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The Landscape of Climate Finance 2012

Climate Policy Initiative

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Executive Summary

Background

Climate finance has been a key topic in recent international climate negotiations. Understanding how much and what type of finance is available to advance low-carbon growth and combat climate change at a global level is critical to scaling up finance and ensuring that resources are used effectively.

The *Landscape of Climate Finance 2012* estimates that annual global climate finance flows reached approximately USD 343-385 billion, on average USD 364 billion, in 2010/2011. This figure represents an increase from last year's report, mostly because of the expanded scope of this year's study (See Box ES-1), but still falls short of the investment required to limit global temperature rise to below two degrees Celsius. To achieve this goal, the International Energy Agency projects that incremental investment in the energy sector will need to reach USD 36 trillion over the period of 2012-2050 – or approximately USD 1 trillion each year.

The private sector contributed the majority of finance (USD 217-243 billion), mostly from developed country actors. The public sector (USD 16-23 billion) acted as a catalyst for private finance as well as providing bilateral aid to other developing countries. A large proportion of public finance reflected domestic government support toward structural changes in energy systems as engines of economic growth.

Public and private intermediaries, especially national development banks and commercial banks, played an important role raising and channelling global climate finance (USD 110-120 billion), as well as supporting the creation of an environment conducive to private sector investment.

Emerging economies were key recipients of climate finance, but were also important sources. Roughly one third of global mitigation investments were located in China, Brazil, and India. A significant share of this was raised domestically and invested in pursuit of national development mandates.

The following provides more detailed findings for each stage of the life cycle of climate finance flows – from public sources, private sources, through to intermediaries, instruments, and uses.

Public Sources

Public sources ranged at least between USD 16-23 billion, or 5-6%, of the total amount. A large proportion of this amount reflects domestic government support to renewable energy projects and related infrastructure, as engines of economic growth.

Notwithstanding fiscal austerity and the tightening credit context, the **public sector increased funding for low-carbon, climate-resilient development**. Notably, bilateral Official Development Assistance grew from USD 9.5 billion in 2009 to an estimated USD 23 billion in 2010, reflecting the impact of fast-start finance pledges, which we estimate accounted for around 36% of Official Development Assistance in 2010. A large portion of this Official Development Assistance was subsequently intermediated by Bilateral Finance Institutions.

The *Landscape 2012*, captures a broader range of public domestic flows in developed and developing countries. We found that **almost USD 11 billion was spent to support domestic renewable energy projects**. This spending was largely related to the tail end of the U.S. 'green' economic stimulus packages.

Furthermore, our investigation of the ownership structures of seemingly private investments indicates that **a large portion of these investments could be classified as governments' direct and indirect shareholdings and lending to private investment structures**. While we have not included these types of government investments in this year's finance flows diagram, our preliminary investigation identified **USD 51 billion** of public money sitting behind private investments, mostly in developing countries and in particular, China.

Private Sources

Private finance continued to represent the lion's share of total climate finance flows with USD 217-243 billion, or 63% of the total. Close to two-thirds of private finance came from developed countries.

In developed countries, private actors contributed USD 143 billion, with USD 68-70 billion in asset finance. Fifty-five percent of projects were financed on a balance sheet basis while 45% were funded through project-level finance. Commercial banks were the leading providers of project-level debt (77%), while domestic public budgets contributed around 17%, and corporate players contributed around 6%. In developed countries, **domestic private actors contributed the most to overall asset finance investment flows** (84%). Investment by private actors from other OECD members (almost exclusively developed countries) represented around 12% of investment, and investment by private actors from non-OECD countries made up the remaining 4%.

In developing countries, private actors contributed USD 85 billion, with USD 64-87 billion in asset finance. Four out of five projects were financed on a balance sheet basis. This headline obscures important country-specific trends, such as the role of National Development Banks in encouraging private investments at the local level. In particular, the Brazilian National Development Bank (BNDES) played a central role in financing wind power generation in Brazil. **We estimate that domestic private actors contributed up to 83% of private investments in developing countries.** Private investors from OECD countries contributed 15% while non-OECD actors made up the remaining 2%.

The **inclusion of small-scale renewable energy finance** (almost exclusively in developed countries) in the *Landscape 2012* highlights the significant contribution of households and corporate actors (USD 83 billion).

Intermediaries

Public and private financial institutions played an important role in the climate finance landscape, raising and channelling USD 110-120 billion. Public intermediaries (such as Multilateral, Bilateral, and National Development Banks) distributed USD 77 billion, or about 67% of these resources. **Public intermediaries can also enable private investment and help make projects viable.**

Development Finance Institutions (multilateral, bilateral, and national) continued to play a pivotal role, distributing climate finance of around USD 77 billion. This represented about 21% of global climate finance flows. In addition, domestic and international development agencies played a critical role in channeling bilateral aid.

Increased international focus on the role of **National and Sub-regional Development Banks** made it possible to gather more detailed information about the climate finance flows and the role of these intermediaries in managing and disbursing funds. **Together with Bilateral Finance Institutions, these banks distributed the majority of intermediated climate finance (USD 54 billion)** and played a growing role enabling the transition to low-carbon and climate resilient development in the countries where they operate. In fact, 89% of total climate finance from National and Sub-regional Development Banks was invested in the country in which these institutions are located.

National Development Banks in emerging economies, such as the Brazilian and the Chinese development banks, channeled the largest share. Local budget contributions to climate compatible activities in these countries was particularly evident in Brazil where the Brazilian Development Bank's concessional support to renewable power generation projects reflected the government's backing for the Bank's operations, in the pursuit of its policy targets.

It is important to acknowledge the **complex interplay between actors at different stages of the life cycle of climate flows**. Multilateral and bilateral entities tend to rely on national actors' closer proximity and knowledge of the local market, with the objective of channeling money more effectively. National actors, on the other hand, benefit from the expertise of international intermediaries to develop their capacity to assess, analyze, and structure green investment projects, or appraise the risk profiles of developers. In turn, this allows national institutions to pass knowledge to the local banking system to unlock its financing potential and exploit its ability to reach a wide group of recipients.

Dedicated Climate Funds typically managed by multilateral, bilateral, and national intermediaries contributed at least USD 1.5 billion to overall flows. Their importance is likely to grow given their capacity to catalyze and coordinate resources for co-financing, including at national levels.

Private commercial banks and infrastructure funds intermediated around USD 38 billion, including project-level debt and direct investments. Private intermediaries played a particularly critical role by providing the scale of finance and financial toolboxes able to address the specific needs of 'green' and innovative investment interventions (e.g. concentrated solar power, etc.). On the other hand, project developers provided equity capital and know-how.

Instruments

Our analysis of instruments indicates that most climate finance, USD 293-347 billion out of USD 364 billion, can be classified as investments in which public or private financial institutions had an ownership interest or claim – that is, money which has to be paid back – rather than as contributions to incremental costs.

Public intermediaries enabled otherwise unviable projects through the use of instruments such as concessional loans and grants.

Around USD 293 billion was in the form of market rate loans and equity, of which USD 262 billion had been made by the private sector. Green credit lines as well as support for institutional development were also intended to attract local financial institutions to on-lend to projects that would not otherwise be implemented and to favor private sector investment.

Public intermediaries enabled investments by filling capacity and viability gaps that prevented private investors from engaging in capital-intensive, riskier, and in the short-term, less profitable ventures. Public intermediaries delivered more than 60% of their financing through concessional loans and about 7% in grant form. Lowering the cost of debt in this way is essential for low-carbon technologies to compete with traditional, fuel-based alternatives.

Beyond grants, loans, equity, and debt finance, **a variety of risk management instruments help to overcome risk barriers and encourage low-carbon technologies to scale up**. Public-private facilities and guarantees to assume regulatory, credit, or perceived technology risks, are just some of the instruments that can remove the risks private actors are not willing or capable of bearing.

Uses

Mitigation activities attracted USD 350 billion, mostly related to renewable energy and energy efficiency. Emerging economies were key recipients of climate finance. Close to 33% of mitigation-related finance was invested in China, Brazil, and India.

The majority of funding captured by the *Landscape 2012* was spent on mitigation activities. Compared to the *Landscape 2011*, there was progress in understanding adaptation finance due to increased tracking efforts. However, weaknesses in defining and tracking adaptation finance, partial reporting by some multilateral players, and the inability of existing efforts to capture private flows dedicated to such activities hampered our understanding of adaptation finance flows.

The bulk of financing captured went to renewable energy generation projects and energy efficiency, accounting for 85% and 4% of the total respectively. This reflects governments' low-carbon growth ambitions, the commercial viability of a broad range of proven technologies, the profit-driven character of private investments, and the data sources we had access to.

This report confirms that public financial institutions are playing an essential role in financing clean energy, allocating more than 60% of their intermediated financial flows to renewable energy and energy efficiency. They are also essential for financing adaptation measures, contributing up to USD 11 billion and, even more importantly, managing and implementing some of the relevant adaptation funds.

The allocation of climate finance between developed and developing countries was relatively balanced, with USD 193 billion, or 53%, going to projects in developed countries and USD 172 billion, or 47%, to projects in developing countries.

Emerging giants such as China, Brazil, and India were the largest recipients of global mitigation-directed climate finance flows, with USD 171 billion, close to 33% of the total. This implies that investments have been made where they are needed most and where mitigation potential is the greatest. Notably, a significant share of this was raised domestically and invested in pursuit of development mandates.

Box ES-1: Building an understanding of climate finance

CPI's *Landscape of Climate Finance 2011* represented the first attempt to map the life cycle of climate finance flows across the globe. This year's study, the *Landscape 2012*, builds and improves upon our previous work using data from the latest year available, mostly 2011.

Compared with the *Landscape 2011*, the *Landscape 2012* aims to provide, to the extent possible: an expanded geographical scope, covering more flows between and within countries; expanded coverage of players, including broader coverage of private and public actors; a more detailed representation of private sector flows, with a better picture of sources and uses; an improved representation of uses by economic sector, including flows toward adaptation, improving land use, and preventing deforestation; and a better understanding of the final users of climate finance.

While the *Landscape 2012* provides real insights about global climate finance, this exercise is still a work in progress. External factors continue to hinder our collective understanding of the scope, true magnitude, nature, and effectiveness of global climate finance flows.

Future steps need to resolve the following key issues to build an understanding of climate finance:

- **Further expansion of scope and coverage.** Climate finance configurations differ by country and circumstance and a variety of actors with distinctive responsibilities exist. There needs to be a better understanding of the different actors, including the various players in the private sector, and Development Finance Institutions at the international, national and local levels. To inform the debate on climate finance effectiveness, better sectoral and geographic information on the uses of money is also required.
- **A net perspective.** The *Landscape 2012* takes both incremental costs and investment capital into account, and focuses on gross flows due to the difficulty of calculating incremental cost and net values of all finance flows. To create a more precise picture, we need more information about net flows and incremental costs compared to business-as-usual, or 'brown', investments.
- **A sound understanding of how effectively financial flows are being used, and whether they address the challenges posed by climate change and global needs.** In addition to CPI's effort to build up an evidence-based, bottom-up database of success and failure stories related to climate finance (the *San Giorgio Group* case studies*), there is a need to explore whether finance flows represented in the *Landscape* have been effective.
- **A benchmark on business-as-usual, or 'brown' finance flows.** To put climate finance estimates into perspective, comparable estimates of traditional polluting investments are a useful benchmark to check whether there is real progress towards a low-carbon, climate-resilient future.

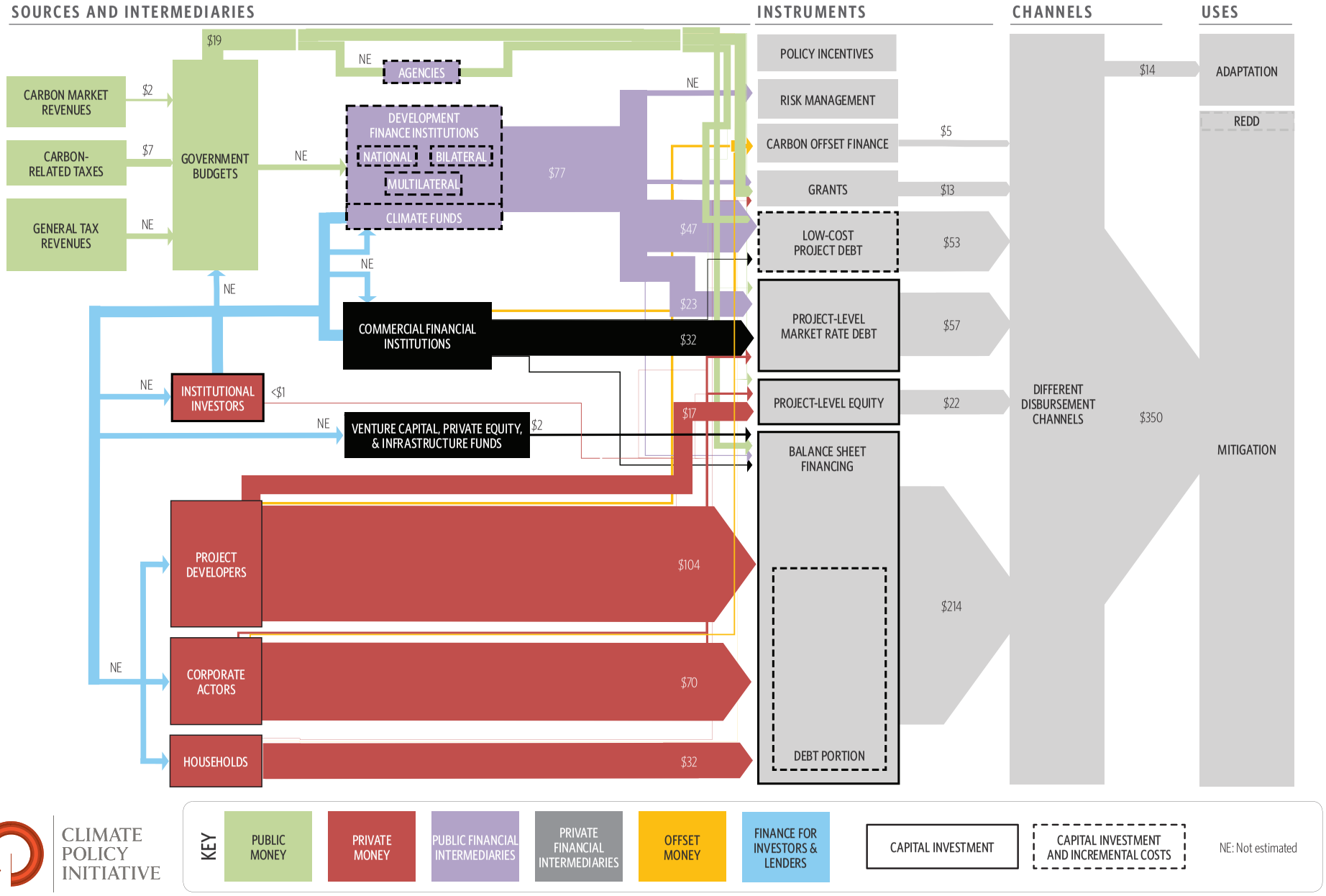
A comprehensive picture of climate finance flows is essential to ensure that governments and policymakers have the knowledge and tools to spend their money most effectively. CPI remains committed to improving the understanding and transparency of today's climate finance landscape to help countries learn how to spend money wisely.

*The San Giorgio Group is a working group of key financial intermediaries and institutions actively engaged in green, low-emissions finance. Led by CPI, the World Bank Group, OECD, and CLP, the mission of the Group is to provide valuable insights on how to scale up climate finance and spend available resources more wisely. To this end, CPI is examining a series of case studies to determine how public money can catalyze and incentivize private investment in low carbon technologies, and to provide lessons for scaling up green finance.

THE CLIMATE FINANCE FLOWS DIAGRAM 2012

The Climate Finance Flows Diagram 2012, also known as the 'spaghetti' diagram, illustrates the landscape of climate finance flows along their life cycle for the latest year available, mostly 2011. The width of the arrows in the diagram represents the relative size of the flows.

*Notes: Figures are indicative estimates of annual flows for the latest year available, 2010 or 2011 (variable according to the data source). Flows are expressed in USD billions and 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. The diagram distinguishes between 'incremental costs,' that is, financial resources that cover the price difference between a cheaper, more polluting options and costlier, climate-friendly ones and do not need to be paid back — and 'capital investment,' which are tangible investments in mitigation or adaptation projects that need to be paid back. Categories not representing capital investment, or a mix of capital investment and incremental costs, are incremental costs only. The group of National Finance Institutions includes Sub-regional entities. Most data presented relates to commitments in a given year due to limited availability of disbursement data.



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