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INTERNATIONAL CLIMATE FINANCE TO DEVELOPING COUNTRIES

TAKING STOCK OF THE VARIETY OF BILATERAL, PRIVATE, AND HYBRID FINANCING INITIATIVES

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Preface

BeFinD is a consortium of four Belgian research centres at three different universities. It performs policy-oriented research related to the Financing for Development Agenda (2014-2017). The research is done on behalf of the Belgian Federal Public Service Foreign affairs, Foreign Trade and Development Cooperation, and hosted by the Flemish Inter-university Council (VLIR-UOS). The University of Namur (CRED), the University of Antwerp (IOB), and the University of Leuven (HIVA & GGS) are jointly coordinating research activities in 4 main areas: local resources for development, mobilising private resources for development, ODA and its relationship with other development-relevant funding flows, and global public goods. The research is oriented towards informing policies and practices of Belgian bilateral and multilateral development cooperation actors regarding the emerging landscape of development finance. HIVA-KU Leuven is contributing to the research activities on the redistributive potential of social protection, the role of the private sector in development, illegal financial flows, and global public goods.

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List of abbreviations

AFD	Agence Française de Développement
BCF	The BioCarbon Fund
BFI	Bilateral Financing Institution
BIO	Belgian Investment Company for Developing Countries
BNEF	Bloomberg New Energy Finance
CCWG	Climate Change Working Group
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CERs	Certified Emission Reductions
CMCI	Capital Markets Climate Initiative
COP	Conference of Parties
CPF	Carbon Partnership Facility
CPI	Climate Policy Initiative
CQC	C-Quest Capital
CSR	Creditor Reporting System
DAC	Development Assistance Committee
DBCCA	Deutsche Bank Climate Change Advisors
DECC	Department of Energy and Climate Change (UK)
DFID	Department of International Development
ECA	Export Credit Agency
EE	Energy Efficiency
EFC	European Foundation Centre
EIB	European Investment Bank
EPOC	Environmental Policy Committee
ERPA	Emission Reduction Purchase Agreement
ES	Energy Saving
ESA	Energy Services Agreement
ESCO	Energy Service Companies
ESPC	Energy Saving Performance Contract
EU	European Union
FAO	Food and Agriculture Organization
FCPF	Forest Carbon Partnership Facility
FINNFUND	Finish Fund for Industrial cooperation
FMO	Netherlands Development Finance Company
GCF	Green Climate Fund
GCPF	Global Climate Partnership Fund
GEEREF	The Global Energy Efficiency and Renewable Energy Fund
GET-FIT	Global Energy Transfer Feed-in-Tariffs Programme
GFA	Guarantee Facility Agreement
GHG	Greenhouse Gases
HBF	Heinrich Böll Stiftung
ICF	International Climate Fund
ICI	International Climate Initiative
IFCI	International Forest Carbon Initiative
IDB	Inter-American development Bank
IDFC	International Development Finance Club
IEA	International Energy Agency
IIGCC	Institutional Investors Group on Climate Change

INCR	Investor Network on Climate Risk
JBIC	Japan Bank for International Cooperation
JI	Joint Implementation
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau/German Development Bank
KP	Kyoto Protocol
LDC	Least Developed Country
LFI	Local Finance Institution
LULUCF	Land Use, Land-Use Change and Forestry
MDB	Multilateral Development Bank
MFI	Multilateral Financing Institution
NADB	North American Development Bank
NDB	National Development Bank
NGO	Non-Governmental Organisation
NICFI	Norwegian International Climate and Forest Initiative
OECD	Organisation for Economic Co-operation and Development
ODA	Official Development Assistance
ODI	Overseas Development Institute
OeEB	The Development Bank of Austria
OPIC	Overseas Private Investment Corporation
OOF	Other Official Flows
OPEC	Organization of the Petroleum Exporting Countries
PC	Performance Contract
PoA	Programme of Activities
PCF	Prototype Carbon Fund
PP	Precautionary Principle
PPP	Polluter Pays Principle
PPP	Public-Private Partnership
REDD	Reducing emissions from deforestation and forest degradation
REEEP	Renewable Energy and Energy Efficiency Partnership
REN21	Renewable Energy Policy Network for the 21st Century
SIFEM	Swiss Investment Fund for Emerging Markets
SIMEST	Societa Italiana per le Imprese all' Estero
SME	Small and medium-sized enterprise
TCGI	Transnational Climate Governance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNCSD	United Nations Commission on Sustainable Development
UPP	User Pays Principle
WSSD	World Summit on Sustainable Development

1. Introduction

Climate finance will be one of the central themes of the forthcoming 21st Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), to be held in Paris at the end this year. After months, if not years of tedious and complex negotiations, this summit is expected to result in a 'new climate agreement' that is expected to include, inter alia, significant formal commitments to support adaptation and mitigation measures in developing countries and particularly in least developed countries (LCDs).[1]

As well-known, the scaling up of funding and investments towards climate actions in developing nations is crucial to achieving a more equitable and effective climate agreement. Not only are industrialised countries[2] historically responsible for the bulk (75%) of cumulative global greenhouse gas (GHG) emissions, they have more resources than developing countries to combat the effects of climate change. But while developed countries will be impacted by climate change in the years to come, it is the poorest communities of the poorest nations, the least able to cope with climate change, that will be hit the hardest and the earliest mainly due to their geographical location and their heavy reliance on land and agriculture (Mendelsohn, Dinar, & Williams 2006; Stern 2007). For some of these communities, the consequences of climate change could be catastrophic and potentially irreversible.

Fortunately, in recent years, some progress has been made, at least toward a short-term finance pathway up to 2020. At the 15th and 16th sessions of the COP in 2009 and 2010, developed countries promised to provide 'new and additional'[3] finance to address the needs of developing countries, with a balanced allocation between adaptation and mitigation. They agreed to provide USD 30 billion a year for the period 2010-2012 and to "jointly mobilize USD 100 billion per year by 2020 to address the needs of developing countries (…) from a wide variety of sources, public, private bilateral and multilateral, including alternative sources" (UNFCCC 2010). At COP 16 in Cancún, the Green Climate Fund (GCF) was formally adopted which, when fully operational and appropriately

[1] Defined as non-Annex 1 parties of the convention. For a list of LDCs see : http://unfccc.int/cooperation_and_support/ldc/items/3097.php

[2] Defined as Annex 1 parties to the convention.

[3] Note that the issue of what should count as "new and additional" funding is still much debated. Developed countries disagree in particular on whether they should use a common baseline (Martin Stadelmann, Roberts, & Huq 2010). At present, the notion of "new and additional" generally refers to volume of funds that should be superior to the previous climate financing levels and that should be additional to existing funding for development purposes.

funded could become the world's leading channel for delivering climate finance to developing countries.

Despite these efforts however, a number of critical issues remain. Chief among them is the unresolved question regarding the sources of funds for the GCF and whether "leveraged" private finance in addition to public funds should be included. More important is the fact that there is as yet no internationally agreed definition of what qualifies as 'climate finance" which makes it difficult to properly track financial flows for climate actions (Buchner et al. 2011). Organisations set up to collect data on international climate finance do exist, but in the absence of a commonly shared definition, tend to include different types of financing sources and flows. Finally, there is widespread agreement that the figure of USD 100 billion per year recently pledged by developed countries will not be sufficient to meet the actual financing needs of developing countries. Sterk et al. (2011 : 76), among others, estimate that climate finance towards mitigation alone in developing countries should total USD 200 billion as for 2020, and funds to finance adaptation measures should reach at least USD 50 billion.

All in all, what these concerns suggest is that if recent trends in flows of climate finance are already significant and likely to continue to increase in the future, the issue of how to adequately finance climate actions in developing countries is far from being settled. Greater information is required particularly regarding the extent of climate financing needs in developing countries, the adequate volume of support from developed countries that can be realistically provided, the expected sources of financial flows, and the role of institutional intermediaries involved. If the establishment of the GCF can help to reduce fragmentation in the governance of climate finance and cope with larger financial pledges, individual contributing countries and private actors still retain significant discretions over how and where they should deliver their commitments. Currently, much climate finance is channeled through a wide range of institutions that do not directly fall under the UNFCCC such as bilateral aid agencies and multilateral funds.

Such is the main topic of this study which aims to inform readers on the varied set of "non-multilateral" initiatives presently involved in operationalizing climate finance commitments to developing countries and/or in mobilising greater private climate-related investments particularly in carbon reduction activities. Understanding how and to what extent climate financing has been developing outside multilateral financing channels and the UNFCCC, is ultimately central to the task of promoting a more coherently coordinated global climate finance architecture.

Indeed, in the past decade or so, a wide range of bilateral and transnational funds, initiatives, and channels working either independently from or in close cooperation with multilateral financing institutions and the UNFCCC financing mechanism, has been increasingly involved in

providing or mobilising funds to finance climate actions in developing nations. For instance, many developed countries have been funding climate actions through their development cooperation agencies by mainstreaming climate-related funds onto their development assistance agenda (Buchner et al. 2012). Sizeable flows in support of mitigation and adaptation is also generated through bilateral development banks and a number of developed countries have established special bilateral climate funds to increase the visibility and effectiveness of their climate finance commitments. In recent years, financing from private sources – particularly in middle-income and emerging economies – has grown increasingly diverse and important in scale, and currently constitutes 'the lion's share of total climate finance' (Buchner et al. 2012; Clapp et al. 2012). Carbon finance is now an important mechanism of climate financing with the proliferation over the past ten years of a myriad of private, public, and hybrid carbon funds. Finally, in recent years, a number of innovative transnational and regional public-private partnerships, gathering stakeholders from different sectors (e.g., public, private, non-profit), have been established for the purpose of scaling up private climate-related investments in developed and developing countries.

This report takes stock of the variety of these non-multilateral initiatives by using a wide range of information sources including databases on financing sources, the Overseas Development Institute's climate Funds Update, and recent reports on climate finance and finance for sustainable development of major research institutes and international organisations. The study is organised in 5 sections. Following this introduction, section 2 lays out the conceptual basis guiding the mapping exercise by defining the key constitutive elements of the global climate finance architecture. Section 3 evaluates the recent climate financing activities of major bilateral institutions, such as bilateral development agencies, bilateral development banks, and bilateral climate/environmental funds. Section 4 turns to private financing sources and especially to emerging climate-specific groups of institutional investors, private carbon funds, and environmental philanthropies. Section 5 centres on hybrid forms of climate financing and especially on a number of transnational multi-stakeholder partnerships established for the purpose of promoting greater public and private climate-related support to developing countries. Section 6 concludes with a set of recommendations and suggestions for future research on international climate finance to developing countries.

2. International climate finance: a conceptual tool box

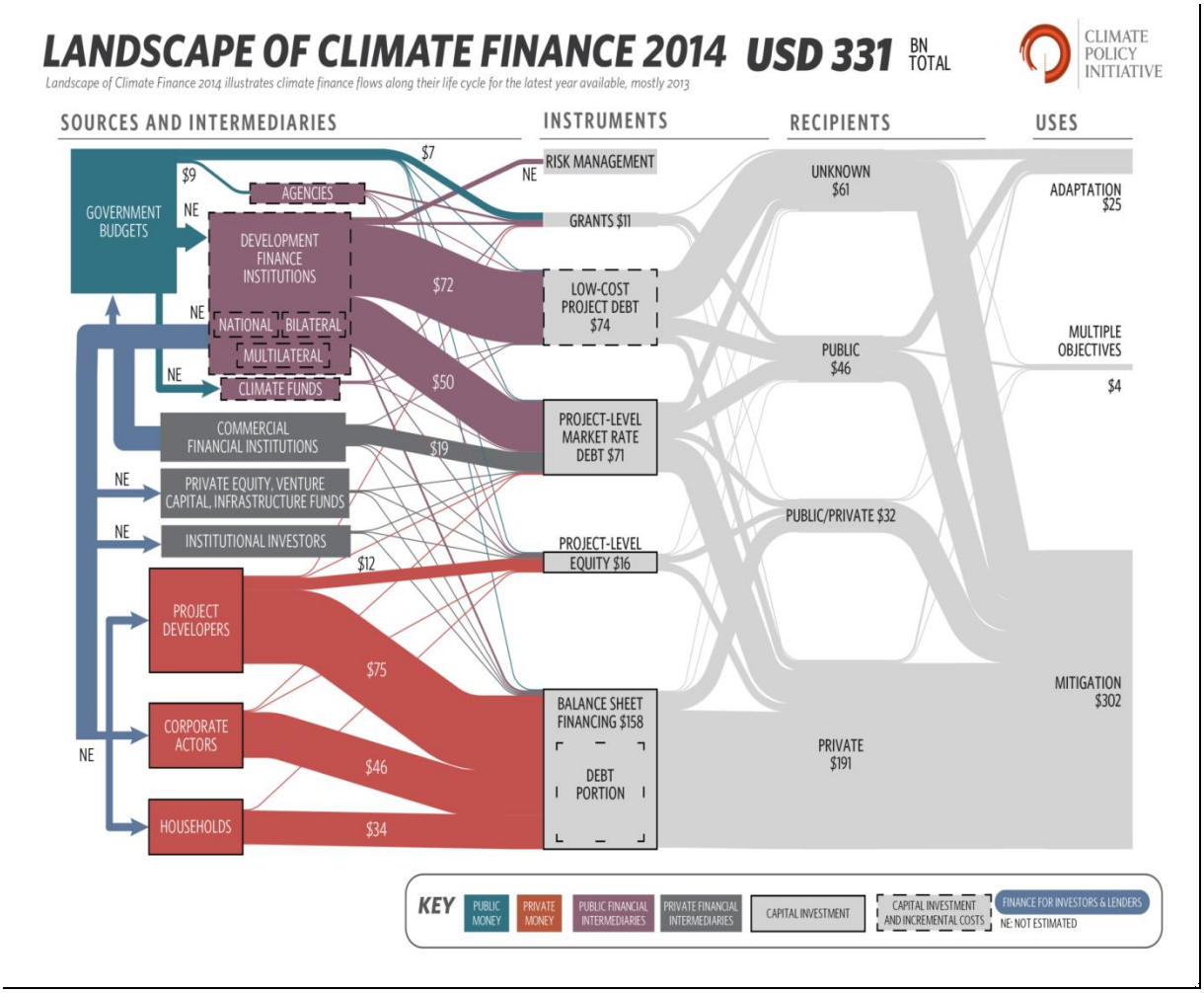
At present, the term 'climate finance' is used in two ways. In its broad version, and following the UNFCCC Secretariat's own definition,[4] the term 'global climate finance' "refers to local, national, or transnational financing, which may be drawn from public, private, and alternative sources of financing". As defined, climate finance includes all the financial resources and investments directed at climate mitigation and adaptation activities, irrespective of where those resources come from and are directed. For recent years, the estimates for "global total climate finance" range from USD 331 billion to USD 343 billion per year, with most of the funds stemming from private sector actors and directed at mitigation actions.[5] In a more restricted usage however, the term climate finance encompasses only those financial resources and investments that aim to support (directly or indirectly) low carbon and climate resilient projects, actions, and programmes in developing countries. There is currently no agreement on what should be included in the climate finance from developed to developing countries. Recent estimates for instance tend to include the total investments or costs rather than the amount of funds dedicated to mitigation or adaptation activities; they also tend to reflect commitments rather than actual disbursements (UNFCCC 2014 42)

In this report, it is the latter definition of climate finance that is operative - i.e. international climate finance to developing countries – and especially climate finance sourced by non-multilateral financing initiatives and institutions located in developed countries (i.e. non-multilateral north-south financial flows). Despite its narrower focus, in reality, this type of climate finance still maps out into a highly complex and fragmented global institutional landscape ***(see figure 1 below)*** characterized by a diverse set of interconnected elements (e.g. sources, channels, intermediaries, instruments etc…). In light of this institutional complexity, and before we come to our analysis, some definitions and conceptual clarifications appear to be in order. The following provides definitions and examples of the key concepts that pertain to the analysis of international climate finance.

[4] See http://unfccc.int/focus/climate_finance/items/7001.php#intro

[5] The most comprehensive estimates of global climate finance are provided by the Climate Policy Initiative (CPI)'s annual Global Landscape of Climate Finance reports (Buchner et al. 2011 ; Buchner et al. 2013; Buchner et al. 2014). See also the UNFCCC Standing Committee on Finance's first 'Biennial Assessment and Overview of Climate Finance' (UNFCCC 2014).

Figure 1 :The Landscape of Climate Finance (source: Buchner et al. 2014).



Overall, the main conceptual components of international climate finance comprise funding sources, financial flows, financing initiatives/channels, financial instruments and principles, and financing modalities. All of these components are of course closely connected, and are hence, seldom used in isolation from each other.

The concept of ***funding source*** for instance, refers to the primary origin(s) of the funds**,** which can be in either public money from government budgets or/and in private money from capital markets, firms, or individuals. Funds can also be sourced either domestically or internationally. Hence, financial flows in many areas of global politics can fall into one of four categories: 1) national public sources; 2) national private sources; 3) international public sources; and 4) international private sources. As already noted, a main source of climate finance is the private sector but climate-related financial flows also originate from domestic public budgets, carbon offsets, and voluntary/philanthropic organisations. Climate financial flows can vary as well depending on the category of country in which they originate. The UNFCCC terminology for country groupings is often

used here. In brief, Annex II parties (i.e., OECD members of Annex I parties) are the only ones that have financing commitments toward developing countries. They are also obliged to scale up the development and transfer of friendly technologies to countries with economies in transition. Annex I parties consist of all Annex II countries and countries with economies in transitions, such as the Russian Federation, the Baltic States, and Several Central and Eastern European States. These countries have only emission-reduction commitments under the convention. Finally, Non-Annex I parties are developing countries which are then divided into subgroups depending on their level of development and estimated vulnerability to the impacts of climate change. In the context of climate finance, the notion of 'developed' countries includes those countries that have committed to the joint goal of mobilising USD 100 billion a year by 2020.

The notion of ***financial flows*** depicts the volume of funds that are committed and/or disbursed by a particular actor or set of actors. Financial flows vary depending on their sources (public, private, for –profit, and non-for-profit), their scope (domestic, international, regional, local); their recipients; and primary purpose or use (e.g., mitigation, adaptation and other related activities). The UNFCCC Standing Committee on Finance's first 'Biennial Assessment and Overview of Climate Finance' provides a description of the different types of flows that are commonly examined in climate finance (UNFCCC 2014: 53). These include for example, global total climate financial flows; all financial flows from developed countries (public and private); flows to developing countries through public institutions; flows from Multilateral Development Banks (MDBs); flows from climate related Official Development Assistance (ODA), other official flows (OOF), flows from multilateral climate funds, and flows specifically channeled through UNFCCC funds.

Financing institution/initiative:[6] in broad terms, a financing institution is an organisational entity or institution (formal or informal) set up to channel or mobilise funds for a specific international cooperation purpose (UNDP 2005). As ***figures 1 above*** aptly shows, climate financial flows are currently channeled through a wide range of organisational entities including bilateral channels and initiatives as well as multilateral financing institutions (MFIs) or funds that have, in contrast to bilateral institutions, multiple governing members including recipient and donor countries (e.g. multilateral development banks (MDBs) such as the World Bank and the Inter-American Development Bank (IDB); regional development banks and UN agencies). In recent years, a myriad of climate-specific funds have been set up to operationalize climate finance commitments and as Smallridge et. al. (2012) explain, these funds can fall into one of four major categories: 1*) Global donor funds set up by UN agencies* – including the UNFCCC, the World Bank (WB), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and

[6] The term "institutional intermediaries" is used as well.

the Food and Agriculture Organisation of the United Nations (FAO) (e.g., the global Environment Fund, the Green Climate fund). 2) *Global donor funds managed by the EU institutions* such as the Global Energy Efficiency and Renewable Energy Fund. 3*) Regional recipient funds* managed by regional development banks, BFIs and national development banks (NDBs). And 4) *national recipient funds managed* by BFIs and NDBs. Most of these organisations can be said to exert a *direct influence* on climate finance in the sense that they directly disburse funds to support climate mitigation or adaptation measures in developed and developing countries. Other types of 'financing' initiatives however, can exert a less direct influence on climate finance. These include organisations which do not provide any funds per se, but instead seek to influence the behaviour of actors through regulation, knowledge sharing, and informal standard-setting activities. Of course, it is clear that these two modes of influence (direct or indirect) are not mutually exclusive. [7]

Financing institutions and actors can use a wide range of ***financial instruments***, ***products and services***. ***Table 1*** below presents a list of the main financial instruments used in climate finance with their related advantages and disadvantages. Like financing institutions/initiatives, financial instruments can have a more or less direct influence on the allocation of resources.

Table 1: Examples of climate-related financial instruments (advantages and disadvantages)

Instruments	Definition	Advantages	Disadvantages
Grant	Resources aimed at funding investments without the expectations that the money be repaid.	Provides technical assistance and capacity building. Gives viability to a project. Covers full costs of adaptation, and complements other instruments.	There are no reflows
Concessional Loan	Upfront transfer of resources with the agreement that the money will be repaid on conditions more favourable than market terms by offering low and no interest rates, longer repayment and/or grace periods, or a combination of them.	Used when market financing would make the investment unviable. Reduces risk to all lenders. It can encourage local banks to enter the lending market for energy efficiency and renewables.	
Guarantee	Commitments in which a guarantor undertakes to fulfill the obligations of a borrower to a lender in the event of non-performance	Attracts capital through debt on terms that could ensure the feasibility of a project. Mitigates and manages risks.	It is hard to quantify risks and in international financial institutions, it accounts for the same amount of financing quota as a loan.

[7] The distinction between indirect and direct modes of financial influence is taken from a UNPD's report that provides an inventory of financing arrangements for international cooperation (UNDP 2005).

	or default by the borrower of its obligations, in exchange for a fee.		
Equity	Injection of capital to grow operation of a project or a firm to leverage resources as it mitigates risk for other investors. Used when the probability of failure is high, but still with positive probability of success, therefore, of return to the equity holder.	Support for innovation of start-ups. Leverage resources.	Difficult to quantify risks and define with certainty the level of participation in the total equity.
Debt swap	Voluntary exchange of a debt instrument by a creditor with its debtor for cash, another asset, or a new obligation with different repayment terms.	Ensures additional resources for adaptation investments while reducing the level of a debt of the country.	It may generate negative incentives for the borrower to honour its debt.

Source: GCF (2013 : Annex II p. 15)

Financing principles[8] provide the normative framework that underlie the burden sharing among donors and hence play a crucial role in the choice and design of financing instruments (see especially UNDP 2005:53). A great number of principles are applicable to the environmental domain, the most common of which are the ability to pay principle; the common but differentiated responsibility principle; the equality principle; the precautionary principle; the intergenerational equity principle; the polluter pays principle; and the user pay principle. Of course, some financing principles can be combined to justify the use of multiple financial instruments and mechanisms.

Finally, there is the concept of **financing modality** which is often employed to describe the overall strategy used to mobilise, leverage, or channel financing resources. Drawing on Girishankar's analysis of innovative modes of development finance, four main financing modalities can be distinguished that are also applicable to the realm of climate finance (2009:3): **1) The *Private for private modality*** for instance, involves private to private flows in the market and in civil society. **2) The *Public for public modality (solidarity modality)*** supports public-to-public or sovereign-to-sovereign transfers and mainly qualifies multilateral and bilateral ODA and OOF. **3) The *Public - private modality*** refers to the use of public funds to leverage or mobilise private finance and investments in support of public sector service delivery and other public functions. **4)** Finally, **the *Catalytic modality*** involves public support for creating and developing private markets by reducing the risks associated with private investments.

[8] The notion of financing principle can be also found in UNPD (2005).

3. Bilateral financing initiatives

In recent years, in light of the ongoing debates surrounding the design and operationalization of the GCF, much of the focus on public climate finance has been on multilateral institutions and funds. Often forgotten however is that bilateral financing institutions still constitute a non-negligible source of environmental and climate finance.[9] In fact, a substantial share of public environmental finance to developing countries is actually delivered not through multilateral financial institutions but via bilateral channels like development cooperation agencies, bilateral banks, and funds. With a long experience in financing development assistance activities and programmes in the developing world, the development financing institutions of many developed countries, have in the last 10 to 15 years started to integrate environmental concerns, and especially climate mitigation and adaptation activities into their financing agenda and packages (Atteridge et al. 2009::vii; Limaye & Zhu 2012 : 32). Since the mid-2000s, a number of developed countries (e.g. UK, Germany, and Japan) have also established special bilateral climate/environmental funds so as to facilitate the distinction between development aid and environmental finance.

Essentially, the funding of global environmental goods through bilateral development assistance is grounded in the idea that development and global environmental protection are closely intertwined. Environmental and natural resources protection, as well as climate mitigation and adaptation are of crucial relevance for the short- and long-term sustainability of development. Conversely, effective environmental protection requires genuine development, for an adequate level of living standards is fundamental for a population to start devoting sufficient resources to the protection of its environment and natural resources.

Financing environmental protection in developing countries through public development assistance funds is however, far from being an easy task. The problem is mainly twofold: first, development needs and environmental concerns are in practice not that easily reconcilable. Donors and developing countries must ensure a certain coherence between these two policy objectives. The second major challenge concerns the question of how funds raised towards environmental objectives are counted, measured and channeled from donors to recipient governments without altering the funding from existing development assistance. As noted earlier, what officially counts as "climate finance" and what may constitute a proper base line against which additionality can be

[9] The term "bilateral financing institution" has two meanings in the literature: broadly defined, the term refers to all forms of bilateral institutions involved in distributing funds to developing countries. Used in a more narrow sense, the term alludes only to bilateral development banks governed or belonging to national countries. In this report, we use the broader definition of the term.

measured still remains unclear.[10] Currently, most of the public finance for climate change and biodiversity for instance comes from ODA.[11] Since 1998, the tracking of ODA flows falls under the auspices of the OECD Development Assistance Committee (DAC). The DAC monitors aid targeting the objectives of the Rio Conventions through its Creditor Reporting System (CRS) and its Rio Markers. The environmental objectives include climate change, biodiversity, desertification and the environment broadly defined. Under this system for instance, development funds that target climate mitigation activities must "contribute to the objective of stabilization of greenhouse gases (GHG) concentrations in the atmospheres at the level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration."[12] In turn, desertification related aid must "aim at combating desertification or mitigating the effects of drought in arid, semi-arid and dry sub-humid areas through prevention and/or reduction of land degradation, rehabilitation of partly degraded land, or mechanisms of desertified land."[13] The development funding related to the environment are then marked on whether environmental protection is a "principal objective" (marked a '1') or significant objective (marked a '2'). In practice however, this tracking system has not been without significant limitations ***(see box 1 below).*** One of the main problem is that countries can use different methodologies to account for the exact share of development aid targeting climate change adaptation and/or mitigation. The data on climate-related ODA is also based on commitments rather than on actual disbursements. Given these difficulties, the following draws on recent findings in the policy literature to assess the role played by bilateral financing institutions of developed countries in targeting climate adaptation and mitigation activities in developing countries.

[10] For an analysis of the many definitions of "additionality" and their differing policy implications see especially Brown and al. (2010)

[11] Note that the UNFCCC also requires that Parties report on climate change financing for developing countries. Guidelines require Parties to indicate what 'new and additional' funds they have provided pursuant to Article 4.3 and to explain how they have determined that such financial resources are in fact "new and additional".

[12] See OECD DAC website: http://www.oecd.org/dac/stats/46782000.pdf (last accessed March 2015)

[13] See OECD DAC website: http://www.oecd.org/dac/stats/46782074.pdf (last accessed March 2015)

Box 1: Limitations of the OECD DAC tracking system in regard to climate-related development finance

- The application of Rio Markers by donors reporting to the DAC was not made mandatory until recently; therefore trends cannot be meaningfully measured until 2013-2014 at the earliest.
- The climate change-related marker has only been applied to mitigation actions. In December 2009 the DAC members approved the inclusion of a new marker to track adaptation (reporting will start on the new adaptation marker (…) on 2010 flows).
- Only bilateral climate change flows are reported. Multilateral agencies do not use the marker when they report their flows to the DAC.
- Reporting on climate change-related projects funded over many years may be mis-characterised given that aid is reported on an annual basis. Parties are not required to remove projects that were listed in one year but cancelled in subsequent years.
- OECD DAC only allows project or sectoral tracking of climate change related flows; such flows cannot be tracked via general budget support. This may become more prominent in the future as climate-related development support continues to move towards programmatic forms.
- Since donor governments define their own projects as climate-related or not, each donor agency is likely to have different interpretations of what is meant by 'climate-related'. Reporters may also be under pressure to determine spending as climate-related to satisfy the 'new and additional' criterion and may over-report.
- Given that the markers are open for interpretation by each donor agency, there is no strict comparability across countries.
- Currently, both categories 1 and 2 of climate markers ('principal' and 'significant') are counted towards a country's climate-related ODA. These categories are loosely defined and up for interpretation. There is currently no international agreement on whether either or both of these categories should be counted towards an additionality target.
- There is no internationally agreed methodology for tracking the exact share of aid spending that contributes to climate change mitigation or adaptation.

Source: (Brown, et al. 2010 :7)

3.1. Bilateral development cooperation agencies, banks and funds

Analyses of bilateral development institutions involved in financing climate-related activities in developing countries generally cover three categories of BFIs. These are 1) bilateral development cooperation agencies; 2) bilateral development banks; and for a limited number of countries 3) bilateral climate-specific funds.[14] Although their activities are similar, these institutions tend to have different mandate and purpose (Limaye & Zhu 2012 :31).

A bilateral development cooperation agency for instance, is a government organisation that often works under the directives of the development ministry or the ministry of foreign affairs of an individual country. Its main objective is to contribute to reducing poverty in the developing world. Bilateral development cooperation agencies have specific mandates and differ as well in terms of the regions they work in. They hence use public money for non-profit objectives. In light of the growing climate change challenge, these institutions direct funds towards climate mitigation and adaptation

[14] We could also add to this category National Development Banks (NDBs). They typically invest domestically but increasingly support international cooperation. For an analysis of the potentially important role of NDBs in scaling up private climate sector investments see most recently Smallridge et al. (2012).

activities. In general, they tend to provide funds for projects that more easily overlap with more traditional development objectives and activities such as climate adaptation measures and especially livelihood based approaches which can be seen as forms of development assistance in their own right (Atteridge, et al. 2009:: 9).[15]

In some developed countries, development assistance including environmental/climate finance is also channeled through bilateral development banks, the most important of which include the Agence Française de Développement (AFD), the Japan International Cooperation Agency (JICA,) the German Development Bank (KfW), and the Overseas Private Investment Corporation (OPIC) (***see box 2 below***). As explained by Atteridge and colleagues (2009) in their analysis of the climate financing portfolios of major BDBs, these institutions "are distinguished from bilateral 'donors' (i.e., development cooperation agencies) both in the channels by which they can raise funds as well as the financial instruments available to them to support development and climate activities, as well as in mandate. They are distinguished from commercial banks in that they are driven not only by financial but also by sustainable development objectives." (Atteridge, et al. 2009:ft.2). As banks, they fall under the auspices of the ministries of finance, rely on funds from public budgets of donor countries as well as on their own funds and money raised on global capital markets (see also Limaye & Zhu 2012).[16] The mandates and organisational structures of bilateral development banks vary depending on their relationship with other governmental institutions.

Box 2: Examples of bilateral developments banks

1. France: AFD Agence Française de Développement (AFD)
2. Germany : KfW Deutsche Investitions –und Entwicklungsgeselshaft (DEG)
3. Finland: Finish Fund for Industrial cooperation LtD (FINNFUND)
4. Netherlands: Netherlands Development Finance Company (FMO)
5. Japan: Japan International Cooperation Agency (JICA)
6. Japan : Japan Bank for International Cooperation (JBIC)
7. Germany: KfW Entwicklungsbank
8. US: North American Development Bank (NADB)
9. Overseas Private Investment Cooperation (OPIC)

[15] In 2006, via the *OECD Declaration on Integrating Climate Adaptation into Development Cooperation* , OECD members committed to better integrate climate-adaptation activities and projects into development assistance and development (OECD 2006). In 2009, the OECD Development Committee (DAC) and the Environmental Policy Committee (EPOC) published the *Policy Guidance on Integrating Climate Change Adaptation into Development Cooperation* to "provide policy makers and practitioners in development co-operation agencies with information and advice on how to mainstream climate change into development." (OECD 2009 :12)

[16] The AFD (French Development Agency), for instance, complements the grant money it receives from the French government, the European Commission and international philanthropic organisations with funds raised in capital markets, through bond issues and private placements. To supplement resources provided by the German federal budget, the KFW raises funds on the capital market.

10. Belgium: Belgian Investment Company for Developing Countries (BIO)
11. UK: CDC Group plc- UK
12. Norway: Norwegian Investment Fund for Developing Countries
13. Austria: The Development Bank of Austria (OeEB)
14. Switzerland: Swiss Investment Fund for Emerging Markets (SIFEM/OBVIAM)
15. Italy: Societa Italiana per le Imprese all' Estero (SIMEST)

In the past decade, some developed countries have also established their own climate-specific funds so to better demonstrate their willingness and ability to support global actions on climate change ***(see box 3 below).*** These bilateral funds are administered and disbursed by their implementing agencies and most of their resources come from the national government. They support programmes implemented by their development agencies, as well as programmes implemented by other international organisations including UN agencies, MDBs, and NGOs. To avoid double counting, the financial report provided by these bilateral funds is usually included in the reports of environmental/climate finance submitted by the respective developed country government to the OECD DAC and the UNFCCC.

Box 3: List of major bilateral climate/environmental funds

1. UK : International Climate Fund (ICF)
2. Germany: International Climate Initiative (ICI)
3. Australia: International Forest Carbon Initiative (IFCI)
4. Norway : International Climate and Forest Initiative (NICFI)
5. Japan: Fast Start Finance (private and public funds)

The following provides a more detailed description of major bilateral climate funds which can be found on the Climate Fund Updates website: climatefundupdates.org

UK: INTERNATIONAL CLIMATE FUND (ICF)[17]

The ICF has been created by the UK government to provide £3.87 billion between April 2011 and March 2016 to assist poor and vulnerable countries adapt to climate change and promote cleaner, greener growth. It is administered and funded by three different government departments: the Department of Energy and Climate Change (DECC) which allocates £1.329 billion to the fund, the Department of International Development (DFID) which gives £ 2.4 billion to the ICF, and the Department for Environment, Food and Rural Affairs (Defra) – which allocates £ 140 million. Climate adaptation funding provided by the IFC is for poor and vulnerable countries (e.g. the least-developed countries, small island states and Africa). The fund also provides climate mitigation and forestry funding to regions that have the opportunities to reduce emissions in ways that also reduce poverty and promote sustainable development. The IFC's finance is part of ODA and it contributed to meeting the UK's commitment to provide £1.5 billion in Fast Start Finance for Climate Change from 2010 to 2012.

[17] For further information see: https://www.gov.uk/government/policies/taking-international-action-to-mitigate-climate-change/supporting-pages/international-climate-fund-icf

GERMANY: THE INTERNATIONAL CLIMATE INITIATIVE (ICI)[18]

Established in 2008, the ICI is administered by the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety and finances climate and biodiversity projects in developing countries, in newly industrialized countries, as well as in countries in transition. With an annual amount of funds reaching at least 120 million euros, the ICI aims to : 1) promote a climate-friendly economy by supporting partner countries in establishing a climate-friendly economic structure that prevents climate-damaging greenhouse gas emissions; 2) promote measures for climate change adaptation by supporting appropriate national programmes in selected partner countries that are especially vulnerable to climate change; and 3) promote and finance measures for the preservation and sustainable use of carbon reservoirs and for reducing Emissions from Deforestation and Degradation (REDD). The funding from ICI is classified as ODA, with some exceptions for project funding in non-ODA eligible countries, such as Russia. The ICI uses a variety of instruments including grants, concessional loans and where appropriate, project-based contributions to multilateral funds.

JAPAN: HATOYAMA INITIATIVE

The 2009 Hatoyama Initiative (formerly called the Cool Earth Partnership and now commonly referred as the Fast-Start Financing) is managed by the Japanese Ministry of Finance and aims to support climate mitigation and adaptation efforts in developing countries and especially in those particularly vulnerable to climate change. It has pledged USD 15 billion in public and private assistance to developing countries until 2012. Mitigation assistance may take the form of energy savings, increased energy efficiency technologies, and new, clean energy initiatives. Assistance for adaptation projects may include adaptation planning, forestry, rural electrification research, drought management, and co-benefit approaches. The fund is composed of two types of assistance: 1) USD 7.2 billion in Official Development Assistance (ODA) such as grant aid, technical cooperation, concessional loans and contributions to multilateral funds. 2) USD 7.8 billion in the form of Other Official Flows (OOF), which include official financing in collaboration with the private sector such as preferential loans by the Japan Bank of International Cooperation (JBIC).

NORWAY: INTERNATIONAL CLIMATE AND FOREST INITIATIVE (NICFI)

The Norwegian International Climate and Forest Initiatives (NICFI) is primarily a grant-based scheme launched in 2007 at COP 13, with a pledge to allocate up to USD 500 million per year over a period of 5 years to reduce GHG emissions from deforestation and forest degradation (REDD) in developing countries. The fund's main rationale is that a large investment in REDD+ is crucial in speeding up global carbon efforts. NICFI's main objectives are threefold:

- To promote the inclusion of emissions from deforestation and forest degradation in the post-2012 climate regime.
- To take early action to achieve cost-effective and verifiable reductions in GHG emission.
- To promote the conservation of natural forests to maintain their storage capacity.

The NIFCI pursues these goals through a comprehensive strategy with the following components: establishing an international architecture for REDD+; using a result-based performance approach; emphasizing national ownership of REDD+ strategies by forest countries that protect the rights of local people; funding the research and policy advocacy of civil society organisations and research institutes on various aspects of REDD+ readiness and implementation; seeking to serve as a catalysts for other donor countries to contribute to REDD+ efforts.

[18] For further information see: http://www.international-climate-initiative.com/en/about-the-iki/

3.2. Estimates of bilateral climate-related development assistance to developing countries

According to Buchner et al. (2011:25), the primary data sources for tracking bilateral financial flows targeting climate change include the following:

- Self-reporting and database updates by Bilateral Financial Institutions and Funds
- OECD Development Database on Aid Activities: Creditor Reporting System
- UNEP Climate Change Working Group for Bilateral Finance Institutions
- Overseas Development Institute(ODI)/ Heinrich Böll Stiftung (HBS) Climate Funds Update website
- Bloomberg New Energy Finance Desktop and Analysis
- OECD TAD Export Credits Database

According to the OECD DAC's latest statistical flyer on climate-related aid (OECD 2014a), in 2013, total bilateral climate-related ODA commitments by OECD DAC's members reached USD 21.9 billion representing 17% of total bilateral official development assistance ***(see Table 2 below)*** . As specified in the flyer, this total represents an "upper bound" – that is – the full value of funded activities that have climate mitigation or adaptation as a principal and significant objective. Of this total, USD 12.4 billion (57%) targets climate change adaptation/or mitigation as a principal objective. 43% (USD 9.5 billion) accounts for projects or programmes that have climate activities as their secondary (i.e. significant) objective on the lower-bound.[19]

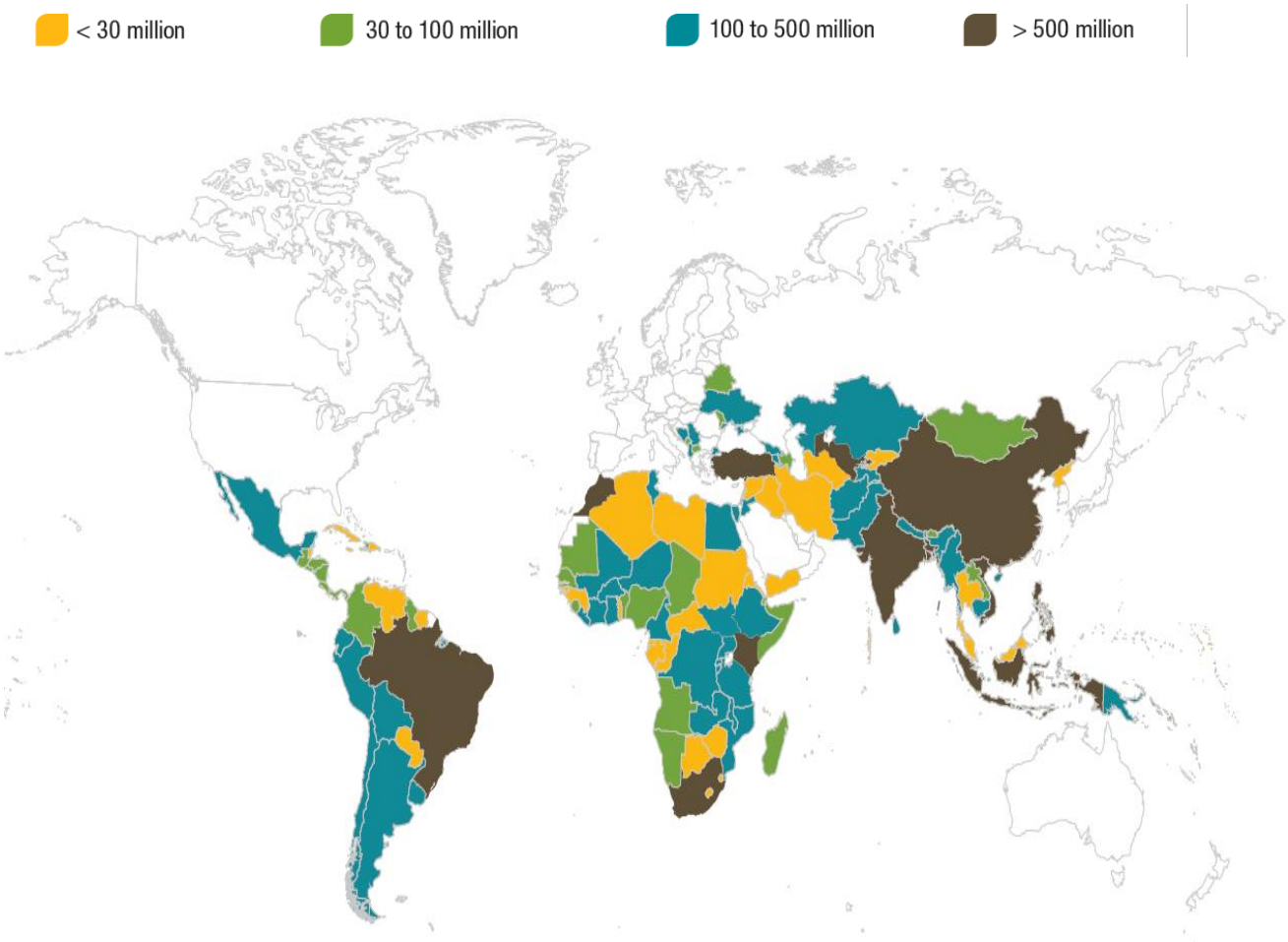
Table 2: Bilateral related ODA commitments reported by OECD DAC members (2007-2013) (Million USD/Nominal Prices) (Sources OECD DAC CRS Statistics and UNFCCC 2014)

	Climate change mitigation related aid		Climate change adaptation related aid		Overlap	Total Bilateral climate-related aid (netting out the overlap) (a+b+c+d-e)
Year	Principal objective (a)	Significant objective (b)	Principal objective (d)	Significant objective (b)	Aid marked both mitigation and adaptation (e)	
2007	2212	1731	NA	NA	NA	**3393**
2008	5547	3161	NA	NA	NA	**8708**
2009	6972	3287	NA	NA	NA	**10259**
2010	13540	4285	2705	5772	3624	**22678**
2011	8294	4919	2067	6450	3686	**18044**
2012	10442	5089	2680	7422	4164	**21469**
2013	10003	5342	3443	7392	4256	**21924**

[19] The share of finance targeting climate change reported by OECD DAC's members can vary across members from 0-100%. In this flyer, the OECD uses "the share of 100% for the climate-related development finance marked as significant to report on the "upper bound" and 0% to report on the "lower bound" of total climate finance flows."

Climate-related Other Official Flows (OOF) (i.e. non-concessional development finance such as loans provided at market rates) are more difficult to assess. In an effort to improve the quality of the data on climate finance, the OECD DAC recently agreed to promote the application of the climate change Rio markers to non-ODA official flows (see especially Clapp et al., 2012:12). But as the flyer suggests, collected data from a number of key OECD countries already demonstrates the importance of non-concessional climate finance which amounted to USD 682 million in 2013 (OECD 2014a:3), of which 97% have climate adaptation and/or mitigation as a principal objective. Worth noting is that a significant share of these flows came from France's AFD (USD 573 million). The previous two years climate-related OOF was significantly higher amounting to USD 843 million per year. As for the recipients of bilateral climate-related development finance, the funds were mainly directed to the Asian region (40%) and to Africa (30%) ***(see chart 1).***

<u>Chart 1:</u> Climate-related development finance by recipients in 2013 (Commitments, USD million) 2013)



Source: OECD (2014a: 6)

In regard to Bilateral development Banks, the UNFCCC Standing Committee on Finance estimates that for the year 2012, climate finance committed to developing countries by the BDBs of developed countries reached USD 14 billion (UNFCCC 2014 : 48). Needless to say, how these funds were distributed across activities and regions is not easy to evaluate. A recent report mapping the climate financing contributions of the members of the UNEP Bilateral Finance Institutions Climate Change Working Group ('UNEP BFI CCWG') – JICA, AfD, KfW and the European Investment Bank (EIB)[20] – estimates that for the year 2010, USD 15,5 billion was channeled through these institutions, 80 % of which were directed to climate mitigation, and the remaining 20% to climate adaptation ***(see table 3).***

Table 3: Total climate finance committed by major BDBs (JICA, AfD, KfW) + EIB for 2010 (USD millions)

	AfD	EIB	JICA	KfW	TOTAL 2010	TOTAL 2008	TOTAL 2009
Mitigation	3156	2099	5927	1683	12865	7242	8926
Adaptation	516	0	2243	95	2854	3029	3963
Total	**3672**	**2099**	**8170**	**1778**	**15719**	**10278**	**12889**

Source: UNEP 2011: 7[21]

In terms of the regional distribution of these funds, almost half of the total 2010 funding was directed to Asia. The next highest are North Africa and the Middle East with 22 %, followed by West and Sub Saharan Africa with 15 %, and Latin America at 14%. Only 2 % of the funds were directed at Oceania.[22]

[20] See UNEP (2011).
[21] As the authors of this report explain, the 2008 figures are drawn from Atteridge et al. (2009). The 2009 data is taken from UNEP (2010).
[22] Understandably, most of the funds provided by the AfD has been directed to the French overseas territories.

4. Private financing initiatives

There is now widespread agreement about the central importance of private finance for achieving sustainable development goals in developing countries. In the climate change sector, the consensus among policy analysts and practitioners is that substantial increases in financial resources are needed to effectively promote low-carbon development and climate resilience in developing countries, and that a substantial share of such resources should come in the form of investments by the private sector (Buchner et al.2013:16; Whiley 2014).

Yet, despite the widespread recognition of the key role of private-sector finance in the global climate policy agenda, existing data on private financial flows is limited both in scope and in detail. As explained recently by Stadelmann and colleagues (2013), tracking and monitoring private climate-related finance is not without serious challenges. Data sets on private climate flows do exist but they tend to use different definitions of what qualifies as private climate finance and different measurement methods.[23] An additional problem is that financial flows distributed by or channeled through private sources are highly diverse and complex: not only are they provided by a wide range of private actors and through a variety of channels and complex instruments, they also feature different levels of risk and return expectations and varying levels of liquidity.[24] Finally, there is the problem of confidentiality: unlike public actors, private sector actors – and particularly international corporations – are more reluctant to reveal information about their financial operations by fear that this might jeopardize their competitiveness (Buchner et al., 2011 ; Martin Stadelmann, et al. 2013).

Not surprisingly then, recent estimates of private climate finance and investments to developing countries tend to vary widely and do not rest on fixed set of criteria. Three recent studies are particularly relevant here.[25] Stadelmann et al (2013) in their analysis of the availability of current data on climate private finance, estimate 'north-south' private financial flows to be between USD 27 and USD 123 billion based on a variety of data from the years 2008 to 2011.[26] These estimates, they

[23] According to Clapp et al. (2012::15) the main data sets of private climate finance include the following: The United Nations Conference on Trade and Development (UNCTAD) Foreign Direct Investment (FDI) statistics; The OECD FDI statistics; and the Bloomberg New Energy Finance (BNEF) and other commercial databases on clean energy only. Each has its own advantages and shortcomings.

[24] For a more detailed discussion of the complexity of the private financial landscape for climate finance see UNEP(2014). In this report, private financial flows are described and distinguished by reference to six dimensions: 1) the legal nature of the financial transactions; 2) the seniority of the transaction and the associated risk profile; 3) the channel and the intermediary actors through which the flow of finance is arranged. 4) the term or tenure of the financial arrangement/the liquidity of the financial asset; 5) the ultimate source of the financial resource and its origin; 6) the knowledge of use of proceeds related to the transaction (see p. 13).

[25] These studies' estimates have been included for instance in the first assessment and overview of climate finance flows conducted by the UNFCCC Standing Committee on Finance (2014).

[26] Their more specific estimates are as follows: $ 10-35 billion of North-South low-carbon investments; $ 19-105 billion of private investments mobilized by actions of Northern governments (not reliable); Carbon Market investments (reliable data) $ 15-30 billion a year. Carbon market payments (North-South) $ 2 billion per year

explain, encompass a variety of private financial flows including: 1) private investments (FDI; portfolios investments, investments mobilized by the climate policies of industrialized countries); 2) payments for carbon credits (compliance purchases); and 3) voluntary payments or donations by companies, NGOs, and private persons. The previous year (2012), a study conducted under the auspices of the OECD and the International Energy Agency (IEA) (Clapp, et al. 2012) estimated the total of climate-related FDI and other private financial flows to developing countries to be between USD 37 to 72 billion a year based on 2009/2010 data. Included in this study were private flows delivered through FDI, mergers and acquisitions, joint ventures or loans. This study estimated the amount of philanthropic flows (including voluntary carbon market flows) to be USD 0.4 billion a year for the year 2009/2010. Finally, in their 2013 study of the 'Global Landscape of Climate Finance', Buchner et al., (2013) focused exclusively on private investments flows from developed to developing countries stemming from investments in the renewable energy sector and hence arrived a far lower estimation of private financial flows to developing countries: USD 4 to 13 billion for 2011/2012.

Despite the lack of adequate data, it is clear that private actors remain the main source of global climate financing. In 2013, for instance, it was estimated that private actors contributed USD 193 billion or about 58 % of total climate flows. Most of the these contributions were made as investments in renewable energy projects in developed countries, the renewable energy sector being the only sector for which there was and still is, reliable data on private finance (Buchner, et al. 2014 :VI). However, in the absence of an internationally agreed system for measuring, reporting, and verifying private finance flows to developing countries, a discussion of which actors or initiatives can have a potentially important future role to play in private climate finance appears particularly relevant here. It is with this in mind that the following focuses on describing the variety of initiatives established or provided by private sector actors for the purpose of scaling up or improving financial support to global climate-related projects in developing countries. The analysis focuses in particular on groups of institutional investors (for example pensions funds, insurance companies, and sovereign wealth funds), private sector carbon funds, and European environmental philanthropies.

(reliable data). Voluntary payments (especially voluntary carbon offsets: 0.2 billion per year). No reliable data on the other voluntary flows. Their overall conclusion on the available data on private climate finance is worth quoting here in full: "Overall," they write, "climate-friendly private flows may already current exceed $ 100 billion if all private finance that flows North-South, or all that is being invested in developing countries as a consequence of incentives or actions by industrialized countries is included. However, data quality is currently very low as most estimates rely on non-verified information. Furthermore, numbers are not comparable due to the lack of agreement over both the definition of 'climate finance' and the types of 'private finance' to be included in the $ 100 billion goal." (Stadelmann et al. 2013:733)

4.1. Institutional investors initiatives

Table 4: Major institutional investors

INSTITUTIONAL INVESTORS	TYPES OF INVESTMENT ASSETS	INVESTMENT CHANNELS
Pension funds - **Defined benefit** - **Defined contribution** **Other pension assets** - **Pension reserve funds** - **IRAs, insurance contracts, etc.** **Insurance companies** - **Life, reinsurance** - **Property and casualty** **Sovereign wealth funds** **Foundations & endowments** **Investment managers**	**Corporate equity** **Corporate debt (Bonds)** **Project equity** - **Levered** - **Unlevered (whole asset)** **Project Debt**	**Direct investment** - **In corporate securities** - **In projects** **Through intermediaries** - **Investment managers** - **Private equity funds** - **Infrastructure funds** - **Other pooled investments vehicles**

Source: Nelson and Pierpont (2013)

Institutional investors include pension funds, insurance companies, sovereign wealth funds, foundations, endowments, and investment managers. With approximately USD 70 trillion in assets under management, this class of investors constitutes a potentially significant source of climate finance, especially in the clean energy sector. [27] Indeed and as Kaminker and Stewart explain (2012 : 7), investments in clean energy projects and programmes are particularly well suited to institutional investors' concerns: they can provide steady and inflation-adjusted cash flows with low correlations to the return on other investments. In addition, clean energy projects such as wind and solar projects, with their long lifespan (25 years on average) align quite well with institutional investors' interest in long-term horizon investments. Thus far, however, climate-relevant investments from institutional investors in developing countries have been rather limited. In their 2013 CPI's study of *The Global Landscape of Climate Finance*, Buchner et al. (2013:: 24) estimated the amount of climate flows originating from this category of actors to be of only USD 0.4 billion for the year 2012, with investments mainly directed at clean energy projects in developed countries. "In our sample," they note, "all institutional investors' money went to developed countries (including USD 280 million to Europe). Most of these contributions (…) were sourced domestically and the remainder came from developed countries other than the project host country." But here again, data limitations and lack of transparency prevented the authors from capturing the full impact that institutional investors can have on total global climate financial flows and especially the indirect financing they can provide as investors for government and corporate bonds.

[27] See especially Nelson and Pierpont (2013) and Kaminker and Stewart (2012) for detailed analyses of the potentially important role of institutional investors in global climate finance.

The problem is that despite their increasing interest and financial capacity to provide much-needed financing in clean energy projects, institutional investors tend to face a number of institutional barriers that prevent them from making the most out of their full investment potential.[28] It is thus urgent for policy makers to consider creating environments that are more supportive of institutional investors' interests and demands so as to scale up their long-term investments in emission reduction projects in both developed and developing countries. In their analysis of the role that institutional investors can play in supporting renewable energy projects for instance, Nelson and Pierpont (2013:47-55) identify a number of steps that could help to overcome key barriers to investments. These include: efforts by policy makers to reduce the policy barriers that restrict institutional investors' capacity and willingness to invest in renewable energy; the promotion of more focused investment expertise in renewable energy projects; the development of more adequate investment practices that encourage more direct investments into projects (especially from investors of a major size) and that get more investors to make allocations to infrastructure and renewable energy; finally, investors should develop better pooled investment vehicles (see also Buchner, et al. 2013).

In recent years however, in an effort to improve and potentially scale up their climate finance contributions, some institutional investors have formed "climate specific" collaborative arrangements (Croce, Kaminker, & Stewart 2011)(***see table 5 on p. 23 for an illustrative list of these initiatives***). While these initiatives differ in purpose and form, they all seek to gather greater expertise and knowledge on low-carbon and resilient investments and to enhance dialogue with governmental actors and other relevant stakeholders. Some of these initiatives even pool resources so to achieve greater levels of investments into climate-related projects.

In Europe, we can find for instance the **Institutional Investors Group on Climate Change (IIGCC)** [29], a forum for collaboration on climate change regrouping more than a hundred European institutional investors including the largest European pensions funds and asset managers. Representing a total of USD 10 trillion of assets, this group's main purpose is to promote public policies, investment practices and corporate behaviour related to long-term climate change risks and opportunities. The initiative has two main strategic objectives: one strategy consists in changing market signals by promoting the design of strong and credible public policy solutions that ensure an effective transition to a low-carbon economy as well as measures for adaptation; and another which seeks to inform investment practices so to preserve and enhance long-term investment values.

[28] For a more detailed discussion of these various institutional barriers see especially Nelson and Pierpont (2013:31-33).
[29] For further information see http://www.iigcc.org/about-us

Established in 2003, the **Investor Network on Climate Risk (INCR)** [30] is a group of more than 110 US-based institutional investors totalizing more than USD 13 trillion in assets. This initiative is principally concerned with identifying the investments risks and opportunities resulting from climate change and other global sustainability challenges. The INCR is in fact a project of CERES, a non-profit advocacy network for sustainability leadership with the purpose of mobilising investors, companies, and public interest groups to promote the adoption of sustainable business practices and solutions. INCR's members commit to the following three main principles: 1) to change their practices throughout the investment value chain to address climate change; 2) to engage with companies in their portfolios on climate change and sustainability issues; and 3) to advocate for strong climate change energy policies at the international, federal, regional, and state levels.

The **Investor Group of Climate Change (IGCC)** [31] is a collaborative platform of more than 50 Australian and New Zealand institutional investors, totalizing approximately AUD 1 trillion in assets. The IGCC pursues three main goals: 1) raising awareness of the potential impacts resulting from climate change to the investment industry, corporate, government, and community sectors; 2) encouraging best practice approaches to facilitate the inclusion of impacts of climate change in investment analysis by the investment industry; and 3) providing information to assist the investment industry to understand and incorporate climate change into investment decisions.

The **P80 Group**[32] was created in 2010 following the success of its predecessor (i.e. the P8 Group) and is an initiative comprising leading global pension funds and sovereign wealth funds from Europe, North America, and Asia. The main objective to the group is to catalyse and promote investments that address climate change and sustainable resource shortages. It aims in particular to promote viable public-private partnerships and funds such as the Climate Partnership Fund and the Climate Catalyst Fund.

Finally there is the **ClimateWise Initiative**[33], an international insurance sector leadership group driven by industry leaders with an interest in addressing climate-change related risks and opportunities. Its 30 member organisations commit jointly or individually to act according to the principles of the group which consist notably in informing public-policy making, supporting climate change awareness amongst customers, incorporating climate change concerns into investment strategies, and reducing the environmental impacts of the insurance sector.

[30] For further information see http://www.ceres.org/investor-network/incr
[31] For further information see http://www.igcc.org.au/about
[32] For further information see http://www.globalsolutionssummit.com/p-80-group-foundation.html
[33] For further information see: http://www.climatewise.org.uk/about/

Table 5: Institutional Investors Groups on Climate Change/Green Growth

Name of the Group	Type of Investors	Total size of assets	Main objectives/activities
The Institutional Investors Group on Climate Change (IIGCG)	100+ European institutional investors including the largest pension funds and asset managers.	EUR 9tn	To catalyse greater investments in low carbon economy
The Investor Network on Climate Risk (INCR)	100+institutional investors in North America as well as leading religious and labor funds, asset managers and socially responsible investment funds.	USD13 tn	To mobilize investor leaders to address climate and other key sustainability risks, while building low-carbon investment opportunities
The Investor Group on Climate Change (IGCC)	Investors from Australia and New Zealand	AUD 1 tn	To encourage government policies and investment practices that address the risks and opportunities of climate change.
The P80 Group (formerly known as the P8 Group)	World's leading pension funds	USD 3tn	To create viable investments vehicle to combat climate change and promote sustainable development
The Asia Investor Group on Climate change (AIGCG) [34]	Asia's assets owners/investors	N/A	To create awareness among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing.
ClimateWise	Group of 30 leading insurance companies from Europe, North American and Southern Africa	N/A	To support and undertake research on climate change to inform business strategies of insurance companies; to spur greater collaboration with policy makers at the national and international levels; to support climate awareness among customers; incorporate climate change into investments strategies

Main Source: Kaminker & Stewart (2012 :19)

[34] For further information see http://asria.org/about-aigcc/

4.2. Private sector Carbon Funds

Since the early 2000s, there has been a substantial growth of carbon markets worldwide, even in countries with no binding emission reduction targets. This is illustrated in particular by the proliferation of diverse types of carbon funds (public, private, hybrid) whose main objective is to purchase emission reduction certificates from the Clean Development Mechanism (CDM) and Joint Implementation (JI) markets that support GHG emissions reductions projects in developing countries or in countries with economies in transition (Alberola & Stephan 2010). To some degree then, and as Alberola and Stephan (2010) put it, carbon funds can be seen as "vehicles for collective investments" that play a significant role in channeling mitigation finance to developing countries. A majority of carbon funds are actually of a private nature, meaning that they are funded and managed by private sector actors and mainly companies. They vary depending on the type of purchases and objectives being pursued, and the type of actors that comprise them. Some funds for instance, invest directly in emission reduction projects, while others buy carbon credits indirectly via a standardized purchase contract, an Emission Reduction Purchase Agreement (ERPA). The investment objectives of these funds also tend to vary, ranging from legal compliance, financial profitability of the investment to voluntary offsetting of emissions. Four different types of private actors can be involved in purchasing carbon credits: 1) companies that are subject to national emission reduction requirements (especially in the EU); 2) companies that are subject to voluntary national emission targets; 3) financial investors that may purchase emission allowances for capital gains; and 4) voluntary market private actors (individuals, NGOs, companies, and others) that seek to voluntarily offset their carbon emissions (Alberola & Stephan 2010).[35] Key private carbon funds include for instance the European Carbon Fund (ECF), the Climate Change Capital Carbon Fund, the Luso Carbon Fund, C-Quest Capital, the Asia Carbon Group and the Asian Carbon Exchange, and the Carbon Credit Capital.

The European Carbon Fund (ECF)[36] was for instance the first carbon fund to be established in Europe. Its main objective is to facilitate the acquisition of Certified Emission Reduction (CER) credits for European companies focusing in JI and CDM projects that can generate credits accepted under the EU directives. The fund covers the following countries: Argentina, Brazil, and China. Egypt, Morocco, India, and South Korea.

[35] For a more detailed discussion of carbon funds, their functioning, structures, and objectives see especially the a 2005 research report conducted on behalf of the Caisse des Dépôts (de Dominicis 2005) and a 2010 CDC Climate research's study on the state of Carbon funds (Alberola & Stephan 2010).

[36] See the fund's website at: http://global-mechanism.org/carbon-funds/european-carbon-fund-ecf

The **Climate Change Capital Carbon Fund**[37] is the world's largest private carbon and is administered by the Climate Change Capital investment group. This fund is opened to a wide set of initiatives that fall under the flexible mechanisms of the Kyoto Protocol (KP) and its main objective is to attract sufficient levels of return for investors by acquiring diverse portfolios of carbon credits, mostly from CDM projects, and by investing directly in emission reduction projects and in the companies that undertake them. The fund operates in all countries eligible under the JI and the CDM with a focus on China, South-East Asia and the former Soviet Union. It covers a variety of sectors such as biomass, coal mine methane, forestry, industrial gases, energy efficiency, waste and landfill gas, wind, hydro and solar energy.

The **Luso Carbon Fund**[38] is a private carbon fund which purchases CER credits for the Portuguese government through pro-development strategies activities in Brazil and some other countries. As with the other private carbon funds, its main purpose is to generate attractive commercial returns for investors by investing in JI and CDM projects. The fund is currently investing in activities in the following countries: Brazil, China, India, Mexico, the Russia Federation, and Thailand. Its focus area covers all JI/CDM projects including manure management; biogas recovery; methane emissions avoidance; hydropower; waste management; transportation; waste heat recovery; and wind energy. Manure management has been the most funded type of projects thus far.

Launched in 2008, **C-Quest Capital** (CQC)[39] is a carbon finance and private equity business organisation which aims to create and develop high-quality emission reduction projects around the world. CQC provides notably a platform for social impact assessment in many of the LDCs and in some of the poorest communities of developing countries. CQC has been implementing Programme of Activities (PoA) under the CDM and aggregate CERs earned by distributing millions of small, energy-efficiency household appliances – mainly improved cook-stoves – and renewable energy technologies. It is seeking buyers for carbon credits from 1 million additional stoves up to 2020 in seven different countries.

4.3. Philanthropic financing initiatives

Philanthropic financing initiatives include private foundations, business-related foundations and major environmental NGOs. These actors play an increasingly important role in many areas of sustainable development but their contributions have thus far rather gone unnoticed by providers of official development assistance. As noted in the 2014 OECD development report on "Mobilizing

[37] See the Fund website at: http://global-mechanism.org/carbon-funds/european-carbon-fund-ecf

[38] For more information see the fund's website at: http://global-mechanism.org/carbon-funds/luso-carbon-fund

[39] For more information see the organisation's website at: http://www.cquestcapital.com/about

Resources for Sustainable Development", it is only in 2011, during the negotiations of the Busan partnership Agreement for Effective Development Cooperation, that foundations were formally recognized as important contributors to global sustainable development efforts (OECD 2014b). That same year for instance, the OECD DAC expanded its aid database to include grants provided by the Bill & Melinda Gates Foundation in global health.[40]

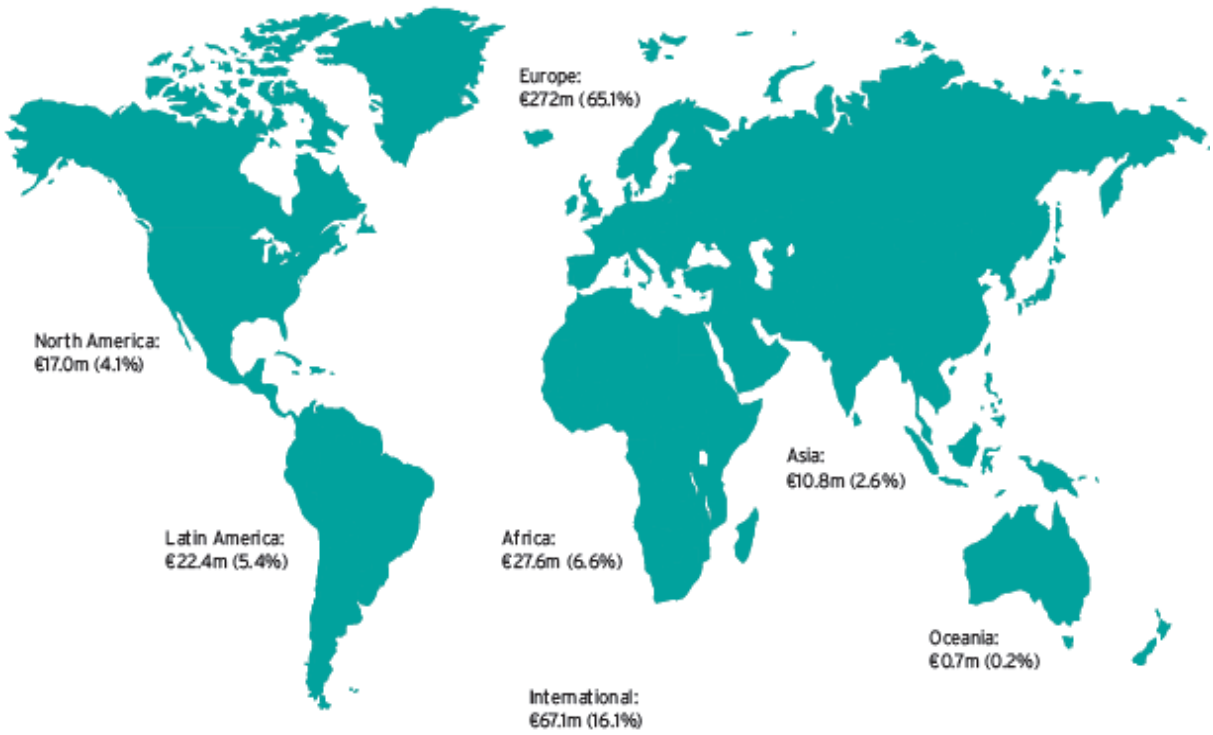
Of course the finance provided through foundations and NGOs is expected to be far less important than the finance provided by other actors. However, and in contrast to for-profit private actors and government institutions, non-for-profit organisations are often more willing to invest in risky initiatives and projects. In this respect, private independent foundations can be described as "social venture capitalists" with the demonstrated willingness to invest early in innovative projects, which if successful can be subsequently supported by governments, international organisations and/or for-profit organisations (OECD 2014b).

According to OECD-Statistics, in the development sector, the total finance provided by philanthropic organisations and non-governmental organisations has increased by nearly ten times over the past ten years, from USD 3 billion in 2003 to USD 29.7 billion in 2013. Yet, climate-related grants from philanthropies are difficult to estimate as there is also no adequate data available on the amount of climate-related finance originating from voluntary and philanthropic sources. In the 2011 CPI's report on the "Global Landscape on Climate Finance", philanthropic contributions were estimated at USD 240 million for mitigation, and at USD 200 million for adaptation (Buchner et al. 2011 : vi). Within the European context, a recent report published by the European Foundation Centre (EFC) (Cracknell, Vrana, & Theodorou 2013) provides a detailed analysis of the environmental grants of 62 European public benefit foundations for the year 2011 ***(see Annex 1 for the list of environmental philanthropies covered by the study and Annex 2 for a list of the top 25 US climate change founders***). Its key findings suggest that philanthropic finance for tackling climate change in developing countries remains rather low. Funding directed at the issue of climate change (including those for projects on Energy and transport) represented only 26.3% of all environmental grants (1,956 in total totalizing EUR 417,7 million). A third of philanthropic environmental funding actually went to the two natural environment categories of "biodiversity & specie preservation" and "terrestrial ecosystems & land use." Noteworthy as well is the fact that most of the funding provided (86%) went to organisations headquartered in Europe and most the remaining (10.6%) to organisations based in North America. In terms of end-beneficiaries, a little more than 30% of these grants benefited initiatives located outside North America and European countries (***see chart 2***

[40] http://www.oecd.org/investment/stats/statisticalreportingbythebillmelindagatesfoundationtotheoecddac.htm

below). As the report concludes, it remains obviously difficult for European environmental foundations to distribute funds outside the country/region in which they are located. Not only are these financial flows more difficult to track, their concrete impacts is also more challenging to assess.

<u>Chart 2:</u> Geographical Distribution of environmental philanthropic grants (from 62 European organisations) at the continental level, measured by when the end beneficiary is located:



Source: European Foundation Centre (2013:: 17)

5. Hybrid (public-private) financing initiatives

Two main points can be logically deduced from the previous sections. The first is that meeting the climate finance needs of developing countries still requires the sustained and large-scaled mobilisation of public and private resources. The second point is that in both climate mitigation and adaptation finance, private sector actors need to play an even more prominent role not only as providers of funds but also in terms of service delivery and implementation. The problem however is that substantial institutional barriers – especially at the local/national levels - tend to limit the incentives for institutional investors, philanthropies, and other private sector actors to expand their financial support in developing countries. Taken together, these two issues points to the importance of better understanding how public and private sector actors can effectively work together to lower barriers, minimize risks, and generate attractive climate change-related private investments projects in developing countries.

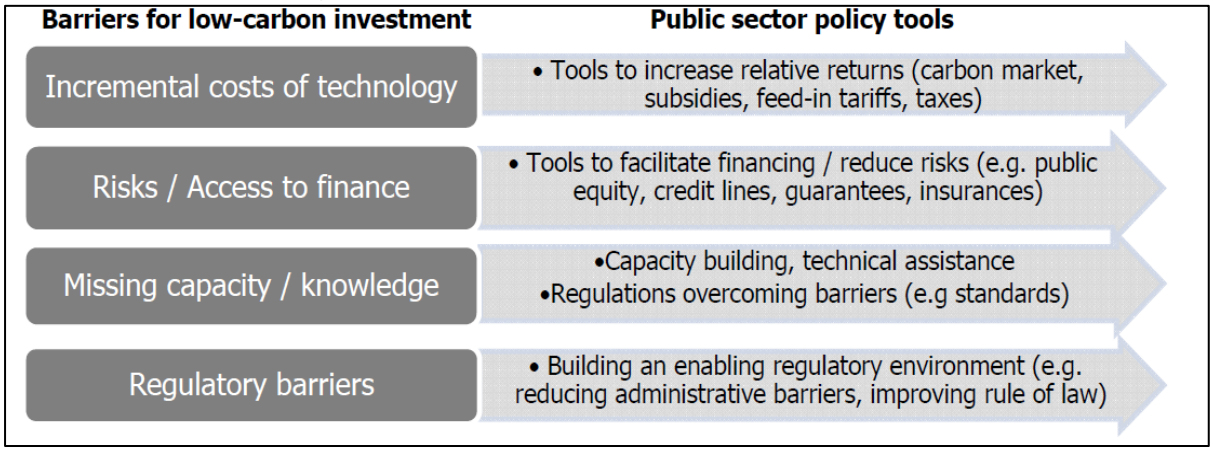
In this section, we focus in particular on the financing role of transnational public-private partnerships or initiatives that have in recent years become an increasingly prominent feature of the global environmental governance landscape and especially in the climate and energy governance areas. Before doing so, we briefly review the main instruments or tools that public sector actors can use to leverage/catalyse climate-related private sector financing.

5.1. Mobilising private finance: key instruments

The issue of how the public sector can better mobilise private investments in low-carbon and climate -resilient projects and programmes has started to receive increasing attention in international public efforts to help developing countries in their responses to climate change. As suggested recently by the UNFCCC Standing Committee on Finance in its first *Biennial Assessment Report* of climate financial flows (2014 71): "[I]nternational public climate finance can fill gaps that other forms of finance (particularly private finance) would not address on their own, and mobilize additional investment by making investments viable for private actors." In this process considerable interest have been shown to a class of financial tools and mechanisms that "blend" together public and private resources and expertise. In practice, blended finance encompasses a wide range of potential financial instruments. Some analysts include in this category bilateral loans provided from government to government for investments in economic and social infrastructure and direct transfer of resources from public donors to the private sector via grants, or equity investments. Other analysts focus on 'innovative' forms of instruments such as risk-based instruments; performance-based instruments; and traditional public-private approaches to cooperation. As Stadelmann et al.

(2011:iii) point out, these tools are generally most effective when combined together rather than when used separately. In their analysis of how to effectively mobilise private investments, the authors present four distinct types of public-sector instruments, each aimed at overcoming a specific type of barrier for low-carbon investments ***(see figure 2 below).*** In all instances, the role of the public sector is to provide an enabling regulatory and implementation environment (especially at the local level) and to use its limited funds to leverage or catalyse private investments in low-carbon and climate-resilient projects.

Figure 2: Public sector instruments to alleviate barriers to private investments (source: Stadelmann et al. 2011: iii).



As also aptly demonstrated in a recent IEA study (2011), the use of these "joint public-private approaches" are particularly important in the energy efficiency (EE) sector where local barriers to private investments are particularly important. In brief, the study recommends governments to establish "public-private partnerships," that is, voluntary forms of cooperation in which the government and the private sector create and further develop "mechanisms that use public policies, regulations or financing to leverage private-sector financing for EE projects" (p. 13).[41] The main rationale behind the creation and development of PPPs for EE financing is that while public sector actors can create enabling environments for investments (through policy and regulatory instruments), commercial financing by institutional investors is still necessary to sustain sufficient levels of investments. In other terms, governments cannot go it alone, and commercial financing especially from banks and financial institutions is needed for the long-term growth and development of the market for delivering EE financing and implementation services. Three PPPs mechanisms are emphasized in the report: 1) dedicated credit lines, 2) risk sharing facilities, and 3) energy saving performance contracts (ESPCs).

[41] In the report, PPPs are defined more broadly as well as: "voluntary efforts in which government and the private sector collaborate to analyse public policy problems and jointly implement solutions" (p. 13).

As with Stadelmann et al. (2011)'s analysis, the IEA study suggests that these three types of public-private financial instruments are designed in ways that tend to target different institutional barriers to private investments **(see table 6 below). Dedicated credit lines** are instruments that use international or domestic public sector funds to increase lending by local financial institutions (LFIs) for EE projects. Ultimately, their main objective is to address the problem of insufficient lending due to the LFIs' lack of knowledge and understanding of EE projects. By providing low-interest loans to LFIs, the public sector encourages them to provide sub-loans to private sector interested in implementing EE projects. **Risk-sharing facilities** for their part, seek to reduce LFIs' perceptions that EE projects constitute risky investments endeavours. Under a risk-sharing facility indeed, governments or multilateral banks can offer a partial guarantee that covers the portion of a potential loss resulting from loan defaults. Finally, **energy saving performance contracts** (**ESPCs)** target barriers linked with the private sector implementation of EE projects in the public sector. Under an ESPC, the energy services companies involved in the implementation of EE projects in the public sector receive their payments only upon the satisfaction of performance. Despite their differences, the IEA study also suggests that these mechanisms are not mutually exclusive and should be used in combination.

Table 6 : Key characteristics of public-private financial instruments in the energy efficiency sector

		PPP Features			
TYPE OF PPP	***Brief description***	***Agreement between public and private entities***	***Allocation of risk between partners***	***Mobilization of private sector financing***	***Payment to private sector for providing services***
Dedicated credit lines	*Mechanism under which governments or donors provide low-interest loans to LFIs to encourage them to offer sub-loans to implementers of EE projects*	*Loan agreement between partners*	*Project financing risk shared between partners*	*Private partner generally provides co-financing*	*LFI earns fee by on-lending funds at higher interest*
Risk-sharing facilities	*Mechanism where governments or multilateral banks offer guarantee product to absorb some EE project risks and encourage involvement of LFIs in EE financing by reducing their risk.*	*Guarantee Facility Agreement (GFA)*	*Public Partner absorbs some financial risk*	*Risk reduction mobilises additional private-sector financing*	*LFIs earns interest on additional loans mobilized.*
Energy saving performance contracts (ESPCs)	*Energy services company enters into an agreement with a public agency to provide services, with payments contingent on demonstrated performance.*	*Energy Services Agreement (ESA)*	*Performance risk generally borne by Energy Services Company*	*The company mobilises private-sector financing.*	*Performance-based payment to energy saving company*

Source: IEA 2011: 15

Although some of these instruments can be provided by bilateral donor agencies or multilateral financing institutions, the IEA's evaluation of PPPs in the energy efficiency sector is mostly directed at financial flows domestically resourced and focused on instruments rather than organisations. At the international level, the attention has in recent years turned to the role that Export Credit Agencies (ECAs) can play in leveraging private investments in the energy sector in developing countries (Newell 2011). These agencies can be defined as "governmental or quasi-governmental departments that use taxpayers' money to help companies invest and export overseas"(ECA-WATCH 2010:1). In this context, financial assistance is provided mainly in the form of guarantees, insurance or direct loans with the aim of protecting companies against the political and commercial risks associated with their foreign investments. If in theory, ECAs can serve as adequate public-private platforms that can facilitate private investments into climate friendly projects and technologies, in reality, these agencies have been largely criticised for their role as the main public financiers of fossil fuels projects. Some NGOs, including the the Bank Watch and ECA-Watch have recently launched several campaigns exposing the predominant role of ECAs in fossil fuel financing and argued against the view that ECA financing should be counted towards international climate finance mainly on the basis that appropriate climate finance to developing countries should come primarily in the form of grants (or the equivalent) and be additional to ODA expenses (see especially ECA-WATCH 2010).

In exploring alternative venues for public-private forms of cooperation in the climate finance sector, it is important to note that public-private or hybrid financing initiatives do not merely encompass public-sector financial instruments at the domestic and international levels. Over the past decade, transnational public-private partnerships have emerged as an increasingly prominent feature of the global environmental governance landscape. If the bulk of these multi-staholder partnerships are mainly involved in advocacy, regulatory, and/or implementing functions, a minority of them have been created for the purpose of mobilising public and/or private sources of funds.

5.2. Multi-stakeholder (financing) partnerships

As with many other "catch-all" concepts that transcend multiple policy areas, levels of analysis, and academic disciplines, the notion of "public-private partnership" does not lend itself to a single definition. In regard to climate finance, the problem is that the concept of PPP is often used in various ways, either to refer to a financing modality, a financial instrument or an organisation, thereby bringing confusion to an already highly complex and diverse phenomenon. Here however, our focus is mainly on the so-called "global public-private partnerships" (or multi-stakeholder partnerships), a term that developed in throughout the 1990s with the introduction in various areas of global governance of innovative forms of voluntary collaboration between states and non-state

actors from the commercial and non-profit sectors. In both scholarly and policy circles, these voluntary cooperative arrangements (now called voluntary commitments) have long been hailed as "effective" means to fill in regulatory and implementation deficits at the global level (Börzel & Risse 2005). The development of these new forms of cooperation has been particularly pronounced in the realm of global sustainability development governance, which now counts more than 340 PPPs registered with the United Nations Commission on Sustainable Development (UNCSD).[42] These voluntary multi-stakeholder initiatives were formally endorsed at the 2002 World Summit for Sustainable Development (WSSD) in Johannesburg and presented as potentially effective implementation mechanisms for internationally agreed environmental and sustainable development policies (e.g. agenda 21 and other sustainable development goals).[43]

In global environmental politics at least, global public-private partnerships vary along several dimensions including: the types of actors involved (founders and participants), their primary and secondary function(s), the degree of institutionalisation, their time scale, their geographic coverage, and the type(s) of sector(s) covered. In the academic literature however, partnerships are often differentiated mainly on the basis of their goals or functions and, despite their mixed goals generally fall into one of three main categories: 1) knowledge partnerships; 2) standard-setting partnerships; and implementation/capacity building/service partnerships.[44] **Knowledge partnerships,** as their name implies, acts as knowledge sharing or learning platforms for relevant stakeholders. Their main function is to gather expertise and shared experience and formulate policy proposals towards the implementation of objectives agreed at the major UN international conferences. **Standard-setting partnerships** for their part, work to create and/or promote voluntary standards, norms, and regulations especially in the areas of business and industry. A particular case in point are the so-called public-private standards organisations that have been established for the purpose of regulating internationally traded products and services such as food and wood. Finally, **implementation partnerships** focus mainly on implementation and service delivery. They provide assistance in realizing projects to implement international policies or principles and provide technical assistance and service provision.

[42] The list of these partnerships is available at the UN sustainable development platform: https://sustainabledevelopment.un.org/partnerships.html.

[43] Note, however, that since their formal endorsement as "Types II outcomes" at the 2002 WSSD, much of the initial optimism has slowly given way to a more sceptical view. If in theory at least, these hybrid modes of governance hold great promise as broader participatory approaches and as potentially effective implementation mechanisms for internationally agreed sustainability policies, recent quantitative and qualitative research has identified problems related to their legitimacy and effectiveness. See for instance: Biermannn et al. (2007) and Bäckstrand et al. (2012).

[44] Here I draw mainly on M. Beisheim's typology of global public-private partnerships (2012:12).

Recently, a number of analyses have been conducted with a special focus on "transnational climate governance initiatives" (TCGIs), a category of cooperative climate-focused governing arrangements that includes strictly private partnerships as well ***(see Annex 3 for a recent list of TCGIs).***[45] In their assessment of 60 transnational climate initiatives, Bulkeley and colleagues (2012) have found that initiatives that seek to contribute to capacity building explicitly through providing funding are relatively rare (25%) and only a few public-private climate partnerships are actually concerned with climate financing per se. These operate in the climate, forestry, but mostly in the energy sectors and have been established with the purpose of mobilising private or public financing support, either directly by raising funds and/or scaling up private investments to developing countries, or less directly by providing greater opportunities for multi-stakeholder interaction on issues related to environmental finance ***(see table 7 below for examples of these global PPPs)***

Table 7 : Examples of public-private partnerships (regional/global) focusing on scaling up climate-related financing to developing countries

Partnership Name	Types of members	Main objectives
The Renewable Energy and Energy Efficiency Partnership (REEEP)	45 governments, IOs, businesses, and development organisations	Non-profit international PPP focused on the development of market conditions that support clean energy projects in developing countries
The Renewable energy policy network for the 21st century (REN21)	Governments, International organisations, Industry associations, Science and academia as well as civil society	A global renewable energy policy multi-stakeholder network that promotes renewable energy to meet the needs of both industrialized and developing countries that are driven by climate change, energy security, development and poverty alleviation.
BNDES Amazon Fund	Governments of Brazil, Norway and Germany Private investors from Brazil and other countries	aimed at raising donations for non-reimbursable investments in efforts to prevent, monitor and combat deforestation, as well as to promote the preservation and sustainable use of forests in the Amazon.
The Capital Markets Climate Initiative (CMCI)	Launched by the UK government, includes public actors and private investors	Establishes a public-private dialogue and action to help mobilise and scale up private finance flows for low-carbon technologies, solutions and infrastructure, with a focus on developing countries
The Finance for resilience initiative	Various financial institutions, technology companies and	A not for profit platform run by Bloomberg New Energy Finance

[45] See for instance Bäckstrand (Bäckstrand 2008); Andonova, Betsill & Bulkeley (2009) ; Pattberg (2010); Hoffmann (2011); Bulkeley et al. (2012); Hale & Roger (2014).

	policy think tanks	(BNEF), which aims to accelerate private capital investment in clean energy.
The Climate Group	Various governments, corporate actors, NGOs.	A not for profit platform which works with corporate and government partners to develop climate finance mechanisms, business models which promote innovation, and supportive policy frameworks.
The Global Energy Transfer Feed-in Tariffs (GET FiT) programme	Development partners, Deutsche Bank Group, World Bank, KfW.	PPP proposal that was promoted by Deutsche Bank Climate Change Advisors (DBCCA) in early 2010 to drive renewable energy investment in the developing world through the creation of new international PPPs.
The Forest Carbon Partnership Facility (FCPF)	Governments, businesses, civil society, and Indigenous People	Provide financial and technical assistance to countries in their REDD+ efforts.
The Global Climate Partnership Fund (GCPF)	Governments, Businesses, civil society, financial institutions	Hybrid investment fund aimed at promoting green development and growth in developing countries.

At present, the most well-known multi-stakeholder financing partnership is the **Renewable Energy and Energy Efficiency Partnership (REEEP)**.[46] It was launched in 2002 during the WSSD and is funded by a variety of actors such as governments, businesses, and development banks. REEEP's main aim is to catalyse low-carbon energy market development in developing countries. In so doing, the partnership operates through what is called a "new investment accelerator component" which provides mentoring to entrepreneurs in designing business plans and improving processes, and facilitates connections to private investors and the transition from public and donor funding to growth commercial investment. The organisation's mission has two financial portfolios: 1) the *enterprise portfolio* assists firms to build scale and growth through a seed-level grant funding of up to €350,000 to promote the provision of new clean energy technologies and services. Mentoring is also provided through the "investment accelerator component." 2) The *enabling portfolio* in turn, provides practice-based insights on the practical effects of policy regulations and works with policy makers to design policy tools to promote more enabling environment for clean energy investments. Thus far, REEEP has funded more than 200 clean energy projects in the developing world and its main donors for the year 2013/2014 included the governments of Austria, Norway, Great Britain,

[46] For further information see http://www.reeep.org/ See also: REEP's Annual Report for the 2013/2014 available on the organisation's website at: http://www.reeep.org/sites/default/files/REEEP_Annual_Report_2013_2014.pdf

Germany, and Switzerland, The Climate and Development Knowledge Network, the Organisation of the Petroleum Exporting Countries (OPEC) Fund for international Development, and the FAO. During that period, its portfolio included 53 ongoing projects with impact across more than 23 countries However, because of the lack of permanent funding contributions, the organisation tends to focus on small-scale and short-term projects (Florini & Sovacool 2009). REEEP also maintains a clean energy information portal, called Reegle, which provides information about renewable energy and energy efficiency. In recent years, REEEP expanded its role as a global knowledge broker, developing new products and helping to create the new *Climate Knowledge Brokers Group*, which will expand collaboration and cooperation between knowledge brokers beyond the climate and development community and new sectors and fields.

The **Renewable Energy Policy Network for the 21st Century** (REN21)[47] is a global policy network that serves as a platform for building international leadership on renewable energy. Its main objective is not to fund projects but to promote knowledge exchange, joint actions, and global policy development for the deployment of renewable energies in developing and industrialised countries. As a multi-stakeholder network, REN21 connects together a wide range of actors including governments, international institutions, NGOs, industry associations, and other partnership initiatives. Its steering committee is composed of approximately 30 individuals representing different parties that shape the organisation's strategy which is then implemented by a secretariat managing a budget of around USD 1 million.

Another potentially relevant financing multi-stakeholder partnership is **the Global Energy Transfer Feed-in Tariffs (GET Fit) Programme** [48], a PP initiative created in the early 2010 by experts of the *Deutsche Bank Climate Change Advisors* (DBCCA) to scale up investment in capital intensive renewable energy sources in emerging and developing economies. To this end, the programme combines mechanisms and structures of the public and the private sector including the development of and implementation of Feed-in Tariffs laws and policies, debt leveraging and equity financing. In May 2013, the program formally launched a pilot initiative in Uganda (the GET Fit Uganda Program) aimed at targeting key barriers to investments in small renewable energy projects. The program is supported and implemented by Uganda's Electricity Regulatory Authority, the Government of Uganda and the German Development Bank KfW, with funding contributions from the Governments of Norway, Germany, UK and the European Union (EU). The World Bank supports the Program through a Partial Risk Guarantee facility.

[47] For further information see http://www.ren21.net/AboutREN21.aspx. See also REIN21's latest annual report available on the organisation's website at: http://www.ren21.net/Portals/0/documents/Resources/GSR/2014/GSR2014_full%20report_low%20res.pdf

[48] This programme is not yet fully running. For further information http: //www.getfit-uganda.org/ and https://www.db.com/cr/en/concrete-getfit.htm

The **Capital Markets Climate Initiatives** (CMCI) [49] is an initiative established by the U.K. Department of Energy and Climate Change to scale up private investments in low carbon, climate resilient activities in developing countries. As described on the organisation's website, the CMCI provides a platform for government engagement, dialogue and knowledge-sharing with the private sector, NGOs and research institutes on the UK's climate finance agenda, including the UK's International Climate Fund (ICF). The work of the CMCI is delivered through a high-level steering group - the CMCI innovation platform - and subject specific sub-groups. The CMCI's objectives are mainly twofold: 1) to develop a common understanding among policy makers of why and how public sector action can help to mobilise private capital and encourage new markets in low-carbon investments; and 2) to demonstrate the potential impact of public sector action by developing and testing tailored financing and policy tools in specific partner country case studies to mobilise private capital.

The **Global Energy Efficiency and Renewable Energy Fund** (GEEREF) [50] is a PPP mainly funded by the European Commission and managed by the European Investment Bank which aims to increase the private finance leveraged through public funds. GEEREF is in fact structured as a fund of funds which invests in private equity sub-funds specializing in financing small and medium-sized project developers and enterprises (SMEs) to implement energy efficiency and renewable energy projects in developing countries and in countries with economies in transition. Fund management companies, financial institutions, project developers or individuals interested in developing a clean energy investment fund or in expanding existing funds into the clean energy sector can seek assistance. Developers of clean energy projects can also submit proposals for investment funds. [51]

The **Forest Carbon Partnership Facility (FCPF)** is a multi-stakeholder partnership of governments, businesses, civil society and indigenous people. It was created in 2008 for the purpose of providing technical and financial assistance to developing countries in carrying out their REDD+ efforts. The FCPF's funding mechanisms include two separate but complementary funding instruments: the **Readiness Fund** and the **Carbon Fund**. These are two mullti-donor funds of governments and non-governmental entities, including private companies that make a minimum financing contribution of USD 5 million. **The Readiness Fund** supports participating countries in the development of REDD+ strategies and policies, reference emission levels, measurement, reporting, and verification systems, and institutional capacity to manage REDD+, including environmental and social safeguards. **The Carbon Fund** builds on the progress made in readiness and is designed to pilot

[49] For further information see https://www.gov.uk/capital-markets-climate-initiative
[50] For further information see http://geeref.com/about/what-geeref-is.html
[51] This description is borrowed mainly from the following source:
http://www.climatefundsupdate.org/listing/geeref#TOC-Summary

performance-based payments for emission reductions from REDD+ programs in a small number of FCPF countries. The partnership currently supports 47 developing countries, with a fund capital totalizing USD 850 million provided by 17 different financial contributors (i.e. 15 developed countries, 1 private sector participant, and 1 NGO).[52]

Finally, there is the **Global Climate Partnership Fun**d **(GCPF)**, a hybrid investment fund based in Luxembourg and established in 2010 by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and KfW Entwicklungsbank. The main goal of the GCPF is to promote green development and growth in developing countries by providing financing for sustainable energy efficiency and renewable energy projects in developing and emerging countries. It finances local financial institutions or (co)-invest directly into energy efficiency or renewable energy projects. The fund also aims to support the creation of employment by fostering investments for SMEs and private households. By providing the means to introduce or enhance innovative climate change oriented loan products, GCPF further assists the development of the local financial sector. The fund provides commercial investments from donor agencies, governments, international financial institutions and professional investors. Current investors include: the German Federal Ministry, Nature Conservation and Nuclear Safety, KfW Entwicklungsbank and Deutsche Bank. Other leading development finance institutions will soon join the Fund.[53]

[52] This draws mainly from : https://www.forestcarbonpartnership.org/about-fcpf-0

[53] Main source: http://gcpf.lu/information-material.html

6. Concluding remarks

The main goal of this preliminary study was to provide an inventory of the variety of 'non-multilateral' financing initiatives and institutions that are currently involved in providing or channeling climate-related finance to developing countries. As with most studies of international climate finance, the main conclusion that can be drawn from this mapping exercise is that properly identifying and tracking the variety of climate finance initiatives and flows, and especially those that stand outside the UNFCCC's finance mechanism, is not without obstacles. Chief among them is the persistent lack of a commonly agreed definition of international climate finance and, relatedly, the lack of a formal international system for tracking, verifying, and monitoring financial flows. As long these two issues remain unsolved, the overall picture of the landscape of international climate finance will be incomplete.

This notwithstanding, this preliminary study raises a number of important points and concerns which can be used to stimulate further research and can be of significant policy relevance for policy practitioners. Firstly, more attention should be devoted to scaling up adaptation finance to poor and vulnerable countries with special focus on the potential role of the private sector. As noted in sections 4 and 5, currently, the bulk of private climate financial flows to developing countries has been directed to Asia in the form of investments in clean energy projects and carbon reductions activities. The situation however, is far more different for adaptation finance. Unlike mitigation projects, adaptation measures have less commercial potential and often depend on limited grant funding provided through public bilateral and multilateral channels. As a result, greater focus should be paid on how to foster the engagement of private sector actors such as banks and institutional investors in adaptation finance. In this respect, more information is needed particularly regarding the potential financial benefits stemming from adaptation projects in developing countries and especially in small island states and LDCs.

Secondly, there is a need to more actively evaluate the output effectiveness or impacts of climate financing to developing countries. At present, most of the attention has been on "financial flows," i.e., on tracing and measuring the various volumes of funds committed, and in some case disbursed, by a particular set of actors. In this context, the notion of "effectiveness" is associated more with the amount of funds provided or delivered, and less with their actual or potential impacts on the ground and with whether or not they have been used according to their intended purposes. Additional standards and metrics should be developed to enhance our capacity to evaluate, compare, and rank the ex-post performance of financing initiatives in supporting climate-related activities in developing countries. Several initiatives have already started to develop their own

evaluation standards such as bilateral development banks (Atteridge, et al. 2009), but far more coordination is needed to develop criteria that are applicable across initiatives and recipient countries and regions.

Thirdly, the final core issue that emerges from this study concerns the need for greater meta-governance of the global climate finance architecture. As with many other areas of global politics, the global climate governance landscape is characterized by a large number of initiatives, organisations, and channels, varying greatly in terms of their financing instruments, target activities and recipient countries and operating with almost no centralized coordination or "orchestration", to use Abbott and Snidal's term (Abbott & Snidal 2010). Orchestration as they define it, can be understood as a form of "meta-governance" which can be provided by existing international organisations. In the context of global climate finance, some form of orchestration could help overcome some of the main obstacles that commonly inhibit a highly fragmented and diversified institutional architecture to reach its full potential: i.e. institutional overlaps, low collaboration between the various governance initiatives and units, lack of transparency, accountability and effectiveness.

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Annexes

Annex 1 : List of European Environmental foundations covered by the ECF's study on Environmental Funding by European Foundations (Volume 2) (2013)

1. Adessium Foundation (Netherlands)
2. Agropolis Fondation (France)
3. Anonymous foundation (Switzerland)
4. Arcadia Fund (UK)
5. Ashden Trust (UK)
6. Calouste Gulbenkian Foundation (UK branch)
7. Children's Investment Fund Foundation (UK)
8. City Bridge Trust (UK)
9. David Shepherd Wildlife Foundation (UK)
10. Dutch Postcode Lottery (Netherlands)
11. Ernest Cook Trust (UK)
12. Ernest Kleinwort Charitable Trust (UK)
13. Esmée Fairbairn Foundation (UK)
14. European Climate Foundation (Netherlands)
15. Fundación Biodiversidad (Spain)
16. Fondation BNP Paribas (France)
17. Fondation Charles Léopold Mayer pour le progrès de l'Homme (Switzerland)
18. Fondation Ensemble (France)
19. Fondation Lombard Odier (Switzerland)
20. Fondation pour une terre humaine (Switzerland)
21. Fondazione Cariplo (Italy)
22. Fondazione Cassa dei Risparmi di Forli (Italy)
23. Fondazione Cassa di Bolzano (Italy)
24. Fondazione Cassa di Risparmio di Cuneo (Italy)
25. Fondazione Cassa di Risparmio di Padova e Rovigo (Italy)
26. Garfield Weston Foundation (UK)
27. Gatsby Charitable Foundation (UK)
28. Grantscape (UK)
29. HDH Wills 1965 Charitable Trust (UK)
30. Hungarian Environmental Partnership Foundation (Hungary)
31. JJ Charitable Trust (UK)
32. JMG Foundation (Switzerland)
33. John Ellerman Foundation (UK)
34. Joseph Rowntree Charitable Trust (UK)
35. King Baudouin Foundation (Belgium)
36. Kirby Laing Foundation (UK)
37. "La Caixa" Foundation (Spain)
38. Man Group Charitable Trust (UK)
39. Mark Leonard Trust (UK)
40. Mava Foundation (Switzerland)
41. Mitsubishi Corporation Fund for Europe & Africa (UK)
42. Monument Trust (UK)
43. Network for Social Change (UK)
44. Oak Foundation (Switzerland)

45. People's Trust for Endangered Species (UK)
46. Realdania (Denmark)
47. Robert Bosch Stiftung (Germany)
48. Rufford Foundation (UK)
49. Shell Foundation (UK)
50. Sigrid Rausing Trust (UK)
51. Sophie and Karl Binding Stiftung (Switzerland)
52. Stichting Fonds 1818 (Netherlands)
53. Stiftung Mercator (Germany)
54. Tellus Mater Foundation (UK)
55. Tubney Charitable Trust (UK)
56. Tudor Trust (UK)
57. Underwood Trust (UK)
58. Velux Foundation (Denmark)
59. Veolia Environmental Trust (UK)
60. Villum Foundation (Denmark)
61. Waterloo Foundation (UK)
62. Whitley Animal Protection Trust (UK)

Annex 2 - List of Top 25 U.S. Climate Change Funders (data only available for 2008) (funds have been mostly directed in north America).

1. William and Flora Hewlett Foundation CA
2.David and Lucile Packard Foundation CA
3. Rockefeller Foundation NY
4. Kresge Foundation MI
5. Lincy Foundation CA
6. Skoll Foundation CA
7. Robert Wood Johnson Foundation NJ
8. Sea Change Foundation CA
9. John D. and Catherine T. MacArthur Foundation IL
10. Richard and Rhoda Goldman Fund CA
11. Gordon and Betty Moore Foundation CA **12.** Ford Foundation NY 7,389,293 0.8 37 2.2
13. Kendeda Fund DE
14. Joyce Foundation IL
15. Rockefeller Brothers Fund NY
16. California Endowment CA
17. Richard King Mellon Foundation PA
18. Surdna Foundation NY
19. McKnight Foundation MN
20. New York Community Trust
21. Cleveland Foundation OH
22. Nathan Cummings Foundation
23. PG&E Corporation Foundation CA
24. Mertz Gilmore Foundation NY
25. Doris Duke Charitable Foundation NY

Source: The Foundation Center, 2009. Based on all grants of USD 10,000 or more awarded by a sample of 1,490 of the largest U.S. foundations.

Annex 3: List of Transnational Climate Governance Initiatives (source: Hale & Roger (2014) online appendix)

#	Name	Year Started (and Ended)
1	Asia-Pacific Partnership on Clean Development and Climate	2006-2011
2	Asian Cities Climate Change Resilience Network	2008
3	BioCarbon Fund	2004
4	C40 cities	2005
5	Carbon Disclosure Project (CDP)	2001
6	Carbon Finance Capacity Building Programme	2009
7	Carbon Rationing Action Groups	2006
8	Carbon Sequestration Leadership Forum	2003
9	Carbon Trust Footprinting Certification	2007
10	Carbon War Room	2010
11	CarbonFix Standard	1999
12	CCX (Chicago Climate Exchange Offset Program)	2003-2011
13	Clean Air Initiative	2001
14	Climate Action Initiative	2009
15	Climate Action Reserve	2009
16	Climate Alliance of European Cities with Indigenous Peoples	1990
17	Climate Champions	2008
18	Climate Disclosure Standards Board	2007
19	Climate Neutral Network	2008
20	Climate Savers Computing Initiative	2007
21	Climate Technology Initiative PFAN	2006
22	Climate, Community and Biodiversity Alliance (Climate, Community, and Biodiversity Standard)	2005
23	ClimateWise	2006
24	Collaborative Labeling and Appliance Standards Program	1999
25	Community Development Carbon Fund	2003
26	Connected Urban Development	2006
27	Covenant of Mayors	2009

28	Delta Alliance	2010
29	Global Sustainability Electricity Partnership (formerly the E8)	1992
30	Eco-Partnerships	2008
31	Edenbee	2008
32	Energy Cities	1990
33	EUROCITIES Declaration on Climate Change	2008
34	Forest Carbon Partnership Facility	2008
35	Forest Disclosure Initiative	2008
36	Global Gas Flaring Reduction Partnership	2002
37	Global GHG Register	2005
38	Global Methane Initiative (formerly the Methane to Markets Partnership)	2004
39	Global Reporting Initiative	1997
40	Green Power Market Development Group	2001
41	Green-e (Climate Standards)	2008
42	Greenhouse Gas Protocol	1998
43	HSBC Climate Partnership	2007
44	ICLEI - Local Governments for Sustainability	1993
45	Institutional Investors Group on Climate Change	2005
46	International Climate Action Partnership	2007
47	International Emissions Trading Association	1999
48	International Leadership Alliance for Climate Stabilization	2006
49	Investor Network on Climate Risk	2003
50	ISO 14064/14065	2006
51	Midwestern Greenhouse Gas Reduction Accord	2007
52	Pew Business Environmental Leadership Council	1998
53	Plan Vivo	2008
54	Prototype Carbon Fund	2000
55	Quality Assurance Scheme for Carbon Offsetting	2009-2011
56	R20	2010
57	Refrigerants, Naturally!	2004
58	Renewable Energy and Energy Efficiency Partnership (REEEP)	2002
59	SlimCity Initiative	2008
60	SOCIALCARBON	2008

61	Sustainable Energy Finance Initiative (and Alliance)	2005
62	The Climate Group (Member Principles)	2004
63	The Climate Group (The Climate Principles)	2008
64	The Climate Registry	2007
65	The Gold Standard	2001
66	The Roundtable on Sustainable Biofuels (RSB Standard)	2007
67	Transition Towns	2006
68	UN Global Compact Caring for Climate	2009
69	UNEP Finance Initiative (UNEP FI)	2000
70	VER+	2007
71	Verified Carbon Standard (formerly the Voluntary Carbon Standard)	2007
72	Western Climate Initiative	2007
73	William J. Clinton Foundation Climate Initiative	2006-2011 (merged with C40)
74	World Mayors' Council on Climate Change	2005
75	WWF Climate Savers	2008