

# THE LANDSCAPE OF CLIMATE FINANCE

---

## Executive Summary

Barbara Buchner  
Angela Falconer  
Morgan Hervé-Mignucci  
Chiara Trabacchi  
and Marcel Brinkman



CLIMATE  
POLICY  
INITIATIVE  
VENICE

27 OCTOBER 2011

## Descriptors

Sector	Multilateral Climate Finance
Region	Global
Keywords	Climate Finance, Flows, Mapping
Related CPI Reports	The State of International Climate Finance: Is It Adequate and Is It Productive (December, 2010)
Contact	barbara.buchner@cpivenice.org

## About CPI

Climate Policy Initiative (CPI) is a policy effectiveness analysis and advisory organization whose mission is to assess, diagnose, and support the efforts of key governments around the world to achieve low-carbon growth.

CPI is headquartered in San Francisco and has offices around the world, which are affiliated with distinguished research institutions. Offices include: CPI at Tsinghua, affiliated with the School of Public Policy and Management at Tsinghua University; CPI Berlin, affiliated with the Department for Energy, Transportation, and the Environment at DIW Berlin; CPI Rio, affiliated with Pontifical Catholic University of Rio (PUC-Rio); and CPI Venice, affiliated with Fondazione Eni Enrico Mattei (FEEM). CPI is an independent, not-for-profit organization that receives long-term funding from George Soros.

## Acknowledgements

Close dialogue and interaction on certain finance flows was sustained during this work with a number of organizations active in these areas, including, in alphabetic order, Asian Development Bank, Agence Française de Développement, AidData.org, Bloomberg New Energy Finance, Chatham House, Development Bank of Southern Africa, Ecofys, European Bank for Reconstruction and Development, European Climate Foundation, E3G, Global Canopy, Global Environmental Facility, International Finance Corporation, KfW Entwicklungsbank, McKinsey & Company, Overseas Development Institute, Organisation for Economic Co-operation and Development, Stockholm Environmental Institute, The Nature Conservancy, UNEP, UNFCCC Secretariat, World Resource Institute, and the World Bank. Experts in these organizations were critical in helping us better understand the available data, and our work has benefited substantially from the many discussions. The authors would like to acknowledge the helpful comments from Philippe Ambrosi, Julia Benn, Alexis Bonnel, Jessica Brown, Jan Corfee-Morlot, Pierre Forestier, Liz Galagher, Valerie Gauveau, Kirsty Hamilton, Jochen Harnisch, Ari Huthala, Celine Kaufmann, Johanna Lutterfelds, David McCauley, Ariane Meier, Chantal Naidoo, Charlie Parker, Clarisse Kehler-Siebert, Martin Stadelman, Stacy Swann, Dennis Tirpak, Guy Turner, Eric Usher, Delia Villagrassa, Christiane Weber, and Ming Yang. Finally the authors would like to acknowledge comments and internal review from CPI staff (Juliano Assunção, Ruby Barcklay, Keven Brough, Sandra Fernandez, Tom Heller, Anne Montgomery, Valerio Micale, David Nelson, Karsten Neuhoff, Kath Rowley, Tim Varga, and Qi Ye).

## Executive Summary

Climate finance has been a key topic in recent international climate negotiations, resulting in a significant commitment to increase the flow of climate finance from developed to developing countries to USD 100 billion per year by 2020. Building a comprehensive picture of climate finance flows is essential to this effort. Understanding how much and what type of support is being made available to advance action on low-carbon, climate-resilient development, how these types of support correspond to countries' needs, and whether financial resources are being spent productively, is critical to building trust among countries and ensuring the effective use of the available financial resources.

In this paper we assess the current status of the climate finance landscape, mapping its magnitude and nature along the life cycle of finance flows, i.e. the sources of finance, intermediaries involved in distribution, financial instruments, and final uses. After presenting estimates of current flows based on available data, describing the methodology, and discussing the sources of data, we offer recommendations to improve future data-gathering efforts.

To gain a comprehensive picture of the landscape of climate finance, it is necessary to compile data from a wide range of sources, from international organizations like the OECD, to private sector sources like Bloomberg NEF, as well as NGOs like the ODI. We conducted a detailed review of the available data, recognizing the wide variety of definitions and the gaps in data gathering. Our extensive year-long effort went to great lengths to cover all data sources and make them comparable to the extent possible. While the timeframes covered by these sources differ, our data mostly relate to flows in 2009/2010.

We used three major sources of information: 1) existing databases, tracking initiatives, and studies compiled by various organizations; 2) third-party expertise, when official numbers were lacking or did not appropriately portray the related flow; 3) our own estimates, when no satisfactory official / third-party numbers were available.

### ***The Global Climate Finance Landscape***

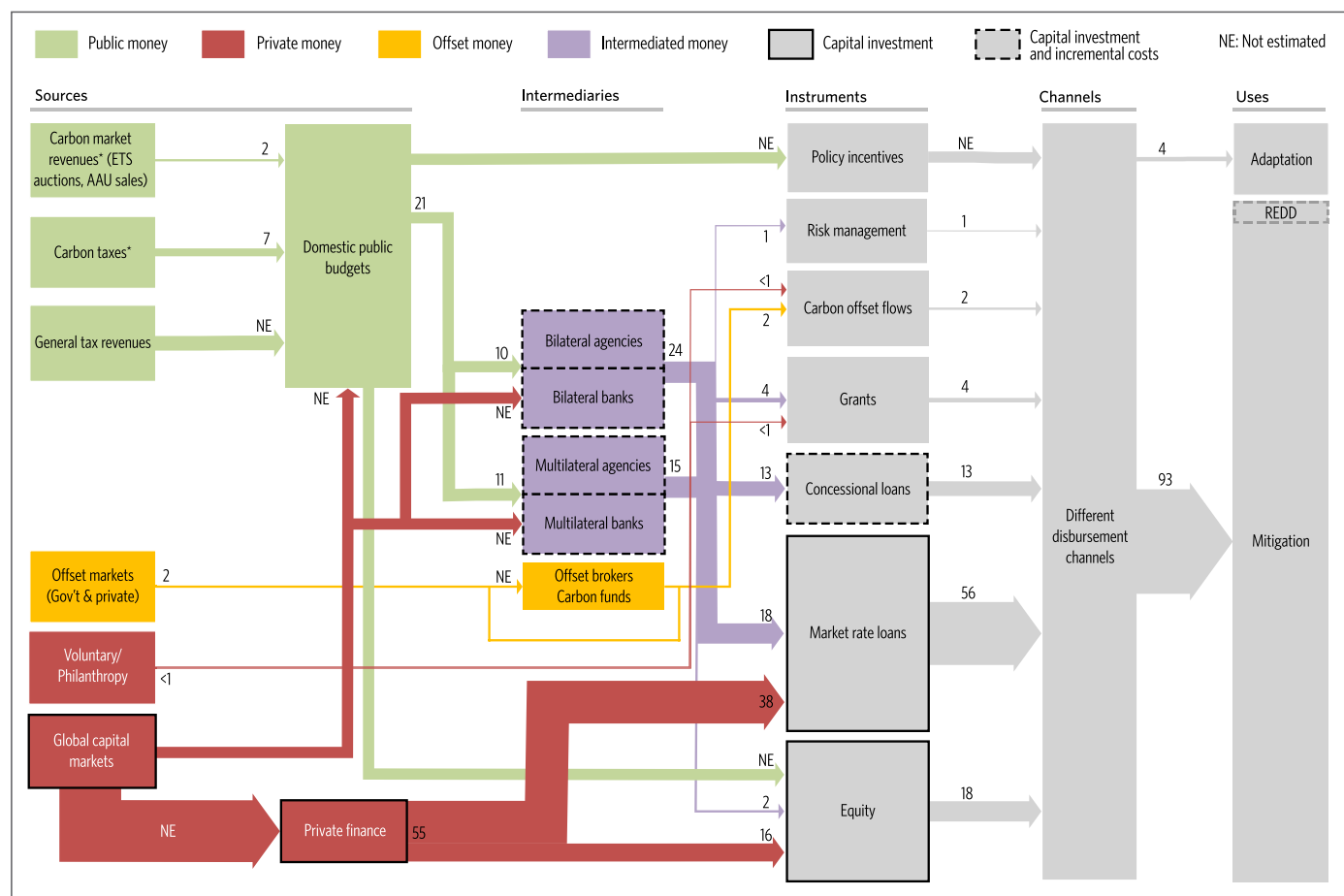
**Our research suggests that at least USD 97 billion per annum of climate finance is currently being provided to support low-carbon, climate-resilient development activities.**

An optimist might suggest that the USD 97 billion total in climate finance is close to the USD 100 billion promised by developed countries in the Copenhagen Accord. Yet, we have to recognize that this might not be correct for multiple reasons:

- Not all of the USD 97 billion is necessarily additional to climate finance available prior to the Copenhagen Accord. The reality is that while climate finance has increased quickly over the past 10 years, a significant share of the USD 97 billion was already being provided prior to the Summit.
- Many countries and commentators have interpreted the USD 100 billion climate finance to originate from public sources, rather than partially provided by the private sector (although the Copenhagen Accord does mention private sources).
- Many have also argued that the finance provided should cover incremental costs rather than capital investment.
- Furthermore, the USD 97 billion total includes some developing countries and domestic sources, although to a limited extent.

Figure ES-1 – the 'spaghetti diagram' – illustrates the current landscape of climate finance flows along their life cycle. The width of the arrows in the diagram represents the relative size of the flows. The diagram distinguishes between 'incremental costs' and 'capital investment'. The former refers to financial resources provided to cover the difference between a less costly, more polluting option and a costlier, more environmentally-friendly and/or climate-resilient one. The latter refers to tangible investment in mitigation or adaptation projects. Incremental costs are like revenues to recipients, whereas capital investment needs to be paid back. Incremental costs often make the difference in the final investment decision, influencing where investors decide to put their money, and are generally funded by public climate finance resources.

Figure ES-1. Current climate finance flows (in USD billion)



Source: Climate Policy Initiative (CPI)

Notes: Figures presented are indicative estimates of annual flows for the latest year available, 2009/2010 (variable according to the data source). Figures are expressed in USD billion and are rounded to produce whole numbers. Estimates spanning multiple years are adjusted to produce annual-equivalent estimates. Where ranges of estimates are available, the mid-point is presented. All flows are incremental except for those identified as full or partial 'capital investment'. Most data presented relate to commitments in a given year, due to limited availability of disbursement data. \*Estimated carbon pricing revenues indicated are not necessarily wholly hypothesized for climate finance.

**SOURCES**

**The amount of private finance is almost three times greater than public finance.** Out of the estimated USD 97 billion in global climate funding, on average USD 55 billion is provided by the private sector, while at least USD 21 billion is provided by public budgets. Private funding is in the form of direct equity and debt investments, to which bilateral and multilateral agencies and banks also contribute another USD 20 billion by leveraging the public funding they receive. A relatively small share - less than USD 3 billion - is provided by carbon markets and voluntary / philanthropic contributions. Public finance is raised through carbon market revenues, carbon taxes and general tax revenues.

The relatively small role of the public sector compared to the private sector is remarkable, in light of the debate in the global climate change negotiations where many have emphasized the need for developed countries to fund mitigation and adaptation in developing nations. The role of the private sector in our figures is a reminder of the fact that capital investment is crucial for any mitigation and adaptation activities. Many developing countries lack developed capital markets - i.e. a well functioning banking system, a public debt market and/or a public equity market - requiring them to rely, instead, on international capital investments. The poorest countries must rely on development banks.

**Carbon finance plays only a small role in climate finance.** The relatively small role of carbon finance (USD 2 billion out of

USD 97 billion) stands in contrast with the high ambitions for carbon markets when the Kyoto Protocol came into force. After rapid growth in the generation of CDM ('Kyoto') carbon credits, the offset markets have leveled off at roughly 160 million credits per annum, as the European Union Emissions Trading System (EU ETS) proved to be the only significant source of demand.

#### INTERMEDIARIES

**Intermediaries such as bilateral and multilateral financial institutions play a key role in distributing climate finance, around USD 39 billion a year (40% of the total).** Most climate finance is not distributed directly by governments to end-users, as is generally believed, but is distributed through government agencies and development banks. Agencies mostly rely on public money, while banks typically leverage public money with debt financing.

**Bilateral institutions distribute a greater share of finance than multilateral agencies.** While there has been a lot of attention recently on the development of a global 'green fund' to catalyze international climate finance, the reality is that most of public climate finance (USD 24 billion) is currently provided by bilateral institutions (those sponsored by one nation) rather than multilateral institutions (like World Bank / IFC, EIB, EBRD, AfDB, AsDB, IDB), which distribute USD 15 billion a year. The remainder of climate finance either flows directly through the capital markets, or is provided directly by governments.

**Dedicated climate funds, typically managed by bilateral and multilateral institutions, channel a small but growing portion of finance** (currently USD 1.1-3.2 billion).

#### INSTRUMENTS

**Most climate finance, USD 74-87 billion out of USD 97 billion, can be classified as investment or more generally including ownership interests.** Around USD 56 billion is in the form of market rate loans; of this amount, USD 18 billion is through bilateral and multilateral institutions like IFC and EIB while USD 38 billion is through the private sector. Another USD 18 billion is provided as equity, of which USD 16 billion comes from the private sector. Because these loan and equity instruments must be paid back to investors over the investment horizon, they are technically not considered 'aid'.

Concessional loans (USD 13 billion) are typically provided by bilateral and multilateral banks. While the principal loan amount needs to be paid back, the interest rate payments are significantly discounted. The discount can be characterized as 'aid'. Concessional loans can therefore be considered as both incremental and investment contributions and include ownership interests where public bodies take on risk-return positions that a private investor would not bear.

The remainder of climate finance, between USD 8 and 21 billion, is comprised of instruments such as policy incentives, risk management facilities, carbon offset flows and grants. These types of financing that do not have to be (fully) paid back or incur a reduced interest rate can be seen as 'aid' in the technical sense of the word. Approximately USD 8 billion is provided in the form of grants (USD 4 billion), carbon offset flows (USD 2 billion) and risk management mechanisms (USD 1 billion). Policy incentive instruments are increasing in importance but their magnitude is not estimated as information tends to be fragmented.

The role of investment / ownership finance is striking. One can explain the large investment component in international climate finance as due to the lack, in many developing countries, of developed capital markets required to raise investment capital.

#### USES

**The large majority of climate finance (USD 93 billion out of USD 97 billion) is used for mitigation measures; only a very small share goes to adaptation efforts.** This large share of mitigation finance is mostly the result of significant capital investments in mitigation measures like renewable energy. Adaptation receives USD 4.4 billion, mostly in the

form of incremental cost payments.

A detailed assessment of the sources for adaptation and mitigation shows that adaptation is predominantly financed through bilateral institutions (USD 3.6 billion out of USD 4.4 billion), followed by multilateral institutions (USD 475 million) and voluntary / philanthropy (USD 210 million). A relatively small share (USD 65 million) is provided by dedicated funds. It is surprising to see that multilateral funds like the Adaptation Fund, which has attracted a great deal of attention, play a relatively insignificant role compared to bilateral adaptation funds.

Mitigation finance is provided by a wider range of sources, with most (USD 55 billion out of USD 93 billion) coming from the private sector in the form of capital investment. Bilateral and multilateral institutions provide significant sums for mitigation, USD 19 billion and USD 14 billion respectively. Funds contribute USD 2.4 billion. While most of those sources provide capital investment, the offset market provides USD 2.2 billion of incremental cost financing. Voluntary / philanthropic contributions are estimated to provide USD 240 million, slightly more than their contribution to adaptation.

The split between mitigation and adaptation (95:5) contrasts with some of the rhetoric in global climate change negotiations where many countries and commentators have remarked that climate finance should be split 50:50 between adaptation and mitigation. The following points are worth considering:

- One could argue that it makes sense to invest in mitigation now, while climate change can still be avoided, and that the world should only start to focus on costly adaptation measures once climate change is truly unavoidable and irreversible. One could see our data as proof that the world is acting rationally now.
- Many mitigation efforts are part of the business-as-usual economic activity and have rationales beyond climate change. For example, energy or resource productivity can be justified based on the savings achieved. Renewable energy can also be justified based on energy security and local environmental concerns (rather than global climate change concerns). This makes those activities more likely than adaptation activities.
- Mitigation activities tend to have more private sector participation, as they offer stronger incentives through established business models. Adaptation, on the other hand, is often a public good and needs to be provided through public sector accounts.

### ***Key issues and recommendations for climate finance tracking***

Our analysis of current climate finance flows highlights a number of key issues in climate finance tracking and suggests that there are multiple improvements required to overcome these challenges:

- **The complex nature of climate finance and lack of agreed-upon definitions hamper tracking efforts.** Inconsistencies in labeling and definitions of what constitutes climate finance exist. There needs to be a common set of definitions spanning all types of climate finance in order to allow data tracking and comparison.
- **The various objectives of climate tracking efforts complicate the analysis.** Various goals often require specific methods of analysis. Transparency and clarification regarding the objectives of specific climate finance tracking systems help to focus analytical and data-gathering efforts for global climate finance tracking.
- **While there is a wealth of data on elements of the climate finance landscape, there is limited coordination and some gaps in data gathering.** An expansion of our and others' efforts and a platform to bring existing tracking initiatives together could support a close dialogue between organizations active in this area, and improve the consistency, comprehensiveness, and overall quality of data.
- **Several information gaps impede a better understanding of what is needed to enhance the effectiveness of climate finance.** Inaccessible and inconsistent data on private finance flows, limited information on domestic and 'South-South' flows and a lack of data at the instrument, disbursement and use levels limit our understanding of the scale and effectiveness of climate finance efforts. New efforts to fill in those gaps are required.

A comprehensive picture of climate finance flows is essential for the success of international climate policy. Our study provides a first overview of the climate finance landscape and stimulates thinking and action on next steps in developing a comprehensive tracking system that ultimately helps countries learn how to spend money wisely.