

Climate Change Finance:

If You Can't Measure It, You Can't Manage It

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- Climate change finance is currently estimated at between approximately USD 70 and 120 billion per year. However, these estimates involve a fair amount of uncertainty. There is no agreed definition of what climate finance includes; moreover, for private sector flows, the range is estimated using mismatched data sources.
- The significant sums of financing committed in the international climate change negotiations (USD 100 billion per year by 2020) are expected to be earmarked according to the traditional template whereby developed countries provide financing to developing countries. Not only is this an outdated view of how private investment moves in today's global world, it also provides an impractical framework for keeping track of financial flows. Furthermore, the developed/developing country negotiating viewpoints are plagued by disagreement as to which public sector and private sector financial flows should count.
- Managing limited financial resources effectively requires grasping how financial flows contribute to results in climate mitigation and adaptation. As yet we have little understanding of the tangible results being achieved from these flows, and how public money and instruments drive private investments. Better understanding will require consistent information on a range of indicators of successful financial interventions, including leveraging ratios. We need to consider what financial kinds of information could serve both purposes: to measure progress towards the USD 100 billion commitment, and to measure how effective financial flows are in achieving results.
- We need a common definition of what types of flows are to be considered 'climate change finance'. Until such a definition has been agreed, governments and organizations must be more transparent as to what account as 'climate finance'. Governments should work with private investor groups and data providers to adapt existing information so as to provide a more comprehensive dataset on private climate finance.

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Finance for climate change action has come under increased scrutiny following the developed-country commitment in international climate negotiations to jointly mobilize USD 100 billion per year by 2020 for meaningful mitigation actions in developing countries. This commitment has sparked interest in measuring how much finance is already flowing, and on work on developing methodologies that can measure progress towards the USD 100 billion. The Green Climate Fund has been designated under the United Nations Framework Convention on Climate Change (UNFCCC) and countries have been invited to make contributions, but it is unclear what portion of climate finance can be expected to flow through this fund. Moreover, the details of its management are still being ironed out.

To start with what we know about the state of financial flows for climate change today: there are significant amounts of climate finance already flowing. However, these uncertain estimates are based on inconsistent datasets that are not comprehensive, particularly not for private sector flows. We cannot know if these public and private resources are being used effectively to achieve tangible results, as measurement, reporting and verification of results is not systematic, with inconsistent disclosure of data useful for measuring effectiveness. Thus we lack sufficient information to determine which financial incentives and configurations should be replicated or avoided, and where should we focus further incentives for investments. Here it is worth noting that several research groups have begun in-depth examination of financing practices to see what could be replicated, e.g. the Organisation for Economic Co-operation and Development (OECD) and the Climate Policy Initiative case studies for the San Giorgio Group.

To understand how best to use the limited financial resources available, we need to measure the links between financial flows and climate change results. Because the USD 100 billion commitment is defined as finance 'mobilized' by governments, a better understanding is needed of the extent to which public-sector finance and interventions can influence pri-

vate investments. Improved information on the amounts of private-sector finance flowing for different types of climate change actions, together with information on how public interventions have served as catalysts to private flows (or not), can provide indicators of how effectively the money has been spent.

This paper highlights our limited knowledge on climate finance and shows how the negotiating framework is impractical for measuring climate finance. The necessary financial information is outlined for purposes of measuring progress towards the USD 100 billion and for measuring the effective use of finance. Recommendations are then provided for how to improve the state of knowledge on climate finance.

Significant flows, limited knowledge

The most recent estimates of climate finance indicate a wide range from approximately USD 70 to 120 billion per year flowing from developed to developing countries, according to a recent report from the OECD.¹ However, these estimates are largely uncertain – particularly as regards the private-sector estimates, which are based on mismatched data sources (see Table 1).

Financing from the private sector accounts for approximately 60% of this total, yet comprehensive data and systems to measure this accurately do not exist. Several databases cover investments in clean energy or climate change projects (e.g. Bloomberg New Energy Finance, Point Carbon), but they have been compiled for subscription clients and are not publicly available. These databases are largely based on project-level anecdotal evidence, so they may not have consistent data across investments. Given their existing configuration, such databases are not useful for more aggregated analysis of investments and their links to public policy or interventions. On foreign

¹ Clapp, C., J. Ellis, J. Benn and J. Corfee-Morlot (2012), Tracking Climate Finance: What and How? OECD/IEA Publishing, May 2012, <http://www.oecd.org/env/climatechange/50293494.pdf>

Table 1: Climate finance flowing from developed to developing countries

Financing Channel	Low estimate	High estimate
	USD billion, latest year estimates	
Public <i>Including bilateral, multilateral, special funds, export credits</i>	30	45
Private <i>Including CDM, philanthropy, FDI, private investment</i>	? [40 FDI only]	? [75 clean energy investment only]
Total	~70	~120

Source: Clapp, C., J. Ellis, J. Benn and J. Corfee-Morlot (2012). Tracking Climate Finance: What and How? OECD/IEA Publishing, May 2012, www.oecd.org/env/climatechange/50293494.pdf

direct investment (FDI), both the OECD and the United Nations Conference on Trade and Development (UNCTAD) maintain databases, but with limited detail on final destination country and sector.

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Furthermore, the range in estimates is widest for private-sector climate finance, and these estimates are based on inconsistent datasets. The private finance totals shown in Table 1 are based on FDI data from UNCTAD for the low estimate, and investment in clean energy from Bloomberg New Energy Finance for the high estimate. It is not known to what extent these two data sources overlap, nor how well they represent the full picture of private-sector climate finance.

The public sector side is also subject to considerable uncertainty, although to a lesser degree than the private flows, and improvements are under way (as further detailed in Clapp et al. 2012, referred to above). At present, multilateral flows (which account for

nearly half of the public climate finance) are not reported consistently by multilateral development banks (MDBs), although MDBs have established an informal working group on consistent reporting. Non-concessional public flows are not currently tagged for climate change in the OECD Development Assistance Committee (DAC) marking system, but there are plans to do so in the future.

While there is an established literature on aid effectiveness, consistent data are still lacking on the amount of private investment catalysed. There is also no agreement on what 'effectiveness' means in relation to climate finance – which became evident in the discussions at the Climate Change Expert Group Global Forum hosted by the OECD on 26–27 September 2012. Particularly for climate change activities, multilateral development banks and other institutions apply varying definitions of 'leveraging' to determine the amount of private-sector involvement in a project: this makes robust comparisons impossible, and the reliance on leveraging ratios dangerous.²

Disconnect between negotiations and real-world finance

In the UNFCCC negotiations, developed countries committed to mobilizing USD 100 billion per year by 2020 for developing countries. However the specifics of this commitment, and how to measure progress towards it, have

² Brown, J., B. Buchner, G. Wagner, and K. Sierra (2011), Improving the Effectiveness of Climate Finance: A Survey of Leveraging Methodologies. Climate Policy Initiative, December 2011, www.odi.org.uk/resources/details.asp?id=5701&title=climate-finance-private-investment-public-sector-climate-change; and Ellis, J. and C. Regan (2012), Climate Finance: Annotated Questions Document for the Climate Change Expert Group Global Forum, 26-27 September 2012.

remained undefined. There is no international agreement on what constitutes mobilized climate finance, or which types of public and/or private flows are to be counted (for further discussion on the latter point, see Clapp et al. 2012, referred to above) It is also unclear how to measure the additionality of finance. All these ambiguities complicate measurement of progress toward this commitment.

The terms of the USD 100 billion commitment follow the historical lines of official development assistance (ODA), which has been provided by developed countries to developing countries (or North–South aid). However, this traditional lens of North–South finance does not fit well with how money is actually flowing today. Financial flows South–North or South–South are becoming increasingly important in supporting climate change projects. To illustrate the new state of global financial flows: India’s leading wind turbine manufacturer, Suzlon Energy Ltd. established its global headquarters in Denmark to take advantage of knowledge spillovers, and has acquired a German turbine manufacturer.³ There are also cases of developing countries providing risk insurance for financing from developed countries, such as the government of Mali’s sovereign guarantee for a renewable energy project.⁴ Multinational companies also use local subsidiaries or intermediaries for tax purposes, obscuring the country of origin.

The distinction between public and private sources of finance is also central to finance discussions in the negotiating arena. Current discussions (both in the negotiations and the UNFCCC Workshops on Long Term Finance) are sometimes hampered by disagreement as to whether ‘mobilized’ finance is to include specific types of private-sector finance. For some developing countries, the use of public finances in addition to traditional development aid is critical; for many developed countries, it is crucial to incorporate private financial markets, given the state of public budgets today. Yet these distinctions between public and private flows become hazy when applied to the reality of financial flows. Not only are public–private configurations commonplace,

but also many financial instruments are difficult to categorize. One such example is export credits – instruments issued by a government or a quasi-governmental agency to boost the sales of exported goods – which are not easily defined as either purely public or private finance. Nor is it easy to distinguish which private flows have been triggered by specific public instruments.

Due to the universally-agreed definition of climate finance, countries have been applying their own definitions to the fast-start finance pledged in the international negotiations, so definitions vary. For instance, while both the UK and the USA count only public finance towards their near-term commitment for ‘fast start finance’, the USA includes loans and loan guarantees whereas the UK includes capital contributions in addition to grant funding.⁵ When it comes to the long-term climate finance commitment, there is no agreement on what it means to ‘mobilize’ the USD 100 billion, or on whether it could include public interventions that catalyse private-sector investments in developing countries. Given the different positions and approaches in the negotiating arena, it makes sense for measurement work to proceed using a range of sample definitions.

In measuring progress towards the USD 100 billion commitment, it would be wise to minimize the effort and data needed, taking into account data that could also be useful in looking at what has been achieved with this commitment. If all we are doing is counting towards the USD 100 billion, we will still not know what climate benefits have been achieved, or if the money has been used wisely.

³ Glob, Stephen S., Celine Kauffmann and Philip Yeres (2011), “Defining and Measuring Green FDI: An Exploratory Review of Existing Work and Evidence,” OECD Working Papers on International Investment, No. 2011/2, OECD Investment Division, www.oecd.org/daf/investment/workingpapers

⁴ SREP MALI (2011), SREP MALI – Investment Plan: Scaling Up Renewable Energy in Mali, Volume 1: *Investment Plan*, Republic of Mali, Ministry of Energy and Water, National Directorate for Energy.

⁵ Fransen, T., K. Stasio, S. Nakhooda (2012), The US Fast Start Finance Contribution, ODI and WRI, May 2012, www.odi.org.uk/resources/details.asp?id=6560&title=usa-america-fast; and Nakhooda, S. and T. Fransen (2012), The UK Fast Start Finance Contribution, ODI and WRI, May 2012, www.odi.org.uk/resources/details.asp?id=6559&title=fast-start-finance-unfccc-multilateral-uk.

Table 2: What financial information is useful to whom?

Purpose	Consumers of Information		
	Financial decision-makers, investors	Negotiators	Recipient / host country
To measure progress on developed countries' commitment to 2020	N/A	<ul style="list-style-type: none"> ▪ Financial flows from developed to developing countries ▪ Country/region of origin? ▪ Indication of 'additionality' from a baseline measure of financing 	<ul style="list-style-type: none"> ▪ Financial flows from developed to developing countries ▪ Indication of 'additionality' from a baseline measure of financing
To measure effectiveness of finance	<ul style="list-style-type: none"> ▪ Financial flows for climate projects compared with flows for high-emitting projects ▪ Identification of financial instrument/arrangement ▪ Links to public policy measures ▪ Leveraging ratios based on consistent definitions ▪ Indicators of 'success': e.g. ease of accessibility, <i>ex-post</i> GHG results achieved, establishment of enabling environment for long-term flows, co-benefits 	<ul style="list-style-type: none"> ▪ Indicators of 'success': e.g. ease of accessibility, <i>ex-post</i> GHG results achieved, establishment of enabling environment for long-term flows, co-benefits 	<ul style="list-style-type: none"> ▪ Identification of financial instrument/arrangement ▪ Links to public policy measures ▪ Indicators of 'success': e.g. ease of accessibility, <i>ex-post</i> GHG results achieved, establishment of enabling environment for long-term flows, co-benefits
To identify financing gaps	<ul style="list-style-type: none"> ▪ Sector- and/or activity- level data 	<ul style="list-style-type: none"> ▪ Sector- and/or activity- level data ▪ Identification of public- and private-sector sources 	<ul style="list-style-type: none"> ▪ Sector- and/or activity- level data

What financial information is needed?

The information needed for measuring and managing climate change finance depends both on the ultimate purpose of the information as well as who will be using the information. Measuring progress towards the USD 100 billion commitment requires different information than measuring the effectiveness of climate finance (see Table 2). Negotiators require a somewhat artificial distinction in financial flows depending on the source and destination country, whereas financial decision-makers or investors interested in measuring the effectiveness of an investment will be more concerned with the type of financial instrument used and the degree to which private finance was catalysed. It makes sense to focus on the information needed for investors to make better decisions because that has a broader application, and then consider how to adapt the same information to measure progress towards the negotiations commitment.

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Measuring effectiveness of financial interventions should involve other factors beyond just leveraging ratios, as was discussed at the Cli-

mate Change Expert Group Global Forum at OECD in September 2012. In fact, over-emphasis on leveraging ratios could distract from other indicators of successful financing for climate change action, and possibly create incentives for competition between multilateral and national development banks to show the highest leveraging ratios. What is meant by 'successful' financing needs further clarification, but initial indicators could include ease of accessibility, ex-post results achieved in terms of greenhouse gas (GHG) reductions, development co-benefits, and the creation of longer-term sustainable financial flows through enabling conditions.

Regardless of the ultimate purpose and audience, obtaining the necessary information to measure and understand climate finance is necessarily highly complex. Gathering detailed financial information on specific climate projects can provide useful insights, but may take many months of data mining and research. The detailed case studies developed for the San Giorgio Group⁶ illustrate not only the complexity of real-world financial transactions, but also of the complexity of data-gathering with a bottom-up method. Comparing across projects or financing institutions is even more complex, due to differing definitions and timeframes for data collection (e.g. *ex-ante* vs. *ex-post*). To understand better what the existing data can (and cannot) tell us, the OECD is leading a research collaborative to improve private-sector climate finance data.

How can we improve the information on private investments?

As there is already some movement to improve consistency and robustness of data on public financial flows, efforts should focus on how to improve information on private-sector financial flows. Different incentives motivate private investors and data providers to disclose information on financial transactions, than those that drive governments to release data on public expenditures. Information on private investments for climate change projects is typically available on a paid subscription basis for investors.

To improve our understanding of private climate investments, governments and the private sector should work more closely to-

gether. There are various possibilities for concrete options for working together on better private-sector finance data.

For example, governments could work with private-sector data providers to reconfigure existing databases (originally designed for use by private investors) to meet the information needs of financial decision-makers and negotiators alike, making use of some of the information already at hand. The aggregate information from such databases could then be made publically available by interested governments.

Another approach would be for governments to build upon the goodwill of the socially-responsible investment movement, asking private companies to estimate their aggregate investments in climate change projects. A network such as the UN Principles for Responsible Investment (UN PRI) includes thousands of investors, who voluntarily fill out a qualitative annual questionnaire on their investments in socially-responsible activities. One possibility could be to expand the questionnaire to provide some indication of the level of investment in clean energy and other climate projects. Another possibility could be to build upon the Carbon Disclosure Project, which surveys corporate involvement in GHG reduction strategies.

Recommendations

Both the public and private sector can play a role in improving the state of information on climate finance. Taking into consideration the information needed for the dual purpose of measuring progress towards the USD 100 billion and measuring the climate impacts and effectiveness financial flows, there are several possible courses of action:

- Agree upon a common definition of 'climate change finance', with applicable project types and financial flows. If it is difficult to reach agreement, a range of working definitions could be applied in the meantime.
- Determine the indicators and data needed to measure the 'success' of financial flows in terms of climate impacts. Some initial ideas are provided in Table 2, such as consistent leveraging data and links to policy measures, identification of project types, indicators of sustained investment, and *ex-post* measurement of results.

⁶ CPI (2012), San Giorgio Group Case Studies, Climate Policy Initiative, August 2012, <http://climatepolicyinitiative.org/publication/san-giorgio-group-case-studies/>

- Measure progress towards the USD 100 billion commitment by utilizing the same information useful in examining the impacts of financial flows, to avoid overlapping efforts on data collection. Informal working groups, such as the research collaborative on private climate finance led by the OECD, could be used to discuss the minimum level of information necessary to measure progress towards the USD 100 billion commitment, while also providing useful information to measure effectiveness.
- Adapt private-sector investment information for public use. Governments should also work closely with private investor groups to discuss options for aggregating information on private investments, to make such information publically available and to increase transparency as regards methodology. Policy-makers with a strong interest in accessing such information should work with data providers (e.g. Bloomberg New Energy Finance, Point Carbon) and investor groups to develop prototypes of useful financial information.

Moving ahead on these fronts will help us to better understand the overlaps and gaps in the existing financial flows, and how to improve the situation. The more we know about climate finance, the more effectively we can manage it – and the better we can set about addressing the challenge of climate change.

About the author

Christa S. Clapp is an Associate Director at Thomson Reuters Point Carbon. She has over a decade of experience in global climate change policy analysis, including analysis of low-emissions development strategies, national emissions baselines, and tracking climate change finance. She has previously held positions at OECD and US EPA, and is a research member of Climate Strategies.