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Comparing Definitions and Methods to Estimate Mobilised Climate Finance

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ABSTRACT

At the 16th Conference of the Parties (COP) in 2010, developed countries formalised a collective climate finance commitment made previously in Copenhagen of "mobilising jointly USD 100 billion per year by 2020 to address the needs of developing countries...from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources" (UNFCCC, 2010). However, there is currently no definition of which "climate" activities, flows, or other interventions could count towards the USD 100 billion; what "mobilising" means; or even which countries are covered by this commitment. The paper examines different definitions used by 24 key actors in climate finance to quantify the level of private climate finance mobilised by their interventions, as well as the methods used to track such private climate finance. Key findings are that i) methodologies to assess and estimate mobilisation vary widely, and ii) considerable risk of double-counting exists.

JEL Classification: G23, F53, F21, Q54, Q56, Q58, O13, O16, O19
Keywords: Climate finance, mobilise, mobilize, leverage, tracking, MRV

RÉSUMÉ

A la 16e Conférence des Parties (CdP) tenue en 2010, les pays développés ont formalisé un engagement financier collectif pour le climat précédemment souscrit à Copenhague de « mobiliser collectivement 100 milliards USD par an d'ici à 2020 pour répondre aux besoins des pays en développement ...de diverses sources, publiques et privées, bilatérales et multilatérales, y compris de sources alternatives (CCNUCC, 2010). Cependant, il n'existe pas actuellement de définition des activités, flux ou autres interventions « climatiques » qui seront comptabilisés dans ces 100 milliards USD ; que signifie « mobiliser » ; voire, quels sont les pays concernés par cet engagement. Ce document se penche sur les différentes définitions utilisées par les 24 acteurs principaux du financement climatique pour quantifier le niveau des financements climatiques privés mobilisés par leurs interventions, ainsi que les méthodes employées pour suivre ces financements climatiques privés. Il ressort de ce rapport deux grandes constatations i) les méthodologies d'évaluation et d'estimation des fonds mobilisés sont très disparates, et ii) il existe d'énormes risques de double comptage.

Classification JEL: G23, F53, F21, Q54, Q56, Q58, O13, O16, O19
Mots-clés: Financement lié au climat, mobiliser, stimuler, suivi, MNV

FOREWORD

This document was prepared by the OECD and IEA Secretariats in 2012-2013 in response to a request from the Climate Change Expert Group (CCXG) on the United Nations Framework Convention on Climate Change (UNFCCC). The CCXG oversees development of analytical papers for the purpose of providing useful and timely input to the climate change negotiations. These papers may also be useful to national policy-makers and other decision-makers. Authors work with the CCXG to develop these papers in a collaborative effort. However, the papers do not necessarily represent the views of the OECD or the IEA, nor are they intended to prejudge the views of countries participating in the CCXG. Rather, they are Secretariat information papers intended to inform Member countries, as well as the UNFCCC audience.

Members of the CCXG are Annex I and OECD countries. The Annex I Parties or countries referred to in this document are those listed in Annex I of the UNFCCC (as amended by the Conference of the Parties in 1997 and 2010): Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, the European Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, the Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. As OECD member countries, Korea, Mexico, Chile, and Israel are also members of the CCXG. Where this document refers to "countries" or "governments", it is also intended to include "regional economic organisations", if appropriate.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY **7**

1. INTRODUCTION **10**

2. BACKGROUND: ASSESSING MOBILISED FINANCE UNDER THE UNFCCC **11**

2.1 What is covered by the USD 100 billion commitment? 11
2.1.1 What does "mobilising" mean? 11
2.1.2 What does "leveraged" mean, and how does it relate to "mobilised"? 12
2.2 Which "developed" countries are covered by the commitment? 12
2.3. What needs to be reported? 13
2.4 Key challenges affecting developed countries' reporting of climate finance 14

3. A METHODOLOGICAL FRAMEWORK FOR COMPARING ESTIMATES OF MOBILISED CLIMATE FINANCE **15**

3.1 Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance 15
3.2 Determining how, or if, mobilisation is attributed to specific actors 16
3.3 Tracking whether financing is public or private 16
3.4 Point of estimation: assessing when in the financing chain mobilisation is estimated and reported 17

4. RESULTS: DEFINITIONS AND METHODS USED BY INSTRUMENT **18**

4.1 Debt instruments 19
4.2. Equity instruments 22
4.3 Grant instruments 25
4.4 De-risking instruments 27

5. DISCUSSION: APPLYING THE FRAMEWORK TO A CASE STUDY **30**

5.1 Case study project description and financing structure 30
5.2 Implications for estimating mobilisation 32

6. CONCLUSIONS **33**

ANNEX A: Institutional-level tracking systems **38**

ANNEX B: Use of results-based financing (RBF) for climate finance: an innovative mechanism for mobilising private investment **41**

REFERENCES **50**

GLOSSARY **54**

LIST OF TABLES

Table 1: UNFCCC reporting guidelines for different categories of climate finance 14
Table 2: Selected actors' tracking of key components: debt instruments 20
Table 3: Selected actors' tracking of key components: equity instruments 23
Table 4: Selected actors' tracking of key components: grant instruments 26
Table 5: Selected actors' tracking of key components: de-risking instruments 28
Table 6: Background on Zorlu Enerji debt and equity financiers 31
Table 7: Variation between methodologies to assess and estimate mobilisation 35
Table 8: Current tracking/reporting of key components by selected institution 39

LIST OF FIGURES

Figure 1: The impact of intermediaries on estimated mobilisation 18
Figure 2: DAC methodology for assessing mobilisation via guarantees 29
Figure 3: Zorlu Enerji wind farm (Jhimpir, Pakistan) 31
Figure 4: Traditional vs. output-based approaches 41
Figure 5: KenGen Olkaria I & IV geothermal project (Olkaria, Kenya) 43
Figure 6: GPOBA and World Bank OBA projects by sector 45
Figure 7: Sectoral breakdown of GPOBA project financing (USD million) 46

Executive Summary

At the 16th Conference of the Parties (COP) in 2010, developed countries formalised a collective climate finance commitment made previously in Copenhagen of "mobilising jointly USD 100 billion per year by 2020 to address the needs of developing countries...from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources" (UNFCCC, 2010). However, there is currently no definition of which "climate" activities, flows, or other interventions could count towards the USD 100 billion; what "mobilising" means; or even which countries are covered by this commitment.

Recent decisions by the COP use the term "mobilised" in the context of the overall USD 100 billion commitment. The term "leverage" is also used in the context of guidelines to developed countries for reporting on private climate finance in their biennial reports. However, there remains considerable uncertainty as to what both terms encompass. The lack of clarity regarding "mobilised" climate finance and what could constitute appropriate guidelines for measurement, reporting and verification (MRV) has important political implications in the United Nations Framework Convention on Climate Change (UNFCCC) context, as such clarity is required for building trust and transparency, as well as for improving mutual accountability.

At present, official systems in place to track climate finance mainly focus on public outflows from developed countries. The greatest uncertainties in climate finance flows therefore relate to private and South-South flows to developing countries as well as domestic flows. This paper focuses on the issue of private climate finance mobilised by developed countries in the context of the USD 100 billion commitment under the UNFCCC. It is important to note that tracking progress towards the USD 100 billion commitment has a narrower scope than tracking long-term mobilisation and scaling-up of global investment in low-carbon, climate-resilient activities in general.

The paper is based on information gathered from 24 key actors involved in financing climate activities in developing countries (bilateral and multilateral financial institutions, investment funds, programmes and agencies). The paper examines different definitions used by these actors to quantify the level of private climate finance mobilised by their interventions, as well as the methods used to track such private climate finance.

Climate finance can be mobilised by several types of public interventions. This includes direct co-financing (e.g. provision of grants, equity or loans), the use of other financial instruments (e.g. insurance or guarantees), and other policies and measures (such as partial funding by a developed country of a feed-in-tariff for renewable electricity production in a developing country). This paper focuses on developed countries' use of the first two categories. The methods and tracking systems needed to estimate the mobilisation of finance from public polices and measures are likely to be different from those needed for direct co-financing and financial instruments. Climate finance mobilised via public policies and measures may therefore need to be examined using a different framework.

The paper identifies four key components of a framework that can be used to compare how different institutions estimate mobilisation of climate finance. These are:

1. Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance.
2. Determining how, or if, mobilisation is attributed to specific actors (this is important for complex deal structures where multiple public actors from developed countries are involved).
3. Tracking whether financing is public or private.
4. Assessing when in the financing chain mobilisation is estimated and reported.

This report highlights some similarities between the definitions and methods used by different institutions to track climate finance mobilised or leveraged.[1] For example, no institutions systematically report co-financing disaggregated by country or region of origin (although some do track data at this level of disaggregation). However, most institutions do distinguish between public and private co-finance.

Nevertheless, there are also some considerable differences between the definitions, methods, tracking and reporting of climate finance between different institutions. In particular, the paper identifies two key messages that have direct implications on the comparability of mobilisation estimates across institutions and the way forward for tracking progress towards the USD 100 billion commitment: i) methodologies to assess and estimate mobilisation vary widely, and ii) considerable risk of double-counting exists.

Methodologies to assess and estimate mobilisation vary widely

There is a wide variation in the stringency of methods used to assess whether, and to what extent, climate finance has been mobilised. The methods vary both between and within different financial instruments and institutions. The level of conservativeness differs, mainly depending on whether:

- Climate finance is tracked at a disaggregated or aggregated level (at a disaggregated level, finance for project components that are not climate-relevant is not counted).
- Financiers assume that their intervention has mobilised all, or only a part, of associated financing, or that eligible geographical sources of mobilised climate finance are limited, e.g. private investors from the same donor country.
- Interventions from other actors are tracked as being either public or private in a systematic and disaggregated manner, which facilitates efforts to minimise double counting.
- Time limits or tapering factors are applied, e.g. by discounting mobilisation from subsequent funding rounds by a given percent or excluding investments into a particular fund that predates the actor's an participation in that fund.

Considerable risk of double counting exists

A number of factors can complicate tracking of climate finance and result in double counting the same flows as having been mobilised. One such factor is that it is difficult to identify a single point in the climate finance supply chain where tracking would ideally take place. This is because climate-related activities in developing countries can have several project stages (e.g. feasibility study, infrastructure development, project development) and involve multiple actors at each stage. Each intermediary used may play a role in mobilising climate finance. Therefore, picking one mid-point (e.g. multilateral development bank, or a national development bank) as "the" place to assess and estimate mobilisation would risk under-counting finance mobilised in some cases and double counting it in others.

Quantifying the risk of double counting is a difficult task because of data availability constraints. Preliminary CCXG analysis of project financing deals from the Bloomberg New Energy Finance database found that there is a risk of double counting of direct co-financing in 9 of the 39 renewable energy deals closed in developing countries in 2012 that involved direct Annex I public co-financing (BNEF, 2013).[2] Further levels of double counting could also occur when considering interventions outside the scope of this database that could have mobilised climate finance, such as facilitative support, grants for feasibility studies, and capacity building.

The point in time when mobilised climate finance is assessed can also significantly impact the risk of double counting and the estimated level of mobilised climate finance. This is particularly true for

[1] Some institutions refer to "mobilised", some to "leveraged" climate finance, and others use both terms.

[2] Including both governmental bodies and State Owned Enterprises (SOEs).

interventions that are designed to encourage follow-on funding, such as revolving loan funds or funds-of-funds. The point of measurement of mobilised climate finance can also affect which country or entity along the finance chain (intermediary or final) is reported as the recipient. Further, the point of measurement can affect the ease and feasibility of collecting the necessary information, which can be asymmetric across actors.

The way forward for tracking progress towards the USD 100 billion commitment

The UNFCCC has established reporting guidelines relating to the provision and receipt of climate finance. These are for developed countries' national communications and biennial reports as well as for developing countries' national communications and biennial update reports. The guidelines address on national reporting of public climate finance provided from Annex II countries[3] (including both bilateral contributions as well as contributions to multilateral institutions) and on private finance leveraged by bilateral finance. The guidelines, however, do not cover reporting of some key sources of private finance such as private climate finance mobilised by multilateral sources. Further, the guidelines do not cover provision of information by all "developed" countries - only the climate finance mobilised by Annex II countries. Another limitation is that the guidelines request only selected information from non-Annex I countries, focusing on their receipt (inflows) of climate finance from developed countries, the Global Environment Facility, and other multilateral institutions such as the Green Climate Fund (UNFCCC, 2011).

Current reporting guidelines under the UNFCCC are therefore not sufficient to give a complete picture of climate finance mobilised towards the USD 100 billion commitment made by developed countries. In the absence of a more complete reporting and tracking framework, it will be difficult to identify the full progress that developed countries are making towards meeting this commitment, and therefore to enhance trust and transparency on this issue.

Current biennial reporting guidelines for developed country Parties under the UNFCCC allow for the possibility of either individual or collective reporting of mobilised finance. However, there is no further guidance on what could be reported collectively, nor on who would be best placed to report "grouped" information. Previous analysis (Clapp et al., 2012) has indicated that attributing private flows to specific countries can be complicated for several reasons, including multiple ownership and confidentiality issues. Information on such flows may also lie outside governments (e.g. at multilateral development banks or in the private sector). Further work on this topic could therefore be useful, including on how to address the variability in different actors' definitions relevant to estimating mobilised climate finance.

Discussions at the CCXG Global Forum in March 2013[4] suggested that collective reporting of mobilised climate finance could be useful in overcoming some of the difficulties related to both double counting and attribution. Collective reporting could allow Parties to satisfy biennial reporting guidelines under the UNFCCC while optimising the cost-effectiveness of any tracking and reporting system that is developed. There were also calls for increased reporting of mobilised climate finance at the level of activity implementation, as a means to reduce the risk of double counting.

Decisions regarding what level of attribution is needed for effectively tracking mobilised climate finance will also be important to move forward. As highlighted at the CCXG Global Forum, tracking flows of climate finance, both broadly and in the context of the USD 100 billion commitment, is not necessarily the same task as attributing mobilised climate finance to specific countries, interventions, or institutions. Although attribution is not a straightforward task, it may be important for those countries who wish to highlight how much climate finance their public interventions have mobilised individually.

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[3] See Box 1 for UNFCCC terminology regarding country groupings.

[4] Climate Change Expert Group Global Forum, 19-20 March 2013, OECD Conference Centre, Paris. Agenda and presentations available online at: www.oecd.org/env/cc/ccxg

1. Introduction

At the 16th Conference of the Parties (COP) in 2010, developed countries formalised a collective climate finance commitment of "mobilising jointly USD 100 billion per year by 2020 to address the needs of developing countries...from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources" (UNFCCC, 2010). As highlighted in previous CCXG analyses (Clapp et al., 2012; Ellis and Regan, 2012; Buchner et al., 2011), there is currently no definition of which "climate" activities, flows, or other interventions could count towards the USD 100 billion; what "mobilising" means; or even which countries are covered by this commitment.

Further, current systems in place to track climate finance focus on public flows, whereas private climate finance is estimated to account for the majority of flows (Buchner et al., 2012; Clapp et al., 2012). This highlights the lack of both a consensus on what needs to be tracked as part of the USD 100 billion commitment, and of adequate tracking systems. Thus, it is at present difficult to track developed countries' progress towards their collective commitment.

However, progress is being made on three fronts. First, some actors involved in using public money to finance climate-relevant activities in developing countries are improving their quantification of mobilised private flows. Second, in terms of reporting, COP 18 agreed on a reporting format ("common tabular format") for reporting of a sub-set (the public component) of the USD 100 billion. Further, the report of the Standing Committee on Finance[5] from COP 18 invited developed country parties to submit information on their "appropriate methodologies and systems used to measure and track climate finance" to the Secretariat by May 2014 (UNFCCC, 2012). Third, progress on definitions has also been made, although by various sub-sets of actors (e.g. individual institutions and the group of multilateral development banks, MDBs) rather than in the context of the UNFCCC.

As the greatest uncertainties relating to climate finance are associated with private flows, e.g. scale, instruments, channels, and actors, this paper focuses on the issue of tracking and reporting mobilised private climate finance. It examines different definitions used by key actors involved in financing climate activities in developing countries to quantify the level of private climate finance mobilised, as well as the methods used to track such private climate finance and what data are available. It does not propose methods for tracking mobilised climate finance. Given the growing interest in using results-based finance to mobilise climate finance, the paper also conducts a stocktaking of how results-based financing could be used in delivering climate finance.

The paper is structured as follows: Section 2 summarises the context and background for this paper, including current UNFCCC reporting guidelines related to mobilised private climate finance. Section 3 outlines a methodological framework for comparing estimates of mobilised climate finance. Section 4 applies this framework to assess the methodologies used by actors of climate finance reviewed as part of this study to estimate mobilisation, separated by type of financial instrument. Section 5 illustrates different aspects of the framework using the case of a wind energy project in Pakistan. Section 6 draws some initial conclusions from the paper and identifies areas of similarity and difference between methodologies used by different institutions to track climate finance that have been mobilised. Finally, as requested by CCXG delegates, Annex B reviews recent experience with results-based financing (RBF), an innovative tool with potential to scale up investment in climate-related activities in developing countries.

[5] At COP 16, Parties decided to establish a Standing Committee (later renamed to "Standing Committee on Finance") under the COP to "to assist the Conference of the Parties in exercising its functions with respect to the financial mechanism of the Convention in terms of improving coherence and coordination in the delivery of climate change financing, rationalization of the financial mechanism, mobilization of financial resources and measurement, reporting and verification of support provided to developing country Parties" (UNFCCC, 2010).

2. Background: Assessing mobilised finance under the UNFCCC

Defining "mobilised" climate finance, and appropriate measurement, reporting and verification (MRV) of this finance is important politically in the UNFCCC context. In particular, robust MRV of mobilised climate finance is key to increasing trust between countries that funds are actually flowing, as well as to enabling individual countries or groups of countries to demonstrate and assess their efforts.

This section highlights definitional issues and reporting requirements under the UNFCCC relevant to the USD 100 billion commitment. While reporting requirements related to the provision of finance have been strengthened over the last three years, there are still several outstanding issues including:

- what is included in this commitment;
- what needs to be reported;
- which "developed" countries are covered by the commitment;
- how this information is to be reported.

2.1 What is covered by the USD 100 billion commitment*?*

As highlighted above (and explored in more detail in previous analysis such as Clapp et al., 2012), it remains unclear which interventions and activities can count towards the USD 100 billion commitment. The commitment is worded as follows (UNFCCC, 2010):

> [D]eveloped country Parties commit, in the context of meaningful mitigation actions and transparency on implementation, to a goal of mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries.

The subsequent paragraph indicates that:

> [F]unds provided to developing country Parties may come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources.

There is no decision to date on whether the USD 100 billion is only associated with flows of money (e.g. grants, loans) or whether it also includes other financial instruments such as guarantees and insurance, which most often do not result in an actual disbursement. This paper focuses on the sources and interventions related to mobilising USD 100 billion; discussions over which project types and activities are eligible to be included towards the USD 100 billion are out of the scope of this paper.

2.1.1 What does "mobilising" mean?

While it is not the intention of this paper to prejudge on-going discussions in the UNFCCC arena regarding the definition of "mobilising", it would be useful to have an indication of what this term could mean. Specifically, what constitutes "mobilisation", how can it be captured and, where necessary, attributed to different actors.

In terms of the first aspect above, few instruments work in isolation from broader policy frameworks (Corfee-Morlot et al., 2012). It may be difficult to distinguish the effect of a particular intervention to indicate that this one (rather than others) caused the mobilisation. In other words, determining whether a specific intervention has mobilised climate finance is not an exact science – even though reporting entities may need to give a concrete indication of whether funds were mobilised or not.

2.1.2 What does "leveraged" mean, and how does it relate to "mobilised"?

The term "leverage" is commonly used in finance-related discussions. However, different actors use this term differently (Brown et al., 2011). The term "leveraged" was introduced into UNFCCC texts at COP 17, in the context of Annex II biennial reporting guidelines (UNFCCC, 2011). Neither this term, nor how it differs from "mobilising", has been defined under the UNFCCC. As outlined in previous analysis (Ellis and Regan, 2012) different actors in the provision of climate finance sometimes use these terms interchangeably.

For the purposes of this paper, "mobilise" will be used in the context of the USD 100 billion commitment. "Mobilise" will be used to refer to the provision of climate finance for developing countries via developed countries' use of both financial instruments (e.g. debt, equity, grants, insurance, and guarantees) as well as interventions such as policies and measures, although the latter is not the focus of this paper. The term "leverage" is narrower, and will be used in reference to discrete financial instruments.

2.2 Which "developed" countries are covered by the commitment?

In Copenhagen and Cancun, "developed" country Parties committed jointly to a goal of mobilising financing for the needs of "developing" country Parties. However, neither of these country groupings have been defined within the context of climate finance under the UNFCCC. The current reporting requirements apply only to Annex II Parties (UNFCCC, 2011), which may exclude flows relevant to the achievement of the USD 100 billion commitment from other developed countries. Box 1 summarises the key terms related to the USD 100 billion commitment and associated reporting requirements.

Box 1: UNFCCC terminology for country groupings

Annex II countries have financial commitments under the UNFCCC. This list of countries (established in 1992, as Annex II to the UNFCCC) comprised the then list of members of the OECD, 24 countries. It has since been revised to exclude Turkey.

Annex I (AI) countries have emissions-related obligations under the UNFCCC. Annex I countries comprise all Annex II countries, as well as some Central and Eastern European countries and former Soviet republics. Since the initial list of AI countries was established in 1992, two further countries (Cyprus[6] and Malta) have decided to accede to Annex I, subsequent to their accession to the European Union.

Non-Annex I (NAI) countries are all other countries.

Developed countries undertook a commitment to mobilise "...jointly USD 100 billion a year by 2020..." This list of countries has not been defined in the context of the UNFCCC, so it is not clear how it relates to the list of Annex I and Annex II countries. Some NAI countries are now OECD members (Korea, Mexico, Chile, Israel) and some of these provide climate-related Official Development Assistance (ODA) to developing countries (e.g. Korea).

This paper uses country terminology in the same way as the associated UNFCCC documents. Thus, "developed" countries when referring to the USD 100 billion commitment, and "Annex I", "Annex II" and "non-Annex I" countries when referring to reporting requirements under the UNFCCC.

[6] "*1. Footnote by Turkey*
The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

2. Footnote by all the European Union Member States of the OECD and the European Union
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus."

2.3 What needs to be reported?

All countries have reporting requirements under the UNFCCC. The content and timing of reports differs for different country groupings, with more flexibility provided to non-Annex I countries. Information on climate finance is to be reported both in national communications (produced approximately every four years for Annex I countries, and irregularly for non-Annex I countries) and biennial (update) reports. The largest focus on reporting information on private climate finance is in the guidelines for developed countries' biennial reports agreed at COP 17. These reporting guidelines[7] (see Box 2 below) apply to private flows "leveraged" by bilateral climate finance from Annex II Parties and on their policies and measures for "scaling up" private investment (UNFCCC, 2011). While reporting guidelines for public financing specify that "each Annex II Party" is to report, the guidelines for private finance leveraged by bilateral interventions refers collectively to "Annex II Parties" as the reporting unit. The lack of explicit "Party-level" reporting guidelines leaves open the possibility of collective tracking and or reporting systems.

Box 2: Selected COP 17 reporting guidelines for biennial reports

The following guidance for the content of biennial reports from developed countries is provided in the decision text from COP 17:

> Each Annex II Party shall provide information on the financial support it has provided, committed and/or pledged for the purpose of assisting non-Annex I Parties to mitigate GHG emissions and adapt to the adverse effects of climate change….
>
> … [E]ach Annex II Party shall provide summary information … on allocation channels and annual contributions … including, as appropriate, to the following:
> (a) The Global Environment Facility, the Least Developed Countries Fund, the Special Climate Change Fund, the Adaptation Fund, the Green Climate Fund and the Trust Fund for Supplementary Activities;
> (b) Other multilateral climate change funds;
> (c) Multilateral financial institutions, including regional development banks…
>
> Recognizing that the goal of mobilizing the financial resources referred to in decision 1/CP.16, paragraph 98, includes private financial sources, Annex II Parties should report, to the extent possible, on private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties, and should report on policies and measures that promote the scaling up of private investment in mitigation and adaptation activities in developing country Parties.
>
> Non-Annex I Parties should … provide updated information on financial resources, technology transfer, capacity-building and technical support received from the Global Environment Facility (GEF), Annex II Parties and other developed country Parties, the Green Climate Fund and multilaterals institutions for activities relating to climate change, including for the preparation of the current biennial update report.

Source: UNFCCC, 2011

[7] The strongest reporting requirements lay out what information "shall" be reported (mandatory). Reporting on climate finance from the private sector indicates that this "should" be reported, "to the extent possible" (and so is recommended, but not mandatory).

As depicted in Table 1 below, climate finance can be divided into several categories. Currently, there are mandatory reporting guidelines for only two of these: provision by Annex II countries of public bilateral climate finance and provision by Annex II countries of multilateral climate finance. A third category - private finance leveraged by bilateral climate finance - is also to be reported "to the extent possible" (UNFCCC, 2011). However, no reporting guidelines have yet been agreed for this third category. As currently drafted, there are no explicit reporting guidelines for other possible sources of mobilised climate finance, i.e. private finance mobilised by multilateral climate finance; climate finance mobilised by non-Annex II developed countries; non-Annex I climate finance mobilised by developed countries. This means that a full picture of climate finance mobilised towards the USD 100 billion commitment cannot be obtained by simply aggregating individual developed countries reports of climate finance to the UNFCCC.

Table 1: UNFCCC reporting guidelines for different categories of climate finance

Type	**Origin**	**Channel**	**Current reporting guidelines (Annex I countries, biennial reports)**
Public	Annex II	Bilateral	"shall"
		Multilateral	"shall"
	Other developed countries	Bilateral and multilateral	none
	NAI	Mobilised by developed countries	none
Private	Annex II	Leveraged* by bilateral	"should"
		Leveraged by multilateral	none
	Other developed countries	Mobilised by other (non-Annex II) developed countries	none
	NAI	Mobilised by developed countries	none

* The use of this term in this table reflects its use in relevant UNFCCC decisions (i.e. UNFCCC, 2011).
Source: Virginie Marchal and authors

While agreement was reached at COP 18 on a common tabular format (CTF) for biennial reporting of climate finance from bilateral and multilateral public sources, Parties did not reach agreement on the best way to report mobilised climate-related private finance. Instead, this topic was highlighted as an area of future work to be considered at the next revision of the reporting guidelines (UNFCCC, 2012d). The current approach of encouraging Parties to report on mobilised climate finance while not providing instructions or a common format for doing so may result in inconsistencies in reporting for this portion of climate finance.

2.4 Key challenges affecting developed countries' reporting of climate finance

The lack of clear guidance at the UNFCCC level on definitions and methods for reporting makes it difficult to gather complete and comparable data across financial institutions and developed country Parties. Further, tracking systems are limited and, even when they are in place, tend to focus on different or more aggregated data, such as the overall financing of projects broken down by public and private sources.

Agreeing on key definitions at the level of an individual institution will also take time and resources, as would enhanced tracking and reporting of data on private climate finance. There is therefore likely to be resistance to making improvements in this area in the absence of top-down guidance, particularly if estimating the level of mobilised climate finance is not a core interest for a particular institution.

Ultimately, which activities, interventions and instruments will count towards the USD 100 billion commitment will be a political decision. However, if some eligible categories of climate finance are not reported or are reported in an inconsistent manner, it will be difficult to assess progress towards the USD 100 billion commitment regardless of whether a country-level or collective reporting system is adopted. It is therefore important to examine the existing ways in which financial institutions are defining and estimating mobilised private climate finance, as well as the assumptions that impact these estimations.

3. A methodological framework for comparing estimates of mobilised climate finance

There are several key components that need to be tracked and reported in order to estimate mobilised climate finance. How these components are themselves defined and tracked can significantly affect the comparability of resulting information, e.g. leverage ratios[8] as reported by different institutions (see e.g. Ellis and Regan, 2012). This section provides a framework to compare these estimations by introducing and examining each of these components. Section 4 then applies this framework to assess existing methods in place across selected financial instruments and institutions. The components of this framework include:

1. Causality: Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance.

2. Attribution: Determining how, or if, mobilisation is attributed to specific actors.

3. Public or private: tracking whether financing is public or private.

4. Point of estimation: assessing when in the financing chain mobilisation is estimated and reported.

3.1 Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance

The lack of a standard definition for what mobilised climate finance entails means that different institutions assess whether an intervention has mobilised climate finance in different ways. For example, the international community may define "mobilised" climate finance as finance and other interventions where developed country public finance and support causes further investment and finance in developing countries to mitigate or adapt to climate change. In such a case, assessment of the causal impact of the developed country intervention would be needed.

This assessment has both qualitative ("did the intervention mobilise?") and quantitative aspects ("how much financing did the intervention mobilise?"). Depending on how mobilised is defined and tracked by a given institution, the amount of mobilised financing reported can differ substantially.

Determining mobilisation is unlikely to be straightforward in several cases. For example, if different financial institutions and governments were involved in a particular activity it would mean assessing the relative causal role of each of their respective interventions. Thus, the answer to "did this particular intervention mobilise financing?" may be difficult to answer categorically (even though it will need to be reported as either mobilised finance, or not). Some observers (e.g. Brown et al., 2011) have recommended that any assessment of mobilisation include a rationalisation for how the project would not have occurred without public intervention. The Clean Development Mechanism's requirement for the demonstration of additionality is one example where such requirements have been implemented. However, it would likely prove challenging and time consuming to determine if a project with multiple public and private actors

[8] Leverage ratios presented herein are written as "leveraged" financial resources to "leveraging" financial resources, e.g. 3 to 1 for USD 30 million leveraged by USD 10 million.

would have gone forward in the absence of any one single instrument that could be attributed to specific countries or country groupings.

There are also challenges to quantifying how much financing was mobilised by an intervention. Different methods to do this will have different implications for the level and risk of double counting. For example, if reporting is done at the level of an individual country, assigning the total project costs as the amount mobilised by any one public intervention could lead to double counting for projects with multiple public financiers.

3.2 Determining how, or if, mobilisation is attributed to specific actors

While not currently a reporting requirement, another aspect that may be useful in tracking how much climate finance has been mobilised is the geographic source and ownership of financing and interventions. The relevance of the geographic origin of mobilised financing is a contentious issue amongst some UNFCCC Parties who hold that the USD 100 billion should flow from developed countries (LDC Group, 2011). If it is decided by Parties that this is an important aspect for tracking the USD 100 billion, this could involve determining the country of origin for financing involved in a project. A second aspect, the importance of which may depend on whether tracking and reporting is done individually or collectively, may be apportioning the country ownership for a given intervention. The former could allow for a tracking system to report "from where" the funds were mobilised while the later would provide "by whom."

There are different ways of identifying country of origin for private investment, i.e. i) the location of the corporate headquarters, ii) the headquarters of the involved subsidiary or local branch, or iii) apportionment according to ownership shares held. Which definition(s) are chosen has significant implications with regard to the USD 100 billion commitment. However, agreeing on a single definition could impact the attractiveness of different financing options for climate responses in developing countries. The first option (using the location of the corporate headquarters) could result in increasingly important South-South flows raised on local private capital markets being counted as North-South flows for multinational enterprises (MNEs) based in developed countries. The second option (HQ of subsidiary) may ignore the important catalytic effect provided by globally recognised and established financial institutions and backers. The third option (apportionment by shareholder), may be difficult to apply universally due to a lack of information on ownership and the amount of time required. However, it may be especially important for multilateral development banks (MDBs) and regional development banks (RDBs).

3.3 Tracking whether financing is public or private

Reporting the amount of private finance mobilised by public sector interventions requires that public entities record whether financiers are public or private. Just as the geographic assessment described above involves determining the country of origin for financing, the source of financing can be categorised as either coming from the public or private sectors. Tracking the public or private nature of financing is important for two reasons. First, it allows public entities to report the amount of private sector financing their interventions have mobilised separately from any financing mobilised from other public sources, as requested in the UNFCCC biennial reporting guidelines discussed in Section 2. The second reason relates to the issue of double counting for projects with multiple public financiers, since knowing whether other public financial institutions are involved in financing a project is important in order to avoid double counting the amount of private finance that has been mobilised.

However, defining whether an actor and the associated financing is "public" or "private" is not always straightforward. Mitigation and adaptation financing programmes themselves could also have mixed public-private ownership, e.g. the World Bank's Prototype Carbon Fund[9] (World Bank, 2013). In such cases, care is needed to ensure that the finance associated with the public component has not already been

[9] The WB Prototype Carbon Fund is a partnership between 17 companies and 6 governments.

counted as bilateral public support. At a methodological level, Parties need to decide whether the terms "public" and "private" should be considered on a binary or an apportioned basis whereby the percentage of shares held by private versus public entities are estimated. Choosing an appropriate ownership threshold may be difficult for state-owned enterprises (SOEs) or joint ventures, where a portion of the company is publicly traded. Since ownership can change over time, this also impacts *ex ante* leveraging estimates.

3.4 Point of estimation: assessing when in the financing chain mobilisation is estimated and reported

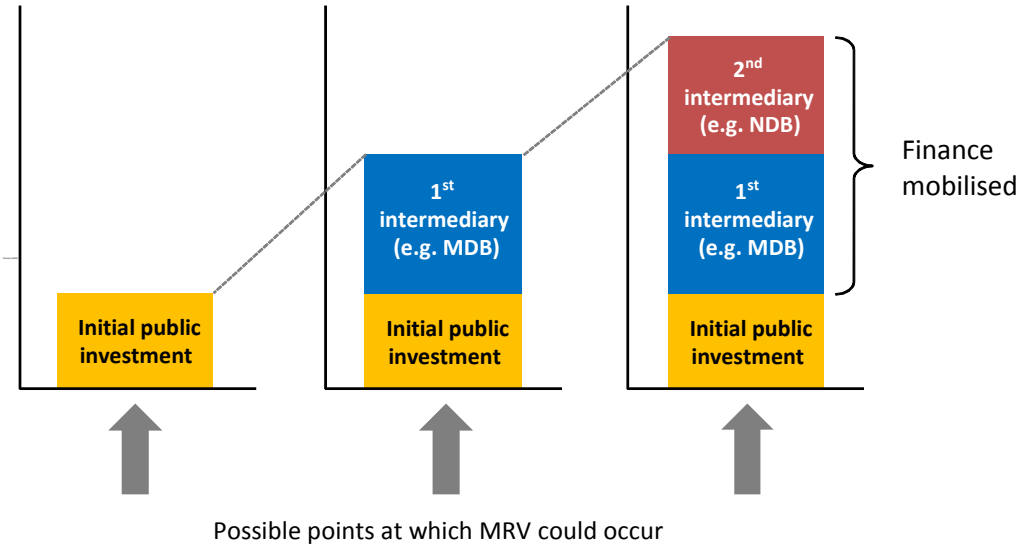
There are three methodological aspects relating to defining the "point of estimation". These are: i) the assumed time horizon of the mobilisation effect, ii) when mobilisation is estimated and iii) where mobilisation is estimated.

The time horizon of the mobilisation effect, i.e. the period of time over which an instrument or mechanism is considered to be mobilising climate finance, is a key methodological aspect. The assumed time horizon is particularly relevant in the context of grants or facilitative support such as technical assistance, capacity building, feasibility studies, and demonstration projects, which can have a catalytic effect on private investment for several years thereafter. The issue of a time horizon is also relevant for revolving loan funds, credit lines, or equity funds-of-funds (FoF), where funds are reinvested or replenished, and/or where follow-on activity can be significant for many years following the initial intervention.

A second aspect of this component is whether mobilisation is reported on an *ex ante* or *ex post* basis. The former typically involves public financial institutions reporting the amount of expected financing mobilised by a particular activity at the time of commitment or board approval. The latter involves either reporting how much financing has been mobilised at the end of the time horizon of the intervention or *ex post* verification and correction of *ex ante* commitments where necessary. There are also important implications regarding the cost-effectiveness of each of these options which Parties may wish to take into consideration when developing a system to track mobilised climate finance. For example, using forecasting models to estimate mobilisation *ex ante* can be a relatively less costly option compared to *ex post* verification by a separate monitoring and evaluations team.

A third aspect of this component is where mobilisation is tracked and reported along the chain of financial providers. This is important because the pathway between developed country climate finance and the activity benefiting from that finance may be indirect (see e.g. UNEP, 2008). Without consistency on which actor will estimate and report the amount mobilised, there is a significant possibility of double counting for multi-stage projects involving multiple public financiers and intermediaries as illustrated in Figure 1 below.

Figure 1: The impact of intermediaries on estimated mobilisation



Source: Gregory Briner and authors

Arrangements between intermediaries may also need to be established to prevent double counting of mobilised financing. As Figure 1 demonstrates, some intermediaries may be better positioned than others to track project-level financing details. Which intermediary is most appropriate will vary, depending on the financing structure of the project or programme. For instance, the second intermediary in Figure 1 may be more likely to have full project-level financing details than the initial public investor who made a contribution to a multilateral fund managed by an MDB and who may not know the ultimate destination of its financing. In this case, if the initial public investor is required to report the amount of private sector financing, systems would have to be established to ensure that sufficiently detailed, disaggregated, and project-level information on financing flows back to the upstream public entity. Such arrangements would also require that downstream financial institutions provide this financing information in a manner compatible with existing tracking definitions and methodologies used by the public entity.

4. Results: Definitions and methods used by instrument

This section draws from the framework outlined in the previous section to compare existing estimation methods for mobilised climate finance in place across financial institutions surveyed as part of this study. Financial institutions often channel climate finance through a number of different programmes within their organisations or across partner organisations. These programmes may in turn use a number of different financial instruments to provide public finance and leverage private capital for specific projects. The range of instruments available and the functional differences between them can have important implications for how mobilised private finance is estimated. To that end, the section is organised by financial instrument and outlines instrument-specific issues that affect how leverage or mobilisation is estimated. Because many financial institutions use multiple instruments, individual institutions are mentioned in different sub-sections.

The following analysis is based on publicly available information as well as discussions with relevant experts from over 24 different bilateral and multilateral financial institutions, investment funds, programmes, and agencies.[10] The analysis in this section focuses on those entities that track financing associated with their climate-related interventions, albeit to varying degrees, and therefore may paint only

[10] ADB, AFD, AfDB, AusAID, BMU, CIF, DECC, DFID, EBRD (SEI), EIB (GEEREF), GEF, IADB, IFC, JBIC, JICA, KfW, NORAD, OPIC, SIDA, Swedfund, USAID, USAID (GDA), USAID (CTI-PFAN), World Bank

a partial picture of the current level of tracking taking place. Also, this paper focuses on the leveraging of financing from external sources by developed country interventions where there is co-financing or other financial instruments being used. This is mainly due to a lack of available information on and methodologies for estimating mobilisation from other types of interventions, e.g. policies and measures which may also be used to mobilise finance as part of the USD 100 billion UNFCCC commitment.

This section assesses the extent to which each methodology addresses the four key components of the framework outlined in Section 3. The results are presented in the tables below. An assessment of the collective impact that these components have on minimising or leaving open the possibility of double counting between institutions and instruments is presented in a fifth column. There are two important distinctions to note when interpreting the analysis contained in this section. The first is the difference between having information and systematically tracking information. When available, project financing information is most often outlined in project document sheets, board approval documents, or institution-specific requests for information from co-financiers. These documents usually contain, at a minimum, how much financing was provided by different public and private actors. However, many public financial institutions do not systematically capture these financing details in their project-level financial management systems. Another important distinction is the difference between tracking and reporting. Indeed, there were several cases where an institution's tracking system contains information at a more detailed and disaggregated level than it reports at; these instances are noted with an asterisk next to the relevant component in the table.

The following similarities and differences between institutions' definitions and methods for estimating mobilised climate finance were identified:

Similarities:

- Assessing causation: most institutions examined do not provide explicit rationale for demonstrating how their intervention has mobilised climate finance.
- Attribution: none of the institutions examined systematically report financing disaggregated by country or region of origin, although some institutions do track at this level of detail.
- Public or private: nearly all institutions, with the general exception of those providing grants, systematically track whether co-financiers are public or private entities.
- Few institutions' tracking systems would allow for double counting to be minimised.

Differences:

- Assessing causation: several different methodological approaches are used to quantify the level of private climate finance mobilised. Some institutions report the level of mobilisation by project component, whereas others do this at the level of an entire project. (This can significantly affect results, as not all components of a project are necessarily climate-related.)
- Point of assessment: some institutions verify estimations *ex post* (through both random and targeted processes), while others provide only *ex ante* forecasts; assumed time-horizons for mobilisation effects and selected point of estimation along finance chain vary widely.

4.1 Debt instruments

Financial institutions use a range of debt products to finance mitigation and adaptation projects such as senior (A tranche) and mezzanine (B tranche) debt as well as credit lines. With four of the largest bilateral financial institutions delivering the vast majority of their climate-related public finance (USD 8.6 billion in 2011, or >85%) in the form of loans (UNEP FI, 2012), reliable methods to estimate the amount of private finance mobilised via these instruments is important.

Selected actors' tracking of mobilised climate finance for debt instruments is outlined in Table 2, below. This highlights differences in the tracking methodology for each of the components highlighted in Section 3.

Table 2: Selected actors' tracking of key components: debt instruments

Reporting Entity	Metrics: does methodology and internal **tracking** architecture address:				
	Assessing Causation	**Country of Co-financier**	**Private or Public**	**Point of Estimation**	**Double Counting**
ADB	"Direct Value Added"	Unclear	Specified, disaggregated*	*Ex ante*	Possible
CIF-CTF	Assumed for Total Project Cost (TPC)	Not Specified	Specified, disaggregated*	*Ex ante*	Possible
EBRD-SEI	Assumed TPC	Not Specified	Specified, disaggregated*	*Ex ante*, some verified *ex post*	Possible
GEF	Assumed TPC	Not Specified	Specified, aggregated	*Ex ante*	Possible
JBIC (Japan)	Only JPN private money	Specified (Japan)	Specified (all private)	*Ex ante, verified ex post*	Minimised
OPIC (U.S.)	Assumed TPC	Specified*	Specified, disaggregated*	*Ex ante*, some verified *ex post*	Minimised (Rarely co-invests in projects with other DFIs)

Source: Authors, based on personal communications and publicly available information (Bhandari, 2013; Zhang, 2013; Klingel, 2013; Aoki, 2012; Sato, 2013; Kuhlow, 2013.)

Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance

In examining the methods and definitions used by financial institutions and funds listed in the table above against the first element of the framework, three current practices stand out. First, there is the approach taken by the Clean Technology Fund (CTF) under the Climate Investment Funds (CIF), the Sustainable Energy Initiative (SEI) of the European Bank of Reconstruction and Development (EBRD), the Global Environment Facility (GEF), as well as the United States' Overseas Private Investment Corporation (OPIC). When reporting the amount of money mobilised via debt instruments, each of these institutions assumes that its interventions have mobilised all external capital being invested in the project.

The second approach is that taken by the Asian Development Bank (ADB), which has an institutional level indicator called "direct value-added (DVA) co-financing mobilization" (Bhandari, 2013). The ADB estimates financing its interventions mobilise from other public bilateral and multilateral partners separately than financing mobilised from the private sector (ADB, 2012). Further, if the ADB joins a non project-specific initiative that is administered by another institution, it does not consider the co-financing provided by others as being mobilised (Bhandari, 2013). In general, ADB requires that its intervention was "instrumental" in mobilising external debt (ADB, 2012). For ADB, instrumentality can be demonstrated by formal agreements between the ADB and co-financiers, such as memoranda of understanding (MoU).

Finally, there is the approach taken by the Japanese Bank for International Cooperation (JBIC) when estimating how much private sector capital was mobilised through its fast-start-financing (FSF) programme. Taking a fairly more conservative approach, JBIC only included private sector loans from Japanese commercial banks (typically comprising 40% in a B tranche of the overall Japanese loan) in its estimation of mobilised funds (Sato, 2013). Considering that the Japanese loan may only partially cover total project costs (typically around 35%), this methodology prevents a significant portion of non-Japanese private sector debt financing that would be included under other methods from being reported as mobilised.

In contrast, the Japan International Co-operation Agency (JICA) presents a unique example where no systems are in place for tracking private co-financing mobilised. JICA rarely participates as a direct co-financier alongside private sector investors, choosing to make most of the loans under its public-private-partnership (PPP) programme to state-owned-enterprises (SOEs) following build-own-transfer (BOT) type models for infrastructure or other capital-intensive projects. Thus, JICA engages indirectly with the private sector through "vertically" or "horizontally" separated components of larger projects (Sudo, 2012). This would include providing finance to a SOE for the construction of railway stations, but leaving the private sector responsible for building railway lines and purchasing trains. JICA's "separated" model makes estimating the amount of private finance mobilised a more difficult task. For example, it would be likely that these project components, while intrinsically linked, would be financed under separate deals for which JICA may not have full financial information (and where other public entities may be present).

Tracking whether financing is public or private and determining how, or if, mobilisation is attributed to specific actors

Financial resources raised via debt issuance in capital markets presents an interesting example highlighting the difficulty of clearly splitting public from private and North from South. This is especially the case for loans provided by the MDBs and Regional Development Banks (RDBs) where the underlying capital has been raised from such sources. Consider the case of the World Bank Group's International Bank for Reconstruction and Development (IBRD). The IBRD sells bond instruments via an AAA/Aaa rated facility on the world's financial markets, where it raised USD 40 billion in financial year 2012 through bond issuances in 23 different currencies[11] (World Bank, 2012). This first-order leveraging effect (i.e. using capital commitments and guarantees from governments to raise private finance from capital markets) is separate from leveraging that can be achieved downstream at the individual project level.

The IBRD then uses this same bond issuance facility to "mobilise funds from the private sector for climate change projects in member countries" through its Green Bonds product (World Bank, 2012). With buyers of the bonds being both public and private investors from all over the world, the question therefore becomes, is this raised capital public or private, attributable to developed or developing countries? While the government bears the risk in the event of default, the source of a significant share of this money is undeniably private sector investors. One recent report classified all funding from the Asian Development Bank (ADB), an RDB domiciled in a developing country, as a South-South flow from the public sector (BNEF, 2012), while others avoid classification but note that such finance is generally treated as public (Buchner et al., 2012; Buchner et al., 2011; OECD, 2010). If risk exposure is chosen as the defining principle for attribution of funds between the public and private sectors, then defining the country of origin for ADB funds, where the U.S, Canada, Japan, Germany, and Australia have a combined subscribed capital commitment of over 50% (ADB, 2012) as a South-South flow seems contradictory. If the MDBs and RDBs are owned by both developed and developing country governments[12] and raise significant capital from both the private and public sectors via financial markets in both the North and the South, how should country and sector of origin be determined?

Assessing when in the financing chain mobilisation is estimated and reported

It is also important to consider that some debt instruments can potentially mobilise private sector finance over a long period of time. One example of this would be credit lines dedicated to climate-friendly investments, such as the KfW-financed credit line for the Latin American development bank CAF, which will cover several types of mitigation and adaptation activities (CAF, 2012). Some of these credit lines have built-in leverage requirements, for example, the European Investment Bank (EIB)-financed credit line

[11] USD 64%, Other (BRL, CAD, CLP, COP, GHS, INR, KRW, MXN, MYR, NGN, NOK, NZD, PLN, RUB, SEK, TRY, and UGX) 12%, AUD 8%, JPY 5%, GBP 5%, EUR 3%, ZAR 3%.

[12] The United States and Japan are the largest two shareholders in the African Development Bank (AfDB).

for the Caribbean Development Bank, which can be used only to fund up to half the costs of selected projects relevant to climate mitigation and adaptation (IISD, 2012).

Another example of initial financing having a mobilisation effect over several years is revolving loans or funds, where an initial investment is used to generate revenue, which is in turn used for additional loans. For example, the Thai Energy Efficiency Revolving Fund has been in operation since 2003 and has financed 294 projects as of February 2012 (UNEP, 2012). While finance for this particular fund came from domestic sources, others have been established by using finance from international sources, such as a revolving loan programme funded by an initial loan from JICA for energy infrastructure renovation assistance in Peru agreed in October 2012 (JICA, 2012).

While nearly all institutions examined assess mobilisation on an *ex ante* basis at the point of commitment, OPIC takes an innovative approach by verifying a randomised sample of projects *ex post*. Under this approach, OPIC reports a minimal amount of variation between *ex ante* and *ex post* assessments of mobilised co-financing for sampled projects. The EBRD also verifies some of its SEI projects on an *ex post* basis, choosing to focus on its largest investments.

4.2. Equity instruments

Equity instruments can be public or private; direct or indirect via a fund-of-funds (FoF) approach; and include mezzanine, venture capital and/or quasi-equity (C tranche debt). Equity involves a capital investment that provides an ownership interest in a portfolio company wherein returns are derived from revenue or value proportional to the investor's shareholdings. Considering the important role that equity plays in the capital structure of a company, public financial institutions are increasingly interested in ways to scale-up the availability of equity for climate projects. However, equity instruments can have unique characteristics that can complicate how leverage and mobilisation is estimated by public financial institutions. Selected actors' tracking of mobilised climate finance for equity instruments is outlined in Table 3, below.

Table 3: Selected actors' tracking of key components: equity instruments

Reporting Entity	Metrics: does methodology and internal tracking architecture address:				
	Assessing Causation	**Country of Co-financier**	**Private or Public**	**Point of Estimation**	**Double Counting**
ADB	"Direct Value Added"	Unclear	Specified	*Ex ante*, first fund level	Possible
CDC (UK)	pre-existing investment excluded	Specified*	Specified	*Ex ante* and *ex post* at fund closure; leverage tapered 25% for each subsequent funding round;	Possible
CIF-CTF	Assumed TPC (Total Project Cost)	Not Specified	Specified	*Ex ante*	Possible
CP3 (UK)	Attribution to UK on pro-rata share of public; "additional"	Not Specified	Specified	Annual *ex post* verification; final beneficiary level	Minimised
EBRD-SEI	Assumed TPC	Specified*	Specified*	*Ex ante*, some verified *ex post*	Possible
GEEREF (EIB)	Estimates a "leverage" and "multiplier" effect	Not Specified	Specified*	Annual *ex post* verification; sub fund and final beneficiary levels	Minimised
JBIC (Japan)	Only JPN private money	Specified (Japan)	Specified (Private)	*Ex ante*, verified *ex post*	Minimised
Swedfund (Sweden)	Not defined	Specified*	Specified	*Ex ante*, verified *ex post*	Minimised

Source: Authors, based on personal communications and publicly available information (Bhandari, 2013; CDC Group plc, 2012; Zhang, 2013; Ockenden, 2013; Klingel, 2013; Arnould, 2013; Sato, 2013; Swedfund, 2010)

Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance

Three institutions' approaches in determining whether, and to what extent, their interventions have mobilised private capital are outlined below. The first is the CDC,[13] the development finance institution (DFI) wholly owned by the UK Department for International Development (DFID), which excludes any investment in equity funds that predates its own investment. The CDC also applies a tapering factor that allows 100% of non-pre-existing funds to be counted for first round funds, but then discounts this by 25% for every subsequent round of funding (CDC, 2012). For example, if the CDC enters into a fund already in its third round, it will only count 50% of co-financing as having been mobilised.

The second is the UK's Climate Public Private Partnership (CP3) programme, which integrates the concept of additionality into the process of assessing how much financing its intervention has mobilised. To do this, the UK forecasts what percentage of sub-funds and direct investments would have reached financial close without intervention by the CP3. This can vary substantially according to sub-fund. For instance, DFID reported that for the CP3 Asia Fund, 60% of sub-funds and 80% of direct investments would have reached closing, and therefore that only 40% of sub-funds and 20% of direct investment were additional. For the CP3's investment in the IFC's Catalyst Fund, it was estimated that only 40% of sub-funds would have reached closing (Ockenden et al., 2012; UK DFID, 2011).

A third example is provided by the ADB, which estimates the amount of DVA commercial co-financing mobilised by its equity investments. The ADB's definition of DVA co-financing as it relates to equity

[13] CDC was established before the UK's International Climate Fund (ICF) and predates the ICF's key performance indicator methodology for tracking private climate finance mobilised was developed. It is also not counted as part of the ICF or a core UK climate initiative, which explains any inconsistencies in methodology between the CDC approach and ICF approach (which encompasses projects such as CP3).

investments only includes investments made by private actors in funds where the ADB acts as a general partner,[14] excluding those where the ADB acts only as a limited investment partner (ADB, 2012).

Determining how, or if, mobilisation is attributed to specific actors

Another unique characteristic of private-equity (PE) funds that is relevant for assessing the country of co-financing is the use of offshore financial centres (OFCs) by fund managers. Public entities will often provide equity finance through FoF or other investment fund models that are managed by private fund managers who choose a country of domicile based on a range of factors including regulatory and tax conditions. Consider the case of Swedfund, which utilises 12 different fund managers to channel equity investment into projects. One of the PE funds in which Swedfund invests is legally domiciled in Mauritius, a popular OFC. This means that the country of origin for any investments made by the PE fund with Swedfund public money would appear as Mauritius. Further, the 15 funds in which Swedfund invests were on average comprised of 39% other public money, 57% money from private investors, and 4% Swedfund money (Swedfund, 2010). This is also relevant both in assessing when and where mobilisation is estimated as well as in determining whether co-financing is public or private. In this case, while Sweden may know that its public intervention provided equity financing for a climate activity in a developing country, other potential public co-financiers involved in financing the end activity may not know that this Mauritian-originating equity is from a Swedfund anchored fund and could also report this as financing that its intervention has mobilised.

Further illustrating the potential for double counting is a case of dual public investments by OPIC and the CDC in Berkley Energy's Renewable Energy Asia PE Fund. Although established via an initial contribution from CDC (Berkley Energy, 2010), subsequent inputs by OPIC later claimed to have "catalyse[d] and facilitate[d]" this previous investment (OPIC, 2011).

Assessing when in the financing chain mobilisation is estimated and reported

Equity instruments, in particular FoF models, provide additional challenges in relation to when, where, and for how long the mobilisation effect is assessed. For example, consider the PE FoF model for delivering climate finance, which is structured as follows:

1. One fund is established wherein initial seed capital is provided to attract additional funding from larger PE firms.

2. This umbrella fund is managed by an independent private fund manager, which then takes an equity stake in smaller PE funds that meet predefined criteria for climate relevance and profitability.

3. These individual funds then invest in individual projects or portfolio companies, which themselves attract additional debt and equity financing.

This multi-tier structure also raises interesting questions in relation to the causal relationship between one unit of initial equity funding provided by a public IFI and every subsequent unit of equity raised by successive funds and both equity and debt at the final beneficiary or project-level. The implications of this structure on tracking and reporting of mobilised finance are illustrated by the examples provided in the following paragraphs.

On the issue of fund hierarchy, the Global Energy Efficiency and Renewable Energy Fund (GEEREF) estimates and reports two separate numbers for the amount raised at the intermediary fund level (where it uses the term "leverage") and the amount raised at the downstream beneficiary and project level (where it uses the term "multiplier") (Arnould, 2013). It also separates these estimations out by debt and equity. One

[14] General partners bear full liability while limited partners are only liable up to the extent of their investment.

difficulty in this FoF model, however, is to maintain the same level of tracking for each downstream fund. For instance, it is easier for GEEREF to know the sector and domicile for all of its co-financiers in first level funds, but this may become increasingly difficult at the portfolio company and project level. Without this information, it may be difficult to avoid double counting between multiple public entities involved in a project.

The point at which mobilisation is estimated differs across institutions examined. The ADB, Swedfund, and JBIC estimate mobilisation only at the first fund level, whereas the CP3 and GEEREF for instance estimate mobilisation at the final beneficiary level. These differences in where and when mobilisation is estimated can significantly impact the amount of finance reported as mobilised, due to the inherent multiplier-effect of the FoF model.

4.3 Grant instruments

Grant instruments are composed of either direct cash or subsidy and in-kind contributions. In-kind contributions can be legislative and regulatory guidance, technical assistance, capacity building, advisory services, feasibility studies, public-private platforms, etc. In 2010, OECD DAC members used grants to provide a significant share (32% of their USD 13.8 bn) of financing for mitigation-focused activities in developing countries and a large share (65% of their USD 3.1 bn) for adaptation-focused activities (OECD, 2012).[15] While grants account for a relatively small proportion of overall climate finance, they can play a significant role in reducing risk, proving the viability of technology and markets, generating environmental data crucial for assessing project feasibility (e.g. wind speed, geothermal hotspots, insolation), and supporting the development of policy mechanisms. They are thus an important source of climate finance for some types of climate-relevant activities (in particular for adaptation) and in some countries (e.g. Least Developed Countries). Selected actors' tracking of mobilised climate finance for grant instruments is outlined in Table 4, below.

[15] Due to methodological issues for how the OECD DAC-CRS applies the Rio Markers, the amount of finance for mitigation and adaptation should not be added together to obtain a principal 'climate' total. Amounts for 'principal' mitigation projects may contain financing for projects also marked as adaptation 'significant' and *vice versa*.

Table 4: Selected actors' tracking of key components: grant instruments

Reporting Entity	Metrics: does methodology and internal tracking architecture address:				
	Assessing Causation	**Country of Co-financier**	**Private or Public**	**Point of Estimation**	**Double Counting**
CIF-CTF	Assumed TPC (Total Project Cost)	Not Specified	Specified	*Ex ante*	Possible
CTI-PFAN	Assumed, total investment secured via PFAN	Not Specified	Not Specified	*Ex ante*	Possible
EBRD-SEI	Assumed, multiple methods	Specified	Not Specified	*Ex ante*, some verified *ex post*	Possible
GEF	Assumed TPC	Not Specified	Specified	*Ex ante*	Possible
GET-FiT (U.K)	Attribution to UK on pro-rata share of public finance; "additional"	Not Specified	Specified	*Ex ante*, verified *ex post*	Minimised
GPOBA	Assumed TPC	Not Specified	Specified	Not specified	Possible
RBF (U.K.)	Attribution to UK on pro-rata share of public	Not Specified	Specified	Annual *ex post* verification	Minimised
USAID-GDA	Assumed TPC	Not Specified	Specified	Not specified	Unclear
UK-ADB PV Guarantee Partnership	Assumed TPC	Not Specified	Specified	*Ex ante*, verified *ex post*	Possible

Source: Authors, based on personal communications and publicly available information (Zhang, 2013; Taylor, 2013; Klingel, 2013; Aoki, 2012; Ockenden, 2013; GPOBA, 2013; Warrander, 2013; Cho, 2013)

Grant instruments and in-kind support highlight specific challenges in relation to two particular components of the framework for assessing comparability:

Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance

The difficulty in assessing whether, and to what extent, grant or in-kind support has mobilised private finance into climate activities is illustrated by two interesting aspects related to in-kind co-contributions and public-private platforms.

The first involves the treatment of in-kind co-contributions from external partners. Currently, there is variation in how in-kind contributions from either the beneficiary or other project or programme partners are accounted for in current estimates of mobilised climate finance. For example, information from GEF and the USAID's Global Development Alliance (GDA) includes the value of in-kind services provided by project partners in estimates of the amount of money its interventions have mobilised (USAID, 2012). Information on the geographical origin of the in-kind contributions is not always available, which does not allow for a routine separation of North-South from South-South flows.

The second aspect involves assessing whether, and to what extent, public-private platforms mobilise financing. Public-private platforms can be funded and sponsored by both public and private institutions and are intended to act as a hub for connecting private and public actors. Such programs may also involve a project-development technical assistance component that help project developers write business plans, more effectively "pitch" potential funders for support, and link them to relevant regional and technical experts. These platforms can also be focused on sectoral-development and provide policy and regulatory guidance to developing countries from regional and technical experts familiar with investment barriers in a

specific country context. One such example of a public-private platform oriented towards sectoral-development is the UK's Capital Markets Climate Initiative (CMCI), which is designed to build ties between UK based financial institutions, developing countries, and renewable energy experts. Currently, the UK does not plan to assess mobilisation for any catalytic impact had by the CMCI, given no known methodologies to do so, though would apply existing estimation methods for any projects where the UK government subsequently provided financing (Ockenden, 2013).

The Private Finance Advisory Network (PFAN) presents a second example of these public-private platforms.[16] Funders include several bilateral and multilateral donors such as USAID, who provide a range of services to project developers including identifying sources of financing. Thus, PFAN can help project developers to mobilise climate finance via indirect interventions and advice. USAID reports that PFAN has mobilised over USD 432 million as of 2012 (Taylor, 2013). This number is estimated from the total investment raised for projects receiving direct facilitative support from PFAN. However, PFAN currently does not systematically track the sources of financing for these closed deals. This leaves open the possibility that these sources involve other donors or IFIs who might claim to have mobilised this same money via their relatively more direct involvement in projects. Taken together, these examples highlight the current lack of clarity for how, or whether, to assess mobilisation for facilitative or indirect financing roles while avoiding double counting by more direct financing partners.

Assessing when in the financing chain mobilisation is estimated and reported

Different assumed time horizons for the mobilisation effect by grant instruments or in-kind contributions can greatly affect the comparability of mobilisation estimations across institutions.

This is especially true for TA or capacity building (CB) activities, where there can be significant variation in how different actors estimate how much money has been mobilised. One observation from leverage estimations by the EBRD's Sustainable Energy Initiative (SEI) is that leverage ratios for TA actions in general are very high (a low of 1 to 20 and a high of 1 to 2762 – across different types of TA activities and calculation methods) (EBRD, 2012). The EBRD estimates leverage in three different ways in order to determine the leveraging effect its TA intervention achieved in relation to its own financing. These relate to: internal project leverage (EBRD SEI funding compared to TA costs), component leverage (SEI-component funding compared to TA costs) and total leverage (total project value including non-SEI component compared to TA costs). The different estimation methods resulted in ratios ranging by up to a factor of nine for projects of the same type, providing an interesting example of the effect that different definitions have on estimating TA leverage (EBRD, 2012). This is also true for feasibility studies, pilot projects, or other technology-proving activities that are often funded by grants where the causal impact of the intervention on subsequent private investment is even more difficult to determine (see Zorlu Enerji case study in Section 5).

4.4 De-risking instruments

De-risking instruments, including insurance, guarantees and derivative-based products, are tools that can directly improve the risk-return profile in favour of low carbon technologies.[17] Investment in climate mitigation activities in developing countries can be associated with high perceived and actual risks related to environmental, technological, political, financial, and regulatory uncertainties (for a more detailed discussion see e.g. Corfee-Morlot et al., 2012 and Frisari et al., 2013). To address these concerns, several

[16] PFAN is a multi-stakeholder platform working under the International Energy Agency's Climate Technology Initiative with the intention of bridging the gap between renewable energy project financing needs and investors (PFAN, 2012).

[17] While not profiled in this section, results-based financing is highlighted in Annex B as an additional mechanism with the potential to reshape the risk-return profile of private and public financial institutions by transferring risk to borrowers and/or sponsor governments in host countries.

de-risking instruments are available, e.g. partial credit guarantees, political risk insurance, expropriation insurance, foreign exchange insurance, wind-availability insurance, power purchase agreements (PPA), feed-in-tariffs (FiT), etc. Other financial instruments such as subordinated debt or multi-tranche financing facilities can restructure the distribution of risk and returns in a way that can make projects more appealing to different classes of investors.

As outlined in previous analysis (Clapp et al., 2012), guarantees are treated differently by different actors involved in providing and tracking climate finance. The MDBs include guarantees in their estimates of mitigation expenditure (Joint-MDB, 2012), and the US reports use of guarantees in its submission to the UNFCCC on fast-start finance (United States, 2012). However, guarantees are not included in OECD-DAC ODA statistics, as this database records flows (and not potential flows). Guarantees are also not included in some countries' submissions on fast-start finance (e.g. Norway). Selected actors' tracking of mobilised climate finance for de-risking instruments is outlined in Table 5, below.

Table 5: Selected actors' tracking of key components: de-risking instruments

Reporting Entity	Metrics: does methodology and internal tracking architecture address:				
	Assessing Causation	**Country of Co-financier**	**Private or Public**	**Point of Estimation**	**Double Counting**
CIF-CTF	Assumed TPC (Total Project Cost)	Not Specified	Specified	*Ex ante*	Possible
OPIC	Assumed TPC	Specified	Specified, disaggregated	*Ex post* site visits for randomised sample	Rarely co-invests with other DFIs
EBRD-SEI	Assumed TPC	Specified	Not Specified	*Ex ante*, some verified *ex post*	Possible
CHUEE	Assumed TPC	Specified (China)	Specified	*Ex ante*	Possible
JBIC	Only JPN private money	Specified (Japan)	Specified (Private)	*Ex ante*, verified *ex post*	Minimised

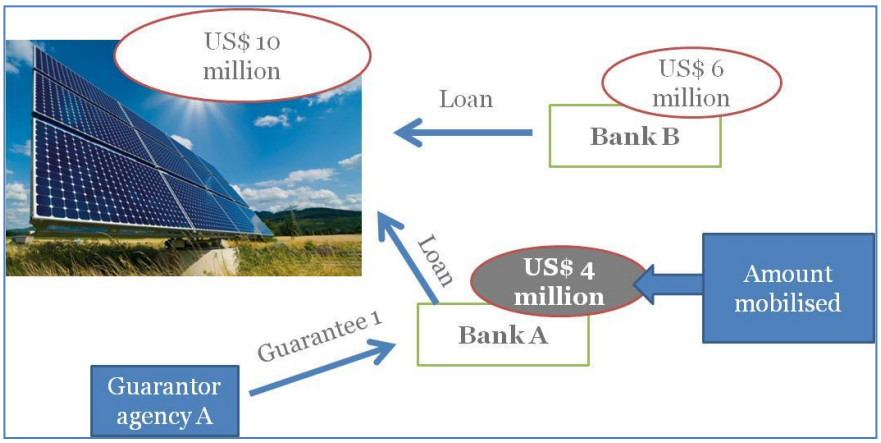
Source: Authors, based on personal communications and publicly available information (Zhang, 2013; Kuhlow, 2013; Klingel, 2013; IFC, 2010; Sato, 2013)

Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance

The comparability of leveraging definitions and methods in place across de-risking instruments is best discussed in terms of two different methodological approaches: the first captures only direct mobilisation while the second includes indirect mobilisation. The nature of insurance and guarantees, i.e. that a discrete instrument (e.g. loan or equity) is guaranteed or insured by a specific de-risking instrument, makes estimating the direct leverage effect a relatively easy task. The indirect effect, i.e. the role that the total value of the guaranteed loan or insured capital plays in mobilising additional finance required to cover total project/programme costs, however can be more difficult to determine.

The first approach, which estimates mobilisation based only on the direct leveraging effect of the guarantee on the loan, is illustrated in Figure 2 below.

Figure 2: DAC methodology for assessing mobilisation via guarantees



Source: Survey on guarantees for development, OECD DCD/SDF, 2013

To increase the availability of information on the amount of financing mobilised by official guarantees, the OECD DAC has launched a survey to collect information on guarantee schemes used by development finance institutions. The main objective of the survey is to "estimate the volume of private sector flows to developing countries for development purposes that have been supported by guarantee schemes over the period 2009-11."

For the purpose of the survey, the "amount mobilised" by a guarantee is defined as "the full nominal value of the instrument (e.g. loan, equity) to which the guarantee relates, regardless of the share of this value covered by the guarantee". In the example outlined in Figure 2, this would equate to USD 4 million. This definition includes only the direct leveraging effect of the guarantee (loans to guarantee). In order to provide data on the use of official guarantees for leveraging private climate finance, the survey includes a question to assess whether the issuing institution tracks climate change relevance [18] as well as a question to identify the sector benefitting from the guarantee.[19] Preliminary results from the survey were presented at the March 2013 CCXG Global Forum. These highlighted the difficulty of robust data collection in the absence of a specific definition of what technologies and activities comprise climate finance; the complex contractual structures of some guarantee schemes; and the risk of double counting in the case of multiple public actors providing co-guarantees.

The second approach, which bases mobilisation on all external financing in a project, is the approach taken by both the EBRD and OPIC. Under EBRD methodology, mobilisation in the example presented in Figure 2 would be reported as USD 10 million. OPIC, on the other hand, would report that its intervention has mobilised USD 10 million less the amount of the value of the guarantee. Interestingly, if OPIC was providing insurance as opposed to a guarantee, it would report the entire USD 10 million as mobilised.

To illustrate the importance of accounting for either direct or indirect mobilisation by guarantees consider the China Utility Energy Efficiency Program (CHUEE), an initiative launched by the IFC in 2006 to provide guarantees to enable local banks in China to make loans in RE projects. These guarantees were also coupled with advisory services, risk capital, and Global Environment Facility (GEF) grants by donors. This project was lauded as "one of IFC's most successful programs" for scaling up sustainable energy

[18] The survey sample includes aid agencies, Development Finance Institutions and Multilateral Development Banks. The exact question in the Survey is: "Indicate if the project addresses climate change adaptation or mitigation issues. For "Yes", the climate change adaptation/mitigation objective has to be explicitly promoted in project documentation." The response is "Yes", "No" or "Not tracked".

[19] The respondent is asked to: "Report the sector that the project supported by guarantee scheme intends to benefit." OECD/DAC purpose codes are given as response options.

investment in China (UN AGF, 2010). However, it illustrates the difficulty of consistently reporting leverage ratio, as estimates of CHUEE's leverage effect have ranged from 100 to 1 (UN AGF, 2010) to 1.6 to 1 (UNEP, 2011). The main discrepancy accounting for these differences is whether the methodology includes only the direct leveraging effect of the guarantee (loans to guarantee) or the indirect effect of the guarantee (total project costs to guarantee). Other factors having an impact on the leverage ratio include which co-financing elements were used in the numerator, which enabling public instruments and mechanisms are included in the denominator, and the point in time in the project lifecycle when the estimation was done.

A further example illustrates the role that guarantees can play in leveraging investment in equity instruments such as PE funds. OPIC is prevented by its mandate from making direct equity investments in funds. Instead, OPIC sells "certificates of participation" in US debt capital markets and uses the proceeds to make a senior secured loan in the investment fund (OPIC, 2013). Repayment to holders of these certificates are guaranteed by OPIC and the US government. To estimate leverage for its interventions in investment funds, OPIC uses the same methodology as it does for guarantees.

Tracking whether financing is public or private and determining how, or if, mobilisation is attributed to specific actors

CHUEE also presents an interesting example in regards to apportioning mobilisation by instrument, sector, and actor. This project has had grant financing from GEF, advisory services funded by Finland and Norway, guarantees provided by the IFC, and loans issued by provincially owned Chinese banks. Is capital leveraged from provincially owned Chinese banks public or private? In this case, apportioning mobilisation by instruments and actors will not be straightforward.

5. Discussion: Applying the framework to a case study

This section uses financial information from a climate relevant project to illustrate issues and implications of the methodological framework for tracking mobilised climate finance (Section 3, above) and the different empirical methods to estimate mobilised climate finance (Section 4, above). The case study selected is "Zorlu Enerji", a wind power plant located in Pakistan, as its financing structure highlights a number of the complexities that need to be addressed when quantifying the level of mobilised climate finance.

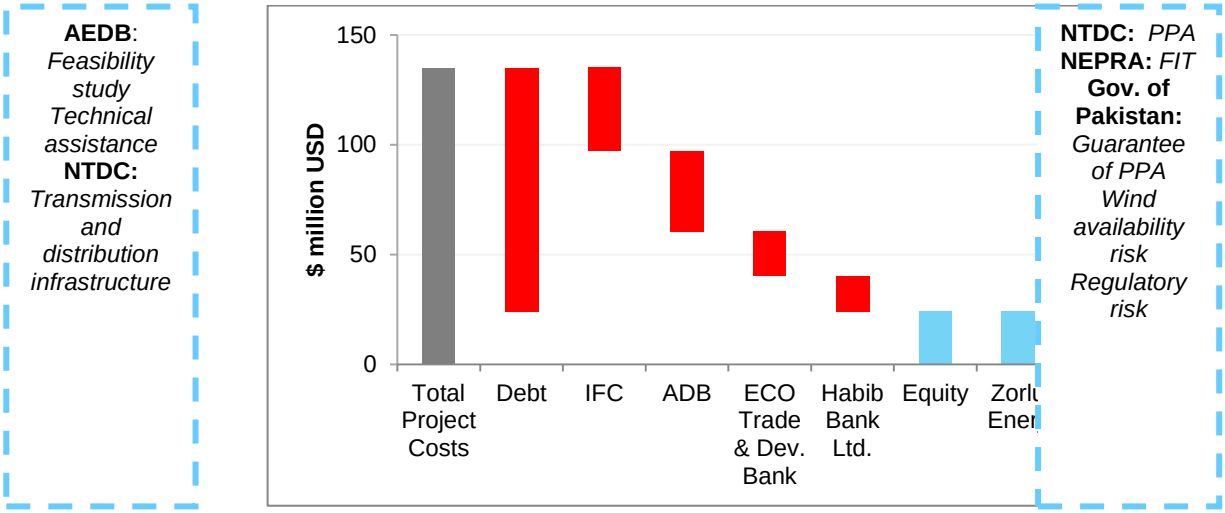
5.1 Case study project description and financing structure

Zorlu Enerji signed an agreement in 2006 with the Pakistan Alternative Energy Development Board to construct the first wind power plant in the country. The project was designed to generate 167.2 MWh of electricity per year to meet the energy needs of approximately 115,000 households (Zorlu Enerji, 2012). Preceding this project was a feasibility study, funded by the US Agency for International Development (USAID) (AEDB, n.d.), and an agreement that the National Transmission and Despatch Company (NTDC) of Pakistan would build the power transmission infrastructure (ADB, 2010). The Zorlu Enerji project also benefited from a number of existing financial instruments, policies, and measures implemented by the Government of Pakistan (GoP) These include a power purchase agreement (PPA) guaranteed by the GoP; a feed-in tariff (FiT) at a pre-agreed rate; favourable land rates; the lifting of import duties; and permission to issue corporate registered bonds (AEDB, n.d.). All these elements contribute to the policy and regulatory context in which the deal took place.

The financing structure of the Zorlu Enerji wind farm is outlined in Figure 3 below. The central graph shows the financial flows associated with the construction of the wind farm itself, highlighting that funding came from a variety of sources – national and international, public and private. The left-hand side outlines some of the enabling activities that were needed in order for a wind farm to become a feasible project

option in that location (such as a wind feasibility study). The right-hand side outlines actors involved in improving the economic attractiveness of the project, including the GoP's guarantee of a PPA.

Figure 3: Zorlu Enerji wind farm (Jhimpir, Pakistan)[20]



Source: Authors; Bloomberg New Energy Finance (2011), Project Finance Magazine (2012), AEDB (n.d.), ADB (2010) data

Table 6 below provides relevant background information on each of the debt and equity providers who invested in the project. These investors were both public and private actors, and based in both developed and developing countries.

Table 6: Background on Zorlu Enerji debt and equity financiers

Financier	Type	Public or Private	Legal Domicile of HQ	Legal Domicile of Controlling Owner
IFC	IFI, MDB	Public	United States	Multiple (184)
ADB	IFI, RDB	Public	Philippines	Multiple (67)
ECO Trade & Dev. Bank	IFI, RDB	Public	Turkey	Pakistan, Iran, Turkey
Habib Bank Ltd.	Commercial Bank	Private	Pakistan	Pakistan
Zorlu Enerji Pak. Ltd.	Special Purpose Enterprise	Private	Pakistan	Turkey

Sources: IFC (2012), ADB (2010), Eco Trade & Dev. Bank (2013), and BNEF (2011)

[20] Alternative Energy Development Board (AEDB), National Transmission and Dispatch Company Ltd. (NTDC), National Electric Power Regulatory Authority (NEPRA), feed-in tariff (FIT), power purchase agreement (PPA). Note that different sources of information on project finance for this specific project vary slightly.

5.2 Implications for estimating mobilisation

This section uses the framework outlined in Section 3 to highlight implications of different methods to estimate mobilised climate finance from this case study as well as other examples.

Assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance

The Zorlu Enerji case study highlights that a combination of enabling conditions and interventions are likely to be needed in order for an activity to be implemented, and thus that picking only one of them as the reason for mobilisation is difficult to do objectively. For example, as Zorlu Enerji was the first wind power plant in Pakistan (Zorlu Energy, 2008), the role of the feasibility study for wind power could have been a determining factor in deciding to go ahead with the project. Both Pakistani sources (AEDB, which is part of the Pakistan Ministry of Water and Power) and developed country sources (in this case, USAID) were involved in promoting or supporting this study. Similarly, the market for electricity produced by the plant (guaranteed by the Government of Pakistan, (IFC, 2012b)), could also have been a key factor in mobilising the finance for the project to go ahead. The provision of loans for the project from the IFC and the ADB could also have been key in helping to mobilise domestic and other private sources of funding for the project.

The above illustrates that although it is possible to identify a correlation between interventions by developed countries and the climate finance-related flows of this project, it is however more difficult to identify an individual intervention as having been solely responsible for mobilising finance for the entire project. Nevertheless, some public actors involved in climate finance (e.g. CIF, GEF, IFC, OPIC, WB) operate under a mandate to participate in projects that would not have advanced without public intervention. This therefore assumes that any funds mobilised from these actors in climate projects have been *de facto* mobilised by their intervention.

Determining how, or if, mobilisation is attributed to specific actors

How to attribute mobilisation based on the geographical source of interventions in the Zorlu project is not necessarily straightforward. The geographical location of the actors involved in the direct financing of the Zorlu project is shown in Table 6 above, as is the location of their headquarters. In addition, USAID (US, public source) was involved in the wind feasibility study. This latter intervention has a clear geographical source.

However, attributing the source of the majority of the finance provided via debt or equity is not straightforward for this example, with the exception of Habib Bank. Indeed, the other direct financiers of the project include the IFC, an IFI owned by over 184 developed and developing countries; the ADB, a regional development bank also with multiple owners from both developed and developing countries; the ECO Trade and Development Bank, with owners in an Annex I country (Turkey) and non-Annex I countries (Iran and Pakistan). Determining the actual geographical source (and/or the accounted source) of climate finance may be difficult to determine for these multi-owner institutions.[21] It is also noteworthy that Turkey (an Annex I but not an Annex II country – and therefore with no reporting guidelines related to climate finance) is involved in this project.

Tracking whether financing is public or private

This case study allows for a relatively straightforward assessment of whether funding comes from publicly or privately held entities (although the initial source of the funding may be more complicated, e.g. if

[21] In some cases, a specific public investor channels money through intermediaries such as the IFC or ADB to implement discrete projects or programmes using only one instrument, which makes attribution more straightforward.

funding was raised via bonds on capital markets). However, this will not always be the case, e.g. if one of the sources of climate finance has mixed public-private ownership (e.g. a joint venture, or a carbon fund with both public and private participants).

Assessing when in the financing chain mobilisation is estimated and reported

This case study also illustrates the impact of when mobilisation is accounted for in the total estimate of what has been mobilised as well as the potential for double counting. Thus, if developed country funding of feasibility studies can claim to have mobilised the first [n] projects using that feasibility study (and/or for [y] years following the study), then the feasibility study could claim to have mobilised the entire USD 130 million Zorlu Enerji project (and potentially any follow-on projects). In contrast, if the multilateral institutions involved both indicate that their intervention has mobilised the remaining project's finance, mobilisation estimates would be approximately USD 90 million (and if both multilateral institutions reported in this manner, the USD 90 million would be double-counted).

To illustrate the broader risk of double counting, this paper conducted a preliminary analysis of clean energy project financing deals contained in the Bloomberg New Energy Finance database. This analysis found that of the 39 deals closed in 2012 in the renewable energy sector in NAI countries involving direct public Annex I co-financing, nine involved more than one Annex I country public actor[22] (BNEF, 2013). This means that double counting of direct financing is a risk in 9 out of 39 cases.[23] The total risk of double counting could be considerably greater, as the BNEF database excludes small projects and does not capture interventions such as facilitative support, grants for feasibility studies, and capacity building.

6. Conclusions

There are many different ways of mobilising climate finance. These include direct interventions such as participating in financing a specific project/programme, to indirect interventions such as technical assistance, feasibility studies and funding credit lines. Different instruments to mobilise climate finance will be appropriate in different circumstances. The level of climate finance mobilised will vary significantly according to context, financing instrument, and the definitions and methods used to estimate it.

This finance will work in different ways, over different timescales, and involve different numbers of intermediaries. There is therefore no single obvious point where mobilised climate finance should be assessed. This complicates both tracking and reporting such finance. Further difficulties in the context of tracking the USD 100 billion commitment under the UNFCCC arise from the fact that there are no agreed definitions for what climate projects encompass, what interventions constitute climate finance, or how to assess "mobilised" climate finance.

This paper has examined the definitions and tracking methods in place in several selected bilateral and multilateral financial institutions and funds that provide finance for climate responses in developing countries. There are some similarities between the definitions and methods used by different institutions. For example, no institutions systematically report or attribute co-financing disaggregated by country or region of origin (although some do track data at this level of disaggregation). However, there are also some considerable differences between the definitions, methods, tracking and reporting of climate finance between different institutions. These similarities and differences are summarised below.

Definitional and methodological issues

[22] Including both governmental bodies and State Owned Enterprises (SOEs).

[23] Financial information is not available for all deals, so it is not possible to quantify the level of this potential double-counting.

Within the context of the UNFCCC negotiations, neither the term “mobilised” nor “leverage” has been defined. However, some international financial institutions and bilateral donors have established specific definitions for these terms. Unsurprisingly, there are differences in the definitions between different actors. There is thus also a range of methods being used to track mobilised climate finance, both between different financial instruments used, and within instruments.

Identifying what constitutes “mobilised” climate finance is not an exact science. Even if a single definition for “mobilised” was agreed, given that climate actions involve multiple actors and multiple interventions, it would be difficult to disentangle the effects of an individual actor or intervention to pinpoint which one exactly was the cause of the intervention.

The definition of leverage is also important. This paper has highlighted that definitions of leverage can vary within institutions – and that some institutions use multiple definitions and methods (to illustrate e.g. leverage compared to a specific component cost, or compared to total project costs). The results of these different methods to estimate leverage can vary widely. If leverage factors are to be used in an assessment of how much climate finance has been mobilised, it will be important to have clear guidance on what should be included in the numerator and the denominator, in order to ensure that different leverage ratios are comparable.

This paper has identified four key components of a framework that could be used to track mobilised climate finance. These are:

1. Causality: assessing if, and to what extent, there is a causal link between an intervention and mobilised climate finance.

2. Attribution: determining how, or if, mobilisation is attributed to specific actors.

3. Public or private: tracking whether financing is public or private.

4. Point of estimation: assessing when in the financing chain mobilisation is estimated and reported.

There is considerable variation between different institutions in the definitions and methods used to estimate mobilised climate finance. Some actors assume that their intervention has mobilised all associated financing. This may be in part due to their mandate to participate in projects that would not have advanced without public intervention. Other financiers adopt a more conservative approach by utilising methodologies that include or exclude financing based on a variety of aspects, including those outlined in Table 7 below.

Table 7: Variation between methodologies to assess and estimate mobilisation

Methods related to…	**More Conservative**	**Less Conservative**
Causality	Assessing whether an activity is additional; only counting the climate relevant sub-component; providing a justification for the direct value-added of an intervention	Assessing mobilisation based on total project costs
Attribution	Estimating a *pro rata* share of mobilised finance based on the level of involvement of an actor in relation to other public financiers or only counting mobilised private sector finance that originates from the Annex II public institution's home country	Assuming an intervention has mobilised all external financing or counting mobilised private finance from all geographic sources
Public or private	Systematic and disaggregate tracking of whether other actors are public or private, which facilitates any effort to minimise double counting	Not tracking whether other actors are public or private, which makes avoiding double counting in multi-donor projects more difficult
Point of estimation	Excluding financing that predates an intervention in a deal as well as 'tapering' of financing mobilised in subsequent investment or funding rounds	Including all financing that was raised before and after an intervention

Source: Authors

As many actors can be involved in financing a climate activity, the point of time at which mobilised climate finance is estimated can affect the number of actors included in the estimation (and therefore the amount of climate finance accounted). The point of measurement can therefore impact the estimated level of mobilisation. This is particularly the case for climate finance that is channelled through instruments that are designed to operate over several years and encourage follow-on financing (such as revolving loan funds, or fund-of-funds models).

The point of measurement for mobilised climate finance can also affect other factors. These include the ease and feasibility of collecting the data (which may be easier to request and less resource-intensive to obtain from the first direct beneficiary of the climate finance, rather than further along the financing chain). Where mobilisation is assessed can also affect the extent or risk of double counting (for example, if several actors along the same financing chain each report climate finance that their intervention is considered to have mobilised). Finally, the point at which mobilisation of climate finance is assessed can also affect who is assumed to benefit from the funds, for example if climate finance is directed from a donor via an intermediary to its final destination.

Tracking and reporting issues (individual institutions)

This paper highlights that considerable gaps remain in the tracking of climate finance, both at the national and international level. These are particularly marked for private climate finance, and encompass gaps in who tracks, what is tracked and when the tracking is done. Indeed, not all institutions involved in providing public financing for climate activities in developing countries track private co-financing. However, several actors are working on improving their tracking of the private climate finance associated with their interventions, so the level of information on private climate finance mobilised by public interventions should increase to some extent in future.

At present, several institutions track whether financing is from public or private sources, particularly for climate finance provided in the form of equity or debt. However, this information is not always reported at a disaggregated level, which means that it would be difficult to separate out private and other funds mobilised by developed country interventions (which, depending on definitions to be agreed, may be important in the context of reporting progress to the USD 100 billion commitment). Unless this can be disaggregated, considerable double counting could occur. One of the reasons is because multiple Annex I

public funding sources may be used to mobilise climate finance in an individual activity: this occurs in 9 of 39 renewable energy project deals closed in developing countries in 2012 that involved Annex I public co-financing. Another reason may be that the line between public and private finance is not always clear. For example, should climate-related investment in developing countries by Annex II country state-owned enterprises count as public or private?

The point along the climate finance chain where mobilisation is assessed can also impact both estimates of how much mobilisation has occurred as well as the risk of double counting. However, it would be difficult to identify a single point in the climate finance chain where tracking would ideally take place. This is because financing climate responses in developing countries can involve one or several stages of an activity (e.g. feasibility study, infrastructure development, project development), and one or multiple actors at each stage. Each intermediary used may help to mobilise climate finance. Therefore, picking one mid-point (e.g. MDB, NDB) as "the" place to assess and estimate mobilisation would risk under-counting finance mobilised in some cases, and double counting in others. The point of measurement can also affect who the reported recipient ends up being (intermediary or final), as well as the ease and feasibility of collecting the information.

At the level of individual institutions, more information on mobilised climate finance is tracked than is reported. For example, in terms of the geographical source of the co-finance, none of the institutions examined for this paper routinely report co-financing disaggregated by country or region of origin, although some institutions do track at this level of detail.

Some funds and actors do track components related to mobilising or tracking climate finance in great detail, in order to allow for "future proofing" of reports, i.e. they track in detail now, to enable reporting in the future of what has been mobilised for several definitions of what "mobilised" could mean. Other funds that do not do this may need to subsequently revise what they report if they are to be able to fulfil reporting requirements.

Current reporting guidelines under the UNFCCC

The UNFCCC has established reporting guidelines for countries relating to the provision and receipt of climate finance. Current reporting guidelines under the UNFCCC focus on national reports of: i) public climate finance from Annex II countries (bilateral, and contributions to multilateral institutions), and, ii) to the extent possible, private finance leveraged by bilateral climate finance. Information on other sources of climate finance that could potentially count towards the USD 100 billion commitment (such as private climate finance leveraged by multilateral sources; climate finance mobilised by non-Annex II developed countries) is not currently requested in the UNFCCC context.

Possible way forward

At present, mobilised private climate finance is a 'nice to know', rather than a 'need to know' for those reporting at project and programme level. Thus, many financial institutions do not track it, or do not track it consistently. The level of tracking could be improved if developed country governments make it clear to their bilateral finance institution that better tracking and reporting of mobilised climate finance is a key issue that needs to be improved in the near future.

Developed country governments have been "invited to submit to the [UNFCCC] secretariat, by May 2014, information on the appropriate methodologies and systems used to measure and track climate finance." If information collected using these methods and systems are to be consistent and comparable, then guidelines as to what can be included, and how mobilised climate finance should be estimated and reported would be helpful.

Some institutions or groups of institutions (e.g. joint-MDB working group, the International Development Finance Club (a group of 19 national and sub-regional development banks), OECD-DAC) are actively

trying to improve the availability and consistency of data on mobilised climate finance. Improving communication between these institutions and relevant UNFCCC bodies could help to identify relevant work underway that can be built on by the international community in its efforts to scale up investment in climate responses and to improve the tracking and reporting of these efforts. In addition to making progress on definitional and reporting issues related to the USD 100 billion commitment, further work may also be needed in other areas. This could include the broader areas of how to scale up climate-friendly investments, and tracking how finance is facilitating and achieving the target to limit warming to below 2˚C. The issue of how effective climate finance outflows and inflows are in meeting these goals may also need to be considered.

Meeting current reporting guidelines under the UNFCCC will not lead to a complete picture of mobilised climate finance. Reporting guidelines do request that Annex II countries include some information on selected private finance flows in their biennial reports to the extent possible. In addition, finance sources provided to developing countries also need to be reported, to the extent possible, in countries' national communications to the UNFCCC. Further, as it may be difficult to attribute mobilised climate finance to specific interventions or countries, decisions may be needed on whether some of this mobilised climate finance can be reported at an aggregate level (e.g. collectively by several countries or by an independent body) and if so, how. To help solve these attribution issues, developed country Parties may wish to agree to a set of straightforward attribution rules which could be applied to projects with multiple public interventions.

More work is needed towards increasing the comparability of estimates and reports of mobilised climate finance. One approach may be enhanced transparency of the assumptions, definitions, methods, and formulae that are currently or are planned to be used to reach these estimates. This approach would allow for Parties' submissions of reports on mobilised climate finance to be interpreted appropriately and could foster a convergence of reporting methods over time.

Annex A: Institutional-level tracking systems

Some institutions have developed or are in the process of developing agency or institution-level tracking systems as part of larger results management frameworks.

United Kingdom

DFID for example has developed a "Logical Framework" (logframe) that allows for results indicators to be tracked across projects and agencies and includes a specific indicator on public and private finance leveraged. Currently, the UK is one of the only public entities to report leverage on a *pro rata* basis by estimating its share of funds to other public monies and then using this to attribute private sector finance mobilised to only its spending.

United States

The US State Department in co-operation with USAID have developed a list of Standard Foreign Assistance Indicators, which include "total public and private funds leveraged by United States Government (USG)" for a range of climate relevant sectors. USAID has adopted this indicator as part of a results framework for its Global Climate Change Imitative, although reporting this information is currently not required. The sources of the co-financing data for the indicator are quarterly and annual reports and "must be additional to [and advance the objectives of] USG funds invested in a program." (GCC Indicators). Their indicators also allow for reporting to be disaggregated by clean energy, adaptation, sustainable landscapes (including REDD+), and general climate change investments from either the public or private sector. For the purpose of this indicator, leverage is defined as including "funding transferred to a common funding instrument, delivered in parallel or provided in-kind." These leveraged funds may support "improving the enabling environment necessary for the program to succeed, funding the costs of activities advanced by the program, publicizing program results, monitoring program progress and/or outcomes, or sensitizing stakeholders to climate risks, REDD+ issues and opportunities addressed through the program." (GCC Indicators).

Climate Investment Funds

The Climate Investment Funds (CIF) has individual results frameworks for each of its sub-funds and programmes. While each of the results frameworks include indicators for tracking the overall private investment in the relevant sector and region, only the Clean Technology Fund (CTF) includes direct leveraging as one if its core indicators to be reported for all projects. MDBs and CTF country focal points are responsible for reporting these to the CIF Administrative Unit on an annual basis. The indicator is defined as "volume of direct finance leveraged through CTF funding – disaggregated by public and private finance", though it is not clear how CIF defines 'direct' (CIF, 2013). While the CTF requires baseline and targets for each of its core indicators, it allows for these "to be established and updated as appropriate" by the MDBs and implementing agencies. To meet these requirements, the AfDB for instance has to manually go through each project-financing document and assemble a spreadsheet to provide fully disaggregated breakdown of private co-financiers (without country of domicile) to the CIF (Duarte, 2013).

Table 8: Current tracking/reporting of key components by selected institution

Reporting Entity	Does the results framework track:						Notes
	Indicator	**Reporting Unit**	**Public v Private**	**Level of Causality**	**Temporal**	**Double Counting**	
	Multilateral						
ADB	"net private flows from all sources to developing member countries"[24]	Country level	Yes	NA	Unclear	NA	Not climate specific
AfDB	None found	-	-	-	-	-	-
CIF	CTF: "volume of direct finance leveraged through CTF funding"	Country program level	Yes	Assumed for total project costs	Unclear	Allows	Baseline and targets TBD,
World Bank	Systematic leverage/mobilised estimations not publicly available. Project level financials available	-	-	-	-	-	-
EBRD	"total value of the project (including the non climate- related portion) divided by the value of the SEI financing"	Project level	No	Assumed for total project costs	Unclear	Allows	-
IFC	Leverage: project value divided by IFC lending (concessional and non-concessional) for climate related projects, weighted by project size"[25] " total value of the climate-related portion of a project divided by IFC's pro-rata share of the financing plan attributable to that portion"	Project level	No	Assumed for total project costs	Unclear	Allows	-
IADB	"Co-financing as % of regular lending"	Portfolio level	No	NA	Unclear	NA	Can filter for climate specificity

[24] ADB, *Development Indicators Reference Manual*, http://www.adb.org/sites/default/files/pub/2004/Reference-Manual.pdf

[25] IFC (2011), "Climate Finance: Engaging the Private Sector," http://www1.ifc.org/wps/wcm/connect/5d659a804b28afee9978f908d0338960/ClimateFinance_G20Report.pdf?MOD=AJPERES.

	Bilateral						
United States	"amount of investment leveraged in USD from public and private sources for climate change as a result of U.S. assistance...must be additional to U.S.G. investment"	Project level	Yes	Unclear	Annual and quarter reports	Allowed	-
United Kingdom	RBF-EnDev : "Amount of financing leveraged for private enterprises by RBF programme – finance leveraged from private equity and debt" GETFiT: "finance mobilised" CP3: multiple	Project level	Yes	*pro rata*, U.K. share of public funds	Annual updates	Prevented	GETFiT accounts for only first round financing, not follow-on projects CP: estimated at both fund-of-funds and sub-fund level, unclear if *pro rata* rule applies

Annex B: Use of results-based financing (Rbf) for climate finance: an innovative mechanism for mobilising private investment

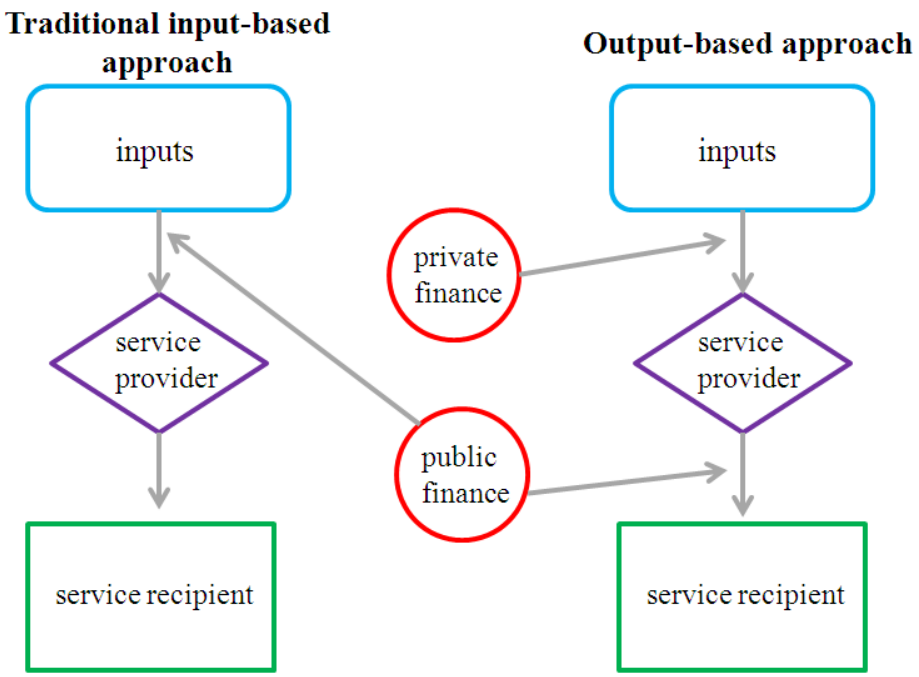
Using results-based financing to deliver climate finance more effectively has been a subject of increasing interest within the climate finance and aid-effectiveness communities. At COP 17 Parties decided that the financial instruments of the Green Climate Fund would "employ results-based financing approaches, including, in particular for incentivising mitigation actions, payment for verified results, where appropriate" (UNFCCC, 2011) Likewise, at COP 18, Parties decided to undertake a work programme on "results-based approaches" for financing REDD+ activities.

This section 1) provides background on what RBF could encompass and how it differs from other financing instruments, 2) highlights the relevance of RBF to key aspects of negotiations under the UNFCCC 3) provides a stocktaking of the usage of RBFs by donors in delivering climate finance to developing countries and 4) summarise lessons learnt from existing RBF programmes.

Background

Results-based finance is an umbrella term that includes a number of different financing mechanisms that seek to tie the provision of financial resources to specific and measurable results. While a comprehensive economic analysis of RBF is outside the scope of this paper (see e.g. Vivid Economics, 2009), the key difference between RBF and more traditional instruments for mobilising climate finance is that RBF approaches disburse financial resources only after independently verified results have been demonstrated. These results or outputs can vary widely, e.g. be a specified number of rural homes electrified, solar lanterns deployed, or natural gas connections completed. Figure 4 (below) highlights the structural differences between traditional "input-based" approaches and "output-based" approaches. In effect, RBF transfers risk from donors to service providers, thus creating an incentive to deliver goods and services more efficiency.

Figure 4: Traditional vs. output-based approaches



Source: reproduced from Brook and Petrie (2001)

Box 3 below outlines different RBF approaches with relevance to financing and mobilising private sector investment for mitigation and adaptation activities (GPOBA, 2012). The examples discussed in the balance

of this section mainly focus on output-based aid and carbon finance, although examples of advanced market commitments were provided in the body of the paper in discussion of power purchasing agreements and feed-in tariffs.

Box 3: Results Based Financing models relevant for climate finance

OBA	Output-Based Aid - payment of a subsidy to cover a funding gap to access basic services by the poor. Service delivery is contracted out by the entity providing the public funds to a service provider, with payments tied to achievement of specified service performance or outputs.
OBD	Output-Based Disbursement - involves payment of a subsidy to a service provider or a contractor for improvements in the efficiency of service- related assets, systems, or recurrent government activities.
CCT	Conditional Cash Transfer- provides cash payments to poor households that meet certain behavioural requirements, generally related to children's health care and education.
COD	Cash on Delivery Aid - payments to the recipient government after measurable progress, only for as much as is verifiably achieved.
AMCs	Advanced Market Commitments - guaranteeing service providers a price on delivery of a pre-defined output and/or that they will be able to sell a minimum number of units for a limited period of time
CF	Carbon Finance - involves contracts to purchase emission reductions similar to a commercial transaction, paying for them annually or periodically once a third party auditor has verified them.
PES	Payments for Ecosystem Services - market-like payment mechanisms where the downstream beneficiaries of environment services pay for the continued supply of those services by upstream service providers.

Source: GPOBA, 2012

Links to UNFCCC

While few RBF programmes are framed explicitly as climate change activities, RBF has been used in several climate relevant sectors such as health, transportation, sanitation, and energy.[26] Thus, current deployment of RBF in these sectors constitutes a potentially useful evidence base for RBF's role as an innovative mechanism to mobilise and scale-up private sector finance in mitigation and adaptation activities. As mentioned previously, the COP has decided on two results-based approaches in relation to financing for REDD+ and designing the private sector facility for the Green Climate Fund. Therefore, it is crucial to understand how RBF aligns with and relates to issues central to the UNFCCC negotiations.

MRV of the provision and receipt of support

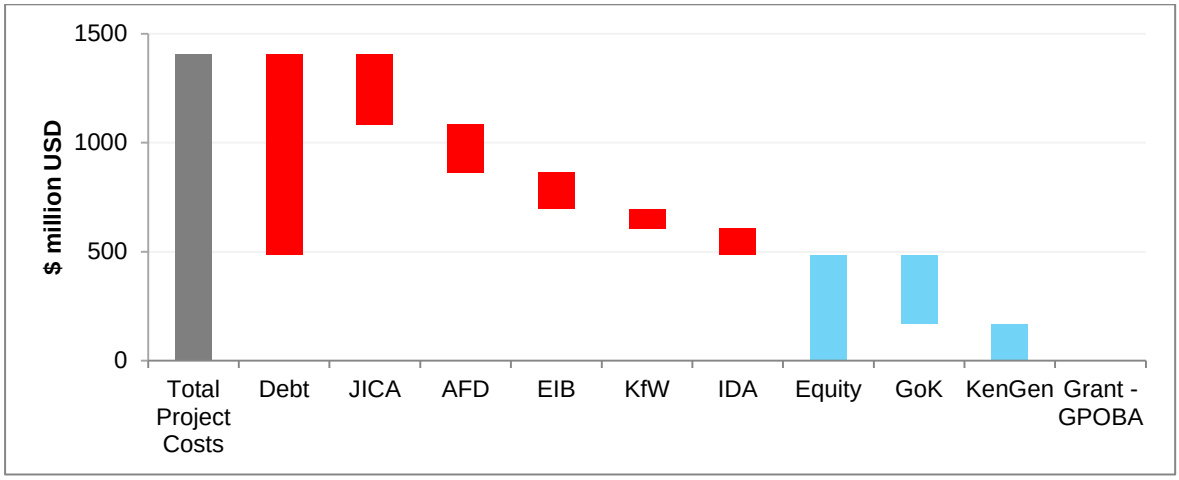
RBF is potentially an innovative mechanism for mobilising and leveraging both public and private sector investment. Thus, any further deployment and use of RBF programmes to deliver climate-related finance further underscores the importance of current efforts to improve tracking of mobilised finance discussed in the body of the paper.

Indeed, the structural differences of RBF programmes could have important implications for the MRV and biennial reporting of finance by developed country parties that will be required. One potential issue is

[26] As of 2010, only 6% (by value) of the World Bank's OBA portfolio was in the energy sector (World Bank, 2011).

relevant for projects where RBF is part of an overall financing ecosystem to reduce risk and scale-up private sector investment. Consider the example of KenGen's Olkaria Geothermal project (see Figure 5 below), where a USD 5 million grant from the GPOBA to fund a feed-in-tariff (FiT) for Kenyan renewable energy producers was a small portion of the overall financing flows (GPOBA, 2013). This example makes it clear that RBF programmes, like other financial instruments and mechanisms, do not work in a vacuum, making their benefits difficult to attribute to the RBF element entirely.

Figure 5: KenGen Olkaria I & IV geothermal project (Olkaria, Kenya)



Source: Authors; BNEF (2012) and Karingithi (2012)

On the recipient side, successfully implementing a RBF scheme necessitates linking of MRV systems for finance disbursed and received to verified mitigation or adaptation activities associated with that finance (UNDP, 2012). The current capacity required to do this is lacking in some developing countries. For instance, a UNDP report identified the need for further technical work and capacity building to help countries build or strengthen their MRV systems and better link financial management and MRV systems at the national and local levels (Ibid). Developed country financing for potential RBF mitigation projects, for instance, would be agreed on by both parties, tying the provision of financing to developing country Parties directly to, rather than "in the context of…" (UNFCCC, 2010) meaningful mitigation activities.

Creating a marketplace for results

By creating a marketplace for results, whereby developing countries advertise RBF-based projects for funding and donor countries purchase country-driven projects with independently verified results, donor countries could more efficiently achieve their responsibilities under the Convention. While not currently framed as results-based financing portals, this section highlights several current and potential exchanges under the UNFCCC that could be explored for their potential in this area.

For example, the current NAMA Registry allows countries to put-forth preparatory, implementation, and recognition projects on a web-based platform designed to match developing country needs with developed country support. One possible way to scale up the use of RBF for mitigation activities would be to provide guidance to developing countries on ways to better align their project proposals with RBF by basing mitigation projects around measurable and verifiable outputs. Components of NAMAs submitted for recognition to the UNFCCC by Chile and Uruguay for instance share a common approach of outlining a high-level policy goal ('*x*'% reduction of emissions in sector '*y*') followed by specific projects that help to achieve the stated goal. Existing examples of RBF approaches for energy sector projects (such as those by the Global Partnership for Output-Based Aid described later in this section) could prove highly compatible with this conceptual framework for NAMAs. Several NAMAs already include in their "indicators for

implementation" section metrics which either very closely parallel or could be easily framed as outputs chosen in existing RBF projects in renewable-energy and energy-efficiency.

Likewise, 39 Least Developed Countries (LDCs) have submitted National Adaptation Programmes of Action (NAPAs) that prioritise "urgent and immediate" adaptation projects essential for climate resilience and security (UNFCCC, 2013a). While the best ways to scale-up private sector finance in adaptation activities are still being debated, NAPAs crafted with specific and measurable outputs could be highly compatible with RBF approaches. While increased climate resilience and other adaptation indicators are difficult to quantify directly (Persson, 2011; Levina, 2007), NAPAs identify discrete projects that governments have identified as helping to improve overall adaptive capacity. Deploying household rainwater harvesting systems (UNFCCC, 2012a), or technologies to provide drinking water to coastal communities combating enhanced salinity due to sea-level rise (Government of Bangladesh, 2005) are two projects identified in NAPAs that may lend themselves relatively easily to RBF approaches. Likewise, planting of vegetation for flood and windstorm protection (UNFCCC, 2012b) or sanitation sector projects for constructing latrines, wells, and boreholes (UNFCCC, 2012c) also provide discrete projects that may be amenable to RBF approaches.

One interesting example focusing on coral reef protection is provided by a project organized by the Waldorf Astoria in the Maldives. In partnership with a technical consultancy firm, guests of the Waldorf Astoria can donate $150 and assist in propagating sections of damaged corals to a lagoon (Gadling, 2011). This approach involves a subsidy, in-kind support, private-sector expertise, and private-sector involvement aligning to deliver an output with the potential of increasing climate resilience more efficiently. With the impacts of coral bleaching affecting both private and public parties such as hotels and subsistence fishers, RBF could be used to scale-up such efforts that prove effective. Each of these examples highlights several projects from NAPAs that involve specific and measurable outputs as part of their desired outcomes that could be further explored to determine their suitability for RBF approaches.

While these examples include results that could be amenable to results-based approaches, it is important to point out that not all components of NAPAs are as equally well suited for RBF. In particular, some more process-oriented components of NAPAs focusing on capacity building and policy reform, where the relationship between increased resilience and the results chosen as metrics is more tenuous, may pose additional challenges. Finally, as adaptation planning continues to be mainstreamed into more programmatic national adaptation plans as opposed to project-centric NAPAs, it may be increasingly difficult for donor countries to identify adaptation projects with easily quantifiable results that are clearly separable from a larger framework.

Finally, In advance or absence of an international REDD+ Registry or market, a future marketplace for forestry and land-use projects could include the creation of national REDD+ Registries (KfW, 2011). Such a marketplace could enable the freer exchange of finance for results-based actions, as suggested by the COP (2/CP.16 and 2/CP.17). This would allow a one-to-many relationship between country REDD+ strategies and potential RBF donors.

Examples

Results-based financing approaches have already been implemented in a number of relevant sectors to mitigation and adaptation. This section profiles existing approaches being used in carbon financing; increasing energy, health, and water supply access; technical assistance; and REDD+.

Carbon Finance

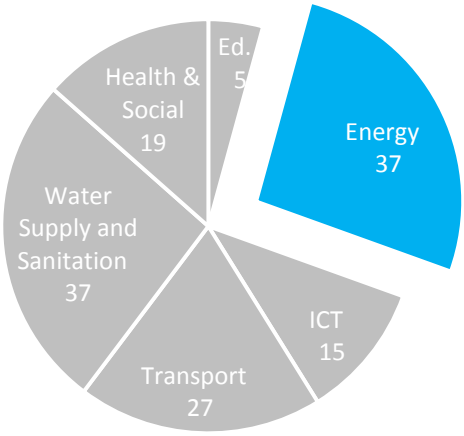
Carbon markets represent one area that has adopted a RBF framework for scaling up investment in climate change mitigation projects. Carbon markets can include the *ex ante* (or *ex post*) purchase of verified emissions reductions from projects in developing countries. With its Prototype Carbon Fund developed in

2000, Community Development Carbon Fund in 2003, and Carbon Partnership Facility in 2009, the World Bank has utilised a specific type of RBF programme to deliver offsets for developed country buyers by creating a market-based platform for results.

Global Partnership on Output Based Aid (GPOBA)

The GPOBA is a partnership currently composed of AusAID, DGIS, DFID, Sida, IFC, and the World Bank, the latter of which also administers the program. Taking a RBF approach, the aim of GPOBA is to pilot projects to increase access to basic infrastructure and services in the health, water and sanitation, education, and energy sectors. As shown below in Figure 6, there were 37 projects as of January 2013 that have either been completed or are currently active in the energy sector with a number of other projects in sectors relevant to climate adaptation such as health, water, and sanitation (GPOBA, 2013).

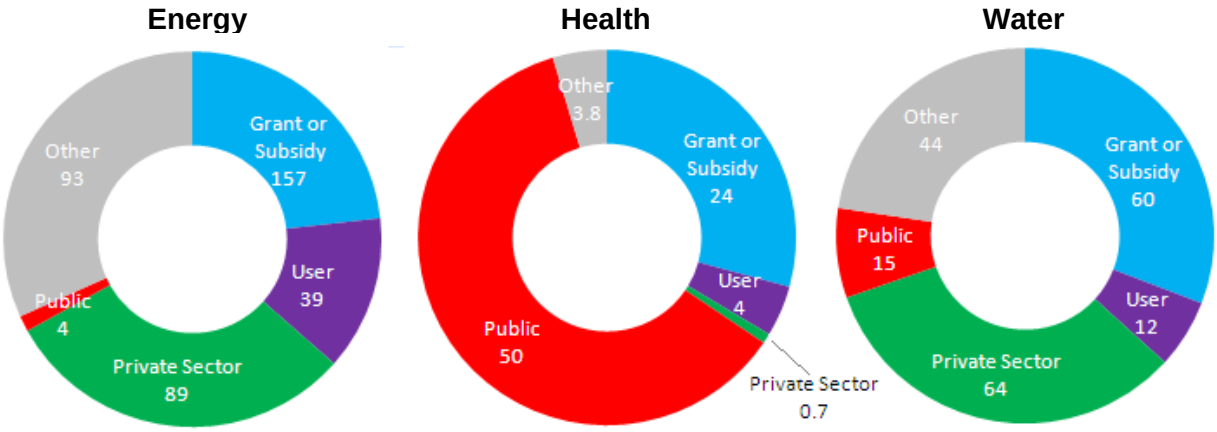
Figure 6: GPOBA and World Bank OBA projects by sector



Source: Authors' analysis of GPOBA (2013) data

Figure 7 below highlights the breakdown of financing for projects in the energy, health, and water sectors that were managed directly by the GPOBA (disaggregated financial information was not available for WB managed projects). For GPOBA projects, "public" refers to co-financing provided by the host country government, with the "grant or subsidy" portion representing the amount of public money provided by developed countries through the GPOBA programme, "other" includes non-domestic public sources of financing provided by MDBs and RDBs, "user" refers to end-users or households, and "private sector" refers to either for- or not-for profit companies (GPOBA, 2013).

Figure 7: Sectoral breakdown of GPOBA project financing (USD million)



Source: Authors' analysis of GPOBA (2013) data

The current ability of RBF to mobilise private sector finance for climate relevant projects is not uniform. Figure 7, shows the difficulty of projects in the health and social services sector to attract significant interest from the private sector. However, RBF approaches have demonstrated potential in mobilising private sector capital for energy and water supply and sanitation projects, which represent key sectors relevant for mitigation as well as increasing adaptive capacity and climate resilience. As such, the GPOBA programme may provide useful lessons for how to scale up both public and private sector financing for projects in some of the same sectors identified by developing country parties in NAMAs and NAPAs.

The example of natural gas connections in Columbia, highlighted below in Box 4, illustrates how the GPOBA designs and implements RBF projects.

Box 4: Natural gas connections in Columbia

Subsidy: USD *5.1 million* | User Contribution: USD *0.14 million* | Private: USD *8.4 million*

GPOBA established a goal with Fundacion Promigas, a non-profit established by the natural gas company Promigas, to bring 35,000 new natural gas connections to poor residents in coastal Columbia. While the Columbian government already had a subsidy scheme to make monthly rates more affordable for poor-households, connection fees amounted to more than $370 per household, where these fees could often represent 220% of an average family's monthly income. GPOBA decided on a subsidy of $141 per eligible household (about 38% of the cost of a new connection), with regional distribution companies offering households six-year financing of the bulk of the up-front cost. Payments are only made to the distribution companies, who have assumed the financial risk for the initial financing, after certain quality standards have been met, three monthly payments by the household have been demonstrated, random inspections performed by Fundacion Promigas and verified by an independent auditor, and an additional layer of random inspections and verifications performed by GPBOA.

This example also illustrates the persistence of some of the same difficulties in tracking and estimating the amount of private finance mobilised, since it would be difficult to determine the relative contributions of the on-going consumption subsidy versus the one-time subsidy of the donors.

Source: (GPOBA, 2010)

RBF for technical assistance: IFC's Performance Based Grant Initiative

In addition to its participation in the GPOBA, IFC's board approved USD 28 million in 2005 for piloting its own RBF programmes as part of its Access to Finance (A2F) line of business within its Advisory Services unit (IFC, 2011). While 70% of these projects concentrated in the microfinance sector (where the thematic purpose is unclear) at least some went explicitly towards increasing access to financing for energy efficiency (9%) and for agrifinance (2%) for poor households – and is thus relevant to financing climate activities (World Bank IEG, 2011).

At least one such example in the microfinance sector with relevance for climate finance, IFC's partnership with microfinance institution (MFI) Dia Vikas in India, included a component to create one microfinance product for energy, with two others for water and sanitation. The stated aim of the intervention was to stimulate and build-capacity within MFIs "to undertake sustainable finance in a responsible way that helps them manage their own risks – and contribute to climate mitigation" (IFC, 2012a). To track this, IFC would ensure that Dia Vikas, among other things, disbursed 100,000 sustainable finance loans and achieve a sustainable finance portfolio across MFIs of USD 2.5 million. With an estimated total cost of USD 500,000, half of which will be borne by Dia Vikas, IFCs direct contribution only amount to USD 250,000. This type of programme, if proven successful, could demonstrate the potential of RBF to also increase both the efficiency of financing technical assistance projects as well as in mobilising private capital for TA services.

REDD + RBF in the context of the UNFCCC

Following up on its decision in Cancun on Reducing Emissions from Deforestation and Forest Degradation (REDD+), COP 17 invited parties to submit their views on financing results based actions listed under its earlier REDD+ decision (UNFCCC, 2010; 2011). These submissions evince a divergence in views for what constitutes "results based actions", with some countries having concrete ideas of specific financing modalities that were along the lines of other RBF approaches and others offering general language for working towards transparency in linking REDD+ actions with REDD+ financing (UNFCCC, 2012e). India offered its view that 'incentives' in the form of payment per unit of stabilized/conserved forest carbon stock will be determined and fixed by the Parties in advance, be disbursed by UNFCCC to national governments, who will then quickly transfer the payments to stakeholders and communities, with all decisions as to benefits belonging to the host country."

Norway, a early adopter in RBF for REDD+, also articulated a very strict interpretation of the decision, stating that "[b]y REDD+ 'results' we mean reduced emissions, avoided emissions and/or enhanced removals that are fully measured, reported and verified (t CO2eq per year), based on Decision 1/CP.16 and Decision -/CP.17. Thus, 'financing of results-based actions' means payments for verified emission reductions relative to an agreed incentives level" (UNFCCC, 2012e). Moving forward, more discussion between Parties may be necessary to further define the intended meaning and scope of "results based actions" in the COP decisions.

Norway – Indonesia REDD+ RBF

In 2010, the Governments of Indonesia and Norway signed a Letter of Intent (LoI) to initiate a REDD + Partnership. Composed of 'preparation', 'transformation', and 'contribution' stages, the Partnership makes available up to USD 1 billion through a RBF facility. Specified outputs start with the creation of institutions and legislation in the first stage to independently verified emissions reductions in subsequent stages. While many RBF projects usually provide traditional up-front grant funding for initial start-up, capacity building, and technical assistance purposes, the Government of Norway decided to provide an 'advance' of USD 30 million within a RBF structure. Results for this first stage include a focus on creating the institutional and other framework conditions (e.g. development of a national REDD+ strategy in

Indonesia). Specific indicators for these results range from Presidential decrees to approved Terms of Reference (Caldecott et al., 2011).

An independent evaluation of this first stage found that the UNDP (chosen as the interim funding instrument) has received 40-50% of deliverables at only 10% of the projected cost of USD 30 million. The report cited "overestimation of cost" as the main factor for this discrepancy (Caldecott et al., 2011). This highlights the potential usefulness of RBF in right-sizing donor support for specific outcomes and increasing overall programmatic efficiency. The partnership also highlights an innovative use of RBF to catalyse regulatory and policy changes in developing countries, though it may be too early to fully assess its effectiveness in this regard.

U.K. (DFID) – RBF financing facility for Renewable Energy

In addition to support for one-off projects through the GPOBA, the U.K. is currently finalising details for a new RBF facility focusing on low carbon energy access. A preliminary business case prepared by the U.K. Department for International Development (DFID) estimated that an RBF model would mobilise 14% more private sector investment, averaged across technologies, compared to traditional capital grants (Warrander, 2013). The technologies in the scoping business case included solar lanterns, institutional biogas, and managed mini-grid connections, though the final list of technologies and countries eligible under the program is still under development, with final application criteria and a call for proposals targeted for mid-2013. The U.K. is planning to implement the programme as a specially designed facility under the GIZ managed Energising Development (EnDev) multi-donor initiative.

Preliminary insights

Results-based finance is an umbrella term that includes a number of different financing mechanisms that seek to tie the provision of financial resources to specific and measurable results. By disbursing financial resources only after independently verified results have been demonstrated, RBF transfers risk from donors to service providers, thus creating an incentive to deliver goods and services more efficiently.

The design of RBF programmes, country context, and sectoral factors can affect the success of results-based approaches in increasing private sector investment in targeted climate objectives as efficiently as possible. While not currently framed in climate specific terms, there are some general lessons to be learnt from successfully projects in adaptation and mitigation relevant sectors and activities.

RBF does not achieve success in a vacuum

As demonstrated by the examples of geothermal development by KenGen in Kenya and natural-gas connections in poor-households in Columbia, results-based financing does not achieve success in the absence of an enabling environment, such as policies and access to finance and credit. However, as demonstrated by both the Norway-Indonesia REDD+ Partnership as well as the IFC's Performance Based Grant Initiative, RBF is a flexible enough tool that may be able to catalyse regulatory efforts and provide advisory services to address each of these.

Ensuring compatibility with country priorities is important

As outlined above, RBF programmes can involve public and/or private finance. RBF programmes will therefore require collaboration between donor and partner countries, and the private sector. For those RBF programmes that deliver climate-related aid, principles of country ownership, such as those embodied in the Paris Declaration (OECD, 2008) will need to be integrated throughout both the design and implementation stages to ensure that the results being financed are not only efficient but also country-driven.

Not a magic-bullet for MRV

While RBF is a useful tool to ensure independent verification of results for specific outputs, attributing results to a single intervention is not necessarily straightforward. With multiple interventions, policies (both domestic and international), etc in place, it may be difficult to disentangle an intervention from its supporting policy context. For example, an independent evaluation of GAVI HSSI (Pearson, 2011) found attributing results for programmes targeted towards changing market fundamentals are difficult to distinguish several years after the initial intervention, since a multitude of factors could have contributed to their success or failure at mobilising the private sector.

Choose the right objectives, not the ones easiest to measure

With the possible abilities of RBF approaches in producing targeted outcomes comes the responsibility to choose the right objectives. According to one review of RBF approaches, one evaluation team found that an "overemphasis on quantity not quality of value" created unintended negative consequences that affected the quality of services provided (Macro International, 2009). Admittedly, the right objectives are often difficult to quantify and measure. However, priority should be given to choosing the right objectives and not simply the ones easiest to measure. As one observer suggests, donors may want to ask themselves whether it is "[b]etter to get a questionable answer to the right question than the right answer to the wrong question?" (Pearson, 2011).

Consider market fundamentals

As depicted earlier in Figure 4, RBF replaces upfront public sector disbursements with commitments to pay for independently verified results. Aside from initial technical cooperation and capacity building aid that is usually part of the initial start-up of these programmes, this model requires the implementing agent to be able to assume associated risk, cited as a motivation for increased efficiency, and be able to obtain initial capital expense costs from balance sheets or the private sector. It is crucial to consider that these projects take place in areas of the world where risk is often high and the depth and development of capital markets low. These factors can greatly affect the feasibility of specific RBF programme arrangements as well their scalability in the region.

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Glossary

AAU	Assigned Amount Unit
ADB	Asian Development Bank
AEDB	Pakistan's Alternative Energy Development Board
AfDB	African Development Bank
AGF	UN Secretary General's Advisory Group on Finance
AI	Annex I countries (to the UNFCCC)
AusAID	Australian Agency for International Development
BNEF	Bloomberg New Energy Finance
CAF	Development bank of Latin America (Corporación Andina de Fomento)
CCXG	Climate Change Expert Group
CDC	UK's Development Finance Institution (CDC Group)
CHUEE	IFC's China Utility based Energy Efficiency financing programme
CIF	Climate Investment Funds
CMCI	UK's Capital Markets Climate Initiative
COP	Conference of the Parties
CP3	UK's Climate Public Private Partnership
CTF	CIF-Clean Technology Fund – or- common tabular format
CTI	IEA's Climate Technology Initiative
DAC	OECD's Development Assistance Committee
DECC	UK Department for Energy and Climate Change
DFI	Development finance institution
DFID	UK Department for International Development
DVA	Direct value added
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
FiT	Feed-in tariff
FoF	Fund of funds
GCF	Green Climate Fund
GDA	USAID's Global Development Alliance
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GEF	Global Environment Facility
GHG	Greenhouse gas
GIZ	German Agency for International Cooperation
GPOBA	Global Partnership on Output-Based Aid
HQ	Headquarters
IBRD	WBG's International Bank for Reconstruction and Development
IFC	International Finance Corporation
IFI	International financial institution
JBIC	Japanese Bank for International Cooperation
JICA	Japan International Cooperation Agency
KfW	German development bank (Kreditanstalt für Wiederaufbau)
LDC	Least Developed Country
MDB	Multilateral development bank
MFI	Micro-finance institution

MoU	Memorandum of understanding
MRV	Measurement, reporting, and verification
NAI	non-Annex I countries (to the UNFCCC)
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Adaptation Programmes of Action
NDB	National development bank
NEPRA	Pakistan's National Electric Power Regulatory Authority
NTDC	Pakistan's National Transmission and Dispatch Company
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OFC	Offshore financial centre
OPIC	Overseas Private Investment Company (US Development Finance Institution)
PE	Private equity
PFAN	Private Finance Advisory Network
PPA	Power purchase agreement
RBF	Results-based Finance
RDB	Regional Development Bank
RE	Renewable energy
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SCF	Standing Committee on Finance
SEI	EBRD's Sustainable Energy Initiative
SOE	State-owned enterprise
TA	Technical assistance
TC	Technical co-operation
TPC	Total project costs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	US Agency for International Development
USD	United States Dollars
WBG	World Bank Group

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