean Energy Investment Framework began. Following agreement on a basic approach and governance structure at a meeting in May, the World Bank's Board of Governors approved the establishment of the CTF as a World Bank trust fund in July 2008.[1]

The early design of the CTF was substantially shaped by the objectives of its largest contributors, and the perspectives of the World Bank staff who managed this process. The US commitment to the CTF reflected the Bush administration's desire to demonstrate that it was taking multilateral steps towards climate change, without having to directly participate in the UNFCCC process. For the UK, the CTF was one way to follow up on the Gleneagles outcome, and respond the Stern Review findings on the economics of climate change that highlighted the urgent need to use public finance to enable larger scale investment in the

[1] Alongside the Special Climate Fund (SCF), thereby creating the CIFs.

solutions to climate change.[2] The initial logic was to focus on a small set of countries where a large amount of finance delivered at substantial scale could unlock significant transformation. The CTF would build on and complement GEF programming and other capacity building programs, by supporting the scale up and commercialisation of technologies.

Developing countries originally rejected the idea that contributions to the CIFs should count as climate finance, or that the World Bank should have any role in managing climate finance (Ballesteros et al., 2010). Several governments have expressed concerns that the establishment of the CIFs and the programs it supports may prejudice the outcomes of negotiations on how to finance climate change within the UNFCCC. As a result, the CIFs were positioned as an "interim measure to scale up assistance [for climate change] to developing countries and strengthen the knowledge base in the development community."

As noted, the CTF is to "take necessary steps to conclude its operations once a new [UNFCCC] financial architecture is effective" (CTF 2009). Any remaining funds may be transferred to "another fund that has a similar objective". If the UNFCCC negotiations result in a renewed mandate for the CTF, operations may continue with appropriate adjustments in priorities or programmes.

Spending

A. Instruments

One of the CTF's primary objectives is to accelerate and scale up low carbon investments in a way that builds the case for transformational change to GHG-intensive sectors in countries with large and rapidly growing emissions. In this context, a major innovation of the CTF has been to experiment with different instruments for delivering CTF concessional finance, to reduce the costs associated with decarbonisation of public expenditure on infrastructure in the energy, transport and built environment sectors. Given that this is a substantial innovation of the fund, we begin this study by reflecting on the nature of these instruments.

As we will discuss further, the fact that the CTF is itself partially capitalised through loans and capital grants [3]affects how much risk it is able to take on through these various instruments. Contributors have sought to prevent cross subsidies between loans and grants. Outgoing finance from the CTF can be no more concessional than incoming finance. In addition, this has complicated the legal administration of loans, creating a need for parallel loan agreements because the trustee must pass associated liabilities on to the implementing MDBs.

Targeting the public and private sectors

Public sector loans are offered at harder and softer levels of concessionality (see box 1). MDB co-financing is necessary for any CTF investment, and the concessional finance. The availability of concessional finance could help incentivise countries to borrow for low carbon projects that otherwise they would be unlikely to prioritise. Even harder concessional terms were very attractive to many countries compared to MDB non-concessional rates, or loans from the market on commercial terms.

[2] In the UK, this prompted the establishment of the Environmental Transformation Fund, which was the basis for the CIF design

[3] With terms akin to those of the International Development Agency

The overall level of concessionality is determined by the ratio of CTF to MDB financing.[4] Embedding the CTF funding within an MDB project was intended to provide a seamless way to provide co-financing for climate change with ordinary capital. The CTF procedures, which are reflected in the MDB implementing agreements with the trustee, require CTF loans to have the same legal status as the MDB loans. These loans tend to benefit from a sovereign guarantee, making the level of risk of default relatively low.

Box 1: CTF Public Sector Products

The CTF offers loan products on the basis of an analysis of the financial internal rate of return without CTF co-financing for proposed projects.

(a) Harder concessional loans: (i) rates of return near / above market threshold but below risk premium for project, technology or country or (ii) rates of return near or above normal market threshold, but acceleration the low carbon technology will have higher opportunity costs.

(b) Softer concessional loans, for projects with (i) negative rates of return (ii) rates of return below normal market threshold

Borrowers can pay (a) a fee of 0.18% of undisbursed loan balance in semi-annual payments or (b) a fee equivalent to 0.45% of the total loan amount as a single lump sum. Fees cover MDB lending and supervision costs. Grant elements are estimated on the basis of the interest rate and repayment period using the IDA methodology.

CTF Loans	Maturity	Grace Period	Principal Repayments Year 11-20	Principal Repayments Years 20-40	MDB Fee a/	Service Charge b/	Grant Element c/
Harder Concessional	20	10	10%	N/A	0.18%	0.75%	~45%
Softer Concessional	40	10	2%	4%	0.18%	0.25%	~75%

Additional measures were created for private sector projects or municipal investments due to default concerns in the absence of guarantees and the range of available instruments is broader. In addition to the use of concessional loans, CTF funds can be used through senior or junior loans, dedicated lines of credit to private sector financial intermediaries, guarantees and, in some cases, equity investments. The terms and conditions of the CTF finance utilised in combination with MDB resources are not fixed. Instead, it is up to the lead investment officer to negotiate the terms so that the least amount of concessional finance is used for each investment. This can help ensure maximum leverage of private sector finance, as well avoid over-subsidising private investors in ways that may distort market conditions.

The CTF investment criteria make clear that the use of concessional finance must be justified on the basis of wider benefits. For example, it may buy-down costs and risks of a new technology deployment at the early stage of a market where returns may be uncertain over the medium- or longer-term.

Tailoring the level of concessionality to the minimum amount possible to overcome a specific risk or set of risks for the investor is a guiding principle of the CTF private sector investments. This implies that the terms and conditions are to a certain extent at the discretion of individual investment officers and their teams. However, checks and balances are provided by the MDB credit committees who verify that specific risk-sharing

[44] Further investigation of the way in which these ratios have been determined, and so calibrated towards delivering transformational outcomes across different technology, sector and country contexts is needed, and would offer valuable insights for the emerging international architecture for climate finance

instruments are proportionately calibrated to the level of assessed risks. The credit committees require evidence that CTF concessional finance is working to help develop and expand the local market in a way that crowds in new players.

Subordinated Loans*:* The MDBs may also be unable to take on risks without an appropriate return due to the need to maintain their own AAA credit ratings. In these cases CTF funds can be subordinated to the MDB loan to reduce the risk for the MDB so that it is can invest in new and potentially transformational activities. This was initially one of the core added-values of the CTF. Once the operational procedures for private sector financial products were developed, however, there were pressures to avoid placing CTF funds in riskier positions than MDBs. This resulted in procedures that allowed pricing and repayment terms for the CTF part of the loan to be different to the MDB loan (and articulated through two separate loan agreements) whilst requiring that the seniority and security of the loans were *pari passu* with the MDB. The MDB must justify any exceptions to this rule to the CTF Trust Fund Committee (TFC). Whilst this is itself not unreasonable, the requirement for TFC approval in addition to that of the MDB's own internal procedures leads to longer project approval timelines and can create additional uncertainty for the private sector client, which may deter innovation.

Concessional Lines of Credit to Financial Intermediaries: The CTF has also been used to provide lines of credit to financial intermediaries from both the public and private sectors. For project developers of renewable energy and energy efficiency the high capital costs and their own perception of risks associated with new and undeveloped markets are further constrained by inexperience of those from whom they need to access finance. Typically both public and commercial financial intermediaries lack the expertise and capacity to assess and appropriately structure financing deals for such investments. If they do offer financing this is often at very high interest rates and involves relatively high transaction costs. A large number of CTF projects have targeted these barriers to investment through providing dedicated lines of credit on concessional terms to financial intermediaries combined with technical assistance for strengthening their capacity to appropriately assess the risks and reflect these within structuring of deals.

Guarantees: CTF resources were intended to encourage the MDBs to increase the use of guarantees to address risk that deterred low carbon investment. At the outset, high demand for such risk-sharing measures was expected. To date, guarantees have only been used for the Mexico Renewable Energy Finance Facility guarantee.[5] It is likely that in the case of the CTF the liabilities associated with loan contributions to the CTF Trust Fund created additional barriers to guarantees.

Equity investments: CTF funds can also be used as equity investment subordinated to an MDB equity investment. The EBRD have requested a project preparation grant for a renewable energy equity fund, and the International Finance Corporation (IFC) has also indicated that equity investments might form part of their funding towards the Renewable Energy Association of the Philippines. Not all the MDBs are able to make equity investments under their current policies, and the CTF procedures indicating the need for treatment on a *pari passu* basis may have further deterred the use of equity as an instrument.

Project Preparation Grants: In addition to CTF capital for investments, a small proportion of CTF resource can be utilised as grants for project preparation. Initially this was up to USD 3 million per CTF Investment Plan, split amongst all the participating MDBs for the different programs and projects. This relatively scarce CTF resource has been used to help develop institutional capacity in Mexico for example, as well as to undertake studies that would inform greater financial innovation. Further detail on this is provided in the section on enabling environments.

[5] A guarantee type mechanism was also used in a program with Bancosef in Colombia

Development Policy Loans: The CTF is exploring the use of non-earmarked finance that is channelled through borrower financial management, procurement, auditing and implementation processes. The use of such instruments may have the potential to help strengthen national ownership through the use of recipient country systems. This instrument has been proposed as a means to support hydropower development in the Indian state of Himachal Pradesh.

Results based financing: The use of results based financing approaches, in which payments are made once the delivery of agreed program results have been verified, is to be piloted by the CTF through a World Bank supported program in India for super energy efficient equipment. The program will support the Bureau of Energy Efficiency to offer incentives to manufacturers of more efficient ceiling fans.

1 Resource Mobilisation Approach

As of September 2013, nine governments have pledged USD 4.8 billion to the CTF, which is equivalent to USD 5.2 billion in 2008 dollars (see Figure 2**Error! Reference source not found.**). This constitutes the bulk of the CIFs, to which countries have pledged a total of more than USD 7 billion. Initial pledges from the US, UK and Japan were quickly followed by additional contributions from France, Germany, Spain, Sweden and Australia. Canada was the last to contribute, and made its first contribution in March 2012. CTF finance has largely been raised through informal channels, with the MDBs and the administrative unit taking the initiative to explore the scope for increased funding, including by convening pledging meetings with contributor countries. Pledges to the CTF have increased by USD 531 million since 2008, signalling some donor confidence in its operations, although US pledges have also dropped during the same time period (Climate Funds Update 2013).

Forms of capitalisation

The UK made its contribution to the CTF in the form of a capital grant. France and Germany also made their contributions in the form of concessional loans. In the French case, their pledge to the CTF was accompanied by a commitment of co-finance from the French Development Agency (AFD). As discussed above, the use of loans to capitalise the fund has placed some constraints on the risks that the CTF is able to take on. On the other hand, as we will discuss further, it has had some positive impacts in terms of increasing attention to the financial viability of programs.

			Pledges Oustanding and Contributions Finalized						
Contributor	Contribution Type	Currency	Pledges Oustanding	Contributions Finalized	Total	Historical Value of Total in USD eq. a/ (1)	Current Value of Total in USD eq. b/ (2)	FX changes (3) = (2) - (1)	Receipts in USD eq. b/
Australia	Grant	AUD	-	100	100	84	86	2	86
Canada	Loan	CAD	-	200	200	193	199	6	199
France c/	Loan	EUR	-	203	203	300	265	(35)	265
Germany d/	Loan	EUR	-	500	500	739	615	(124)	615
Japan e/	Grant	USD	-	1,000	1,000	1,000	1,068	68	1,068
Spain	Capital	EUR	-	80	80	118	109	(9)	70
Sweden	Grant	SEK	-	600	600	92	80	(13)	80
United Kingdom f/	Capital	GBP	-	610	610	1,135	951	(183)	934
United States g/	Grant	USD	602	890	1,492	1,492	1,492	-	890
						5,154	**4,866**	**(289)**	**4,207**

a/ Represents pledges valued on the basis of exchange rates as 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 June 30, 2013.
c/ France pledged USD 500 million, including: 1) concessional loan of USD 300 million to the CTF and 2) USD 200 million from the French Development Agency (ADF) to co-finance the CTF projects. The second co-financing commitment was fulfilled with ADF loans to solar power projects of South Africa (USD 144 million in January 2012) and Morocco (USD 124 million in July 2011) under the CTF.
d/ The EUR 500 million pledge was committed in USD in the amount of USD 615 million.
e/ The USD 1 billion pledge was committed in JPY in the amount of JPY 93 billion.
f/ Represents the amount pledged under the Strategic Climate Fund and allocated to the Clean Technology Fund.
g/ The total pledge made by the United States to the CIF is USD 2 billion; the allocation across the programs is indicative.

Figure 2: Contributions to the CTF. Source: October 2013 Trustee Report (current as of June 2013)

Follow through on pledges with actual deposits to the CTF has been a slow process (see Figure 3**Error! Reference source not found.**). Specifically, the deposits against the US pledge have been delayed and reduced multiple times as a result of Congressional opposition (Watkins and Ghosh 2009, Nakhooda 2010). In addition, the level of the US pledge has fluctuated: while the Bush administration only committed funding to the CTF, the Obama administration has interpreted its pledge to apply across the CIFs as a whole. As of September 2013, however, 88% of the pledged funding had been deposited (although the US has USD 602 million in outstanding commitments). In addition, the CTF has now earned nearly USD 55 million in investment revenue on undisbursed funds. In calendar year 2013, however, it earned a negative yield (-0.23%) and lost money as a result of market downturns (CIF Trustee 2013b).

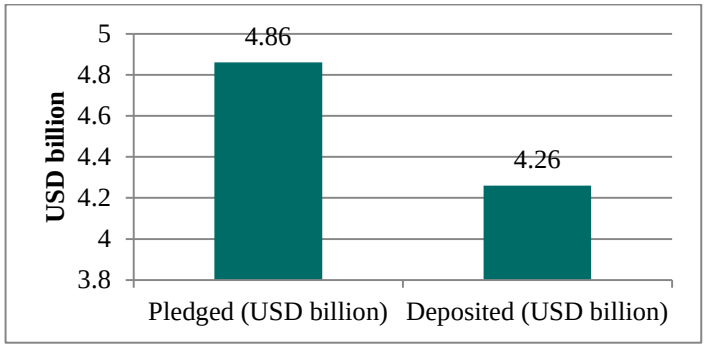

Figure 3: Pledged and deposited funding

Take away messages

- The CTF has been relatively successful in raising funds from donors through informal channels, without a formal resource mobilisation strategy; this success reflects the trust that contributor countries place in it
- While deposits have been slow to follow pledges, progress has been made and the majority of committed funding has now been received
- The capitalisation of the CTF with loan contributions means that it has debt to service, and affects the risks that it is able to take on with its various investments

2 Voice and Administration

The establishment of the CIFs brought the governance of climate funds into sharp focus for the international community. As mentioned, the CIFs were first established without a formal governance structure through a process largely managed by the World Bank with guidance from contributor countries. Yet efforts to establish multilateral funds under the UNFCCC strongly emphasised issues of voice and representation in governance: for example in the same year, the Adaptation Fund was operationalised with a majority of developed country representatives on its board. Wider debates on the effectiveness of international institutions, including the MDBs themselves, emphasised the importance of ensuring that developing country perspectives were well represented in decision-making processes, in order to ensure that decisions represented recipient country priorities and perspective (Ballesteros et al 2010). The fact that the original proposals on the operationalisation of the CTF did not make reference to developing country representation was controversial (Muller and Winkler 2008, Tan 2008).

Voice and representation on trust fund committees

The World Bank moved quickly to respond to these critiques by establishing a governing committee for the CTF that would have an equal representation eight developed and eight developing country governments. It would be co-chaired by a representative of a developed and a developing country. All decisions would be taken by consensus. The membership of the committee has remained largely unchanged since inception, although the co-chairs have rotated (ICF 2013).

The administrative unit built on the GEF governance precedents to design a more inclusive governance structure that included representatives of the UNFCCC secretariat, the GEF itself, United Nations Development Programme, United Nations Environment Programme, as well as four civil society observers representing developed countries and the regions of Latin American, Africa and Asia. It also took a new step by creating two roles for observers representing developed and developing private sector actors, to support the fund in its efforts to engage and harness the private sector. Observers are active, and can propose agenda items and make interventions. They are also responsible for communication and engagement with their constituencies.[6]

These actors were absent at the initial design meetings of the fund, however, and in the early stages of the CTF's working (and the approval of the first six investment plans) there was relatively limited formal space for their inputs because most operational discussions were held in executive session (closed to observers). Since 2011, after multiple requests from NGO and private sector observers, and support from a growing number of developing and developed country committee members, the decision was taken to make all sessions open, and executive sessions the exception. The level and depth of input from civil society observers to the CTF has also varied (ICF 2013, CIF 2010). Private sector observers for their part have not engaged actively with the fund, deterred in part by the limited scope for their input and participation during the early stages of its operationalisation. Deepening engagement with civil society and private sector stakeholders within recipient countries, however, is arguably the greater challenge for the CTF, as we discuss in section 3 on allocation.

Both developed and developing country participants are active participants in the deliberations of the CTF.[7] Germany and the UK are observed to provide the largest volume of written input and comments on plans (ICF 2013).[8] The government of Brazil recently provided written inputs in support of the hydropower Development Policy Loan (DPL)in Himachal Pradesh.

Fund Administration

The CTF trust fund committee meets twice a year. Inter-sessional decisions are now taken by email, and comments received are also made public. Committee members rightly often defer taking more difficult decisions to bi-annual meetings: as a result, meetings are often extended to allow space for deliberation over complexities and controversies. The operations of the fund have also become increasingly transparent, and most investment and meeting documents are now made publicly available via an increasingly navigable website. In 2013, the CTF agreed to report in a format that is consistent with the International Aid Transparency Initiative.

[6] The approach was informed by a paper commissioned from the IUCN on good practices in observer engagement.

[7] For example, during the CTF operationalisation process developing countries were vocal in seeking assurance that contributions to the fund would be additional to overseas development assistance (ODA) that programmes that would ultimately support renewable energy exports to Europe would not end up subsidising developed country emission reduction obligations. They also sought to keep the fund technology neutral, and ensure that programs reflect proponent countries' national priorities.

[8] But on a practical level it also reflects in part the fact that these Germany often seeks input from KfW and German Society for International Cooperation (GIZ) on proposed programs who have local expertise, and the UK has an inter-departmental coordination process between UK Department of Energy and Climate Change and DFID that precede its formal inputs to the fund. In the part, more informal dialogue often takes place between the US Treasury and the administrative unit since they are both based in the same city.

Box 2: Catalysing coordination on mitigation across the MDBs

The CTF has its origins in efforts to prompt greater action and collaboration on climate change across the MDBs, by seeking their support in mobilising a clean energy investment framework. Prior to the establishment of the CTF, there were very few operational collaborations across the MDBs, particularly on climate issues. The joint implementation structure forced greater coordination.

While the dynamic has not always been easy, with each of the MDBs keen to ensure that they had sufficient access to the concessional resources of the CTF, over time important constructive processes that facilitate greater alignment and coordination have evolved. For example, the MDBs have invested in joint approaches to accounting for climate change related activities in their operations, developing precise operational guidance to this end. Such accounting allows a basis for, over time, monitoring whether the CTF is having an effect on the overarching operations of the MDBs by supporting efforts to mainstream climate change into overarching operations. The MDBs have also been working on joint approaches to accounting for GHG emission reductions from their portfolios. This agenda item has been more difficult to make progress on, however, because different accounting boundaries would make some MDBs look better than others.

Source: CIF "Annual Update on Additionality of the CIF Portfolio to Existing MDB Portfolios" April 2013

The administrative unit of the CIF is housed in the Sustainable Development Network 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 programs, as well as increasing demands from committee members and stakeholders. The MDBs are the implementing entities of the CTF, and an MDB committee (see box 2) coordinates and keeps track of their processes and positions. While the MDBs are represented on the CTF committee, they do not vote on decisions. The annual administrative budget for the CIF is on the order of USD 21 million, and administrative spending from the CTF budget amounts to USD 31 million since inception as of September 2013. This amounts to about 1% of funding approved to date. In addition, USD 13 million has been spent on MDB fees.

Take away messages

- The governance of the CTF has evolved from a relatively closed decision-making space to become much more inclusive and transparent. It has invested in improved systems for information sharing and learning from this process
- Developing and developed countries have both shaped the development of the fund, but developed countries have generally been more vocal. The MDBs have shaped its substantive priorities
- Civil society and private sector observers have a responsibility to make good use of the increased formal space for their inclusion in the CTF by engaging (and mobilising their peers to engage) with decision-making processes and perspectives

3 Allocation and Investment Strategy

The CTF funding was made available on a first come, first served basis. It could only work in ODA-eligible countries with an active MDB program underway, consistent with the goal of building on their established networks, experiences and initiatives.

In order to access the CTF, interested countries request a joint mission from the relevant RDB and the World Bank. In responding the MDBs seek to engage with national stakeholders and agree on priorities, in order to draft an investment plan that outlines the wider climate change mitigation context, and on this basis justifies a set of indicative investments for which finance could be sought. Plans had to meet CTF objectives and criteria (box 3). The CTF would be technology neutral. The investment criteria allowed for relatively low carbon fossil fuel technologies to be funded if these projects met agreed standards (Herz 2009). In practice, no CTF funding for fossil fuel projects has been approved to date, although two investment plans did originally propose such investments.

The investment plan estimates the level of finance that will be needed from the CTF, and the co-finance that the relevant RDB and World Bank agency will be able to provide. It also presents estimates of supplementary co-finance, including from the private sector that is expected for each of the proposed investments. Investment plan and constituent projects need to be approved by the trust fund committee. In theory, these approvals should take place on a no-objections basis, but in practice, committee members have often come back with clarifying questions, seeking better justifications for proposed objectives and approaches. In turn, the proposed investments will also need to be approved by the MDBs' governing boards through the usual approval channels.

Box 3: CTF Investment Criteria

- Promote the demonstration, deployment and transfer of innovative low-carbon technologies.
- Promote market transformation for energy efficiency in industry and the building sector.
- Promote investment in renewable energy technologies.
- Promote energy efficient, low-carbon transport and urban systems.
- Promote conservation enhancement of carbon stocks through sustainable management of land use, land-use change and forestry.
- Support enabling activities and capacity building.

Once an investment plan was approved, funds were earmarked for the programme. This created incentives for countries and their MDB partners to move quickly to develop investment plans, and for funding to be set aside for these plans once they were approved. Since the fund was supposed to build on the experiences and capacities of the MDBs, early investment plans built on their existing programs. For example, investment plans in Turkey built on EBRD engagement with Turkish banks on energy efficiency finance, and International Bank for Reconstruction and Development (IBRD) and IFC engagement on power sector reform and collaborations with national banks. In Egypt, the investment plan was informed by IBRD and IFC engagement around powers sector reform and transport. These first three investment plans were developed and approved by January 2009 – less than six months after operationalisation of the CTF in late June 2008. In some countries, the offer of CTF funding opened up opportunities for new engagement: for example the CTF programming process enabled World Bank Group engagement with the government of Thailand for the first time. Investment plans were developed using very different processes, and on very different timelines.

The level of engagement of national stakeholders from across government, the private sector and civil society in the development of these plans therefore varied substantially, and has been somewhat ad-hoc (Radner 2010, ICF 2013). The revision of the Philippines investment plan provoked an unprecedented degree of networked civil society engagement with the fund: a large number of Filipino civil society groups objected to the proposal to re-allocate funding to electric vehicles, with inputs facilitated and coordinated by the

developed country civil society observer. These debates reinforced the importance of having robust systems for engagement at country level.

Plans were intended to propose investments whose collective impact would be transformative, but the basis on which to conclude whether a plan was transformational was not always clear (ICF 2013, Radner 2010). In discussing investment plans, trust fund committee members sought clarity on the cost effectiveness of proposed investments, the extent to which private sector actors would or could be engaged (as this was one of the key objectives of the fund) and wider impacts. By 2012, more than 80% of the approved projects in the CTF pipeline were delayed by more than 12 months from the initial date of proposed approval (CTF-TC/2012). In most cases a policy or regulatory barrier was cited amongst the impediments to progress. We discuss this issue further in section 7 on enabling environments.

Allocating resources

By the time the 14th investment plan was approved, all available CTF funds had been allocated. However additional countries have continued to request investment plans. Investment plans for Colombia, Nigeria, Chile and India were approved by the trust fund committee after this point. More recently, Peru, Pakistan, Uruguay, Albania, Costa Rica and Jordan have now all requested joint missions, and Mexico has requested funding for a second phase of programming. The Trust Fund Committee is therefore exploring adopting new criteria and approaches for selecting countries.

The administrative unit's proposal calls for an emphasis on the fit of the plan with core programme objectives, and the potential to support learning, as well as the need for a transparent and objective process. It suggests two options: one would be to develop criteria and then rely on experts to screen expressions of interest from prospective countries in a rigorous fashion, potentially using a score card to justify conclusions. The other would be to invite countries to develop a preliminary "light touch" investment plan, which could then be assessed with agreed criteria in mind. The former is the selection approach that has been used for other CIF funds. The latter might require a greater demonstration of commitment from interested countries and supporting MDBs, while also giving trust fund committee members a more complete basis on which to make decisions about which programs will best fit CTF objectives, although it would also increase transaction costs and burdens. The current proposal is silent on the precise criteria that should be adopted, proposing to engage experts to this purpose.

Take away messages

- First come, first served approaches may result in a rush to seek resources for programmes that may not adequately reflect national needs and circumstances
- The CTF experience reinforces the importance of ensuring adequate engagement and deliberation early in programme design.
- It also reinforces the need for flexibility: circumstances change, especially when trying to implement larger scale programmes over longer periods of time.

4 Disbursement and Risk Management Processes

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. 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 are 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 CTF funds, and the systems that are in place to manage risks and ensure that projects do not have environmental or social impacts.

Transparency and efficiency of disbursement

CTF reporting on disbursement has improved substantially over the years. These improvements are responses both to developing country and civil society requests for reporting on this issue (ICF 2013) as a crucial indicator of the pace at which approved project implementation was proceeding. Disbursement is reported at aggregate level for the fund as a whole and at country level. There is now public sector project level reporting, but there is still no private sector project level reporting, for business confidentiality reasons.

While program approval was very quick, implementation and disbursement of the CTF has been relatively slow. But USD 575 million had been disbursed to 23 projects and programs (excluding project preparation grants) as of September 2013, representing 27% of approved funding. Recent reporting suggests a significant recent increase in disbursement to USD 322 million over the 2013 fiscal year (CTF/TFC.12/3). Public sector projects account for a larger share of disbursement to date (63%) in absolute terms, in part because they account for a larger share of the total approved funding to date. Several programs in Turkey and Mexico have disbursed close to 100% of funds. Several of these are intermediary programs, however, and publicly available information does not always clarify how much of this funding has been disbursed to intended recipients to implement projects in country.[3]

Management of the CTF Pipeline and revision of plans

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 offers implementing entities space to offer an explanation for delays that may be incurred. The Trust Fund Committee has introduced a rolling system wherein projects that are ready to proceed to implementation can be brought before the committee for approval, as long as there is funding available. As of 2011, over-pipeline over-programming of 30% (based on pledged resources) is allowed. If a project is delayed by more than 18 months from the time when the original investment plan estimated that it would be brought before the committee for approval (9 months in the case of a financial institution oriented programs), then the investment plan as a whole will need to be revised. MDBs and countries will have to decide whether the funds should be re-allocated to other projects, or freed up to support other funds. This has effectively introduced a degree of competition in project development. This may have positive impacts in terms of getting MDB staff in charge of implementation to prioritise CTF supported programmes.

At the beginning of 2012, more than 80% of the projects in the CTF pipeline were delayed by more than 12 months. Project implementers widely accepted that many of the investment plans that had been approved did not fit the national country context and implementation framework. A substantial number of programs were not moving forward because of policy and regulatory barriers. We will come back to this issue in section 7. As a result, an intensive period of investment plan revision began. As a result the October 2013 semi-annual project status report finds 12 of 46 projects are delayed in seeking TFC approval (25% of projects), though this represents a significant decrease. In turn, 12 of 19 projects are significantly delayed in seeking MDB approval (CTF/TFC.12/3).

Risk management

Risk management has become a prevalent issue for the CTF. The CTF was always intended to work through the systems of the implementing MDBs, and as such, relies on their

environmental, social and fiduciary policy systems to safeguard related risks. These risks are particularly relevant for many CTF projects, given that in many cases they include fairly large scale infrastructure investments. The MDBs also bear responsibility for environmental and social risks associated with projects that are implemented through financial intermediary institutions, and may work with these institutions to strengthen their systems. In cases where multiple MDBs work on the same projects, a harmonised approach that uses the more stringent set of standards has been adopted. The DPL in India will use country systems rather than World Bank safeguards.

Since 2012, the CTF committee has sought to establish stronger systems for risk management, as approaches to date have been somewhat ad-hoc (ICF 2013). The fact that the CTF is capitalised with diverse instruments, means that it needs to manage risks that may affect its ability to repay loans. In April 2013, the CIF administrative unit proposed a process to recruit a risk management specialist[9] to manage its Enterprise Risk Management Process, informed by a set of top tier risks identified by a risk management working group comprised of representatives from the CIF Administrative Unit, risk management specialists from the MDBs, the Trustee and the independent risk management specialist, Booz Allen Hamilton (see figure 4). The strategy suggests that better information management will be essential to manage risks, and builds the case for enhanced portfolio management. Proposals have been made to enhance the current "traffic light" based monitoring systems, and introduce dashboards on program status and progress. There is a strong link between efforts to monitor and evaluate the impact of programs including in real time (discussed in the next section) and efforts to manage risks related to the potential for sub-optimal use of CTF funds.

Figure 4: CIF Enterprise Risk Management Framework. Source: CTF-SCF/TFC.10/5

The CTF is also adopting a number of measures to ensure it is able to service debts from loan contributions. These include (i) maintaining a minimum liquidity reserve (ii) preparing quarterly projections on project repayments (iii) supplying possible loan loss rate scenarios (iii) simulating loan loss/default sharing mechanism so that contributors can understand the implications of loan pay outs and (iv) keeping track of actual project interest rates. In effect, this means that the CTF has to lend the equivalent amount of funding that it receives as loans at equal or less concessional terms.

[9] And an additional budget of US$250,000 for the administrative unit for this position.

These measures reinforce the imperative for the CTF to make investments that are financially viable, and exercise discipline in ensuring the minimum use of concessionality to realise investments and robust attention to risks in the portfolio. But there is a challenge of balance to be struck: the CTF does need to take risks in order to achieve its overriding objective of supporting transformative change in developing countries. Concessionality is likely to be essential to make many programs viable.

Take away messages

- Reporting on CTF spending and operations has improved, though it does not include information on private sector programs
- Disbursement of CTF resources has been slower than approval, but has now increased substantially in 2013 (27% of approved funding has now been disbursed)
- Risk assessment frameworks are being introduced to help strengthen the discipline of fund management. Care is needed to ensure that risk management efforts do not unduly constrain much needed creativity and innovation in the use of funds

5 Monitoring, evaluation and learning

Development of a results framework for the CTF began in early 2009 after several programming decisions had already been taken, including the approval of a subset of investment plans. The first logic model went through an extensive consultation process which resulted in a set of 30 indicators at different tiers against which programs would be assessed. Agreement of this initial framework was a difficult process which involved substantial iteration and input. A major sticking point in the initial deliberations was around the attribution of country-level outcomes that would result from a wide variety of domestic and internationally supported interventions to the CTF. After nearly a year of work, the first iteration of the CTF results framework was adopted. Notably, the results framework had not been adopted by the time the first batch of investment plans were approved, and therefore did not provide a clear framework for programming. However, country partners who were responsible for reporting against the original results framework found it difficult cumbersome to work with.

As a consequence, a process to streamline and revise the framework down to a core set of indicators – keeping it to "what we need to know, rather than what is nice to know" (CIF 2013). The revised framework is much simpler, and has been designed to respond to inputs and feedback from recipient country engagement. It has a clear focus on immediate term climate impacts and results, rather than on underlying policy, regulatory or governance issues or on social issues and co-benefits, which were a focus in earlier versions of the results framework. These issues are recognised to be central to transformation in the revised results framework, but beyond the scope of immediate term implementation. The inclusion of such issues was a priority for many NGOs and contributor countries, but a difficult issue for many developing country governments to accept for a number of reasons, including the complexity of monitoring such results and the perception that they may impose conditions on policies and regulations that countries would be expected to foster.

Figure 5 shows the logic framework for the CTF. All countries are now required to report against the following five core outcomes: (1) tonnes of GHG emissions reduced or avoided (2) volume of direct finance leveraged through CTF funding – disaggregated by public and private finance (3) installed capacity (MW) as a result of CTF interventions (4) number of additional passengers (disaggregated by men and women, if feasible) using low carbon public transport as a result of CIF intervention and (5) annual energy savings as a result of

CTF interventions (GWh). All projects may not address all outcomes. In addition, all projects are expected to address at least one development indicator, using the MDB's own systems for monitoring development results. In the case of the CTF, investment plan guidelines required evidence of poverty reduction and co-benefits by prioritising activities that: (i) help reduce poverty, by enhancing economic growth or by improving services to the poor, and/or (ii) provide local or regional environmental benefits, such as improved air or water quality, or biodiversity benefits" (CIF 2012). Steps have now been taken to support "real time" monitoring of the outcomes of CTF programs through reporting against expected targets through the semi-annual report.[10]

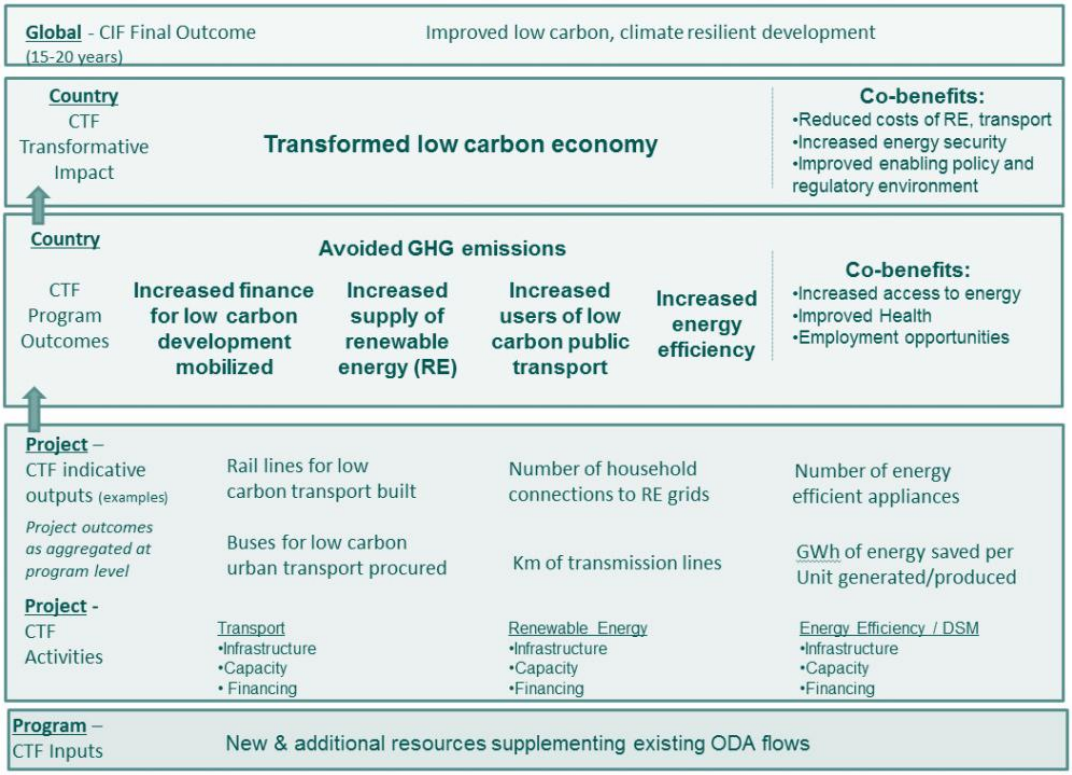

Figure 5: CTF Results Framework Logic

[10] The emergent findings have also been presented on the CTF website as infographics.

Outcome	Progress	Target
Tonnes of GHG emissions reduced or avoided	10 million tonnes of $C0_2e$ (this is 2% of the target over the lifetime of the projects per MDB approvals)	780 Mt CO2eq
Volume direct finance leveraged	USD 3.5 billion co-financing (44% from implementing MDBs and 33% from the private sector). 21% of total co-financing expected.	USD 19.09 billion
Installed capacity from renewable energy	2,626 MW (28% of target). The majority came from projects and programs in Mexico and Turkey.	11,244 MW
Annual energy savings	6,800 GWh (5% of targets). Largely from Mexico and Turkey	
Additional passengers using low-carbon public transport	No results reported to date	Expected outcome metrics differ

Table 1: Results of the CTF to date. Source: CTF Semi Annual Report October 2013

In July 2013, a monitoring and reporting toolkit with a form for result reporting was released. The interim report of the independent evaluation of the CIF noted that there was no detailed guidance on how to apply these indicators and ensure good data quality, which are standard elements of monitoring and evaluation (M&E) plans (ICF 2013). Yet the toolkit does not offer detailed guidance on how to collect and report data, and underlying assumptions. Assumptions used can radically change the measurements made for many of these indicators. The difficulties of accurate accounting for GHG emissions from interventions are particularly well documented, particularly through the GEF's now longstanding experience seeking to account for emission reductions that result from its projects (Nakhooda 2013, GEF Evaluation Office 2013). Furthermore, the implementing entities for the CTF do not have established or common approaches to accounting for GHG emissions, and efforts towards harmonisation have made modest progress to date.[11] Similarly, different approaches to calculating funding "leveraged" can result in dramatic differences to the volumes estimated (Brown et al 2011). This makes it quite difficult to understand what underlies the reported results of the CTF so far, and make judgements about robustness. Future work by ODI under this work program will reflect on the differences in GHG emission reduction outcomes of multilateral mitigation funds, and their cost effectiveness.

Greater clarity on the methodologies to be used for key indicators, their underlying assumptions and easier access to disaggregated results would support both learning objectives as well as the risk management objectives of the CTF discussed in the preceding section. M&E specialists at the CIF have acknowledged that "collection of baseline data at the project level is often an afterthought or done only during the first year of the project - often, no information is made available on the baseline data… at the time of funding approval, results estimates are questionable" (CIF 2013).

Regardless, the results reported to date (see Table 1) suggest, unsurprisingly, that the CTF is making more progress towards its targets with regard to leveraging additional finance and installing new renewable energy supply. Energy efficiency programmes appear to be proceeding more slowly, and not all energy efficiency oriented programmes had set an energy saving estimate so far. No public transport programmes were at a stage where any

[11] This point has not yet been reflected in the CTF results framework documents, although it is acknowledged in separate papers on the links between the CTF and carbon finance

results could be reported, and the expected results for the three transport programmes approved to date use very different metrics which are not strictly comparable (including number of total passengers, but also in the case of the Philippines, the number of vehicles that will be deployed). Progress towards GHG emission reduction goals will necessarily take time, as reductions will be apparent at the end of a programme, after it has been operational for a significant period of time. Progress is reported, but it is therefore understandably modest. It is also noteworthy that the majority of progress is reported in Mexico and Turkey, where programme implementation is most advanced.

Learning

The flexibility and iteration reflected in the CTF's approach to results management demonstrates a commitment to responding to partner concerns, and seeking to find more practical and flexible approaches. But monitoring and evaluation is not the only way in which learning is intended to take place in the context of the CTF: an express objective in establishing it was, in fact, to support the international community to learn more about what it takes to invest in climate change solutions. Arguably, such lesson learning has taken on heightened importance in light of the simplification of the CTF results framework, which will no longer collect data on complementary aspects of interventions which may explain how and why programmes had the results that they did.

Yet the interim report of the independent evaluation of the CIF suggests that this objective does not appear to have been prioritised in programming. It observes that the incorporation of information sharing and lesson-learning in CTF investment plans is "weak to non-existent" (ICF 2013). It observes that while a few plans made reference to knowledge sharing, lesson learning or dissemination, there is limited detail on how this will happen. It further suggests that lesson learning does not appear to be improving because "revised and more recent investment plans also have a modest proposed focus on these issues" (ICF 2013).While the number of learning products has increased steadily over the years, their value in meeting the intended objective is not always clear. Many learning products have not grappled with the difficult realities of project implementation, potentially for fear of creating negative impressions with stakeholders and contributors. Similarly several supplementary fora, such as country meetings and a CIF partnership forum have been established. A global support programme seeks to support countries with implementation of their programs. While stakeholder feedback on the country meetings has been increasingly positive, views on the value of the partnership forum are much more mixed (ICF 2013). The task that the CTF has set for itself is a challenging one, and its implementation record to date provides ample evidence of these challenges. It is only through frank and objective reflection on its experiences (both successful and more difficult) that real learning will take place.

Take away messages

- Agreement on the CTF results framework has been an extensive and complex process. The CIF has been responsive to partner country concerns in simplifying its framework, to a final set of five outcome indicators
- Real time reporting against these outcome indicators has begun in 2013. Information from this process has the potential to inform risk management initiatives
- Further work is needed to strengthen data collection systems and ensure that consistent boundaries are used, and assessment methodologies are reasonably robust
- There is a continued need to strengthen processes to learn from the experience of the CTF, through frank and objective reflection

Outcomes

By 15 September 2013, the CTF had approved USD 2.8 billion for 51 CTF projects and programmes (CTF/TFC.12/3 and Figure 6). Nineteen of these projects (valued at USD 750 million) are still awaiting MDB approval. The detailed project review presented below focuses on approved projects. The largest share of approved finance to date has supported solar energy, including concentrating solar thermal power programmes in Morocco, South Africa and India. A substantial sum of funding has also been approved for financial intermediary projects in the Philippines, Turkey and Ukraine, that will support national banks in most of the countries where the CTF is active to increase their ability to invest in renewable energy and energy efficiency projects: these programs fund multiple types of renewable energy technologies and energy efficiency approaches, and may have unspecified components. Finally the CTF is supporting more sustainable road transport solutions in several countries, largely through support for Bus Rapid Transit systems and associated systems in Colombia, Mexico and the Philippines, but also through electric vehicles, in the case of the Philippines.

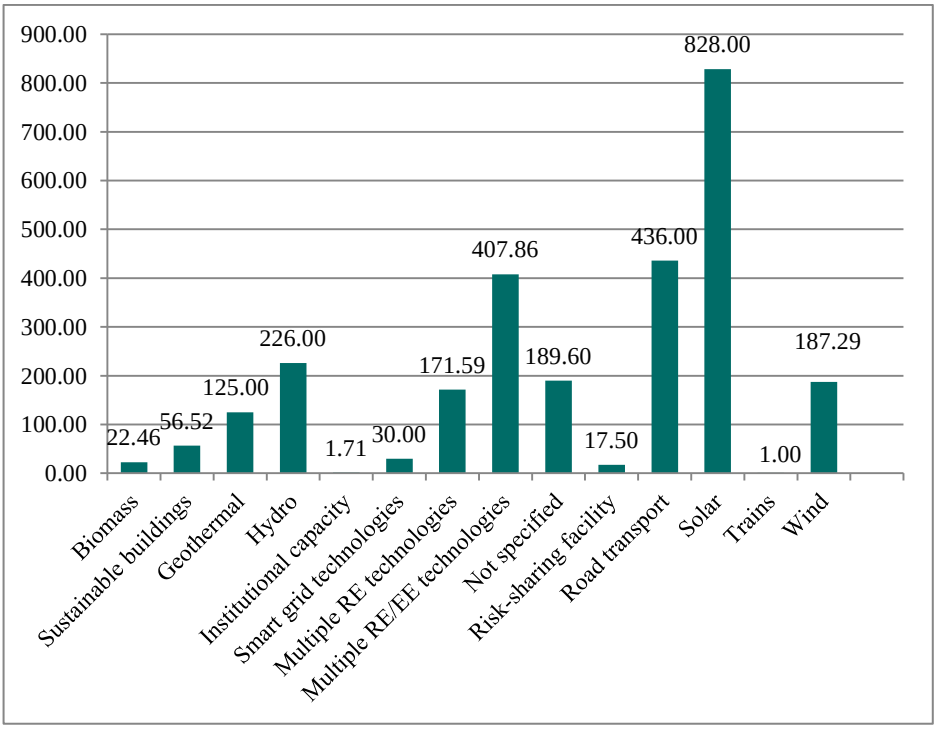

Figure 6: CTF portfolio

The geographic distribution of approved CTF finance (figure 7) has been relatively even, although the focus has rightly been on ensuring that programs that are ready to proceed with

implementation are approved rather than ensuring balance for political reasons. The CTF is also working with a wide range of partners, including private sector institutions – particularly banks.

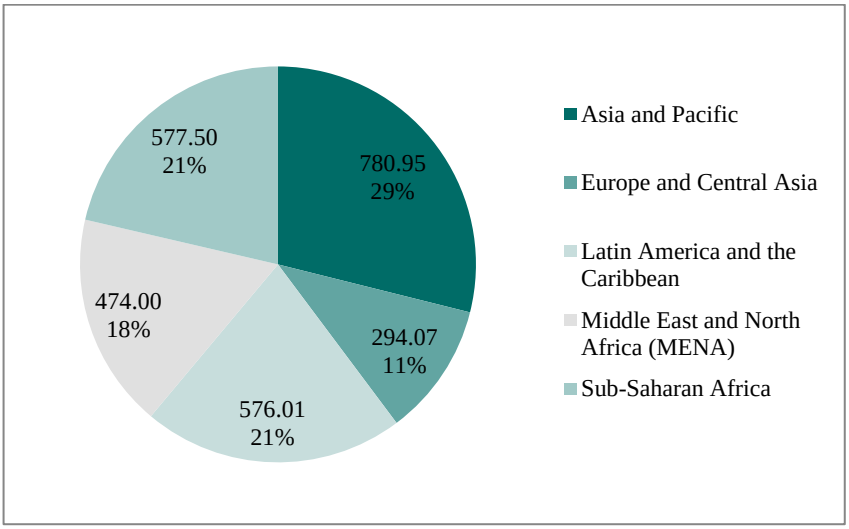

Figure 7: Geographic distribution of CTF funding

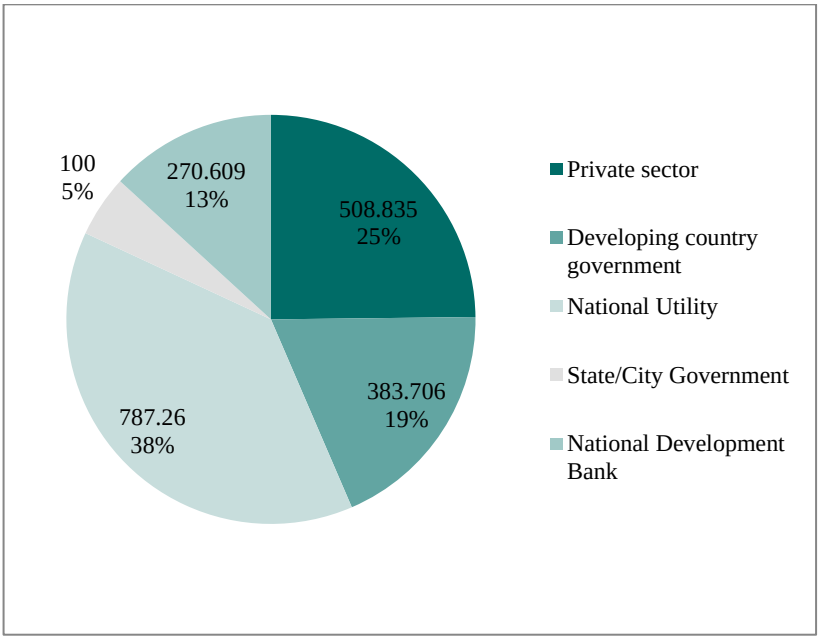

Figure 8: Recipients of CTF funding

Informed by this portfolio review, we now turn to consider the outcomes of the CTF. Much more information was available on processes for spending climate finance, than on outcomes given the early stage of implementation of many programmes. We have relied heavily on reports prepared by the CIF administrative unit to complete this analysis, given a dearth of secondary literature on the CTF. In addition, our analysis of the outcomes of the CTF is necessarily much more tentative and indicative, given the early stage of implementation of most of the programmes that it supports.

6 Scale

In understanding the effectiveness of climate finance, it is helpful to consider whether the fund 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). One of the consequences of focusing on making large scale of investments is that the CTF has placed relatively less focus on direct financing of individual projects, and virtually no focus on community level interventions.

Engaging subnational institutions

The CTF can operate at any level that the MDBs operate at. For public sector investments this includes lending to national governments; lending to national governments for on-lending to sub-national entities such as a national development bank or directly lending to sub-national entities. it will support a number of programs working with municipal institutions and the national government to implement more sustainable transport solutions in Bogota (Colombia), Cairo (Egypt), Mexico City (Mexico), Manila and Cebu (Philippines), and Hanoi and Ho Chi Minh City (Vietnam). Municipal energy efficiency programmes have been explored in Kazakhstan, Ukraine, Turkey and Mexico.

The original 2009 CTF investment plan for Thailand anticipated a dedicated public sector programme aimed at supporting low carbon development in Bangkok, to enable implementation of the Bangkok Metropolitan Area Action Plan on Global Warming and associated emission reductions. This programme component proved difficult to implement, however, in part because the constitution of Thailand required two parliamentary approvals for sovereign borrowing. This raised risks that these political processes might hold up approval, and tie up CTF resources. In addition, the World Bank concluded that significant policy and regulatory changes would be required to allow realisation of its objectives, and that the challenge was related to governance rather than finance (as there was adequate public finance already domestically available for the program component). Several components of the India CTF investment plan have a state level emphasis, including a project to improve transmission systems for grid-based renewables in Rajasthan, and the proposed DPL for hydropower seeks to directly engage the state government of Himachal Pradesh. Most of these programmes are at very early stages of implementation, and there is therefore limited evidence from which to draw conclusions regarding lessons from implementation.

Reaching smaller projects and programs

During the conception phase of the CTF there was a strong desire to focus on accelerating and scaling-up investment to demonstrate the potential for transformational change in high-emitting sectors of countries with large and rapidly growing emissions. This created pressures to move large volumes of funding quickly, which reinforced the pre-existing tendency of the sovereign guaranteed arms of the MDBs to favour large-scale investments. This tendency arises from the transaction costs in the form of time and internal approval processes, which are the same for small projects as they are for large ones.[12] Yet many energy efficiency and renewable energy programmes are smaller in scale, and require due diligence to ensure the credit-worthiness of recipients. In order to respond to this challenge, the MDBs have proposed a range of programs that channel funding through financial intermediary institutions based in recipient countries, including both national development banks and local commercial banks. These institutions have greater capacity to administer smaller programmes, and should be better networked within the country. Their capacity to assess and appraise renewable energy and energy efficiency programs, however, may be

[12] Specialized units within the MDBs may have expedited procedures for dealing with SMEs and can therefore be more nimble with smaller-scale projects.

limited. CTF programmes with financial intermediaries have therefore often included a technical assistance component aimed at supporting them to build up these capacities, and leverage their networks to identify low carbon investment opportunities within their countries.

An assessment of financial intermediary programmes that EBRD and IFC supported in Turkey suggests that the intermediaries supported a significant number of programs, and have helped the banks to scale up their operations, particularly on energy efficiency. The assessment suggests that CTF funding supported at 54 of 1160 renewable energy programs licensed by the national regulator (5.4%). This is seen as a significant achievement, although the renewable energy market in Turkey was quite well established by the time the CTF began to engage. On balance, with many programs in early stages and limited information available on the impacts of financial intermediary projects to date, it is difficult to reach strong conclusions regarding how effectively the CTF as a whole has been able to target smaller projects and programs.

Take away messages

- The CTF has made some efforts to engage subnational institutions, particularly cities as part of efforts to finance sustainable transport solutions
- The focus on finding ways to move large sums of funding and the transaction costs associated with smaller projects have reinforced a focus on larger projects.
- By working through financial intermediary institutions in developing countries, it has sought to reach small- and medium-sized private sector actors. More work is needed to understand the impacts and outcomes of such efforts.

7 Enabling environments

Policy, regulatory and governance frameworks fundamentally shape the viability of investment in low carbon and climate resilient approaches. Public finance can be used to strengthen the underlying "enabling environment for climate finance", and help address the various risks and barriers of different stakeholders.

In many of the countries where the CTF has sought to engage, the policies, regulations and governance that would drive investment in low carbon technologies are evolving and not yet well established. CTF investments are therefore situated in a complex context. One of the substantial contributions of the CTF has been to directly engage ministries of Finance, Planning and Energy, who are in a lead role on economic planning, around climate related issues. Many other climate funds, by contrast, have worked through Ministries of Environment, who have had a less central role in economic planning. These networks and relationships create a significant opportunity for strategic engagement on these issues. In general, however, approved CTF investment plans have placed uneven attention on issues related to the adequacy of policy, regulatory and governance frameworks that would affect the viability of proposed investments (Nakhooda 2010).

One of the challenges in this context has been finance: grant and technical assistance finance is generally limited to project preparation grants of up to USD 1 million and support for learning. This meant that supplementary resources were needed to implement complementary projects that addressed these issues. In some cases, the implementing entities were able to mobilise funding from additional sources: for example the IADB

complemented CTF resources with grant finance from the Sustainable Energy and Climate Change Initiative for technical assistance to support regulatory strengthening. These interventions facilitated CTF funded renewable energy programs.

Where CTF finance could be combined with more flexible finance, early indicators of outcomes appear encouraging. For example, the EBRD was able to use USD 8.45 million in grant finance from the GEF to help develop the regulatory framework for renewable energy in the Ukraine and help establish a feed-in tariff, and strategic environmental reviews. This finance has been complemented with support for a direct lending facility, which combines USD 26 million from the CTF with USD 65 million in EBRD finance and an additional USD 33 million in equity from domestic investors (EBRD 2013). While the environmental and social outcomes of the programme as well as its cost effectiveness remain to be seen, these early indicators suggest that the programme is attracting significant private investment. But resources to this end were not available to all MDBs for all interventions. While the CTF investment criteria emphasised the need to address market barriers and support transformation, they did not necessarily prompt attention to issues related to institutional readiness for programme implementation. In April 2013, a proposal for the CTF to support a new World Bank-led research effort to develop indicators that report on the enabling environment for promoting investment in clean energy was received.[13]

In general, however, CTF investment plans and associated programs did not actively seek to address the underlying pricing, incentive and subsidy regimes that incentivise business as usual approaches. For example, the Indonesian investment plan did not address with the underlying subsidy and pricing regimes for conventional energy and its implications for the viability of the renewable energy technologies for which finance was sought. This was despite the fact that the World Bank and the ADB both had an established record of working with national stakeholders to strengthen regulatory regimes and address subsidies (Nakhooda 2010, Nakhooda and Tirpak 2010). Similarly, the MENA Regional Investment Plan recognised the need to reform energy tariffs as key to the success of the project, but to date progress on this count in the context of CTF programming is unclear. While Trust Fund Committee deliberation over plans and projects has sometimes raised these issues, they have often remained unresolved.

In retrospect, the level of institutional preparedness was overestimated in many cases, which resulted in substantial delays and implementation challenges, as noted in section 3. Even where countries had climate strategies and had identified related policies for implementing these, in the majority of cases these were not well developed, and stakeholders had limited awareness of the requirements of implementing proposed interventions. Political issues have also been a significant consideration. The CTF portfolio had significant commitments in the Middle East, particularly Egypt, and these programs were disrupted by the political changes that swept the region in 2010. In both Thailand (see section 6) and Indonesia, the need for parliamentary approval of sovereign loans to the government for programmes where the underlying regulatory framework was not aligned with the proposed investment has also caused delays and prompted revisions to investment plans. In Indonesia, the lack of clarity on the legal framework for geothermal development was a barrier.

In general, CTF investments that were able to build on existing MDB interventions to support low carbon or climate change programs, policy innovation and institutional strengthening were better placed to make rapid progress. In cases where there was limited or no existing MDBs program of support in this area, implementation was challenging.

[13] There are of course a number of other indices and initiatives that monitor these issues, including the Bloomberg New Energy Finance Climate Scope Indicators

Take away messages

- The CTF experience suggests that a lack of strategic engagement with considerations related to policies, regulations and institutional capacity, can disrupt implementation
- Some programmes have strategically combined resources for policy engagement and technical assistance (for example, grant resources from the GEF) with investment programmes financed through the CTF. These programmes seem poised to have significant long term impacts
- It reinforces the importance of investing in institutional capacity and preparedness (readiness) to implement and execute programmes to realise transformational change

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.

Approaches to Engagement

As noted, the express purpose of the CTF was to mobilise private sector investment in climate related activities. In practice, many of its programs have supported public sector actors to do more on climate change, including through national utilities. The fact that recipient governments often prefer to have access to available public finance for public sector oriented programs (IFC 2011) has been a common challenge for multilateral climate funds. Despite express objectives on this count many stakeholders perceive the CTF record on this count to be relatively mixed.

The CTF invests in a growing number of PPPs, including through flagship programmes such as the Ourzazate Concentrating Solar Thermal power program in Morocco which is implemented by a special purpose agency established by the government and executed through a competitively procured private companies. Reviews of project documentation commissioned by the CIF administrative unit suggest that private investment shares range from 12% in the Morocco/MENA Regional Concentrating Solar Thermal Power (CSP) program to 78% in the Mexico Renewable Energy Program (De Nevers 2013). Revisions to investment plans in some cases have resulted in resources being re-allocated from public sector programmes to private sector initiatives. For example, when political opposition to sovereign lending impeded projects (as mentioned in section 6), resources were at least partially re-programmed to support public-private approaches. In Indonesia, a programme to support private sector geothermal exploration replaced the original public sector geothermal proposal.

A large share of private sector programmes have been funded through financial intermediaries, often using fairly similar approaches. A relatively smaller share of programmes directly engaged private businesses (ICF 2013). A substantial challenge associated with such programmes is that business confidentiality concerns have precluded much disclosure about exactly what projects and programmes have been funded in practice (Eurodad 2012). In response, the MDBs have begun to produce learning products that seek to distil aggregate lessons about achievements. For example, IFC and EBRD published an in-depth impact assessment of their financial intermediary programs in Turkey (Econoler 2013) which provided aggregate detail on funding leveraged and technologies supported, with some detail on the achievements of the various banks who had engaged. In addition, the MDBs have published notes on lessons learned from efforts to engage the private sector,

which note that the reporting and processing requirements of accessing CTF resources can complicate efforts to develop such programmes.

Reducing costs and leveraging finance

CTF funds are always blended with additional sources of finance, including regular funding from the MDBs, as well as bilateral funding and recipient country co-finance. Such blending serves to help reduce the overall costs of interventions that might otherwise be too expensive to execute (World Bank 2013). Although the new CTF results framework does requires reporting on leverage to be disaggregated by public and private finance, reporting to date does not include this level of detail. As noted in Table 1, USD 3.5 billion has been leveraged to date, against approved projects with predicted total leverage of USD 19.09 billion (CTF/TFC.12/3).

The anticipated results baseline provides uneven information on likely sources of leveraged finance for the private sector. [14]The March 2013 CIF study on lessons from private sector engagement proposed that the CIF engage in a process to clarify where to draw project boundaries, a process to harmonise approaches to calculating leverage, and analysis of deeper analysis of finance leveraged (DeNevers 2013). Clarity on boundaries would also support more robust and consistent accounting for GHG emission reductions. An over-riding challenge, however, is that leverage ratios are likely to be highest where public finance is least needed: the necessity of CTF money to realising such investments warrants additional reflection. This is a substantial limitation to using leverage as the sole indicator of the effectiveness of CTF funds in mobilising the private sector, which may in fact create the wrong incentives.

New approaches

There has been substantial pressure on the CTF to be more ambitious and creative in its approaches to private sector engagement, including through full use of the suite of instruments that it has at its disposal (as discussed in section A). One approach has been to seek to deepen and improve networks and outreach. In 2012, the CIF partnered with Bloomberg New Energy Finance to convene a Private Sector Forum alongside its annual partnership forum. This represented an innovative effort to expand its networks and improve its positioning with the clean technology investor community.[15]

Since early 2013, the CTF Trust Fund Committee has been discussing a proposal for a global private sector programme. The proposal responds to the fact that only a third of projects approved to date directly target the private sector, and many public sector programmes are currently still quite delayed. It would seek to operate in a more streamlined manner, in which CTF committee members only approve high level sub-programming and allow more flexible structuring. The MDBs will monitor progress against the five CTF outcomes and report back to the committee.

In April 2013, the committee approved a USD 150 million program to be funded from existing CTF resources, and invited the MDBs to develop proposals on allocation of these funds, which will be debated at the November trust fund committee meeting. Box 4 summarises the four approaches that have been proposed for approval.[16]

[14] In part for business confidentiality reasons

[15] Previously the CIF administrative unit had sought to work through the World Business Council for Sustainable Development, which also served as civil society observer to the CTF.

[16] Other approaches that the CTF has not yet considered expressly include opportunities to leverage finance from institutional investors, or from the debt capital markets in the form of bonds.

Box 4: Proposed Global Private Sector Program Sub-Programs

Utility Scale Renewable Energy: Initial focus on geothermal power and resource risk. *All MDBs interested*. Phase 1 countries: Chile, Mexico, Turkey. *Expected leverage: 1:4.* US$75 – 100 million sought.

Risk Capital to Address Regulatory Risks for Renewable Energy: CTF would be part of the project finance package, and concessionality would only be enacted if there are regulatory changes. *All MDBs interested.* Phase 1 countries: Jordan, Kazakhstan, Morocco, Nigeria, Philippines, Ukraine. *Expected leverage 1:20*

Renewable Energy Mini-Grids and Distributed Power Generation: to fill financing gaps and promote rural access to reliable clean energy. *Interested MDBs: ADB, AfDB, IADB, IBRD.* Phase 1 countries: India, Philippines, Indonesia. *Expected leverage 1:1*

Climate Finance Equity Investments: invested through mezzanine and private equity vehicles. *Interested MDBs: ADB, AfDB and IDB.* Phase 1 countries: all, with limits for India and China. 1:28 (AfDB), 1:75 (ADB) 1:25 IADB.

The approach of setting aside funds for private sector programmes has been piloted by the GEF, and therefore is not new *per se*. The CTF approach seems to reflect some of the lessons from that approach, by clarifying the goals and objectives and likely outcomes of proposed sub-programmes might fund. It is clear, however, that there are many links between the objectives of the proposed sub-programmes and country programming that is already getting underway. It will be important to find ways to ensure complementarity rather than duplication. It will also be important to strike an appropriate balance between public and private interests in taking some of these approaches forward. For example, while it is important to give private investors certainty in the regulatory framework for renewable energy, policy and subsidy regimes are necessarily dynamic, and a structured process in which incentives are reduced as technology costs come down will be essential to their long term viability. Risk mitigation programmes would usefully be complemented by efforts to strengthen regulatory capacity to manage such trade-offs, and introduce changes without disrupting markets. On a related note, this speaks to the importance of ensuring that programmes fit national and regional contexts, and finding practical ways to keep key national authorities and champions engaged in their development and implementation.

Forthcoming ODI research will seek to analyse the impacts of multilateral climate funds in catalysing private investment in recipient countries, drawing on case study data on wider investment trends.

Take away messages

- CTF programs have supported public private partnerships and financial intermediary programmes, which have generated some positive results. However, the relatively similar approaches taken indicate a need for more innovation and creativity
- A new global private sector programme with more flexible arrangements to structure finance for the private sector has been proposed. There will be a need to clarify the added value of proposed sub-programmes to ongoing programing through CTF investment plans, and maximise synergies
- There is a continued need to understand how CTF finance adds value, recognising that a sole focus on leverage has the risk of creating incentives to invest in projects where this may be less clear.

9 Innovation

Innovation is likely to be a central element of the effective delivery of international climate finance. It is therefore useful to consider how international climate funds have supported a broad continuum of approaches to innovation, including innovative technologies, deployment approaches, financing models as well as capacities and institutions (including at local level). The CTF was supposed to focus on financial innovation, capitalising on the networks of the MDBs and the wider range of instruments that it would have at its disposal to facilitate clean technology deployment. It can only finance technologies that were close to commercial viability. In designing the CTF, there was limited appetite on the part of developed country governments to take loans for more experimental technologies and programmes.

The preceding discussion of the catalytic impacts of the CTF has touched on many of the approaches that the CTF has used to try and engage the private sector, and the recognised need for more creative approaches. On balance, there has been a sense that there is room for the CTF to continue to do more to engage the private sector using a wider suite of the instruments at its disposal. The new global private sector support programme is one effort to this end, whose impact remains to be seen. But the CTF is now also experimenting with performance-based finance as a means to foster innovation. In India, it is working with the Bureau of Energy Efficiency (BEE) to offer performance based finance to local companies that succeed in developing super-efficient fan technologies. Inefficient fan motors place a substantial load on the Indian energy system: new technologies are relatively affordable, but manufacturing capacity is constrained. The programme will offer finance to manufacturers that are able to meet agreed standards. In developing the concept, there was active engagement of leading Indian experts, and it builds on some of the innovative approaches that the BEE has developed to realise the objectives of India's National Energy Efficiency Mission.

While recipient countries were wary of using CTF finance for costly and risky pre-commercial technologies, they have been quite interested in using CTF funding to tailor newer technologies to their national operating conditions and circumstances. In this vein, there are some examples of the CTF engaging national institutions to support such tailoring. For example, the extraordinary wind resources within Mexico required improvements to wind turbines to cope. The IADB recognised this need, and drew on GEF funding to strengthen local manufacturing, and research and development capacity.

The CTF has also made substantial investments concentrating solar thermal power, a technology that was not quite commercially viable but held substantial promise to be able to provide relatively reliable base load power. The goal of its support for these programmes has been to spark technology breakthroughs and scale up. The largest share of CTF finance (USD 750 million) was set aside for a MENA regional CSP investment plan. It also invested in the Eskom Uppington CSP facility in South Africa, and more recently the committee approved a concentrating solar thermal power programme in Chile. Progress in implementing the MENA program is now well advanced in Morocco (see box 5). The CTF supported Ourzazate I initiative promises to be one of the least expensive CSP facilities in the world, with final costs coming in at 25% below projections. In this context, strong institutional capacity and coordination by the Moroccan Agency for Solar Energy (MASEN) and support from international donors are seen to have been vitally important. The implementation of the regional program as a whole, however, has been less smooth, and the plan was recently revised to re-allocate resources in a more concentrated way. The Algeria component was dropped, and the Jordan and Tunisian components were scaled back, and resources were concentrated in Morocco and Egypt where implementation capacity seems greater.

Box 5: Concentrating Solar Power in Morocco

In September 2012, the Moroccan Agency for Solar Energy (MASEN) selected a consortium to lead the construction of the 160 MW Ouarzazate I solar plant at a cost of USD 0.184, which was 25% lower than expected prices in the programme development documents of USD 0.243. If the consortium is able to stick within these costs through the implementation phase, then Ourzazate I will be one of the least expensive solar plants in the world.

It is too early to call the project a definitive success, and the actual environmental and social outcomes of the program remain to be seen. But if these terms are realised, analysts suggest that will substantially reduce the subsidy that the Moroccan government was expecting to pay for solar power from a projected USD 60 million to USD 20 million. Cost reductions arose from a combination of increased production estimates which resulted in some economies of scale, and access to a financing package that made the intervention attractive to investors.

A revised MENA CSP plan has recently been approved by the Trust Fund Committee, which re-allocates resources from countries such as Algeria where programme implementation is not expected to be viable to Ourzazate II, the second phase of the MASEN program. The investment in Morocco will only be transformational if it catalyses the development of the Ourzazate complex as a whole (with a planned capacity of more than 500 MW), and as a result supports learning and cost reductions that allow realisation of Morocco's solar energy plan with a target of developing 2000MW of solar power.

Sources:

M. De Nevers, Private Funding in Public-led Programs of the CTF: Early Experience, CIF Administrative Unit (Washington DC 2013)

A. Falconer & G. Frisari, San Giorgio Group Case Study : Ouarzazate I CSP, Climate Policy Initiative (Venice: 2012).

G. Frisari & A. Falconer San Giorgio Group Case Study : Ouarzazate I CSP Update (Venice, 2013)

For its part, the World Bank as program implementer also made a concerted effort to facilitate learning about CSP, and incorporate lessons from past investments in this technology including through programmes previously supported by the GEF, which encountered implementation channels. It has worked with academics, scientists and practitioners, including within the region, to deepen technical understanding of the potential and hurdles to scale up (see for example Kulichenko and Wirth 2011). These learning processes were supported by the Energy Sector Management Assistance Program, a World Bank administered trust fund on energy, and other concessional funds. The programme also focused on opportunities for local benefit sharing and industrial development through local content sourcing and supply chains. In addition to the importance of learning for technology deployment, the Ourzazate example seems to demonstrate the potential for concerted effort and large scale finance to foster progress in deploying an innovative technology whose promise has been recognised for decades, but whose realisation has been difficult.

Take away messages

- Efforts are being made to increase the use of the full suite of innovative CTF financing instruments that the CTF has at its disposal, and several new initiatives to this end have been launched; it is too early to comment on their likely impact.
- Funding has been used to accelerate near commercial technologies such CSP. There are some tentative indicators of progress in reducing technology costs. These experiences emphasise the importance of concerted and coordinated efforts to deliver finance, and learning. The risks (and failures) taken by other climate funds in the past on solar power have informed CTF approaches.
- The CTF experience also emphasises the importance of working with capable national institutions who can champion and foster an innovation process

10 National ownership

It is instructive to reflect on the CTF's experience working with national institutions in recipient countries, and the extent to which the programmes supported appear to be deeply grounded in national contexts and "owned" by key leaders and stakeholders. As noted, a substantial advantage of the CTF has been its direct engagement of national finance ministries who bear responsibility for national planning processes; most plans also actively engaged ministries of energy. Many programmes have worked through national development banks as implementing agencies. These institutions had substantial power and influence over economic planning and development in their national contexts, but for many, climate change was quite a new issue at the time when CTF programming began.

Building on existing programs and relationships

As we have mentioned previously in this assessment, in countries where the MDBs had already been working on climate change related programs, they better understood each other's priorities and systems. For example, the Mexico CTF investment plan built on several development policy loans for climate change policy that the IADB and World Bank had already implemented in collaboration with the Ministry of Finance. Through these processes the Banks had developed a better understanding of national circumstances and interests and how to engage in the national context. Similarly in Turkey, the EBRD and World Bank had good working relationships with counterparts related to energy sector programming that could be built on relatively quickly.

By contrast in some countries, such as Thailand, the Word Bank had no ongoing program when the CTF program began: indeed the CTF represented an opportunity to engage a middle income country which had not borrowed from the MDBs for several decades. But as a consequence there was less familiarity with the political context in which the MDB engagement would take place. As we noted in section 6, this proved a barrier to initially proposed public sector lending. By contrast, the ADB chose not to participate in the programme, recognising that it did not have many programs to build on.

A dynamic context

But the engagement record of MDBs alone is not an adequate explanation of the extent to which national stakeholders appear to own investment strategies. As noted, in Indonesia the CTF investment plan built on longstanding engagement between the World Bank, ADB and the government of Indonesia in related sectors, but without much focus on climate change. Furthermore, MDB engagement in Indonesia has generally been politically contentious, in part as a result of experiences with structural adjustment lending in the 1990s. In practice,

the Indonesian climate change response strategy evolved in parallel to the CTF investment planning process rather than in tandem with it. The fact that the two processes were not well linked, resulted in some disconnects between the two strategies. Investment plans must necessarily be dynamic and respond to changing circumstances. But ideally, recipient countries would be able to align international support with evolving policy priorities.

National systems and stakeholders

In terms of working through country systems, a process to explore the use of CTF resources through development policy loans that will rely on partner country systems has begun. The first proposed programme, as mentioned, is with the state government of Himachal Pradesh in India to develop hydropower. This has been a challenging context in which to pilot the use of this instrument. While trust fund committee members have been broadly supportive of the proposal, they have sought clarity on how the impacts of the programme will be quantified and assessed, how environmental and social risks will be managed (see box 6).

Box 6: Hydropower and climate finance

The majority of electricity generated in India comes from coal, and the supply that is transmitted through its leaky national grid system is inadequate to meet demand. Power outages are all too frequent occurrences, and add to the costs of doing business as private companies and wealthier households install private back-up systems, usually through diesel generators. Hydropower is a relatively cheap way to meet large and growing demand for electricity, without the greenhouse gas emissions and sustainability problems associated with coal-fired power.

But large-scale hydropower development raises a suite of complex environmental and social challenges, that have been a central point of debate in the both the development and environment communities for many decades. Building a large dam disrupts river ecosystems, and can displace the communities that live and depend on those ecosystems for their livelihoods. Resettling project-affected communities with due regard for their human rights and well-being is complex. In India, the institutions that manage such processes are often very weak.

Source: Scott and Nakhooda 2013

Importantly, the additionality of the intervention needs to be clarified, given that the state government has a pre-existing commitment to scale up investment in hydropower, and that this technology is already commercially viable and relatively cost competitive.

A 2012 review of CIF programme experiences with engaging national stakeholders found that "in the case of the CTF, establishment of country coordination mechanisms was not a focus in the development of most investment plans". This is explained in part by the compressed period in which CTF investment plans were initially developed (Radner 2010). There was often inadequate time for iteration and engagement with national stakeholders, and in which the partnering MDBs ended up playing a central role. On the one hand, it is a substantial advantage of the MDBs that they have may have the technical expertise and capacity to help work with stakeholders to develop viable interventions. But the final responsibility for delivery ultimately falls to national stakeholders. A sound grounding of plans in their national contexts is therefore imperative.

The issue of national government engagement in private sector programmes has been particularly difficult. Formal processes of approval may substantially delay and disrupt private sector programs. But there are some cases where national governments have expressed concerns over the processes by which private sector implementing partners were selected. In some cases, MDBs have sometimes chosen to work with international companies rather than national companies, for example, when IFC invested in the Ventosa project with Wal-Mart in Mexico as its first pilot private sector program. In other cases,

governments have sought clarity on the rationale for choosing private sector partners and their particular comparative advantage or track record for the purposes at hand, for example, in the case of IFC supported South African projects with financial intermediaries. There is a case for establishing better systems to at least ensure that key stakeholders are aware of the basic approach being pursued and its rationale. Regional programmes add an additional dimension to coordination: in practice regional synergies may not have been maximised in program design and implementation, for example in the development of the MENA regional CSP program.

Take away messages

- The fact that the CTF engages ministries of finance and energy presents an important opportunity to make climate change more central to economic decisions and planning. But it can take time and iteration for government counterparts and implementing entities to reach shared understandings of climate change objectives
- There is a recognised need to deepen stakeholder engagement and commitment to proposed programmes and plans
- Attention to climate change has increased over time in many CTF countries, and policy responses are evolving. CTF programming can help shape and inform those priorities, but will also need to adjust to align.

Role in the Global Architecture

We conclude by reflecting on the role that the CTF does and can play in the global climate finance architecture. As noted, the positioning of CTF as one of the CIFs with regard to the newly established Green Climate Fund (GCF) has been contentious. Technically, the CTF is supposed to sunset when the GCF is operational. But the process to operationalise the GCF has proceeded slowly, and in parallel there have been significant new developments in the operations and strategies of the CTF. These include proposals to develop new programmes to support the private sector, and new pledges of finance. The CIF administrative unit has prepared papers (CTF-SCF/TFC.9/10.Rev1 2012) laying out potential options, which could include handing its' programmes over to the GCF to manage once it is operational. Programmes that could complement and support the operationalisation of the GCF have also been proposed, although a recent proposal to establish a GCF readiness facility at the CIFs was not approved by trust fund committee members.

Regardless, of the future of the CTF, its experience offers vital lessons on the opportunities and challenges associated with deploying finance at scale, and using public finance to mobilise private investment.

The CTF has successfully mobilized new resources, both finance and capacity, from the MDBs. Generally, the availability of concessional finance has been successful in encouraging the MDBs to provide loans to low carbon investments that they previously would not have been able to finance. But the strong focus on ensuring the CTF will be able to service its debts, may also serve to dissuade innovation.

Experiences with the first phases of investment plans which have had to be revised to better address country needs and priorities reinforce the importance of robust processes to engage diverse stakeholders. Domestic actors with strong implementation capacity need to play a leading role in the development of plans. They also highlight the importance of grounding interventions in a sound analysis of underlying policy, regulatory and governance frameworks and their linkages with proposed investments. Finally, there is also a need for to strengthen analysis of the scale up and likely GHG emission reduction potential of interventions.

Better coordination with other actors in the global climate finance architecture, notably the GEF, would be valuable. GEF investments in enabling environments can complement (and indeed in many cases has complemented) CTF investments in deployment and mobilisation in ways that are mutually reinforcing and increase the likelihood of transformational change. Similarly, efforts to strengthen monitoring and reporting of GHG emission reductions could be informed by the GEF's significant experience on this issue.

Similarly, the implementation arrangements for the CTF require substantial engagement of national stakeholders including in monitoring and evaluating the progress of projects and

programmes. The CIF has therefore been developing proposals to strengthen country coordination mechanisms and support the operational and implementation requirements of its programmes. There are now a large number of international climate funds and contributors that work in the same countries, and new funds and programs are emerging. There is a case for strengthening recipient country capacity to coordinate all contributors engaged on climate change activities, rather than focusing on individual fund specific mechanisms.[17] But the current dynamic of competition for resources between international climate funds can impede such operational collaborations.

One of the major contributions of the CTF (and the CIFs) has been to encourage the MDBs to work together, including in terms of programmatic approaches bringing different parts of the bank together. This is important, because the MDBs have the potential to support governments to address climate change through their core development finance operations, regardless of how the international climate finance architecture evolves. Further work is needed, however, to understand how engagement with the CTF (and CIFs more widely) has affected MDB attention to climate change in their mainstream operations and programming. It is possible that the incentives, policies and conservative culture at many MDBs have prevented them from being sufficiently nimble or flexible to take on new risks, even where the CTF procedures were designed to promote such innovation.

Ensuring that lessons and understanding the CTF experiences are captured and effectively shared is therefore critical to understanding how concessional climate finance may be used most effectively to mobilise both public and private finance from international and domestic sources. Emerging insights from programme implementation need to reach the wider climate finance community. New partnerships and dissemination strategies may help support this goal.

[17] Future work from ODI will explore the dynamics of in country coordination in responding to climate change in greater depth.

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