WORLD RESOURCES INSTITUTE

WORKING PAPER

Guidelines for Reporting Information on Climate Finance

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May 2010

Increasing transparency around actions countries take to address climate change is key to fostering confidence, trust and ambition among Parties to the UNFCCC. Accordingly, developed country Parties need to report on financial support given to developing countries under an international post-2012 climate change agreement. Agreement by Parties on the format and review process for this reported financial data will be critical to ensuring that the data is complete, transparent, comparable and accurate. This Working Paper looks at current systems to report climate finance and proposes ways to build on these existing systems in order to implement a common reporting format.

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Suggested Citation: Tirpak, Dennis et al. "Guidelines for Reporting Information on Climate Finance". WRI Working Paper. World Resources Institute, Washington DC. Available online at http://www.wri.org.

Glossary of Acronyms

ADB	Asian Development Bank
BASIC	Brazil, South Africa, India and China
CDM	Clean Development Mechanism
COP	Conference of the Parties to the UNFCCC
CRS	Creditor Reporting System
DAC	Development Assistance Committee
EE	Energy Efficiency
ETS	Emissions Trading Scheme
EU	European Union
FCPF	Forest Carbon Partnership Facility
FDI	Foreign Direct Investment
GDP	Gross domestic product
GEF	Global Environment Facility
IEA	International Energy Agency
IEEP	Institute for European Environmental Policy
IMF	International Monetary Fund
LDCF	Least Developed Countries Fund
MDBs	Multilateral Development Banks
MDGs	Millennium Development Goals
MRV	Measurement, reporting and verification
NGO	Non-governmental organization
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PLAID	Project-Level Aid Database
PPCR	Pilot Programme for Climate Resilience
RE	Renewable Energy
REDD	Reducing Emissions from Deforestation and Degradation
SAARC	South Asian Association for Regional Cooperation
SCCF	Special Climate Change Fund
SEFI	Sustainable Energy Finance Initiative
SPREP	South Pacific Regional Environment Programme
UN	United Nations
UNCTAD	UN Conference on Trade and Development
UNDP	UN Development Programme
UNEP	UN Environment Programme
UNFCCC	UN Framework Convention on Climate Change
U.S.	United States
WRI	World Resources Institute

Executive Summary

The importance of reporting and reviewing financial information has become an increasingly urgent issue in the international climate negotiations. In the Copenhagen Accord agreed to by over 120 countries at the United Nations Climate Change Convention in Copenhagen in 2009, developed countries pledged to provide $10 billion per year in "fast start" funding over three years (2010-2012) and $100 billion per year by 2020 for climate adaptation and mitigation. Developing countries want assurances that developed countries are keeping their pledges to provide climate finance. However, Parties have yet to determine how this funding will be tracked and what, if any, common reporting format will be required.

Current United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines are neither transparent nor comprehensive, and efforts by other institutions to fill this gap have been limited in scope. As a result, current data collection systems cannot address whether funds are new and additional, and they provide only limited information on the levels of financing, what financing is used for and which countries are benefiting. The result is a lack of trust between Annex 1 Parties and non-Annex I Parties to the Convention that hinders progress in the negotiations for a post-2012 international treaty to address climate change.

Therefore, for climate financing to flow effectively and efficiently, it is critical that funds be reported and reviewed. Depending on the level of detail required by a reporting system, the reported data should help determine whether Parties are meeting their financial commitments, improve understanding of sectoral and technological investment trends and lead to assessments of the effectiveness of different forms of financing.

This paper discusses different ways to improve the current system for reporting and compiling information on public financing for climate change. Its goal is to help Parties to the UNFCCC develop robust reporting processes for climate finance. The paper discusses:

- How and what kind of financial data is currently collected and reported by the UNFCCC, private organizations, and multilateral development banks (MDBs).
- A vision for an improved financial reporting system, and different options to achieve that goal.
- The potential implications and operational consequences of an improved reporting system.
- Examples of proposed reporting formats (See Appendix 1)

Key Recommendations:

Parties could make significant improvements by adopting a standardized financial reporting format based on components of existing systems. This reporting format should ensure that reporting is complete, transparent, comparable, accurate, and efficient. However, before launching an effort to either revise or initiate a new means to collect financing data, Parties to the Convention will need to determine the kinds of data they want a climate finance reporting system to provide. This will determine the extensiveness of any expanded data collection effort and its likely cost.

Parties should consider implementing a more robust process to review reported data. This could include launching voluntary pilot projects to establish how reviews could be successfully conducted, using independent, non-political technical financial experts, formally establishing clear rules and guidelines for civil society participation in the review process, and improving record keeping so that data between countries can be compared.

A revised reporting system will likely require the redesign of existing databases and search engines. If Parties wish to have a centralized data system, they will need to decide where such a system should be located and will need to develop new procedures for collecting and processing financial data.

The introduction of a revised/new reporting system will take time to implement. A key step in this process is the adoption of a decision at COP 16 (2010), if not sooner, to request the UNFCCC secretariat to cooperate with the MDBs, the OECD DAC, and experts from developing countries to formulate a proposed decision on draft guidelines for reporting of financial information.

I. Introduction

Developing countries have sought clarity around financial commitments from developed countries since the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992. The 2007 Bali Action Plan, which states that support provided to developing countries should be "measurable, reportable and verifiable" and the Copenhagen Accord are the latest in a series of efforts toward this end (UNFCCC 2008).[1] These provisions reflect the feeling among developing countries that most developed countries have failed to deliver on their development aid commitments in the past—a feeling that is fostered by a lack of transparency around international aid provided by developed countries.[2] Developed countries, for their part, having seen development assistance fail to meet their objectives over several decades, are reluctant to scale up financing without adequate means to ensure that it is spent effectively and efficiently. The result is a lack of trust between Annex I Parties and non-Annex I Parties to the Convention that hinders progress in the negotiations for a post-2012 international treaty to address climate change. The importance of reporting and reviewing financial information has therefore become an increasingly salient, if not urgent issue in the international climate negotiations. From an even broader perspective, understanding the level and uses of financing can provide insights into whether greenhouse gas emissions will continue to increase in the future and whether the global community is preparing to adapt to a changing climate.

Despite the critical need, there has been little political guidance to help countries and MDBs communicate their climate finance commitments. Instead, technocrats have been left to sort out ways to improve the reporting and collection of public financial data on projects addressing climate change. The current UNFCCC reporting guidelines, which have not been revised since 1999, are neither transparent nor comprehensive, and efforts by other institutions to fill this gap have been limited in scope. As a result, current data collection systems cannot address whether funds are new and additional, and they provide only limited information on the levels of financing both pledged and delivered, what financing is used for and which countries are benefiting.

1 The Copenhagen Accord (2009) requires that "financing by developed countries be measured, reported and verified in accordance with existing and any further guidelines adopted by the Conference of the Parties to ensure that accounting of such targets and finance is "rigorous, robust and transparent."

2 The importance of tracking these pledges through a robust and transparent measurement, reporting and verification (MRV) system is demonstrated by the experiences of similar pledges made by developed countries in the lead up to the Kyoto Protocol during a 2001 UNFCCC meeting in Bonn. At the meeting, the European Union, Canada, Iceland, New Zealand, Norway and Switzerland pledged to provide US$410 million annually until 2008 for climate change adaptation. Of this amount, the then-15 EU countries pledged to provide US$369 million. While the EU affirms that it has delivered on its pledge, the data is insufficient to prove that this is the case due to inadequate transparency and reporting as well as a lack of agreement on what qualifies as climate finance (Moncel et al. 2009a).

Purpose of the Paper

The purpose of this paper is to stimulate a conversation among Parties and experts on an improved system for reporting and compiling information on public financing for climate change and in doing so lay the foundation for a new set of reporting guidelines and an improved system of collecting financial data. The paper addresses several key questions:[3]

- What kind of financial data are currently reported and how are they collected by the UNFCCC and other public and private organizations? What are the limitations of existing data collection systems?
- What options exist to improve reporting and what would a financial reporting system that can satisfy a broad set of user needs look like?
- What are the potential operational consequences and implications for review of improved reporting systems?

We suggest that financial reporting should serve three objectives:

- To assist Parties to the Convention in gaining a comprehensive understanding of the level of financing from all public entities,
- To enable developed countries to demonstrate that they are meeting their commitments under Articles 4 and 12 of the Convention (Box 1), and
- To facilitate a process of reviewing and considering financial information on public sources of finance, including how financing is being distributed and used.

We acknowledge from the outset that reporting public finance from only developed countries does not provide a complete picture:

1. **The private sector will finance the majority of the measures for mitigating and adapting to climate change** either directly or through the purchase of project offset mechanisms such as the Clean Development Mechanism (CDM). The UNFCCC (2007a) estimates that up to 86 percent of investment and financial flows for climate measures come from the private sector. The current collective pledge by developed countries to provide US$100 billion per year by 2020 to developing countries in the Copenhagen Accord includes private finance.

3 The paper does not address "review or verification" except in so far as they may need to be considered in the context of reporting.

Box 1 | Finance in Articles 4 and 12 of the UNFCCC

Article 4.3: "The developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11, in accordance with that Article. The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties."

Article 4.5: "The developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention.…"

Article 12.3: "Each developed country Party … shall incorporate details of measures taken in accordance with Article 4, paragraphs 3, 4 and 5 [in the communication of information to the Conference of the Parties]."

2. **Most developing countries support mitigation and adaptation measures with internally generated funds.** The UNFCCC (2007a) estimated that in 2000, domestic sources of investment represented about 83 percent of total investment in non-Annex I countries, compared with foreign direct investment (FDI), which represented 14 percent, and official development assistance (ODA), which represented 1 percent. Understanding the domestically supported actions in developing countries is important for grasping the extent of domestic ambition, evaluating how international finance can build on domestic finance, and filling any gaps.
3. **Developing countries are now a source of significant financing for projects in other developing countries.** Developing country contributions to the Global Environment Facility (GEF) in 2006 totaled US$52.84 million (Ballesteros et al. 2009). A 2007–08 New York University study estimated that Chinese foreign assistance and government-supported economic projects in Africa, Latin America, and Southeast Asia grew from less than US$1 billion in 2002 to US$27.5 billion in 2006 to US$25 billion in 2007 (Lum et al. 2009).[4] Moreover, environment ministers from the BASIC (Brazil, South Africa, India and China) countries meeting for the first time in January 2010 "expressed their desire to enhance South-South cooperation with other countries on various issues including those related to scientific cooperation and support for adaptation to vulnerable countries" (BASIC 2010). Following the meeting, Brazilian Environment Minister Carlos Minc stated that he will propose the creation of a joint fund with China, India and South Africa to help poor countries adapt to global warming (Colitt 2010). On April 28, 2010, Indian Prime Minister Manmohan Singh announced the establishment of an India Endowment for Climate Change in South Asia to help member states of the South Asian Association for Regional Cooperation (SAARC) in meeting adaptation and capacity building needs (Singh 2010).

Parties will need to decide when and how to account for these other sources of finance. This will be complex given the difficulty of tracking private financial flows and the limited capacity in developing countries to report incoming financial flows. The system proposed in this paper is intended to be an important first step toward a comprehensive tracking framework for climate finance.

Principles

The general principles that should govern the reporting of financial information do not differ significantly from those used for reporting of national GHG inventories, that is, reporting should be complete, transparent, comparable, accurate and efficient (UNFCCC 1999a).[5]

- *Completeness* means that a report should cover all major sectors, forms of financing and uses of funds (types of projects) from all Parties to all Parties. It could also refer to the sources of funding by governments and other mechanisms.
- *Transparency* means the methodologies, processes and procedures to estimate financing should be clearly explained and the sources of information identified to facilitate the checking of information.
- *Comparability* means that the information provided by Parties should be in a format to facilitate the aggregation and analysis of information.
- *Accuracy* means that the quantification of financial data is systematically neither over nor under actual financing, as far as can be judged, and that uncertainties are reduced as far as practicable. Guidelines should achieve sufficient accuracy to enable users to make decisions with reasonable assurance as

4 Note that these numbers are estimates given that China does not publicly release foreign aid–related data.

5 "Efficient" is included here but is not a principle included in the national GHG reporting guidelines on inventories.

to the integrity of the reported data.
- *Efficiency* means that the information provided serves the decision-making needs of Parties with a minimum of effort, expense or waste.

Scope

Recently a number of organizations (UNFCCC 2007a, OECD 2008, World Bank 2009) have focused on sources of finance and on issues relating to the governance of a possible new financial arrangement under the Convention. Several experts have also tried to catalog trends in bilateral and multilateral financing for energy and other sectors and identify deficiencies in current reporting systems (Tirpak and Adams 2008, Moncel et al. 2009a, Roberts et al. 2009, Corfee-Morlot 2009, Ballesteros et al. 2009). This paper builds on these efforts. It attempts to address some, but not all, of the problems with current reporting systems. More specifically, the paper focuses on:

- **Public funds from governments**, with the exception of Clean Development Mechanism projects, which are often supported by a combination of public and private financing.
- **Adaptation[6] and mitigation** (including reducing emissions from deforestation and forest degradation). While both are development issues, the former is a particular challenge because the boundaries between projects to adapt to future changes in climate and efforts to reduce risks from current weather anomalies are less clear than those associated with efforts to solely reduce GHG emissions, for example, from the energy sector. Adaptation also includes a more diverse set of activities and larger number of sectors. Later in the paper, we propose an approach which attempts to differentiate funding for adaptation to climate change from funding for development.
- **Loans, grants and guarantee**s. We omit "equity" funding while recognizing that in some instances this can be an important source of capital.
- **All major sectors that contribute to emissions of GHGs or in which adaptation may be needed**. Examples include: power, industry, transport, forests and other ecosystems, waste, agriculture, disaster risk management, cities, coastal systems and human health.
- **All categories of project financing**. Examples include: capacity building, training, planning, assessments, analysis, research and development, technology demonstrations and technology deployment.

There are several important limitations to this paper that Parties may also need to consider.

- **The paper does not address how to account for international private investment flows.** These can include international bank lending, public debt, portfolio equity holdings, foreign direct investment and philanthropic sources. The IMF and the OECD (2003) noted that there is a lack of data available on private investment flows to developing countries (some data are available from central banks, but they lack reliability and consistency).[7] At present, data that measure the environmental effectiveness of private flows are not available either.
- **This paper suggests no minimum level of reporting in terms of currency units for a particular sector or form of assistance.** Analysis of projects could shed light on this issue, but it should be noted that setting a minimum threshold could overlook capacity building, planning and assessment types of projects, which are often relatively small in size.
- **Many MDBs often report that a project has leveraged funds either from other MDBs or from the private sector.** Leveraged funds are sometimes difficult to confirm and may result in double counting. Yet excluding leveraged private sector funds means that that the reporting system would not provide a complete picture of financing. Parties should therefore consider how such funds can be accounted for after consultation with MDBs.

A future agreement on a reporting system for climate finance should aim to increase the probability of determining whether Parties are providing new and additional financing for climate change. However, answering with certainty whether funds are new and additional is a complex task given the evolving and different budgetary and accounting systems used by Parties. By itself, such a system may not be able to shed light on whether an increase in climate change funding has changed the total amount of development assistance. Depending on the level of detail required by a reporting system, the data should help determine whether Parties are meeting their financial commitments, should improve understanding of sectoral and technological investment trends and should lead to assessments of the effectiveness of different forms of financing.

6 The MRV of finance provisions of the Bali Action Plan are explicitly applied only to finance-supporting developing country Nationally Appropriate Mitigation Actions (NAMAs) and are not explicitly applied to adaptation actions. However, the majority of countries do not make this distinction when referring to MRV of finance in their submissions, nor is it made in the Copenhagen Accord (Moncel et al. 2009b).

7 For a discussion of the difficulties in compiling FDI data and interpreting what is available, see IMF/OECD 2003 and UNCTAD 1998.

II. Background

A. How is public financing for climate change (bilateral and multilateral) currently reported?

Reporting under the UNFCCC

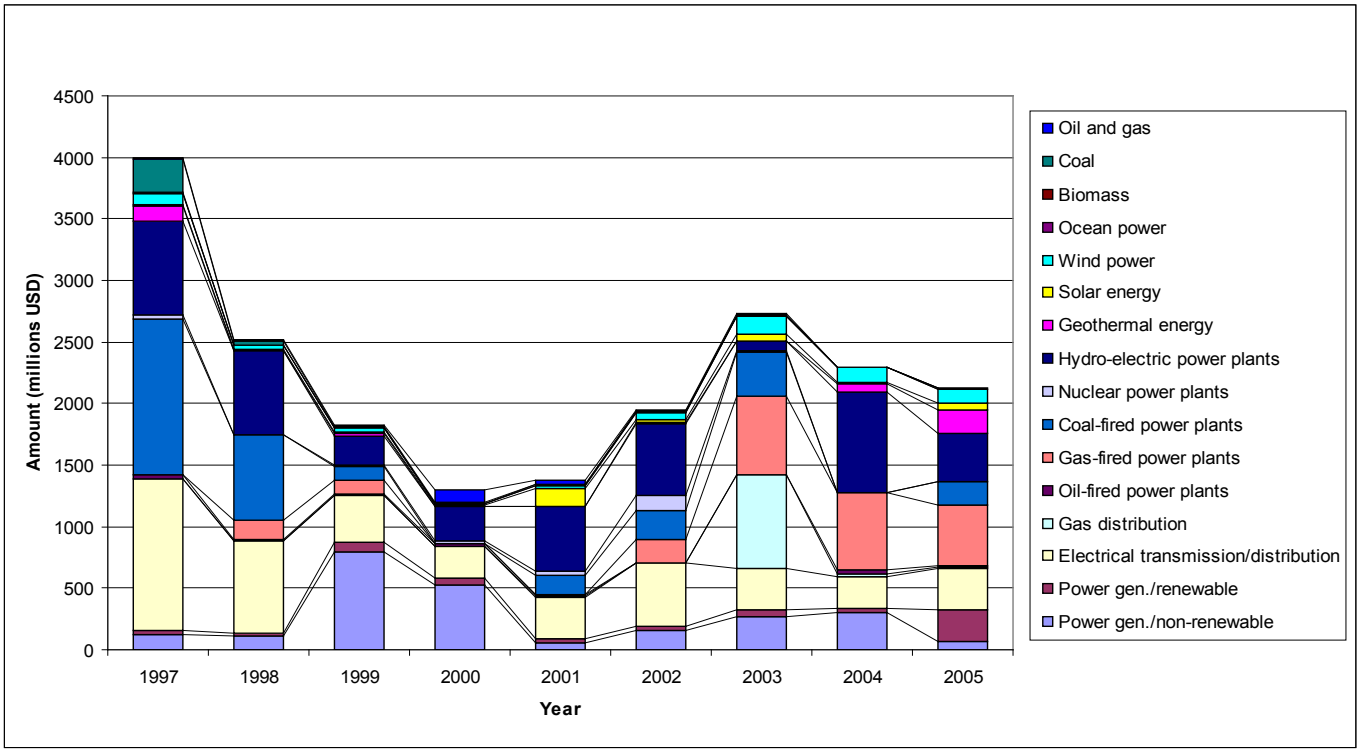
Annex II Parties are required by Decision 4/CP.5 to report on financing for developing countries (UNFCCC 1999b). These guidelines require Parties to indicate what "new and additional" financial resources they have provided pursuant to Article 4.3 and to clarify how they have determined such resources as being "new and additional." Parties are required to provide information in tabular form for a three-year period on financing through bilateral and regional mechanisms to specific countries for mitigation (energy, transport, forestry, agriculture, industry and waste management) and for adaptation (capacity building, coastal zone management and other vulnerability assessments). Also, Parties are to provide a list of contributions over a three-year period to multilateral institutions such as the World Bank Group, United Nations Programmes and scientific, technological and training programmes. In addition, Parties are encouraged to indicate in what way they have encouraged private sector activities and how these activities meet the commitments of Parties under Articles 4.3, 4.4 and 4.5 of the Convention.

Non-Annex I Parties are requested to provide information on their needs for financial resources and technical support for the preparation of their national communications they provide, as well as the support received from the GEF, Annex II Parties or bilateral and multilateral institutions (UNFCCC 2002a).

Reporting to International Organizations

The Creditor Reporting System (CRS) database of the OECD's Development Assistance Committee (DAC) collects and monitor official bilateral financial contributions from developed countries to developing countries.[8] The objective of the CRS is to "provide a set of readily available basic data that enables analysis on where aid goes, what purpose it serves and what policies it aims to implement, on a comparable basis for all Development Assistant Committee members."[9] The CRS online User's Guide provides information on data quality indicators and a list of DAC members. Within the CRS database, aid activities are recorded on the basis of commitments according to a "marker" system that identifies the purpose of the aid. For DAC purposes, grants and "soft" loans are recorded on the face value of the activity at the date a grant or loan agreement is signed with the recipient. Cancellations and reductions of previous years' agreements are not included in the database.

Figure 1 | Trends in bilateral assistance by energy technology, 1997-2005



Source: Tirpak and Adams 2008

8 This includes grants or loans to developing countries. See OECD's "Official Development Assistance," online at http://www.oecd.org/glossary/0,2586,en_2649_33721_1965693_1_1_1_1,00.html#1965586

9 See "User's guide to the CRS Aid Activities database," online at: http://www.oecd.org/document/28/0,3343,en_2649_34447_14987506_1_1_1_1,00.html

The CRS compiles its reported aid data into an online Aid Activity database. It has several important features. For example, it allows the user to sort aid data by sector, purpose, policy objective, type (investment, technical cooperation, etc.), channel, donor, recipient or by the Rio Markers (biodiversity, climate change and desertification). Sector classifications refer to the sector of the economy at which the aid is targeted (e.g., health, energy or agriculture). Policy objective markers are applied to activities according to three values of degree—principal, significant, and not targeted—based on how well they fulfill various objectives such as the Millennium Development Goals (MDGs).

While the CRS provides more detailed information on individual aid activities, the DAC database aggregates the information from the CRS to provide comprehensive data and statistics on aid overall. It allows users to search for aggregate financial data by sector classification, technology, donor and recipient country. For example, see Figure 1, which shows trends in bilateral financing for different energy technologies.

The Multilateral Development Banks (MDBs) report on activities based on their own mandates and operations. They use indicators to classify projects and to track the performance of projects. They have no software comparable to the OECD that enables a user to track contributions from donors to specific funds, technologies, countries or other purposes.

The United Nations Conference on Trade and Development (UNCTAD) compiles data on foreign direct investment and aggregates them in an online database. The online database does not break down FDI by sector; however UNCTAD does provide some sectoral data in its annual World Investment Report. As is the case with other reporting systems such as the OECD CRS, the sectoral classifications make it difficult to distinguish whether or not the funds are furthering climate change objectives. Therefore, Corfee-Morlot et al. (2009) conclude that tracking of private-private flows is neither comprehensive nor particularly useful to the MRV of climate finance.

Private Sector Financial Data Systems

There are two major sources of information on financing that cut across countries and projects: New Energy Finance and Dealogic. The New Energy Finance system tracks annual investments by technology (solar, wind, biomass, geothermal, marine, small-hydro and efficiency) and by type of financing (venture capital, government and corporate research and development, projects, and equity investments) in major countries and regions. New Energy Finance issues an annual report in conjunction with the UNEP Sustainable Energy Finance Initiative (SEFI), which outlines investment trends in renewable energy from both public and private sources.[10] Access to detailed data is available for a fee.[11]

Dealogic is a private firm with research tools covering global capital market and corporate finance activity for all types of projects, including but not limited to energy investments. It has a range of products aimed at the needs of the banking industry. For example, ProjectWare software provides access to the global project finance market including details of every project from pre-approval through signing and contains all relevant financing information. Loan Analytics software offers comprehensive market data on all global syndicated loans. A search engine allows users to analyze data in numerous ways while advanced reporting tools enable the production of a wide variety of reports. While many of the loans are from private banks, the software also provides information on public finance contributions in the form of loans and equity.[12] Access to the databases is available for a fee.

B. What are the limitations associated with current systems?

Issues Related to Reporting under the Current UNFCCC Guidelines

In 2007, the UNFCCC secretariat prepared a synthesis of financial information based on the fourth national communications from Annex I Parties (UNFCCC 2007b). The secretariat synthesized information on how financial flows varied from each Annex II Party to the GEF, to other multilateral institutions and through bilateral channels for the period 1998–2004.[13] In the case of bilateral contributions showed financing for mitigation and adaptation by the sectors/categories noted above for 1998–2004. The secretariat noted that multiple methodological and reporting issues limited the utility of their analysis; some of these are listed in Box 2.

Box 2 | Issues Related to Reporting as Identified by the UNFCCC Secretariat

1. Parties did not use the reporting categories in the guidelines
2. Parties reported using different years
3. Parties reported funding to multilateral institutions without distinguishing funding for climate change
4. While all Parties reported information relating to bilateral contributions, the data were provided in different formats and therefore difficult to compare
5. Only half the Parties reported information on their private sector engagement
6. Some parties reported information over a period instead of annually

10 Reports available at: SEFI, "Creating the Climate for Change," http://sefi.unep.org/english/home.html

11 See New Energy Finance at http://www.newenergyfinance.com/

12 See Dealogic at http://www.dealogic.com/en/index.htm

13 A few Parties provided data for 2005–06.

In addition, with respect to the Annex I guidelines we note the following:

- The current mitigation categories do not require reported financial data to be broken down by specific technologies, e.g., in the case of electricity generation, technology by coal, oil or gas combustion, nuclear, wind, geothermal, solar, hydro or wave power.
- The adaptation categories leave out several important categories, e.g., water, forests, health, energy and infrastructure. Moreover, the guidelines do not provide information as to how climate change financing is to be distinguished from development assistance support.
- The guidelines do not distinguish among funding for research and development, planning, assessments, capacity building, demonstrations or technology deployment.
- The data does not distinguish among grants, loans and guarantees.
- The guidelines provide no information on how to categorize projects having multiple components, e.g., a project that may have an energy efficiency component, a renewable energy component and other non-energy related components.
- The data reported under the UNFCCC cannot be readily compared to other sources such as the OECD DAC Creditor Reporting System
- The UNFCCC reporting guidelines do not require Annex I countries not included in Annex II to report on financial aid to climate change–related activities in developing countries.[14]

Information on financial assistance in developing country national communications also suffers from significant reporting issues. While the UNFCCC guidelines require non-Annex I Parties to provide information on their needs for financial resources and technical support from the GEF, Annex II Parties, or bilateral and multilateral institutions, it does not request that they follow a common reporting format (UNFCCC 2007c). A look at national communications from non-Annex I Parties shows that this information, when provided, often lacks comprehensiveness and is scattered throughout non-Annex I Party national communications rather than compiled in an easy-to-find, comparable and detailed manner. According to the UNFCCC secretariat's 2002 compilation and synthesis report of initial national communications from non-Annex I Parties, "National communications made reference to the assistance received from the GEF through its implementing agencies...Many also referred to assistance from bilateral programmes such as the United States Country Studies Program and the Netherlands and German cooperation agencies" (UNFCCC 2002b).

14 Liechtenstein, Slovenia and Slovakia in their fifth national communications provided some detailed information on climate assistance. As of May 13, 2010, Turkey and Monaco had not yet submitted their fifth national communication.

Issues Relating to Reporting under the OECD DAC Creditor Reporting System and by Multilateral Institutions

Given that the objectives of the OECD DAC are broader than tracking climate change funding and are aimed only at DAC members, its CRS system should not be expected to meet all of the needed functions of a robust climate finance reporting system. Its limitations in this respect are as follows:

- The CRS is incomplete. Multilateral organizations are not obliged to report to the OECD and some donors have not supplied data for all years. It also excludes aid data from some OECD countries that are not members of the DAC[15] and data from foundations and NGOs.
- Funds reported by multilateral organizations are not attributed to a specific donor country. As a result, unless donor countries channel funds through multilateral organizations with a specific mandate, funds channeled through multilateral bodies cannot provide a clear link between donor country and aid objective.
- Energy efficiency projects are not readily captured by the DAC marker system, hence the total amounts reported for energy efficiency from bilateral sources may be underestimates.
- The system does not require donors to distinguish among grants, loans and guarantees.
- Reporting of financing for projects funded over multiple years may be mischaracterized given that aid is reported on an annual basis.
- Parties are not required to delist projects that may have been listed in one year but are cancelled in a subsequent year. This hints at a greater problem in many reporting institutions in which aid is marked based on the intent of the supported activity before it is carried out rather than on its impact after implementation.
- The marker system does not correctly capture aid with multiple objectives. Markers apply to the full financial amount of the aid for a given activity. Each activity can only be assigned one sector code. Otherwise, activities cutting across multiple sectors are either classified with a multi-sector code or with the most relevant code. Policy objectives are applied to entire aid activities based on a three-tiered value of degree.[16] This type of marker system is especially problematic for adaptation activities, which are increasingly being integrated with other development objectives such as poverty alleviation. Starting January 1, 2010, DAC members began to apply a new adaptation marker when reporting aid

15 Non-DAC member countries include Chile, the Republic of Korea, Mexico, Poland, the Slovak Republic and Turkey.

16 Projects whose principal objective is entirely climate change are given a 2. Those that could have a significant climate component ranging from 10 to 90 percent of the project are given a 1. Those which are not targeted for climate change and are deemed to be entirely for development purposes are given a 0. Any data obtained through the system is therefore highly uncertain.

to the CRS. The marker, however, will be applied to aid in the same vein as the other markers (i.e., to the whole aid activity based on a three-tiered value of degree system) and will thus not accurately track aid for mainstreamed adaptation activities.

Public databases and search engines with limited search capabilities are available on all Web sites of the MDBs, but their degree of user friendliness varies greatly. Those that are available appear to have been designed to allow countries and analysts to determine the number of projects or the amount of funding provided to individual countries.[17] None of the systems have the same design features and most of the databases contain incomplete information, for example, on the form of financing and on whether funding has been approved and/or disbursed. In most instances it is also difficult to obtain financial data on complex projects having several components, for example, a construction loan and a training component. In addition, MDBs will often report "allocated" funds before they are delivered, but do not always update the information to reflect what is actually "obligated." Also, it should be noted that the MDBs do not report to the COP of the UNFCCC; they receive their mandates from their Executive Boards. See Appendix III for an analysis of the IADB, GEF, World Bank and ADB project databases.

Neither the MDBs nor the OECD DAC have databases that provide summary information on different types of projects. Currently the only way to ascertain the amount of funding for wind power projects is to count the number of projects in a given year, or to search through Web sites that have summary statistics scattered in various reports that are difficult to compare.[18] This can lead to errors, as the actual status of projects may be obsolete or incomplete. The lack of a consistent format for available information does not allow an easy and accurate comparison or integration of information across MDBs and the OECD DAC.

Issues Relating to Reporting Data by Private Sector Systems

The principal problem with private databases is that the data are collected for specific clients and do not come directly from Parties, the responsible agents under the Convention. There is also a lack of transparency, consistency and comprehensiveness. In addition, there is little tracking related to climate change mitigation and adaptation. For example, Dialogic does not have markers for carbon finance, presumably because there is no interest among its clients. Moreover, the Convention is likely to have little influence over how and what data the private sector chooses to collect.

17 Internal databases can be used by MDBs to present results on specific trends as they contain considerable details on projects. For example, the IADB is currently working on developing indicators that would allow it to have a first simple screen for determining if projects have mitigation and/or adaptation characteristics. IADB is also undertaking a portfolio assessment with regard to adaptation and risks to climate change impacts and may have initial results by July.

18 For an example, see World Bank (2006).

III. Critical Design Issues

A. What should be the goal of an improved reporting system? What questions do Parties wish to be able to address?

Before launching an effort to either revise or initiate a new means to collect climate financing data, Parties to the Convention ought to give consideration to what questions about climate finance they wish to answer. The types of questions will determine the extent and nature of the data collection effort, including its likely cost. This paper suggests a tiered set of increasingly specific questions, for example:

Tier 1: How much public money is flowing from one Party to another for climate change activities in a particular year? This would allow a picture to emerge as to whether climate change funds are increasing or declining and which countries are giving and receiving funds and how much they are exchanging.

Tier 2: How much public money is flowing from Annex II Parties to non-Annex I Parties in a particular year and what type of funds (grants, loans or guarantees) are being made available? This would allow a determination to be made as to whether Annex II Parties are meeting their commitments, what type of financing they are using to meet these commitments and to some extent whether funds are being used in the most efficient manner.

Tier 3: How much public money is flowing toward particular purposes in a given country, and in which sectors? This would allow analyses of whether funds are going into the sectors identified as priority areas in the countries' development plans. It would also support the development of a global picture of the balance between adaptation and mitigation funding, as well as the global distribution among sectors.

Tier 4: How much public money is flowing toward particular technologies or other specific types of mitigation or adaptation measures, and what categories of activities are being supported? This would allow Parties to understand whether there is movement toward low-GHG technologies and fuel types. It would also allow Parties to understand how support is being divided for categories, such as capacity building, planning and assessments or technology deployment.

B. What is the relationship between reporting and review/ verification of data?

The adoption of a possible revised or new reporting system in the absence of a process to review data is likely to continue to foster an atmosphere of mistrust among Parties. In the case of Annex I national GHG inventory data this has been addressed by the use of review teams composed of technical experts from both developed and developing countries who review the data every year on the basis of clear guidance. Similar reviews are conducted for Annex I national communications, but are generally spaced over longer time periods. A post-2012 review mechanism for climate finance could therefore take into account the experience and limitations[19] of the current review mechanisms for GHG inventories and national communications from Annex I Parties.[20] Having information from nonpolitical technical experts has allowed for the consideration of such information by the Subsidiary Bodies of the Convention.

Parties should therefore consider a more robust review process. In contributor countries, a lead ministry would need to be assigned responsibility for consolidating financial data from multiple ministries and making it available to reviewers. A specialized community of financial experts would need to be recruited and given guidance to conduct the review. Experts would require the cooperation of the MDBs, the OECD DAC and other institutions. Also, developing countries might ultimately need to develop a system for collecting data upon receipt of financing, which could be used to cross-check data from developed countries. Since such climate change financing relates to overall international public financing; a review process need not be under the sole purview of the UNFCCC. It could be managed by another institution under a mandate from the COP.

Pilot Projects

To take initial steps toward the creation of such a review system, one option is to conduct a number of voluntary pilot efforts to identify the practical problems that would have to be overcome and to learn whether such reviews are indeed feasible. For example, there are likely to be large differences in whether funds are characterized as being budgeted, appropriated, approved or expended depending on the country and the institution. Reviewers would need to understand these differences. Another option would be to focus a review just on MDB data. Yet another option might be to start an effort to track REDD financing, since related efforts are underway in the context of the Forest Carbon Partnership Facility (FCPF).[21] Following the money trail over time would be a challenge, but just as GHG inventories were permitted to be updated as new methodologies emerged, a flexible financial review system might be designed to allow for the consideration of several different types of pilot efforts.

A Role for Civil Society

Civil society could also play a valuable role in cross-checking climate finance data. The Institute for European Environmental Policy's (IEEP) January 2009 evaluation of the EU's fulfillment of its 2001 Bonn pledge provides one example of this. The IEEP's assessment compiled aid data on the EU's climate finance transfers through bilateral aid, the GEF and MDBs. The assessment concluded that data on EU climate aid lacked transparency, comparability and accessibility (Pallemaerts and Armstrong 2009). Having access to data is but a first step. If civil society is to contribute to reviews, its current unofficial status would need to be changed to allow for consideration of its information in the UNFCCC processes. This could be remedied by formally establishing clear rules and guidelines for civil society participation (Moncel et al. 2009a).[22]

Recipient Country Record Keeping

Verification of financial data will be complicated. A more comprehensive and transparent system might allow financing from Parties to MDBs to be compared to the records of the MDBs. However, verification of financing from one country to another or from an MDB to a country can only be done if the recipient country maintains a comparable set of "books." If this were done it would also have the benefit of providing some information on the limitations, impacts and outcomes of project financing. The Philippines (Resources Environment and Economics Center for Studies, Inc. 2010) and Costa Rica (INCAE Business School and FUNDECOR 2010) have undertaken initial studies toward this end as part of their financial needs assessments.

19 One limitation of the reviews of national communications arises from the composition of review teams and their mandate. For example, since financial data are only one aspect of a national communication, review teams rarely include financial specialists or have the time to assess financial data in depth, nor is it clear that they have a mandate to do so.

20 According to decisions 2/CP.1, 9/CP.2, 6/CP.3 and 33/CP.7, 26/CMP.1 and 7/CP.11 each national communication of an Annex I Party is subject to an "in-depth" review. The in-depth review is conducted by an international team of experts, coordinated by the UNFCCC secretariat. The review of each national communication typically involves a desk-based study and an in-country visit and aims to provide a comprehensive, technical assessment of a Party's implementation of its commitments. The in-depth review results in an in-depth review report, which typically expands on and updates the national communication. The in-depth review reports aim to facilitate the work of the COP in assessing the implementation of commitments by Annex I Parties. The reports also allow easier comparison of information between the national communications of Parties, although no common indicators are employed. Subsequent COPs have requested to streamline this process, but the basic elements remain the same.

21 As part of the REDD readiness process, the FCPF has asked that REDD countries have systems in place to track various financial flows coming in from different programs and how they plan on using this information.

22 For additional information on public participation in international fora see the Aarhus Convention: http://www.unece.org/env/pp/ppif.htm and http://www.wri.org/publication/environmental-accountability-beyond-nation-state-implications-aarhus-convention

Operational Issues

The adoption of a revised/new reporting system would likely lead to the redesign of existing databases/search engines and the introduction of new procedures for collecting and processing financial data. For example, as previously noted, only the OECD DAC database is capable of searching for information by mitigation technology type. If this capability were required, other institutions would need to revise the design of their databases and search engines to make information more accessible. If the COP were to adopt new guidance for the classification of mitigation and adaptation projects or for projects having multiple components, a new computer coding system for projects would be needed, procedures would have to be revised and training would be initiated for either project managers or those classifying projects/activities and reporting data.[23]

If Parties wish to have a centralized data system, it would require the design of electronic reporting forms and a data storage system with an associated search engine. Parties would need to decide where such a centralized data system should be located. Options might include the UNFCCC secretariat, the OECD DAC, one of the MDBs or a completely independent institution or corporation. The direct and indirect costs of establishing a centralized data system are difficult to determine at this time. In the case of the GHG data system, most costs were spread out over many years thereby making them palatable to Annex I Parties.

How should a revised/new reporting system be phased in?

The introduction of a revised/new reporting system will take time. Consequently, it is assumed that in the interim Parties would continue to report information as required by current UNFCCC guidelines, which—as noted previously—have significant limitations. To address the issue in a comprehensive manner, we suggest the following schedule:

1. Agreement at COP 16 (2010) on a decision to request the UNFCCC secretariat to formulate a proposed decision on draft guidelines for reporting of financial information by COP 17. This should be done with the cooperation of all the major MDBs, the OECD DAC, and experts from developing and developed countries. A decision at COP 16 could include a set of principles to inform the design of the guidelines.
2. Agreement at COP 17 (2011) on draft guidelines for reporting financial information and on a process and schedule for their introduction. This should include a number of "pilot projects" in which both developed and developing countries to report data using the draft guidance.
3. A report at COP 18 (2012) by the secretariat on the experience of Parties, the MDBs, the OECD DAC and others in applying the draft guidelines.
4. Agreement at COP 19 (2013) on the final guidelines based on the experiences of Parties, the MDBs, the OECD DAC and others in applying the draft guidelines.
5. By 2015, reporting of financial data by Parties using the guidelines for reporting financial information.[24]

In the interim, it is important to ensure that financial transfers are accounted for in a clear and transparent manner, while a full-fledged reporting system is under development. An important outcome of the fifteenth Conference of the Parties in December 2009 contained in the Copenhagen Accord was the agreement that developed countries provide "fast start" financing to developing countries in the amount of US$10 billion per year over three years (2010–2012). Several developed countries have come forward with individual fast-start climate finance pledges to help reach this global goal. However, little is known about how these pledges will be allocated among countries/funding channels, the types of funds or the mitigation and adaptation measures intended for support. The diversity of information provided by Annex I Parties reflects the current absence of a common reporting format to report this support (Ballesteros et al. 2010). An interim reporting format for fast start financing could serve as a "pilot" for some elements of a new, more comprehensive reporting system.

IV. Options for Improving the Flow of Information on Climate Finance

Parties to the Convention have several options for improving the reporting and compilation of financial data, exclusive of what may be necessary in the short-term for fast start financing under the Copenhagen Accord.

Option 1: Use existing data reporting and collection systems

One option, which may be unavoidable for the near term, is to continue to rely on existing public and private systems for any reports that Parties to the Convention may require. As noted previously, these systems have significant limitations when it comes to comparability, completeness and transparency. However, some are internally consistent; for example, the Global Environmental Facility has data on projects by type that extends over the last 15 years. Others, however, may not cover the same time span or may have changed categories over time, making

23 The World Bank Group (WBG) has a pilot project to test a new classification system using sector/subsector specific indicators to track the WBG's progress in building a more climate-resilient and sustainable investment portfolio. As part of this process, the WBG is also improving its portfolio tracking and monitoring system to better track investments that yield climate-related benefits. Results from this pilot are expected late this year (World Bank 2010).

24 This schedule could be accelerated in several ways. For example, if Parties were to agree at the climate change talks in June 2010 to request the UNFCCC secretariat to cooperate with other institutions and to formulate a draft decision on guidelines for reporting of financial information for adoption at COP 16, a year could be saved.

synthesis difficult. It would also be possible to assess trends in some sectors such as the renewable energy/energy efficiency sector by relying on data from New Energy Finance. Depending on the questions of interest to Parties (see page 9), a partial picture could be developed in this way. Finally, consideration could be given to asking either the OECD DAC or one of the MDBs to become a central repository for all financial data, building on their existing systems.

Option 2: Build on current reporting systems to develop a new integrated system

If Parties agree, consideration could be given to developing a new integrated reporting system by taking the best components of current approaches. However, to ensure comparable data, a system would only be able to answer some possible questions of interest to Parties, given the large number of variables (see Appendix IV for a list of all possible variables). Parties could report aggregate data for some preselected variables, thereby providing answers to some Tier 4–type questions. For example, how much financing has Indonesia received for capacity building relating to wind power? Box 3 provides one possible format for reporting by donor countries and MDBs, but depending on the variables of interest to Parties the format could be altered to address different questions. This format is ambitious relative to the format used in the current reporting guidelines for Annex I Parties, but we offer it as a means to stimulate a conversation among Parties and MDBs regarding the implementation issues. The format builds on the OECD marker system for mitigation financing, the ADB methodology for estimating financing for EE and RE in multiple component projects (for example, projects that may aim to expand production and improve energy efficiency) and a new methodology for categorizing adaptation activities.[25]

For *bi-lateral mitigation projects*, we propose the introduction of six sectoral forms for energy, industry, transport, waste management, forestry and agriculture (see example in Box 3). In each case, the y-axis represents the recipient country,[26] channeling institution, or fund[27] (e.g., GEF[28]) with cells for assessments and

Box 3 | Example of a Proposed Reporting Format for Mitigation[29]

Bilateral and Multilateral Reporting of Financial Contributions for Mitigation Activities
[Indicate Reporting Year]
Energy Sector (Example)*

Recipient country or channeling institution	Category	Solar	Wind Power	Biomass	Etc.	Total	Comment
Indonesia	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						
Maldives	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						

* Similar tables would be needed for other sectors, for example, industry, agriculture, forestry and waste management.

25 The format proposed for adaptation draws heavily on WRI's National Adaptive Capacity Framework, http://www.wri.org/project/vulnerability-and-adaptation/nac-framework.

26 In instances of support for a regional entity, Parties should indicate the countries in the region that are expected to benefit from the finance. Reporting should indicate whether the regional entity will spend particular amounts in particular countries, or if the finance is for capacity building of that regional entity.

27 Parties should indicate the fund(s) or other institution(s) through which finance was channeled. Examples include global channels (e.g., World Bank PPCR, LCDF, SCF, Kyoto Protocol Adaptation Fund, UNDP, UNEP), regional channels (e.g., SPREP, regional climate centers, regional development banks), national channels (e.g., recipient country climate trusts or other "basket funds," budgetary support), or via sub-national channels (e.g., direct to a NGO, research institute, or sub-national government body).

28 Parties providing financial support directly to an MDB or a specialized fund would only fill out the amount, type of funding and the channeling institution/fund.

29 For a more detailed explanation of the content of these tables, see Appendix I.

Box 4 | Example of a Proposed Reporting Format for Adaptation

Bilateral and Multilateral Reporting of Financial Contributions for Adaptation Activities
[Indicate Reporting Year] [30]
Water Sector (Example)

Example 1. Simple grid using major project categories

Recipient country or channeling institution	Assess/ Planning	R&D	Deployment	Capacity Building	Total	Comment
Indonesia						
Maldives						

Example 2. Major project categories are further divided among activity type.

Recipient country or channeling institution	Category	Natural Resource Management	Engineering/ Construction	Social Protection	Other Activity Type	Total	Comment
Indonesia	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						
Maldives	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						

Example 3. Major categories are further divided by level of intervention.

Recipient country or channeling institution	Category	International	National	Sectoral	Local/ Community	Household	Total	Comment
Indonesia	Assess/Planning							
	R&D							
	Deployment							
	Capacity Building							
Maldives	Assess/Planning							
	R&D							
	Deployment							
	Capacity Building							

30 For a more detailed explanation of the content of these tables, see Appendix I.

the purpose, that is, planning, research and development, deployment and capacity building. The x-axis has columns for different types of technologies unique to that sector. For estimating the investments in energy and industry projects that have multiple components, we propose adoption of the Guidelines for Estimating Investments in Renewable Energy and Energy Efficiency Projects used by the Asian Development Bank (ADB undated; see A II). For Multilateral Development Bank reporting, we propose a similar format, but the y-axis only contains cells for recipient countries. The format shown in Box 3 would not allow data to be gathered on the type of financing (grant, loan or guarantee) or the sources of financing, but such information could be shown in the comment column or in a supplemental report (see section below). Each form would be submitted every year by each Party and channeling institution to a body designated by the COP.

We have not explicitly accounted for public funds used to purchase project offsets. The CDM guidelines indicate that the international public finance for CDM projects should not be a "diversion of ODA." They require every project that uses public financing to do so in an annex. To achieve a goal of comprehensive reporting, such funds would need to be reported using an additional reporting form.

Distinguishing financing for climate change *adaptation projects* from development projects is a significant challenge for bilateral and multilateral institutions. The current method the OECD DAC and the MDBs use for estimating investments in adaptation projects requests the funder to rank adaptation projects on a subjective scale.[31] Depending on the score, a different portion of the investment is credited as a climate change investment. We suggest a significant departure from this approach.

Given the highly contextual nature of adaptation, it's very difficult to tell from the description of an activity whether or not it is adaptive. A particular activity that supports adaptation in one context may be maladaptive in another, depending upon climatic, environmental, socio-economic, cultural and institutional factors. Likewise, it can be difficult to distinguish an adaptation activity from a run-of-the-mill development activity based on the nature of the activity alone—the very same activity may be needed in one context to address climate change, but in another it may be selected simply because it furthers a development objective. In other words, adaptation is not defined exclusively by what you do, but rather by why you do it. For this reason, we propose to count adaptation financing only for projects that are directly linked to or emerge from vulnerability or impact assessments, a recipient country adaptation planning document, a climate risk screening or another study indicating how the selected activity can help to address a particular climate risk. The comment/reference column in the suggested reporting format (Box 4) could be used to identify the document or study serving as a rationale for the data.

A second challenge with reporting adaptation finance is the broad diversity of activities that may be supported. In this context, creating a reasonably sized set of comprehensive, mutually exclusive reporting parameters can be very difficult. Three example forms for reporting bilateral adaptation projects in the water sector are presented in Box 4. Each would provide Parties with different information about activities supported and would have different strengths and weaknesses with regard to comparability and comprehensiveness. Example Form 1 would likely provide a high degree of comparability, but it provides less information about supported activities than Example Forms 2 and 3. Example Form 2 provides additional information about the nature of the activity, but it may require a subjective judgment for categorization of an activity (for example, would an irrigation project be categorized as a changing natural resources management practice, or would it be an engineering project?). Example Form 3 provides different information about supported activities and would be able to answer different types of questions that may interest Parties.

Separate forms would be required for other sectors or impacted areas, for example, agriculture, energy, health, and coastal zones. The selection of a sector set would significantly influence the appropriateness of different reporting parameters. Indeed, Parties would probably want to consider whether different parameters would be needed for different sectors (though this would significantly complicate the reporting system). We note that both the set of potential sectors and the set of potential parameters for reporting are large and may need to be defined somewhat arbitrarily after consultations with experts. Both are likely to be modified once experience is gained through the pilot project process noted above.

Option 3. Project-level reporting

If Parties wish to be able address very specific questions (for example, how much financing has Indonesia received for wind power training in the form of grants from the Overseas Development Corporation?), it will be necessary to have Parties report and characterize every project instead of aggregating data as suggested in Option 2. This would require extending the y-axis on all forms to allow a reporting country to list every project undertaken with the recipient country. The x-axis would be extended so that every type of finance, technology and category of support would have its own cell and a new column would be added to allow for the source of funding, in this case, the Overseas Development Corporation. This would provide additional

31 Development projects that are deemed to be 90–100 percent relevant to climate change are ranked 2. Those that are deemed to be 10–90 percent relevant are ranked 1. Projects that are deemed to be 0–10 percent relevant are ranked 0.

transparency by allowing Parties to report projects having multiple types of finance, technologies or categories of support, depending on preferences established by the COP.

Reporting processes

The current effort to classify projects and collect data on financing suffers from a number of limitations, including: the lack of a standardized reporting format, lack of clear instructions to people in different institutions, changes in personnel responsible for classifying projects, and a lack of training. This paper focuses in particular on formats that could be submitted electronically to reduce errors and ensure consistency. However, to improve the process of reporting, Parties should consider the need for an instruction manual with example cases relating to classification of projects, an e-learn tool such as the one used to train GHG expert reviewers and testing material to promote a certain level of competency.

Supplemental information

While standardization of information is important, there are important nuances that may not be captured in common reporting tables. Also, the tables may not be sufficient to be able to fully understand the numbers reported by Parties, for example:

1. The data alone will not provide information on the sources of financing, that is, which ministries or agencies are providing support and legal mandates for financing.
2. The budget categories of ministries often change over time. Budget categories may be relabeled or aggregated differently and shifted from one ministry to another. Explanations of such changes would lead to more transparency.
3. Parties may wish to have an opportunity to describe new initiatives, examples of success stories, contact information for key staff and other information not revealed in spreadsheet formats.
4. Given the unique challenges involved in matching adaptation measures to the needs of a particular place, Parties may wish to provide insights relating to innovative approaches to supporting adaptation.

To address these issues, we recommend that in addition to reporting data using the format in Boxes 3 and 4, that Parties provide a supplementary report.[32] The report could be an opportunity to identify how the data are complied within countries, narrative information on priorities and new initiatives, information on legal mandates and other information to help the reader understand the reported data and allow for cross-checking of information.

32 See U.S. State Department (2010) and the Council of the European Union (2010) as examples of some of the types information that might be included in a supplemental report.

V. Conclusion and Recommendations

Current reporting of public sector financing for climate change projects by bilateral and multilateral institutions lacks transparency, completeness, consistency and accuracy. As a result it is difficult to determine whether financing is additional, what categories of projects are being funded (e.g., capacity building, training, planning, assessments, analysis, research and development and technology deployment), what types of funds (grants, loans and guarantees) are being provided and what the financing trends are in particular sectors, technologies and measures. In particular, current efforts to categorize adaptation projects provide little insight about the types and levels of funding.

Currently there is no integrated international system for storing and accessing financial data, although individual components of a system reside in the OECD, the MDBs and the private sector.

Parties could make significant improvements by adopting a standardized financial reporting format based on some of the components of existing systems. This reporting format should ensure that reporting is complete, transparent, comparable, accurate, and efficient. However, before launching an effort to either revise or initiate a new means to collect financing data, Parties to the Convention ought to give consideration to what questions they need to answer. The types of questions will determine the extent of any expanded data collection effort and its likely cost.

The adoption of a revised or new reporting system in the absence of a process to review data is likely to promote an atmosphere of mistrust among Parties. This has been addressed in the case of Annex I GHG inventory data and national communications by the use of technical review teams composed of experts from both developed and developing countries. Having information reviewed by independent nonpolitical technical financial experts will allow for reasoned consideration of such information by bodies of the Convention. A similar process using financial experts could be used to review financial data.

The adoption of a revised/new reporting system would likely lead to the redesign of existing databases/search engines and the introduction of new procedures for collecting and processing financial data. In the case of GHG accounting, most costs were spread out over many years thereby making them palatable to Annex I Parties.

In the absence of a request from the COP, Annex I Parties will continue to report information as required by existing UNFCCC guidelines and the OECD DAC and the MDBs will continue to

use existing data systems. The introduction of a revised/new reporting system will take time to implement. A key step would be the **adoption of a decision at COP 16 (2010), if not sooner, through a conclusion of the SBATA in June and a request to the UNFCCC secretariat to cooperate with the MDBs, the OECD DAC, and experts from developed and developing countries to formulate a proposed decision on draft guidelines for reporting of financial information.** Assuming the need for pilot projects to gain experience with the draft guidelines over a period of two years and the need to develop electronic reporting forms and an associated database, a fully operational system could be available by 2015. This will not satisfy the need for more transparency regarding fast start funding under the Copenhagen Accord, but it would put the tracking of financial information on a sound long-term path.

VI. Appendices

Appendix I: Examples of Proposed Reporting Formats for Mitigation (Energy) and Adaptation (Water)

A. Bilateral and Multilateral Reporting of Financial Contributions for Mitigation Activities

[Indicate Reporting Year]

Energy Sector (Example)*

Recipient country or channeling institution	Category	Solar	Wind Power	Biomass	Etc.	Total	Comment
Indonesia	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						
Maldives	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						

* Similar tables would be needed for other sectors, for example, industry, agriculture, forestry and waste management.

Guidance for Mitigation Reporting

Column Heading	Explanation
Recipient country or channeling institution	This column can be filled in with the recipient region or country for donor Party or multilateral institution reporting. In instances of support for a regional entity, Parties should indicate the countries in the region that are expected to benefit. In the case of donor Party reporting in which climate funds are being channeled through an intermediary institution, this column should indicate which fund(s) or other institution(s) finance was channeled through. Institutions for channeling adaptation finance are currently proliferating. Examples include global channels (e.g., World Bank, PPCR, LCDF, SCCF, Kyoto Protocol Adaptation Fund, UNDP, UNEP), regional channels (e.g., SPREP, regional climate centers, regional development banks), national channels (e.g., recipient country climate trusts or other "basket funds," budgetary support), or sub-national channels (e.g., direct to an NGO, research institute, or sub-national government body).

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Category	Successful mitigation will require a wide variety of activities, and these will vary significantly from country to country and over time. The finance flowing to each country should be broken down by the following key categories: • **Assessment and planning** – Assessment is the process of examining available information to guide decision-making. This includes assessing the GHG abatement options, reduction potential, costs and benefits, and impacts (environmental, social, and economic) of a mitigation activity. Planning that takes into account the assessments is needed on both the micro and macro level, and for both mitigation measures and the development of national systems that can facilitate mitigation. Examples of macro-level plans include countries' national Low Carbon Development Plans. Effective processes for planning will engage a wide range of stakeholders, will be made transparent to the public, will prioritize issues and sectors, and will enable review and adjustment of plans and priorities as circumstances change.
Category (cont'd)	• **Research, development and demonstrations** – This includes, for example, support for projects, networks or organizations undertaking scientific research, data collection, systematic observation and development of new technologies or methods to understand and mitigate climate change. It could also include demonstrating the feasibility of a technology or policy in order to build awareness around less known but effective solutions and to attract private funding. • **Deployment** – Deployment is the implementation of plans, measures and technologies to actively and concretely decrease emissions. For example, this could include constructing a solar power plant, building an energy efficient building, or reforesting a previously deforested area. • **Capacity building** – Building capacities for all the above activities is a critical component of mitigation. Additional key mitigation activities for which capacity building may be needed include: ◊ Coordination – Mitigation requires action by disparate actors at multiple levels, both within and outside of government. Coordination of their activities helps avoid duplication or gaps and can create economies of scale in responding to challenges. Coordination may be horizontal (e.g., among ministries), vertical (e.g., among national, global and sub-national actors), or inter-sectoral (e.g., between government and business). ◊ Information management – This consists of collecting, analyzing and disseminating knowledge in support of mitigation activities. Relevant information will vary but at a minimum typically covers GHG emissions and energy use by sector. Good information management will ensure that information is useful and accessible to stakeholders. It may also involve building the capacity of stakeholders to use information for mitigation. ◊ Public awareness – This includes developing and implementing public awareness programs, increasing public access to information, and increasing public participation in addressing climate change and its effects. It consists of, among other things, aid to education ministries, administration and management systems; institution capacity building and advice; curriculum and materials development; educational facilities, equipment and materials development; and training teachers. ◊ Training – Training personnel to carry out the activities mentioned above. ◊ Monitoring/Review – The monitoring and review of GHG emissions and policies will be necessary for evaluating progress domestically and assessing and revising strategies based on those findings. It could also be useful internationally to increase transparency and communication around the actions countries are taking, in turn inspiring more ambition in the international system.

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Examples of energy technologies that could be included in an expanded form	CCS Biomass Biofuel Biogas Municipal waste Ocean power Wind power Solar energy Geothermal energy Hydro-electric power plants Nuclear power plants Clean-coal power plants Electrical transmission/distribution Gas distribution Renewable power generation Energy efficiency
Total	Indicates the total amount disbursed (in U.S. dollars at the time of dispersal) during the reporting year that supported an mitigation activity or the mitigation component of an activity for each row. In the case of funds channeled through an intermediary institution, the amount should only include funding for climate change.
Reference or comment	This comment section should include a justification of how the countries' financed activities further mitigation. For example, this could be a reference to an environmental impact assessment.

B. Bilateral and Multilateral Reporting of Financial Contributions for Adaptation Activities

[Indicate Reporting Year]

Water Sector (Example)

Example 1. Simple grid using major project categories

Recipient country or channeling institution	Assess/ Planning	R&D	Deployment	Capacity Building	Total	Comment
Indonesia						
Maldives						

Example 2. Major project categories are further divided among activity type.

Recipient country or channeling institution	Category	Natural Resource Management	Engineering/ Construction	Social Protection	Other Activity Type	Total	Comment
Indonesia	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						
Maldives	Assess/Planning						
	R&D						
	Deployment						
	Capacity Building						

(continued on next page)

Example 3. Major categories are further divided by level of intervention.

Recipient country or channeling institution	Category	International	National	Sectoral	Local/ Community	Household	Total	Comment
Indonesia	Assess/Planning							
	R&D							
	Deployment							
	Capacity Building							
Maldives	Assess/Planning							
	R&D							
	Deployment							
	Capacity Building							

Guidance for Adaptation Reporting

Column Heading	Explanation
Recipient country or channeling institution	This column can be filled in with the recipient region or country for reporting by donor Parties or multilateral institutions. In instances of support for a regional entity, Parties should indicate the countries in the region that are expected to benefit. In the case of donor Party reporting in which climate funds are being channeled through an intermediary institution, this column should indicate which fund(s) or other institution(s) finance was channeled through. Institutions for channeling adaptation finance are currently proliferating. Examples include global channels (e.g., World Bank, PPCR, LCDF, SCCF, Kyoto Protocol Adaptation Fund, UNDP, UNEP), regional channels (e.g., SPREP, regional climate centers, regional development banks), national channels (e.g., recipient country climate trusts or other "basket funds," budgetary support), or sub-national channels (e.g., direct to an NGO, research institute, or sub-national government body).
Category	Successful adaptation will require a wide variety of activities, and these will vary significantly from country to country and over time. The finance flowing to each country should be broken down by the following key categories: • **Assessment and planning** – Assessment is the process of examining available information to guide decision-making. This may include assessments of vulnerability, climate change impacts, adaptation practices, and the climate sensitivity of development activities. Planning that takes into account the assessments is needed on both the long- and short-term, and for measures and national systems that can facilitate adaptation. Examples include countries' national, state or regional adaptation plans, "mainstreaming" plans, effective processes for engaging stakeholders, methods to prioritize issues and sectors, processes to review and adjust plans and processes for dispute resolution.

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Category (cont'd)	• **Research, development and demonstrations** – This could include, for example, aid for various networks or organizations supporting research, data collection, systematic observation and development of new technologies or methods to understand and adapt to climate change. This could also include demonstrating the feasibility of measures, policies, and technology to draw attention to less known but effective solutions and to attracting private funding. • **Deployment** – Deployment is the implementation of plans, measures and technologies to actively and concretely manage risk and address vulnerabilities to climate change. For example, this could include implementing a micro-insurance scheme or building an irrigation system to increase access to water. • **Capacity building** – Building capacities for all the above activities is a critical component of adaptation. Additional key adaptation activities for which capacity building may be needed include: ◊ Coordination – Adaptation requires action by disparate actors at multiple levels, both within and outside of government. Coordination of their activities helps avoid duplication or gaps, and can create economies of scale in responding to challenges. Coordination may be horizontal (e.g., among ministries), vertical (e.g., among national, global, and sub-national actors), or between government and business or civil society. ◊ Information management – This consists of systems for collecting, analyzing, and disseminating data and information in support of adaptation activities. Relevant information will vary, but at a minimum typically covers climate variables, the status of natural and human systems, and existing coping strategies. Good information management will ensure that information is useful and accessible to stakeholders. It may also involve building the capacity of stakeholders to use information for adaptation. ◊ Public awareness – This includes developing and implementing public awareness programs, increasing public access to information, and increasing public participation in addressing climate change and its effects. It consists of, among other things, aid to education ministries, administration and management systems; institution capacity building and advice; curriculum and materials development; educational facilities and equipment development; and training teachers or media representatives. ◊ Training – Training personnel to carry out the activities mentioned above is one component of capacity building. ◊ Monitoring/Review – TThe monitoring and review of adaptation policies and measures will be necessary for evaluating progress domestically and assessing and revising strategies based on those findings. It could also be useful internationally to increase transparency and communication around the actions countries are taking.
Activity type	Natural Resources Management: Activity emphasizes changing natural resource management practices (e.g., for managing water, land, protected areas, fisheries) as an adaptation strategy. Engineering/Construction: Focuses on construction or changes to the built environment (e.g., roads, building codes, sea walls) as an adaptation strategy. Social Protection: Focuses on the creation or modification of social protection mechanisms (e.g., insurance, credit, asset transfer, safety nets) as an adaptation strategy.
Total	Indicates the total amount disbursed (in U.S. dollars at the time of dispersal) during the reporting year that supported an adaptation activity or the adaptation component of an activity for each row. In the case of funds channeled through an intermediary institution, the amount should only include funding for climate change.
Reference or comment	This section should reference how the projects are directly linked to or emerge from a vulnerability or impacts assessment, a recipient country adaptation planning document, a climate risk screening, or another study.

Appendix II: Procedure for Estimating Investments in Energy Efficiency and Renewable Energy

Introduction

The ADB's 2009 Energy Policy has the promotion of clean energy as one of its three key pillars and targets US$2 billion in renewable energy and energy efficiency investments by 2013. To effectively monitor and evaluate ADB's progress, a methodology has been established to quantify ADB's clean energy investments. The reason for this is that, for example, an investment in a wind or solar power farm can be clearly attributed to renewable energy and the whole amount of the investment can be counted towards the current US$1 billion clean energy target.

However, for many projects it is not so simple. Often, clean energy is only a component of a project. For example, some projects address several sectors at the same time, such as those dealing with the rehabilitation of urban infrastructure. Such a project can cover poor road systems, wastewater treatment, more efficient water pumps and reducing water losses during distribution (non-revenue water). In such a case, there are clear energy efficiency gains from decreasing non-revenue water, as each cubic meter of water saved represents energy conserved in its pumping, filtering and any other processes that use energy. There are also gains from replacing old, outdated and inefficient pumps with modern energy-efficient pumps. ADB computes the percentage of efficiency gains for the investment and counts only that percentage of the ADB investment amount toward its target investment of US$1 billion.

Guidelines

The following guidelines provide the methodology of cost estimations for a variety of clean energy project components. As projects are implemented, these numbers are further refined to reflect actual investment values.

Renewable energy (RE)

For RE projects (wind, solar, small hydro, geothermal, biomass, biofuel, biogas, landfill gas, municipal waste), the entire ADB loan/assistance is its RE investment. For transmission lines dedicated to transmit RE-generated power, the ADB loan/assistance is its RE investment.

Demand side energy efficiency (EE)

For dedicated EE projects (projects whose sole purpose is energy efficiency improvement), the entire ADB loan/assistance is its EE investment. For other EE projects in other demand sectors (water supply and sanitation, transport, multi-sector development such as a central heating system, etc.), the EE investment is proportional to improvement in efficiency or to the reduction of emissions due to improvement in efficiency.

For example, an existing pumping system operating at 62 percent efficiency (baseline) is replaced by another system that operates at 70 percent efficiency (project), the percentage EE investment is calculated as follows: Percent EE Investment = (70 – 62)/62 = 0.129, or 13 percent. For assistance provided to ESCOs and manufacturers of energy efficient appliances and industrial equipment, the entire ADB loan/assistance is its EE investment. For railways, the total EE investment is the present value of the total energy savings over its economic life; the percentage of this savings proportional to ADB loan/assistance is ADB's percent EE investment in railways. ADB's EE investment = Present Value (PV) of energy savings proportionate to ADB loans at a discount rate equal to financial internal rate of return (FIRR) of the project.

For projects with clearly defined EE components, the project estimates for such components are taken as the EE investments. In such cases, because the costs of the EE components have been calculated and presented in the project documents, there is no need for EE percentage calculations. For example, in a multisector project composed of road rehabilitation, water supply non-revenue water reduction, and wastewater treatment, the cost estimate for non-revenue water reduction (if clearly separated from other cost components) is taken as the EE investment. Each cubic meter of water saved represents kilowatt-hours (kwhs) of energy saved in pumping and other production processes.

Supply side energy efficiency

For a new power plant, the clean energy investment is proportional to the CO2 reduction relative to a defined baseline. For example, if a combined-cycle gas-fired power plant is to be constructed and a single-cycle gas-fired power plant has been defined as the baseline, the clean energy investment is 53.6 percent of the total investment, as calculated below.

For power plant upgrading projects, similar to new power plant projects the EE investment is proportional to the reduction in CO2 emissions as a result of efficiency improvement. For example, if a conventional oil-fired steam power plant with efficiency of 29 percent is upgraded to have an efficiency of 34 percent, the clean energy investment is 15 percent of the total investment.

For transmission and distribution projects, the EE investment is proportional to the improvement in efficiency, similar to that in power plant upgrading. For example, if a transmission system that uses a conventional alternating current (AC) system (with 8 percent losses per 1000 km, or 92 percent efficiency) switches to an energy-efficient high-voltage direct current (HVDC) system instead (with 3 percent losses per 1000 km, or 97 percent efficiency), the percentage EE investment is determined as follows: Percent EE investment = (97 - 92)/92 = 5.43 percent.

Supply side fuel switching
For power plant switching from coal or oil to gas, the ADB investment is proportional to the reduction in CO2 emissions as a result of using less CO2-emitting fuel. As a fuel switching example, consider an oil thermal power plant (baseline) which was retrofitted to run on gas. The percentage EE investment is calculated as follows: CO2 emissions, oil thermal power plant (baseline) = 0.820 kgCO2/kwh; CO2 emissions, gas-fired power plant (project) = 0.594 kgCO2/kwh; percentage ADB investment = (0.820 – 0.594)/0.820 = 27.56, or 28 percent.

For gas storage and pipelines dedicated to gas-fired power plants, the percentage ADB investment follows the values that apply to specific power plants where the gas will be used. These values vary from 35 to 75 percent.

Appendix III - Major MDB Aid Databases

MDB	Database Format	Reporting Markers	Issues
Inter-American Development Bank	Provides information on a project-by-project basis. Can search the project database based on a keyword search.	• Organizes aid by sector and subsector. • Provides information on the type of finance (loan, grant, guarantee or investment), as well as on the status of the project (preparation, approved, implementation or completion).	• It does not provide aggregate data on aid, but merely provides project-by-project information. • Climate change is a sub-sector that is applied generally to both mitigation and adaptation efforts and is not applied to all projects that address climate change. For example, a project that promotes sustainable management of forests may be tagged with "Environmental Programs" even though it is relevant to climate change. • Under the energy sector, there is only a general "alternative sources of energy" subsector classification that is not broken up into the various technologies like solar and wind. If you want to isolate projects for a specific technology, it would have to be done by the keyword search.
World Bank	Provides information on a project-by-project basis that can be sorted based on a keyword search, or by region, country, area, goal, theme, or sector. Provides aggregate data by country for some countries, including aggregate data by one of ten general sector classifications.	• The World Bank tags aid based on sector and theme (i.e., the goals/objectives of Bank activities). It also has a separate marker that tags aid based on its environmental impact (based on an environmental screening that the World Bank must do according to its Safeguard Policy on Environmental Assessment). • Up to five sectors can be applied to a single project, and the sectors are applied based on the percentage of the project they are relevant to. • Each project page provides fairly detailed information, including the type of finance and the status of implementation.	• It does not provide aggregate data by sector (beyond the ten general classifications within each country). It only provides aggregate data for a small number of countries. • While the sector classifications are applied in percentages, one cannot aggregate aid numbers by specific sector or theme. • Projects are marked with general sectors such as "Renewable Energy" and general themes such as "Climate Change." The renewable energy marker is not broken up into the various technologies like solar and wind, so a keyword search is necessary to isolate projects for a specific technology. There is no adaptation marker (although the World Bank is working on creating one), and there is no marker for the type of activity.

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Climate Investment Fund	Unlike many other MDBs, the CIFs do not compile their financial information in a database. The CIFs compile numerical pledges from countries in a brief table, which is supplemented by trustee reports providing more information.*	• The table divides up aid by country and by contribution to the two CIF Trust Funds—the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF). Contributions to the CTF are further divided into funds for the Pilot Program for Climate Resilience, the Forest Investment Program, Scaling Up Renewable Energy, and others. • The trustee reports distinguish the funds by grant, loan or capital.	• It only provides information on the numerical pledge and delivery of the finance and not on the use or implementation. • Aid is not distinguished by technology type or specific adaptation objective.
Asian Developemnt Bank	Provides information on a project-by-project basis. Can sort projects based on several metrics: keyword search, country, sector, status, type of assistance, and approval year.	• Project status: "proposed", "approved" or "closed or cancelled." • Type of finance: Public sector - loans, technical assistance, regional TA, or grants, guarantees and equity investments (technical assistance figures are clearly separated from loans and grants), or private sector. • Provides information on implementation progress.	• It does not aggregate data at all. • Information on implementation progress is often out of date. • Projects are marked with general sectors such as "energy," which is not broken down into the various technologies like solar and wind. Isolating projects for a specific technology have to be done by keyword search. • There is no adaptation or climate change marker, and there is no marker for the type of activity.
Global Environment Facility	Provides information on a project-by-project basis. Can sort projects based on several metrics: keyword in title, country, focal area, GEF Agency, project size, fund, size of the financing, and approval year. Provides country profiles, which includes aggregate information on the Resource Allocations (RAF) for each country.	Projects are tagged with one of seven focal areas, including climate change and biodiversity.	• Information is not aggregated, except for by country. • The climate change tag is broad and is not broken down into various energy technologies or adaptation. Isolating projects for a specific technology have to be done by the title keyword search.

*See "Funding" explanation at Climate Investment Funds Web site: http://www.climateinvestmentfunds.org/cif/funding-basics

Appendix IV - Information Pertinent to the MRV of Climate Finance

Information included in Appendix I	Definition and Importance
Amount of aid provided	The amount of financing in a currency designated by Parties.
Recipient country/ region	
Channeling institution	Examples include global channels (e.g., World Bank, PPCR, LCDF, SCF, Kyoto Protocol Adaptation Fund, UNDP, UNEP), regional channels (e.g., SPREP, regional climate centers, regional development banks), national channels (e.g., recipient country climate trusts or other "basket funds," budgetary support), or sub-national channels (e.g., direct to an NGO, research institute, or sub-national government body).
Donor country	Information on the donor country when aid is channeled through an intermediary institution.
Activity ("Category" in Appendix I)	The amount of financing for: (1) Assessment and planning, (2) research, development and demonstrations, (3) deployment, and (4) capacity building.
Adaptation or mitigation measure/ technology	The amount of financing for particular mitigation or adaptation measures or technologies.
Type	The type of financing: loan, grant or a guarantee. This might also include equity financing.

Other pertinent information	Definition and Importance
Justification of climate change objective	Information demonstrating that the aid is actually furthering climate change objectives, through referencing reports such as environmental or vulnerability impact assessments.
Source	Standard budgetary appropriations or innovative sources of finance such as carbon markets or taxes.
Additional	An indication whether the funds represent an increase of existing climate funds.
Leveraged funds	The amount of money contributed by the private sector (not another bilateral or multilateral institution).
Status of delivery	An indication of whether funds have been obligated (delivered).
Adaptation or mitigation measure/ technology	The amount of financing for particular mitigation or adaptation measures or technologies.
Narrative	Information on innovative mechanisms or programs, for example, success stories or other information not captured in the reporting tables.

Acknowledgments

The authors wish to thank the following external reviewers for their data and many helpful comments and suggestions: Ari Huhtala, Frances Irwin, Andrea Kutter, Carlos Eduardo Ludena, Alan Miller, Rawleston Moore, Maria Netto de A. C. Schneider, Jagjeet Sareen, Samuel Tumiwa, and Harald Winkler. In addition we wish to thank our WRI colleagues for their many contributions: Florence Daviet, Maggie Barron, Kaija Hurlburt, Hilary McMahon, Remi Moncel, and Janet Ranganathan.

Finally, the authors wish to acknowledge the Norwegian Ministry of Foreign Affairs, whose financial support made this paper possible.

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References

Asian Development Bank (ADB). Undated. "Guidelines for Estimating Asian Development Bank (ADB) Investments in Renewable Energy and Energy Efficiency Projects" http://www.adb.org/Documents/Clean-Energy/Guidelines-Estimating-ADB-Investments.pdf

Ballesteros A., et al. 2009. "Power, Responsibility and Accountability: Re-thinking the Legitimacy of Institutions for Climate Finance." Working Paper, World Resources Institute, Washington DC. http://www.wri.org

Ballesteros, A., et al. 2010. "Summary of Climate Finance Pledges Put Forward by Developed Countries." World Resources Institute, Washington D.C. February 18, 2010, updated March 4, 2010. http://www.wri.org/stories/2010/02/summary-climate-finance-pledges-put-forward-developed-countries

BASIC. 2010. "Joint statement issued at the conclusion of the second meeting of Ministers of the BASIC group." New Delhi, 25 January. http://www.info.gov.za/speeches/2010/10012512451001.htm

Colitt, R. 2010. "INTERVIEW – Brazil to create climate fund, technology for poor." Reuters, Jan 21. http://in.reuters.com/article/businessNews/idINIndia-45586820100121?pageNumber=2&virtualBrandChannel=0&sp=true

Corfee-Morlot J., et al. 2009. "Financing Climate Change Mitigation: Towards a Framework for Measurement, Reporting and Verification." Organization for Economic Co-operation and Development (OECD) and International Energy Agency (IEA), Paris, October.

Council of the European Union. 9437/10. "Financing climate change – fast start financing Report" Brussels. 11 May 2010. Online at: http://register.consilium.europa.eu/pdf/en/10/st09/st09437.en10.pdf

IMF/OECD. 2003. Foreign Direct Statistics: How Countries Measure FDI 2001. http://www.imf.org/external/pubs/ft/fdis/2003/fdistat.pdf

INCAE Business School and FUNDECOR. 2009. "Costa Rica: Towards Carbon Neutrality in 2021." Prepared for the Costa Rican Ministry of Environment, Energy and Telecommunications (MINAET), December.

Lum T., et al. 2009. "China's Foreign Aid Activities in Africa, Latin America, and Southeast Asia." U.S. Congressional Research Service, Washington, DC, February 25. http://www.fas.org/sgp/crs/row/R40361.pdf

Moncel R., et al. 2009a. "Counting the Cash: Elements of a Framework for the Measurement, Reporting and Verification of Climate Finance." Working Paper, World Resources Institute, Washington, DC. http://www.wri.org.

Moncel, R., et al. 2009b. "Summary of UNFCCC Submissions." Working Paper, World Resources Institute, Washington, DC, August 2008–October 29, 2009. http://www.wri.org/

OECD. 2008. "Mobilizing Investments in Low Emission Energy Technologies on the Scale Needed to Reduce the Risks of Climate Change." SG/SD/RT(2008)1, Paris.

Pallemaerts, M. and J. Armstrong. 2009. "Financial Support to Developing Countries for Climate Change Mitigation and Adaptation: Is the EU Meeting Its Commitments." Institute for European Environmental Policy (IEEP), January 29. http://www.ieep.eu/publications/pdfs/2009/sds_paper_funding.pdf

Resources Environment and Economics Center for Studies, Inc. 2010. "National Environmental, Economic and Development study (NEEDS) for climate change." March 2010 (to be available on website of UNFCCC secretariat).

Roberts, T., et al. 2009. "Has Foreign Aid Been Greened?" Environment Magazine, January-February. http://www.environmentmagazine.org/Archives/Back%20Issues/January-February%202009/RobertsParksTierneyHicks-full.html
Singh, M. 2010. "Speech at SAARC Summit." 29 April. http://www.kuwaitsamachar.com/index.php?option=com_content&view=article&id=41812:manmohan-singhs-speech-at-saarc-summit&catid=31:india-news&Itemid=276

te Velde D.W., et al. 2010. "The global financial crisis and developing countries - Phase 2 syntheses." Overseas Development Institute, London. http://www.odi.org.uk/resources/download/4784.pdf
Tirpak, D. and H. Adams. 2008. "Bilateral and Multilateral Assistance for the Energy Sector in Developing Countries." Climate Policy 8: 135–151.

UNCTAD. 1998. World Investment Report, 1998. UNCTAD/WIR/1998. http://www.unctad.org/Templates/WebFlyer.asp?intItemID=2426&lang=1

UNFCCC 1999a. Decision 3/CP.5 - Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories. UNFCCC/CP/1999/7.

UNFCCC 1999b. Guidelines for the preparation of national communications by parties included in Annex I to the Convention Part II: UNFCCC reporting guidelines on national communications. UNFCCC/CP/1999/7.

UNFCCC. 2002a. Decision 117/CP.8 - Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention. UNFCCC/CP/2002/7/Add2.

UNFCCC. 2002b. Second Compilation and Synthesis of Initial National Communications from Parties not Included in Annex I to the Convention. UNFCCC/SBI/2002/15.

UNFCCC. 2007a. "Investment and Financial Flows to Address Climate Change." Dialogue working paper 8. UNFCCC, Bonn. http://unfccc.int/files/cooperation_and_support/financial_mechanism/financial_mechanism_gef/application/pdf/dialogue_working_paper_8.pdf

UNFCCC. 2007b. "Compilation and synthesis of fourth national communications. Note by the secretariat. Addendum. Financial resources, technology transfer, vulnerability, adaptation and other issues relating to the implementation of the Convention by Parties included in Annex I to the Convention." FCCC/SBI/2007/INF.6/Add.2. UNFCCC, Bonn.

UNFCCC, 2007c. "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention." FCCC/CP/2002/7/Add.2. UNFCCC, Bonn.

UNFCCC. 2008. Report of the Conference of the Parties on its thirteenth session, held in Bali from 3 to 15 December 2007. UNFCCC/CP/2007/6/Add.1, 14 March 2008.

U.S. State Department. 2010. "U.S. International Climate Change Finance." April. http://www.state.gov/documents/organization/140689.pdf

World Bank, Energy and Water Department. 2006. "Right on Target: Progress on Renewable Energy and Energy Efficiency in 2005/2006." Brochure. http://siteresources.worldbank.org/EXTENERGY/Resources/336805-1157034157861/reEEbrochure.pdf

World Bank. 2009. "Monitoring and Reporting on Financial Flows Related to Climate Change." Discussion Draft, World Bank, Washington, DC http://beta.worldbank.org/climatechange/node/5290

World Bank. 2010. "Development and Climate Change: A Strategic Framework for the World Bank Group - Interim Progress Report." World Bank, Washington, DC, May 11 2010.

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