

Climate Change Expert Group
Paper No. 2014(7)

The Role of the 2015 Agreement in Mobilising Climate Finance

Takayoshi Kato (OECD), Jane Ellis (OECD) and
Christa Clapp (CICERO)

November 2014

OECD/IEA CLIMATE CHANGE EXPERT GROUP PAPERS

This series is designed to make available to a wider readership selected papers on climate change issues that have been prepared for the OECD/IEA Climate Change Expert Group (CCXG). The CCXG (formerly called the Annex I Expert Group) is a group of government delegates from OECD and other industrialised countries. The aim of the group is to promote dialogue and enhance understanding on technical issues in the international climate change negotiations. CCXG papers are developed in consultation with experts from a wide range of developed and developing countries, including those participating in CCXG Global Forums.

The full papers are generally available only in English.

The opinions expressed in these papers are the sole responsibility of the author(s) and do not necessarily reflect the views of the OECD, the IEA or their member countries, or the endorsement of any approach described herein.

Comments on the series are welcome, and should be sent to env.contact@oecd.org or the Environment Directorate, 2 rue André Pascal, 75775 PARIS CEDEX 16, France.

OECD/IEA Climate Change Expert Group Papers are published on
www.oecd.org/env/cc/ccxg.htm

Applications for permission to reproduce or translate all or part of this material should be made to: OECD Publishing, rights@oecd.org or fax 33 1 45 24 99 30.

Copyright OECD/IEA, 2014

Applications for permission to reproduce or translate all or part of this material should be addressed to:
Head of Publications Service, OECD/IEA
2 rue André-Pascal, 75775 Paris Cedex 16, France
or
9 rue de la Fédération, 75739 Paris Cedex 15, France

ABSTRACT

The Role of the 2015 Agreement in Mobilising Climate Finance

Shifting public and private investment from “brown” to “green” is an essential part of climate change. The post-2020 climate agreement to be agreed at COP 21 in December 2015 has the potential to play a significant role in signalling the importance of such a shift.

This paper explores how the 2015 agreement could spur further mobilisation of climate finance by examining the current state of play regarding existing financing environments and mechanisms. These include examining the existing international institutional arrangements under the UNFCCC to see how balanced financing, co-ordination, streamlining and complementarity between institutions could be achieved. The paper also highlights the key role that in-country enabling environments can play in further mobilising public and private climate finance, and discusses how the 2015 agreement could enhance both “pull” and “push” factors for mobilisation. In addition, the paper also discusses how the agreement could facilitate the broad use of a spectrum of financial instruments and the further development of an enhanced system for measurement, reporting and verification of climate finance.

JEL Classification: F53, O44, Q54, Q56, Q58

Keywords: climate finance, mobilisation, UNFCCC, climate change, 2015 agreement

RÉSUMÉ

Le rôle de l'accord de 2015 dans la mobilisation de financements climatiques

Faire passer les investissements publics et privés du « brun » au vert » est un aspect essentiel de la lutte contre le changement climatique. L'accord sur le climat post-2020 qui doit être adopté à la COP21, en décembre 2015, peut jouer un grand rôle dans ce contexte en mettant en lumière l'importance d'une telle réorientation des investissements.

Ce rapport étudie comment l'accord de 2015 pourrait stimuler une mobilisation accrue de financements climatiques. Pour ce faire, il dresse un état des lieux des environnements et des mécanismes de financement existants, en passant en revue les dispositifs institutionnels internationaux en vigueur dans le cadre de la CCNUCC afin de déterminer comment obtenir des financements équilibrés, une coordination, une organisation efficace et une complémentarité entre les institutions. Le rapport met également en évidence l'importance d'un environnement propice à l'intérieur des pays pour intensifier la mobilisation de financements climatiques publics et privés, et examine dans quelle mesure l'accord de 2015 pourrait renforcer les facteurs d'attraction et d'incitation en matière de mobilisation des capitaux. Le rapport décrit également comment l'accord pourrait faciliter un large recours à toute une panoplie d'instruments financiers et faire progresser la mise au point d'un système amélioré de mesure, de notification et de contrôle des financements climatiques.

Classification JEL: F53, O44, Q54, Q56, Q58

Mots clés : financement climatique, mobilisation, CCNUCC, changement climatique, accord de 2015

FOREWORD

This document was prepared by the OECD and IEA Secretariats in 2014 in response to a request from the Climate Change Expert Group (CCXG) on the United Nations Framework Convention on Climate Change (UNFCCC). The CCXG oversees development of analytical papers for the purpose of providing useful and timely input to the climate change negotiations. These papers may also be useful to national policy-makers and other decision-makers. Authors work with the CCXG to develop these papers in a collaborative effort. However, the papers do not necessarily represent the views of the OECD or the IEA, nor are they intended to prejudge the views of countries participating in the CCXG. Rather, they are Secretariat information papers intended to inform Member countries, as well as the UNFCCC audience.

Members of the CCXG are Annex I and OECD countries. The Annex I Parties or countries referred to in this document are those listed in Annex I of the UNFCCC (as amended by the Conference of the Parties in 1997 and 2010): Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, the European Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, the Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. As OECD member countries, Korea, Mexico, Chile, and Israel are also members of the CCXG. Where this document refers to “countries” or “governments”, it is also intended to include “regional economic organisations”, if appropriate.

ACKNOWLEDGEMENTS

This paper was prepared by Takayoshi Kato, OECD, Jane Ellis, OECD and Christa Clapp (CICERO). It benefited from direct funding for the work of the CCXG programme in 2013/14 including from Australia, Belgium, the European Commission, Germany, Japan, Korea, the Netherlands, New Zealand, Norway, Sweden, Switzerland and the United Kingdom, and in-kind support from the OECD and the IEA. The authors would like to thank their OECD/IEA colleagues Anthony Cox, Simon Buckle, Gregory Briner, Randy Caruso, Juan Casado Asensio, Jan Corfee-Morlot, Kate Eklin, Takashi Hattori, Raphaël Jachnik, Christopher Kaminker, Osamu Kawanishi, Sara Moarif, Stéphanie Ockenden, Alexis Robert, Robert Youngman for their helpful comments on earlier drafts of this paper. In addition, the authors would like to acknowledge valuable written comments from the delegations of New Zealand and Sweden.

The authors are also grateful for valuable information provided by Stefan Agne (EC), Gilberto Arias (Panama), Gabriela Blatter (Switzerland), Tim Cadman (Griffith University), Sarah Conway (USA), Katrin Enting (KfW), Dany Drouin (Canada), Inka Gnittke (Germany), Erlend Grøner Krogstad (Norway), Henrik Malvik (Norway), Yoshihiro Mizutani (Japan), Pieter Pauw (DIE), Herman Sips (Netherlands), Suzanty Sitorus (Indonesia), Daisy Streatfeild (UK), Masashi Taketani (UNFCCC), and Jan-Willem van de Ven (EBRD). The paper also benefited from participants’ comments at the CCXG Global Forum event in September 2014. The Secretariat would like to thank Australia, Belgium, Finland, France, Germany, Japan, Korea, Netherlands, New Zealand, Norway, Sweden, Switzerland, and the UK for their direct funding of the CCXG in 2014, and the OECD and the IEA for their in-kind support.

Questions and comments should be sent to:

Takayoshi Kato
OECD Environment Directorate
2, rue André-Pascal
75775 Paris Cedex 16
France
Email: Takayoshi.kato@oecd.org

All OECD and IEA information papers for the Climate Change Expert Group on the UNFCCC can be downloaded from: <http://www.oecd.org/env/cc/ccxg.htm>.

TABLE OF CONTENTS

ABSTRACT	2
RÉSUMÉ.....	2
FOREWORD.....	3
ACKNOWLEDGEMENTS	3
EXECUTIVE SUMMARY	5
1. INTRODUCTION.....	9
2. INTERNATIONAL INSTITUTIONAL ARRANGEMENTS	10
2.1 Overview of institutional arrangements relating to the Financial Mechanism	10
2.2 The role of the agreement in strengthening international institutional arrangements	15
3. IN-COUNTRY ENABLING ENVIRONMENTS	19
3.1 Overview of in-country enabling environments (the push and pull factors).....	19
3.2 The role of the agreement in enhancing the pull factors	20
3.3 The role of the agreement in enhancing the push factors.....	26
3.4 Enabling environments for technology transfer	28
4. FINANCIAL INSTRUMENTS AND TOOLS	29
4.1 Overview and targeted application of financial instruments and tools	30
4.2 The role of the agreement in using the full range of financial instruments and tools	34
5. ENHANCED TRANSPARENCY AND POSSIBLE ROLES OF MRV OF FINANCE	36
5.1 The current state of play on MRV under the UNFCCC.....	36
5.2 The role of an MRV system in the 2015 agreement	36
6. INITIAL INSIGHTS	39
REFERENCES	42
GLOSSARY	49

LIST OF TABLES

Table 1: Financial Instrument Overview	32
--	----

LIST OF FIGURES

Figure 1: International institutional arrangements for climate finance under the UNFCCC.....	11
Figure 2: Estimated financial needs for mitigation and adaptation	16
Figure 3: Gross ODA-like flows from emerging economies (USD million)	20
Figure 4: Framework for a reiterating process for enhancing enabling environments	22
Figure 5: Examples of measures for carbon pricing mechanisms	24

Executive Summary

Shifting public and private investment from “brown” to “green” is an essential part of addressing climate change. A new international climate change agreement to be adopted at COP 21 in 2015 has the potential to play a significant signalling role by underlining to countries and private investors the intent to shift to a low-carbon development pathway. There is widespread recognition that further scaling up of climate finance will be a necessary component of global efforts to limit increases in global average temperature to 2°C above pre-industrial levels, and to support adaptation to climate change in vulnerable countries.

Building on previous OECD studies and other relevant literature, this paper explores the possible role of the 2015 agreement in promoting further mobilisation of climate finance for developing countries in the post-2020 period. Any finance-related provisions in the new agreement therefore need to facilitate such a mobilisation, and also need to be dynamic enough to reflect the evolving circumstances of countries and learning from experiences in mobilising and scaling up climate finance.

This paper explores how the new agreement could spur further mobilisation of climate finance by examining the current state of play regarding existing financing environments and mechanisms. These include: (i) the existing international institutional arrangements, (ii) in-country enabling environments, (iii) financial instruments and tools, and (iv) transparency in climate finance tracking and an enhanced MRV system of finance.

International institutional arrangements

International institutional arrangements under the UNFCCC have helped to mobilise international climate finance, while also recognising the importance of financial flows relating to climate that are not directly overseen by the Convention. The current landscape of the Financial Mechanism (FM) of the Convention is significantly different from its early years. The Green Climate Fund (GCF) is likely to play a major role in the FM in the future and its initial capitalisation is currently underway. With the emergence of the GCF, climate finance channelled through the UNFCCC’s FM is likely to increase, although the level of finance that the GCF will manage is still unclear.

While the current capacity of the FM may not be sufficient for managing increased climate finance flows in the post-2020 period, some Parties have also raised concerns about duplication of work and mandates in the existing and emerging international institutional arrangements. Thus, improved co-ordination between and greater coherence of the existing and emerging institutional climate finance arrangements are key issues for the 2015 agreement. Indeed, the GCF and the Standing Committee on Finance (SCF) have already started this discussion. Thematic and geographic balance in mobilisation and/or allocation of climate finance also remains an issue.

This paper explores how the 2015 agreement could help to mobilise further climate finance by examining how balanced financing, co-ordination, streamlining and complementarity between institutions could be achieved. The main priorities are:

- Encouraging consideration for thematic and geographic balance in mobilising and/or allocating climate finance, as well as how such balance is defined.
- Facilitating better co-ordination and co-operation amongst climate finance institutions to minimise duplication of work and maximise the synergies between different institutions.
- Streamlining the climate finance allocation processes by entities operating under the Convention to improve efficiency and effectiveness of managing and disbursing climate finance.
- Enhancing synergies and complementarity between institutional arrangements outside and inside the Convention.

In-country enabling environments

Enhanced in-country enabling environments play a key role in further mobilising public and private climate finance in all countries. The discussion of in-country enabling environments in this paper is structured around two major factors, namely “pull” and “push”. Pull factors are used here to mean that policies and regulations within a country help to attract investments and ensure successful implementation of programmes and projects. Push factors are used to mean that policies, regulations and instruments in contributing countries help to mobilise climate finance and investments for use in recipient countries.

For the pull factors, the 2015 agreement could encourage Parties to work together on enhancing predictable and stable in-country policy and regulatory frameworks to help attract financing to support the transition to low-carbon climate-resilient pathways. Examples of policies that enhance in-country enabling environments include coherent and stable carbon pricing schemes and clear adaptation policies and priorities. In-country enabling environments might be made more durable and flexible, by incorporating feedback loops informed by monitoring and evaluation. This might allow revisiting and updating policy goals and instruments in a more cost-effective way over time. But time-consistency and transparency of public policy, particularly around support for clean technologies, is important. Co-ordination among domestic institutions within a country can also strengthen the pull factors. The 2015 agreement could possibly enhance pull factors by:

- Encouraging Parties to establish predictable, transparent and responsive in-country enabling environments, which could include: predictable and stable policy goals; using a range of policy instruments; aligning climate finance interventions with national development goals; monitoring and evaluating the results, and adjusting the intermediate goals and policies aimed at achieving a low-carbon resilient economy in the light of evolving scientific, technological and economic factors.
- Urging Parties to put a price on greenhouse gas (GHG) emissions in a coherent, stable and sustainable manner with mechanism(s) that increasingly reflect the social costs of GHG emissions and to phase out inefficient subsidies for fossil fuels.
- Encouraging Parties to better co-ordinate their domestic institutions to access, manage and use climate finance in an effective manner.
- Encouraging Parties to collaborate to enhance fiduciary, environmental and social standards to enable the greater use of their domestic systems to channel and deliver climate to the final user, which in turn could enhance ownership of international climate finance.
- Encouraging Parties to set timelines for improving the pull factors for enabling environments in the 2016-2020 period.

For the push factors, previous studies and experience of development partners to date show the importance of reducing fragmentation of development co-operation (e.g. by donors) (GCCA 2013; OECD, 2012) and co-ordination among different ministries within a contributing country (e.g. Pickering et al. 2013). Further, an enhanced use of innovative sources of climate finance could also be a push factor to further mobilise climate finance (AGF, 2010). The 2015 agreement could enhance push factors by:

- Stressing the need to reduce fragmentation of international climate finance by reiterating the provision in the agreement on the Global Partnership for Effective Development Co-operation, agreed during the 4th High Level Forum on Aid Effectiveness, Busan (2011).

- Encouraging Parties to facilitate inter-agency co-ordination within and between contributing countries.
- Encouraging Parties to further use innovative sources of climate finance in addition to “conventional” public climate finance sources such as Official Development Assistance (ODA).

Financial instruments and tools

A variety of financial instruments and tools are available for supporting climate actions in developing countries. Which instruments or tools are best suited to specific climate activities varies among different countries, technologies and project types. For instance, grants are particularly useful for capacity building and mobilising financial support for adaptation in the most vulnerable countries, or countries with limited institutional capacities or resources. On the mitigation side, grants could support feasibility studies, or the demonstration and dissemination of proven technologies that are not widely used. Concessional loans could improve risk-return profiles of projects with large up-front investment requirements. Other instruments and tools are better suited for encouraging private sector finance in more financially mature markets, such as de-risking, green bonds and equity investments.

Which instruments or tools are best suited for particular purposes is highly case-specific. Thus, detailed provisions in the 2015 agreement regarding the use of specific financial instruments and tools are unlikely to be helpful. Nevertheless, the agreement could contribute to facilitating the broad use of a full range of financial instruments and tools by:

- Explicitly encouraging the use of the full range of relevant financial instruments, tools and vehicles.
- Providing opportunities for information-exchange on the use of financial instruments and tools (especially newer or innovative ones), which could build greater confidence among private investors.
- Encouraging the further involvement of multiple financial instruments/tools and multiple actors (e.g. financial intermediaries, technical experts, civil society organisations and other public and private entities) in financing and implementing a climate action.

Enhanced transparency and MRV of finance

Efforts to enhance transparency of climate finance are being made by Parties, as well as other actors working on mobilisation, channelling or use of climate finance. Obtaining more consistent and comparable information on climate finance could help build trust among various stakeholders including governments and investors. Increased availability of information on international climate finance flows and impacts could also help improve the effectiveness and efficient use of international climate finance, and thus potentially mobilise further international climate finance flows. Examples of such information include: the progress made towards scaling up climate finance; ways in which climate finance is accessed, managed and used; and its outcomes.

Measurement, reporting and verification, MRV, is an essential element to ensure transparency. However, there are still remaining challenges and gaps concerning MRV provisions and methodologies – both regarding the mobilisation and use of international climate finance. Such challenges relate to a lack of common understanding or definitions of climate finance, the range of methodologies for measuring and monitoring climate related finance flows across institutions, difficulty in tracking private and adaptation

finance, difficulties in attributing specific climate finance flows to particular countries, and capacities of countries in implementing more rigorous MRV provisions for climate finance.

Ensuring the transparent and accountable use of climate finance would be needed throughout the timeframe from initialising pledges and commitments to disbursing finance. Further, information obtained through domestic and international MRV processes could also be useful for governments and private investors when they make financing decisions. In this regard, enhanced transparency on climate finance under the 2015 agreement could contribute to mobilising increased levels of climate finance in the following ways.

- Providing further information on international public climate finance provided to developing countries, as well as the amount of private climate finance that this has mobilised, could help build trust between countries that climate finance is flowing at significant levels and identify promising ways of scaling up climate finance.
- Using MRV as a tool to generate and disseminate information on results from particular climate finance interventions, instruments or funds. This could facilitate a learning process on how climate finance can be accessed, managed and used in an efficient and effective manner, which in turn may encourage increased use of successful approaches, and therefore greater mobilisation of climate finance.
- Encouraging a balance between costs of and benefits from implementing MRV.

Concluding remarks

The paper highlights several ways in which the 2015 agreement could facilitate the mobilisation of further climate finance both directly and indirectly. Direct ways could include mandating the operating entities of the Convention, or encouraging Parties, to prioritise the funding for certain objectives where climate finance is rarely allocated autonomously. Such objectives could include technology transfer, readiness, and actions in countries with limited capacities. Indirect ways could include encouraging Parties to enhance: enabling environments for climate finance investments; co-ordination at various levels within each country; co-ordination among international institutions; and transparency of climate finance mobilised and used.

1. Introduction

Background and the aim of the paper

The global financial system needs right signals to redirect financial flows from “brown” to “green” investment to prevent dangerous human interference with the climate system. A new international climate change agreement to be adopted at the twenty-first Conference of Parties in 2015 (COP 21) has the potential to play a significant role in sending such signals to governments and private investors, as well as to civil society more broadly. At COP 16, developed countries formalised their commitment to collectively mobilise USD 100 bn p.a. by 2020 from a range of sources to address the needs of developing countries (UNFCCC, 2009). However, there is widespread recognition that, to limit the increase in global average surface temperature to 2 °C above pre-industrial, shifting financial flows from brown to green will be necessary.

Climate finance is a means to an end but not an end in itself. Previous studies by the Climate Change Expert Group (CCXG) and the Organisation for Economic Co-operation and Development (OECD) have looked into possible ways in which developed countries could effectively, accountably and efficiently mobilise and scale up climate finance¹. While many of the issues analysed in those studies have also been actively discussed under the UNFCCC negotiation tracks, how the issues on climate finance can be included in the 2015 agreement is still unclear.

The climate finance element in the 2015 agreement needs to help Parties to accelerate the transition towards low-carbon and climate-resilient (LCCR) economies. For this purpose, the agreement may benefit from referring to and/or learning from on-going practices in order to address challenges regarding: (i) the current international institutional arrangements, (ii) in-country policy and regulatory environments, (iii) financial instruments and tools, and (iv) methodologies for transparency. This paper explores the possible role of the 2015 agreement in promoting further mobilisation of climate finance.

To date, the majority of public climate finance (as well as private climate finance) has been committed and delivered outside of the institutional arrangements under the UNFCCC. Indeed, a number of public and private international climate funds, multilateral and bilateral development banks, and private investors play the important role in mobilising and delivering climate finance. Moreover, mobilising climate finance supports not only mitigation and adaptation activities under the UNFCCC, but also the broader climate aims of shifting investments from ‘brown’ to ‘green’, and enhancing climate-resilient economic development. Nevertheless, institutions under the UNFCCC (such as the Green Climate Fund) are likely to have a crucial role to play in supporting the mobilisation of climate finance in the post-2020 climate regime.

Outline of the paper

This paper outlines and analyses the current state of play of a range of aspects relating to international climate finance. Sections 2, 3 and 4 examine: the international institutional arrangements, in-country enabling environments, and available financial instruments and tools respectively. These sections also discuss how the 2015 agreement could play a role in mobilising climate finance in each of these areas.

Subsequently, section 5 discusses issues on transparency in committing, administering, disbursing and using climate finance. In particular, this section discusses how the current measurement, reporting and verification (MRV) of climate finance could be further enhanced and how enhanced MRV could encourage further mobilisation of climate finance in the post-2020 period. The paper concludes by discussing several ways in which the 2015 agreement could facilitate the mobilisation of further climate finance both directly and indirectly.

¹ Examples include, among others, Kato et al. (2014), OECD (2014b), Caruso and Ellis (2013), Ellis et al. (2013), Kaminker et al. (2013), Clapp et al. (2012), Corfee-Morlot et al. (2012) and Buchner et al. (2011).

2. International institutional arrangements

International institutional arrangements under the UNFCCC have helped, and can further help, mobilise international climate finance, while recognising the importance of international and domestic arrangements for climate finance that are not directly overseen by the Convention. The Financial Mechanism (FM) has been the main platform for the international climate financing arrangements under the Convention, and is currently in the process of a significant change.

Since the Global Environmental Facility became an operating entity of the FM in 1990, the mechanism has been evolving in response to the varying landscape of international climate finance. The current circumstances of the FM are significantly different from its early years. There are differences in terms of the development levels of countries, contributors of finance, capacities of international organisations such as UN agencies and the World Bank group, the number and capacities of financing entities (e.g. the GCF, the GEF and MDBs) and the sources and types of finance available (Gomez-Echeverri and Müller, 2009).

2.1 Overview of institutional arrangements relating to the Financial Mechanism

The current international institutional arrangements for climate finance under the UNFCCC involve a multitude of bodies, operating entities and funds (Figure 1). However, the circumstances around the international climate finance are changing relatively rapidly (e.g. establishment of GCF, change in providers of finance as well as destinations), and are likely to continue to change. Thus, arrangements under the FM will also need to remain responsive to such changes.

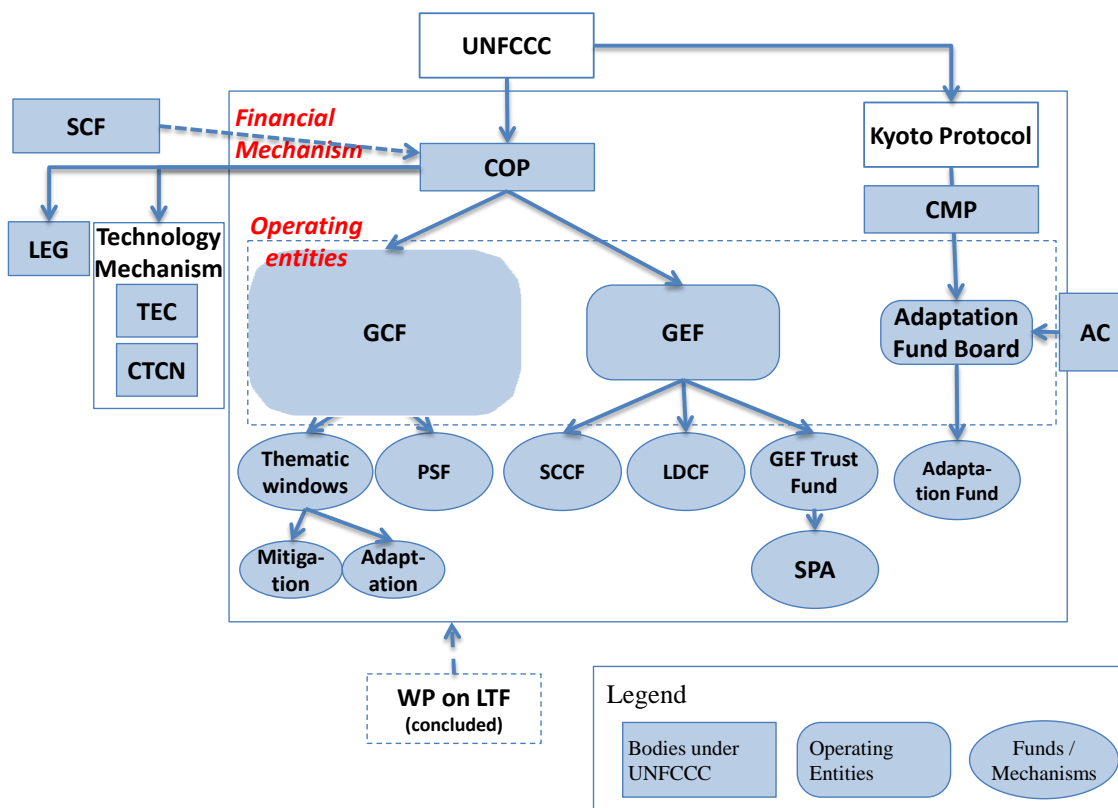
In terms of contributors of climate finance, fast-growing middle-income countries have a unique role to play between providers and recipients of climate finance². They have possibilities to self-finance some portion of their climate change activities, and possibly contribute to financing activities in other countries with greater needs. Indeed, CPI (2013) finds that in 2012 climate investment was split almost evenly between developed and developing countries (USD 177 bn and USD 182 bn respectively), with USD 131 bn (72%) of investment in developing countries provided from domestic sources.

Further, the current capacity of the FM may not be sufficient for managing increased mobilisation of international climate finance flows in the post-2020 period. Given the commitment by developed countries to mobilise USD 100 bn p.a. of climate finance by 2020, the amount of climate finance to be mobilised (and channelled via the UNFCCC's FM) is expected to scale up substantially in the coming years. On the other hand, Parties have also raised concerns about duplication among tasks of existing and emerging institutional arrangements (e.g. SCF, 2013). Co-ordination and coherence among existing and emerging mechanisms and institutions are key issues to address, given that there have already been a range of financing mechanisms and institutions as well as related arrangements, and that the GCF is taking the final steps to become fully operational³.

² For instance, Indonesia and South Korea have announced pledges to contribute to the GCF. Likewise, the gross concessional flows for development co-operation from some of BRICS countries (Brazil, China, India, South Africa) have also increased (see Figure 3 in section 3.1)

³ As of June 2014 (GCF, 2014) https://unfccc.int/files/bodies/awg/application/pdf/adp2-5_gcf_20140613.pdf

Figure 1: International institutional arrangements for climate finance under the UNFCCC



Note: Abbreviations (in alphabetical order): AC (the Adaptation Committee), CMP (the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol), CTCN (Climate Technology Centre and Network), COP (the Conference of Parties), GCF (the Green Climate Fund), GEF (The Global Environment Facility), LDCF (the Least Developed Countries Fund), LEG (the Least Developed Countries Expert Group), PSF (Private Sector Facility), SCF (the Standing Committee on Finance), SCCF (the Special Climate Change Fund), SPA (Strategic Priority for Adaptation), TEC (The Technology Executive Committee), and WP on LTF (the work programme on long-term finance)

The Green Climate Fund

In the Cancun agreements, Parties decided to establish the Green Climate Fund (the GCF) as an operating entity of the FM of the UNFCCC. The Copenhagen Accord stipulates that a “significant portion” of funding should flow through the Green Climate Fund (UNFCCC, 2009). It will therefore play a key role in mobilising climate finance under the UNFCCC in the post-2020 period. The GCF has established the Green Climate Fund Board (the GCF Board) which governs and supervises the GCF and is also fully responsible for its funding decisions. The GCF Board has been requested to enhance complementarity between the activities of the GCF and those of other funding mechanisms and institutions at “bilateral, regional and global” levels (GCF, 2014a). The Fund has also decided to have 50:50 thematic windows for mitigation and adaptation (ibid).

The Global Environment Facility

The Global Environment Facility (the GEF) was established in 1991, i.a. to address an increasing concern over global environmental issues (including, but not limited to climate change), and to formulate financing solutions to these problems. Donor countries provide funding for the GEF, pledging funding every four years through a process known as the GEF replenishment. The GEF focuses on the use of a limited number of financial instruments and tools, particularly grants. It is one of GEF's principles to use these instruments to leverage co-financing to assist developing countries and economies in transition take actions that address critical threats to the global environment⁴ (GEF, 2002).

Regarding the funding mobilised, the GEF has approved more than USD 13 bn from its pilot phase to the GEF-5 replenishment (GEF, 2013). Under GEF-5 (2011-2014), the GEF Trust Fund, the Least Developed Countries Fund and the Special Climate Change Fund have utilised USD 2 880 m, 480 m and 136 m respectively (ibid). The GEF-6 replenishment concluded in April 2014 with USD 4.43 bn⁵ pledged for the period from 1 July 2014 to 30 June 2018 (GEF, 2014b).

The Adaptation Fund

The Adaptation Fund (AF) was established in accordance with Article 12.8 of the Kyoto Protocol (UN, 1998) to “assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation”. Therefore, the AF operates under the guidance of the Conference of the Parties serving as the Meeting of the Parties (CMP), unlike the GEF, the GCF - and the Adaptation Committee (established under the Cancun Adaptation Framework) which are operating under the guidance of the Convention. The Adaptation Fund Board (AFB) was established in 2007 as the operating entity to supervise and manage the Adaptation Fund, under the authority and guidance of the CMP (UNFCCC, 2007). The Adaptation Committee provides advisory guidance for, among others, the AFB. As the AF is under the Kyoto Protocol, it is unclear whether and how the fund will be anchored in the 2015 agreement.

The AF is much smaller than the GEF: its income since its inception is almost USD 400m– approximately half from donations, and the remainder from a share of the proceeds from CDM credits (AFB 2014). It has disbursed USD 225m (AFB 2014). The AF has employed Direct Access as a method to allocate its fund (UNFCCC, 2007). National or regional agencies within eligible developing countries⁶ can apply for funding, and administer the resources allocated by the AF. Such agencies are called National Implementing Entities (NIEs) or Regional Implementing Entities (RIEs), and the AF aims for 50% or more of its fund to be allocated via NIEs and RIEs (AFB 2012)⁷. The Direct Access modality has shown certain benefits such as increased capacity of institutions, preparation for project implementation and motivating further South-South co-operation (AF, 2012). However, despite such benefits, more than 73% of the cumulative funding has been channelled through Multilateral Implementing Entities, such as MDBs, rather than NIEs or RIEs (WB, 2013a).

⁴ Specifically, the GEF supports the issues related to not only climate change, but also biodiversity, international waters, land degradation, depletion of the ozone layer and persistent organic pollutants.

⁵ In GEF-6, donors agreed to new financing in support of the Minamata convention on Mercury that was signed in 2013.

⁶ The eligibility is decided by the Adaptation Fund Board (AFB).

⁷ The 12th meeting of the Adaptation Fund decided that not more than 50% of budget allocation should be directed towards MIEs.

The Standing Committee on Finance

As part of the Cancun Agreements, Parties decided to establish the Standing Committee on Finance (SCF) “to assist the COP in relation to the FM of the Convention”. The SCF’s work includes improving coherence and co-ordination of climate change financing, as well as improving mobilisation of climate finance. As a non-financing entity, the SCF reports and makes recommendations to the COP on all aspects of its work concerning the FM. More specifically the SCF has been mandated to review the FM under the UNFCCC. The SCF has initiated the fifth review of the financial mechanism and further amended the guidelines for the review of the FM. The SCF is also mandated to work on the biennial assessment and overview of climate finance flows as well as other measurement, reporting and verification (MRV) of support under the UNFCCC. Further, the SCF is also requested to conduct its work in a coherent manner with work by the SBI, the operating entities and other thematic bodies (e.g. the Adaptation Committee and the Technology Executive Committee).

The Technology Mechanism

The Technology Mechanism (TM) was established in 2010 at COP 16 to facilitate enhanced action on technology development and transfer to support action on mitigation and adaptation. The main components of the TM are Technology Executive Committee (TEC) and Climate Technology Centre and Network (CTCN). They are mandated to facilitate the full implementation of the TM (UNFCCC, 2010), so as to develop, demonstrate, transfer and deploy environmentally sound technologies to developing countries. Discussion on linkage between the TM and the FM (specifically, the SCF) has already started so as to enhance coherence of their work. For instance, the TEC agreed in March 2014 to summarise its work that is of relevance for the FM, and to organise a thematic dialogue on climate technology financing (TEC, 2014).

International institutional arrangements outside of the Financial Mechanism

A number of international initiatives outside of the Financial Mechanism (FM) of the Convention have emerged in the past decades both multilaterally and bilaterally, and are playing important roles in mobilising climate finance. As outlined in Box 1, such initiatives have a wide range of purposes and activities. For instance, some are driven by the interests in technology transfer, research and development, while others focus more on establishing financial measures to increase investment in low-carbon and climate-resilient activities.

Box 1: Examples of international institutional arrangements outside the FM

One example of multilateral initiatives at a global level is the Climate Investment Funds (CIFs), housed at the World Bank. The CIFs have four funding windows, of which the Clean Technology Fund (CTF) is the largest. CIFs are designed to help developing countries pilot low-emissions and climate-resilient development by financing a range of programmes. In 2008, CIFs were originally launched to 'bridge' the financing gap until the agreement of a post-2012 global climate change regime. Under the UN Secretary General's initiative, the Sustainable Energy for All (SE4ALL) initiative was launched in 2011 to bring governments, business and civil society together with the aim of enhancing access to modern, sustainable energy. Likewise, the UN-REDD⁸ programme was established in 2008, and has been one of the leading primary multilateral initiatives capable of providing early support to countries in developing REDD+ activities and MRV systems (UNEP, 2010).

The Partnership for Climate Finance and Development was launched at the 4th High Level Forum on Aid Effectiveness in Busan, Korea, in 2011, to shape the "building block" on climate finance. It aims to promote the access, management and use of climate finance at country-level through coherence and collaboration among climate change, finance and development co-operation communities at the country, regional and global levels (Partnership for Climate Finance and Development, 2011). To date, 30 countries and institutions are supporting the Partnership.

There have also been a number of regional climate finance initiatives. For example, the European Commission established the Global Energy Efficiency and Renewable Energy Fund (GEEREF), Global Climate Change Alliance (GCCA) and the Global Climate Financing Mechanism (GCFM); these have been managing a number of mitigation projects (For further discussion, see e.g. Butzlaff et al. 2013; Balsiger 2012; De Coninck et al. 2008). For adaptation, the African Risk Capacity (ARC) is a pan-African drought risk facility, to which donors and member African countries pay annual premiums. In case satellite weather indexes indicate that a response to a severe drought is needed, the ARC will make payments to insured governments (Clarke and Hill, 2013). The table below provides examples of regional initiatives and agreements outside the UNFCCC that mobilise or channel climate finance.

Technology, research and development	<ul style="list-style-type: none"> • Carbon Sequestration Leadership Forum • Methane to Markets Partnership (M2M) • Mediterranean Climate Change Initiative • Mekong River Commission Climate Change and Adaption Initiative • ASEAN Multi-Sectoral Framework on Climate Change • Asia Pacific Partnership on Clean Development and Climate Pacific Climate Change Science Program
Finance	<ul style="list-style-type: none"> • The Global Energy Efficiency and Renewable Energy Fund • Global Climate Change Alliance • Global Climate Financing Mechanism • Regional REDD initiatives
Trade	<ul style="list-style-type: none"> • Common Market for Eastern and Southern Africa Climate Initiative • North American Agreement on Environmental Cooperation • Commission for Environmental Cooperation

Source: summarised from Butzlaff et al. (2013)

⁸ REDD stands for Reducing Emissions from Deforestation and forest Degradation.

2.2 The role of the agreement in strengthening international institutional arrangements

Building on the current landscape of international institutional arrangements under the Convention, this section discusses how the 2015 agreement could strengthen them in order to further mobilise climate finance. Possible areas in which the agreement could contribute are set out below, followed by more detailed discussion later in this section.

Box 2: What could the 2015 agreement do to strengthen international institutional arrangements to mobilise effective climate finance?

- Encouraging consideration for thematic and geographic balance in mobilising and/or allocating climate finance, as well as how such balance is defined.
- Facilitating better co-ordination and co-operation amongst institutions financing climate interventions in order to minimise duplication of work and maximise the synergies between different institutions.
- Streamlining the steps in climate finance allocation processes by the operating entities under the Convention to improve efficiency and effectiveness of managing climate finance.
- Enhancing synergies and complementarity between institutional arrangements outside and inside the Convention.

Consideration for thematic and geographic balance in mobilising and allocating climate finance

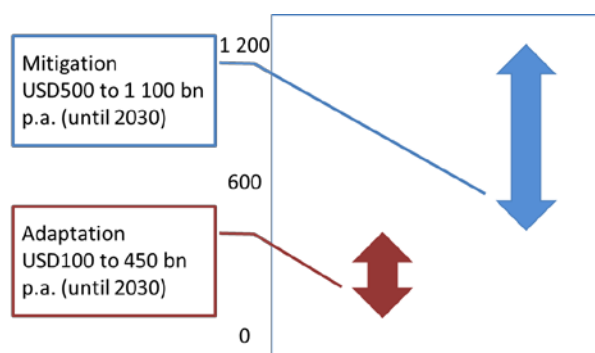
(i) Thematic balance

There have been several calls within the international climate negotiations to balance mobilised climate finance between adaptation and mitigation. Experience to date shows that achieving such a balance is difficult – particularly for mobilised private climate finance, which tends to focus on revenue-generating mitigation activities (Kato et al 2014). For example, adaptation funding in Fast-Start Finance accounted for around 18% of overall pledge, with the large bulk of the remainder being allocated to mitigation (Nakhoda, 2013). This is despite balanced allocation being explicitly mentioned in the Cancun agreements with regard to Fast Start Finance.

The 2015 agreement could call for mobilised climate finance to be allocated in a balanced manner. However, there is no clear understanding to date of what “balanced” mobilisation of climate finance is. In practice, mitigation and adaptation activities are to some extent intertwined (Klein et al, 2007), and some interventions (particularly in the forestry and agricultural sectors) may lead to both mitigation and adaptation. Thus, extracting the adaptation portion of climate finance mobilised tends to be practically and technically difficult (see section 5). Furthermore, definition(s) of adaptation can be diverse and can include actions such as addressing drivers of vulnerability, building response capacity, managing climate risk and confronting climate change (McGray et al., 2007). In addition, there are significant data gaps regarding adaptation climate finance (see e.g. Caruso and Jachnik 2014). This means that significant improvements in data availability are needed to quantify current levels of mobilised climate finance for mitigation and for adaptation.

The lack of a definition on what balanced mobilisation means has made it difficult to send a clear signal to governments and other actors on how this can be achieved. For instance, Montes (2012) shows the difference in the amount of finance needed between mitigation and adaptation based on the (still evolving) estimates by the WB (2010), UNFCCC (2009), UNDESA (2011) and Parry et al. (2009) (see Figure 2). Given the fact that mitigation would require a greater level of finance, the allocation of the FSF, for instance, might be considered more “balanced” than it looks, depending on the timing at which the needs for individual mitigation and adaptation actions occur.

Figure 2: Estimated financial needs for mitigation and adaptation



Source: Based on Montes (2012)

The 2015 agreement could request a body, or bodies, such as the SCF, to elaborate on methodologies to estimate more detailed financial needs for adaptation and mitigation. There have already been processes by which information on financial needs can be collected. Such processes include the Biennial Assessment and overview of climate finance flow (BA) under the SCF, the Technology Needs Assessments (TNAs), Nationally Appropriate Mitigation Actions (NAMAs) and National Adaptation Plans (NAPs) (TEC, 2013b). The 2015 agreement would need to ensure that those processes are elaborated in ways that improve understanding of mitigation and adaptation financing needs, and that are mutually reinforcing.

The 2015 agreement could include a process for consultation and periodic adjustment of such needs estimates, to better respond to changes in the international climate finance landscape. The estimates of thematic needs for mitigation and adaptation finance can vary as circumstances of countries can change over time. In addition, methodologies to estimate the financial needs may also be improved in the future and may affect the estimates of thematic balance.

(ii) Balance between countries or regions

Historically, there have also been difficulties in achieving the balance in mobilising and allocating climate finance between countries or regions. An unequal flow of climate finance (particularly from the private sector) to different countries is not surprising, given variations between countries in response options, their risks and costs. Approximately 45% of the FSF has been directed to lower-middle-income countries such as Indonesia, Vietnam and India, while about 16 % of the portfolio has been towards Least Developed Countries (LDCs), Land-locked Developing Countries (LLDCs) and Small Island Developing States (SIDS) (Nakhouda, 2013). This geographical imbalance is similar to the difficulty that ODA has historically faced, that is, it has been difficult to provide public financial support for countries whose absorptive capacity for such finance is limited. Mobilising private finance for such countries seems even more difficult as the private sector tends to have lower risk tolerance for (e.g.) country risks and policy uncertainty.

The 2015 agreement could also prioritise a certain portion of public finance for mitigation and adaptation actions in countries with limited capacities (e.g. LDCs, LLDCs and SIDS). The GCF has also been required to take geographical balance into account, and started to consider how the Fund could manage access to its resources in a balanced way across countries (GCF, 2014a).

However, as discussed above, the geographical balance of mobilised climate finance is unlikely to be improved unless there is appropriate support for developing institutional capacities in some particular countries. Thus the windows for countries with limited capacities and resources such as LDCs, LLDCs and SIDS could better function if they come with specific funding (or windows) to develop appropriate institutions for enhancing enabling environments, as well as institutional and personal capacities to access, manage and use the international climate finance. This will be elaborated further in section 3.

On the other hand, the 2015 agreement might also need to bear in mind historical relationship of existing financing modalities (i.e. ODA) and legal background between the contributing and recipient countries. While existing historical relationships may have advantages in terms of effective implementation of climate finance, focusing future climate finance on such historical relationships could further geographical imbalance of climate finance allocation.

The 2015 agreement could also reiterate the importance of the capacities of operating entities (e.g. the GCF Board) in co-ordinating both thematic (adaptation and mitigation) and geographical windows. In practice, there have already been an increasing number of multi-focal projects with both mitigation and adaptation focuses. Setting funding windows to focus solely on specific themes might lead to greater fragmentation unless there is sufficient co-ordination between the windows as well as strong capacity of the operating entities in the oversight for such co-ordination. The capacity of the Board might be complemented by establishing sub-committees for individual windows. Yet, this could also risk greater transaction costs accruing due to greater needs for communication between the Board and the sub-committees.

Co-ordination among the international institutional arrangements

Each of the institutions outlined in section 2.1 has an important role to play in mobilising and channelling climate finance. However, the more complicated the institutional arrangements become, the less clear it can be who is in charge of what, and how scarce resources should efficiently be allocated (Chuffart, 2013). The importance of co-ordination among the existing institutional arrangements under the FM has already been discussed under the Convention (e.g. SCF 2014a; GCF 2013a). For instance, Parties have started discussion on enhancing the linkages between bodies or entities such as the GCF, the SCF, SBI, SBSTA, the AC, the TEC and CTCN (GCF, 2013a).

The COP under the 2015 agreement could mandate an entity, or entities, to facilitate collaboration among the operating entities and thematic bodies. While this would not directly influence decision making processes by the operating entities, the 2015 agreement could recommend several steps to gradually strengthen such co-ordination. Based on meeting documents as well as discussion under the current UNFCCC negotiations, possible options for the steps are outlined as follows. For more discussion, see also Briner, Kato and Konrad (2014).

- Cross-participation in the meetings of the relevant bodies, including co-organising workshops and events on issues of common interest.
- Inviting inputs to support the planning and implementation of particular activities from other bodies or entities which are conducting similar or related work.

- Inviting the other bodies or entities to contribute to developing guidance, modalities and other related documents prepared by a body or an entity with regard to the relevant work.
- Inviting relevant bodies or entities to provide technical input to financial decision making processes conducted under an operating entity such as the GCF and the GEF.

Streamlining climate finance allocation

Allocation of international climate finance has been evolving over the last few years, with an increased role of direct access, or enhanced direct access (see e.g. Kato et al 2014). The 2015 agreement could encourage further steps in this direction by reiterating that the steps in planning, committing, and disbursing climate finance should be streamlined to the extent possible while ensuring effectiveness from economic, environmental and social perspectives. Indeed, the GEF has evaluated its project cycle as “notoriously slow”, with an average implementation period of five years (GEO, 2013). Outside the FM of the UNFCCC, Asian Development Bank (2010) analyses that project cycles in its “non-delegated” funds are excessively long, taking 19 additional steps compared to the funds whose allocation decisions are delegated to recipient governments.

The GCF Board has already requested the GCF Secretariat to develop streamlined programming and approval process to enable timely disbursement (GCF, 2014c). Whilst relevant processes could be developed under the GCF for the post-2020 period, the agreement could propose some guidance to help streamline steps in planning, administrating and disbursing climate finance through institutional arrangements under the Convention.

While the 2015 agreement is unlikely to include specific provisions for guidance for streamlining climate finance allocation processes, it could set a basis for such work in subsequent COP decisions. Such guidance could for instance include a more standardised check list whereby project developers could clearly understand what criteria they need to meet and how. Such a check list could also be useful for the Secretariat of operating entities, particularly the appraising and evaluation staff. This is because objective and concrete criteria could minimise the necessity for staff to interpret the guidance and confirm the relevance of their judgment. Involving relevant actors (e.g. operating entities and implement agencies) in developing such guidance could also help to ensure their usability. At the same time, the 2015 agreement could also recognise that project developers may need support in preparing proposals, which could save time and human resources required for appraising project or programme eligibility.

Enhancing synergies and complementarity between institutions outside and inside the UNFCCC

It is not clear how the multilateral and bilateral climate finance institutional arrangements outside the FM could relate to the 2015 agreement. Some initiatives (e.g. the CIFs and the GCFM) have specifically aimed to bridge the period until new international climate finance arrangements (e.g. the GCF) had been formalised and implemented. However, even for those initiatives and funds it is unclear how the 2015 agreement could collaborate with them to further mobilise climate finance.

Nevertheless, there could be interaction between the institutional arrangements for climate finance inside and outside the UNFCCC’s FM. First, the 2015 agreement could request entities under the Convention (e.g. the SCF and the GCF Board) to monitor climate-relevant financial flows channelled outside the FM. This could help Parties to identify financing gaps. This would, however, also need an enhanced MRV system to collect information on climate finance flows (discussed further in section 5). Therefore, care will be needed to strike the right balance between the costs of enhancing MRV systems and the benefits obtained from them.

The second option would be slightly more normative. The 2015 agreement could urge financial institutions and development agencies to apply certain principles for mobilising climate finance when they make (public climate finance) funding decisions. For example, major multilateral development banks (MDBs) have endorsed the MDB Principles to Support Sustainable Private Sector Operations, such as “additionality, crowding-in, commercial sustainability, reinforcing markets and promoting high standards” (EBRD, 2013). Text in the 2015 agreement could influence these kinds of principles or guidance set by institutions outside the Convention, when the relevant institutions revisit and update their principles or activities as necessary.

Regardless of whether initiatives are implemented under the Convention or not, strong enabling environments and the efficient use of a wider range of financial instruments and tools would benefit mitigation and adaptation activities. The 2015 agreement could play a role in enhancing enabling environments, as well as facilitating the efficient use of financial instruments and tools; these two areas are discussed in the next two sections.

3. In-country enabling environments

Political will is necessary, but not sufficient, to mobilise climate finance at the scale needed. To efficiently and effectively mobilise climate finance at scale, enhanced domestic enabling environments within a country play a key role in further engaging providers of climate finance, particularly from the private sector.

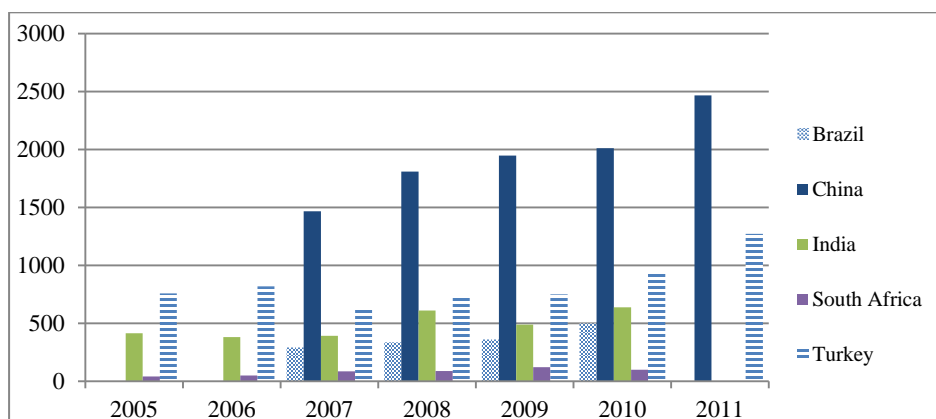
3.1 Overview of in-country enabling environments (the push and pull factors)

In this paper, discussion on in-country enabling environments in all countries is structured around two major factors, namely “pull” and “push” factors. The working definitions of these factors as used in this paper are as follows:

- Pull factors mean domestic policies and regulations in all countries, which help to (i) attract and absorb international climate finance, and (ii) ensure effective and accountable use of the finance.
- Push factors mean policies, regulations and instruments mainly in contributing countries, which help mobilise climate finance and investments for use in recipient countries.

In the context of push factors, it is noteworthy that the landscape of international climate finance is evolving. For instance, some “developing” countries, such as South Korea and Indonesia have announced pledges to contribute to the GCF. In the field of development assistance, there has also been an increasing South-South foreign assistance from emerging economies such as Brazil, China, India, Turkey and South Africa (Figure 3).

Figure 3: Gross ODA-like flows from emerging economies (USD million)



Note:

i) ODA-like flows mean gross concessional flows for development co-operation from OECD key partners (Brazil, China, India, South Africa). Data on Turkey is its ODA outflows. Turkey is an OECD member country and an Annex I Party to the UNFCCC.

ii) Data available for Brazil from 2005 to 2010, China from 2007 to 2011, India from 2005 to 2010, South Africa from 2005 to 2010, Turkey from 2005 to 2011.

Source: Based on the data from OECD "Statistics on resource flows to developing countries" Table 33a. Estimates of gross concessional flows for development co-operation ("ODA-like" flows) from OECD Key Partners, and the Global Humanitarian Assistance programme.

3.2 The role of the agreement in enhancing the pull factors

The roles that the 2015 agreement could have in enhancing the pull factors that could help attract and absorb international climate finance in an effective and accountable manner are outlined below. All Parties can and need to enhance domestic enabling environments at both policy and project/programme levels. In order to mobilise further finance, investors need the stability, clarity and coherence of policy goals and action across regions in which they operate (IIGCC et al., 2010). Further, it is also necessary to support and enhance countries' capacities to develop a pipeline of bankable projects and programmes for mitigation and adaptation (Watson et al., 2013).

Box 3: What could the 2015 agreement do to help Parties enhance the pull factors?

- Encouraging Parties to establish predictable, transparent and responsive in-country enabling environments, which could include: predictable and stable policy goals; using a range of policy instruments; aligning climate finance interventions with national development goals; monitoring and evaluating the results, and adjusting the intermediate goals and policies aimed at achieving a low-carbon resilient economy in the light of evolving scientific, technological and economic factors.
- Urging Parties to put a price on greenhouse gas (GHG) emissions in a coherent, stable and sustainable manner with mechanism(s) that increasingly reflect the social costs of GHG emissions and to phase out inefficient subsidies for fossil fuels.
- Encouraging Parties to better co-ordinate their domestic institutions to access, manage and use climate finance in an effective manner.
- Encouraging Parties to collaborate to enhance fiduciary, environmental and social standards to enable the greater use of their domestic systems to channel and deliver climate to the final user, which in turn could enhance ownership of international climate finance.
- Encouraging Parties to set timelines for improving the pull factors for enabling environments in the 2016-2020 period.

Feedback loop process for enhancing enabling environments

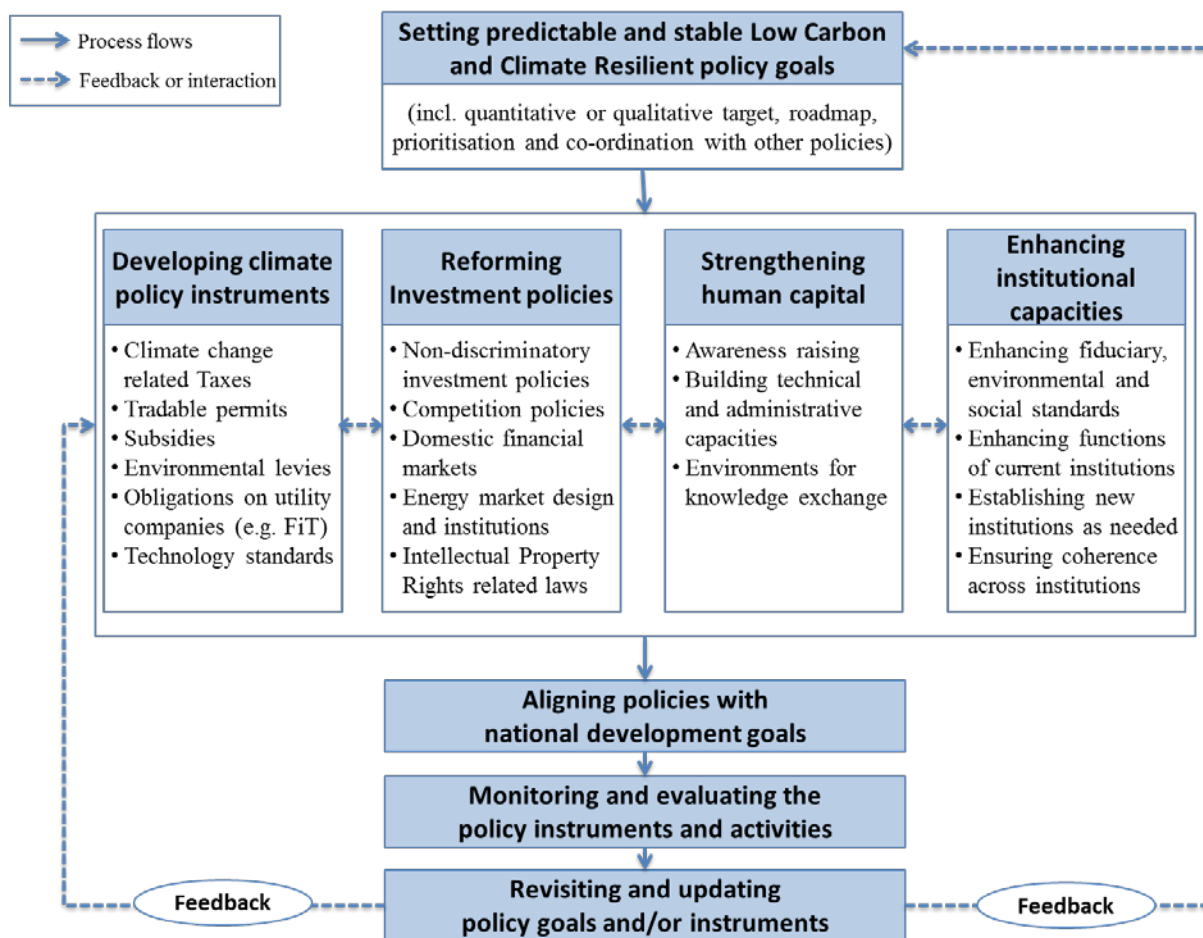
The 2015 agreement could encourage all Parties to work on enhancing enabling environments. Further, the 2015 agreement could stress the importance of developing feedback loop processes which include and sequence: stable policy goals, regulatory and policy frameworks and instruments, monitoring and evaluation frameworks, and aligning these elements with countries' national development goals. Building domestic institutional capacities is also an essential element of enabling environments. Feedback loops could also be effective in this respect since strengthening institutional capacities is not one-off support but needs a long-term engagement (UNEP, 2006).

Given different national circumstances, it is unlikely that the agreement would provide specific guidance about what policies would be needed in particular countries. However, the agreement could facilitate discussion within and among countries by facilitating discussion on what actions would be needed and how these could be implemented.

Figure 4 outlines such a possible feedback loop process for enhancing enabling environments for in-country mobilisation of further climate finance. Such a process could start with establishing long-term and stable policies, and associated goals (Corfee-Morlot et al 2012). A range of policies would need to be formulated and implemented such as: climate-related policy instruments; domestic investment policies for levelling the playing field of green vs brown investments. In addition, capacity development for both human resources and domestic institutions for absorbing and channelling climate finance would be needed. The process could better reflect feedback from on-going practices of implementing climate policy instruments, investment policies, capacity building, and revisit and update policy goals and instruments. Aligning climate policies with other domestic policy goals is also important, since exploring synergies and co-benefits among multiple domestic policies allows for more coherent and cost-efficient policies, and improves their chances of being implemented. For instance, the choice of transport infrastructure impacts GHG emissions, but also congestion, local air quality and associated health impacts; this in turn is related to economic development, transport accessibility and social equity, and road safety (Corfee-Morlot et al., 2012).

The exact form of enabling environments needed for attracting and absorbing climate finance might vary over time, as a country's national circumstances change. Periodically revisiting and updating policies implemented, results achieved and possible ways forward would make domestic policies more functional and flexible. Monitoring and evaluating the effectiveness of policy actions, as well as review processes on the policies, would provide essential feedback for the next round of policy formulation. Nevertheless, this can be challenging: demonstrating the effectiveness of longer-term outcomes from enhancing enabling environments is generally less straightforward and quantifiable than that of more concrete and shorter-term activities at a project or programme level (Ellis et al, 2013). Moreover, time-consistency and transparency of public policy, particularly around support for clean technologies, is important so that the changes will not give excessive shocks to the market.

Figure 4: Framework for a reiterating process for enhancing enabling environments



Source: Based on Kato et al. (2014), OECD (2014a), OECD (2014b), OECD (2013a), GIZ (2013), OECD (2013b) and Corfee-Morlot et al. (2012)

To enhance enabling environments, the 2015 agreement could build on, or learn lessons from, the existing institutional arrangements under the Convention and the Kyoto Protocol. For instance, such lessons could be drawn in terms of (i) financing activities to enhance enabling environments and (ii) exchanging information across regions, countries and sub-national jurisdictions.

Regarding the former, the Least Developed Countries Fund (LDCF) managed by the GEF has specifically financed the preparation and implementation of National Adaptation Programs of Action (NAPAs) by LDCs. Lessons learned from the LDCF include: need for sufficient data on adaptation, importance of enhancing co-ordination across ministries for co-financing between the LDCF and in-kind support within a country, complexity in processes caused by different formats and procedures provided by different actors involved, and slow disbursement of funds by implementing agencies (LEG, 2012). Further, the GCF Board has noted that the funding windows are not limited to adaptation and mitigation, implying that there can be windows for readiness (GCF, 2014a). Thus, it would be worth considering whether, and to what extent, the agreement could urge Parties to earmark specific funding for improving enabling environments (or more detailed sub-themes such as technology development, capacity building and support for legal and policy system development).

With regard to exchanging information, the 2015 agreement could build on current fora on knowledge sharing. For instance, the ADP's ongoing Technical Expert Meetings include sessions on policies, practices and technology. Durban Forum on Capacity-building also facilitates dialogues about issues on capacity building, and collects and shares relevant information that tends to be fragmented and is often not readily available. Such fora would enhance communication channels among countries to share best practices and challenges.

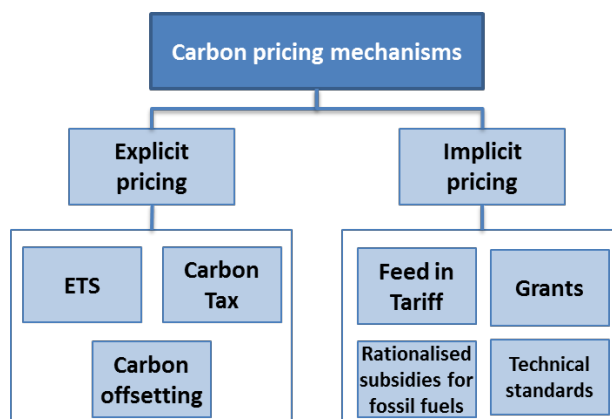
The 2015 agreement could also encourage countries to better link international-level discussions with national- and sectoral-level activities. For example, the Sustainable Energy for All (SE4ALL) initiative illustrates how a global initiative might influence domestic policies. This initiative of the UN Secretary General sets three concrete objectives on which all stakeholders are expected to take action. Such objectives are: (i) ensuring universal access to modern energy services, (ii) doubling the global rate of improvement in energy efficiency, and (iii) doubling the share of renewable energy in the global energy mix (UNECE, 2014). There have already been concerted efforts by governments, international agencies, civil society and private sector to mobilise financing to achieve its objectives under the SE4ALL initiative, such as delivering universal access to modern energy services (WB, 2013b). Such actions include lighting, clean cooking solutions and power for productive purposes in developing countries, as well as scaled-up energy efficiency, especially in the world's highest-energy consuming countries⁹.

Carbon Pricing

The 2015 agreement could also have a provision relating to carbon pricing, since putting an appropriate price on carbon would send a strong policy signal to international and domestic investors to shift investment from 'brown' to 'green'. Such a provision could also reaffirm a political agreement by G20 at its 2009 Pittsburgh meeting to "phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest" (G20, 2009). Some financial assets may become stranded as policy and market signals lower the economic value of natural resource and carbon-intensive investments (UNEP, 2014), which could help to redirect financial flows to green investment. Mechanisms for carbon pricing consist of multiple policies. These include explicit pricing such as emission trading schemes and carbon taxes, and implicit pricing such as feed in tariff schemes, standards and grants – which can also be cost-effective ways for carbon pricing (but can also have other aims, such as bringing down technology costs) (OECD, 2013c) (Figure 5).

⁹ Norway has committed to support renewable energy and energy efficiency activities with about NOK 2 bn in 2014. Bank of America announced that its Green Bond programme, as part of Bank of America's 10-year USD 50 billion environmental business commitment. The OPEC Fund for International Development announced a USD 1 billion revolving fund for energy access. The United Nations Development Programme announced the creation of a Hub for Bottom Up Energy Solutions to advance energy access at country level. The World Bank Group's Energy Sector Management Assistance Program has launched a City Energy Efficiency Transformation Initiative covering 50 cities worldwide. (WB, 2013b)

Figure 5: Examples of measures for carbon pricing mechanisms



Source: Based on OECD (2013d), (Kossov et al., 2014).

Pricing mechanisms need to be credible, stable and sustainable over time in order to inspire the confidence to invest in the technologies and infrastructure needed to realise the shift to low carbon and climate resilient society. (OECD, 2013d). Despite the weak international carbon markets, an increasing number of developed and developing countries have started implementing or planning carbon pricing. According to the World Bank, 40 national and 20 sub-national jurisdictions, in both developed and developing countries already have or are considering explicit carbon pricing (Kossov et al., 2014). Moreover, those countries where carbon pricing is already established have been extending the coverage of their GHG emission sources (e.g. the New Zealand Emission Trading Scheme).

As a major tool for carbon pricing, carbon markets could potentially have an important role to play in the 2015 agreement. Indeed, the Kyoto Protocol and its Clean Development Mechanism has catalysed a number of mitigation projects in developing countries. However, discussions between Parties on New Market Mechanisms (NMM) and Framework for Various Approaches (FVA) have not yet managed to identify a way forward. The 2015 agreement could play a role in improving effectiveness of carbon markets including NMM and/or FVA, and other (international) emission trading schemes. For instance, the agreement could set out the fundamental rules for generating and trading units to be used to meet countries' mitigation contributions (see Marcu (2014), De Sepibus et al. (2013), and Prag et al. (2012) for further discussions).

Co-ordinating domestic institutions to effectively use climate finance

The 2015 agreement could also encourage countries to improve co-ordination among relevant domestic institutions that engage in mitigation and adaptation activities in the countries. One of the difficulties that contributing governments, implementing agencies and other development partners face in the efforts for development co-operation is to identify who is the main counterpart in the partner country to work with. Therefore, co-ordination among domestic institutions in the countries could facilitate accessing, managing and using international and domestic climate finance resources in an efficient and effective manner. Better inter-agency co-ordination would help contributing countries and private investors to build greater confidence for scaling up finance in the recipient country.

There have been already some good practices for the inter-agency co-ordination for absorbing climate finance. For example, Indonesia has established the Ministry of National Development Planning (Bappenas) as a central government institution which is responsible for formulating national development

planning and budgeting. Colombia, for instance, has created direct links between institutions involved in climate change adaptation and development (OECD, 2014a).

The 2015 agreement could also encourage co-ordination among local financial institutions and relevant actors in a country especially for effectively catalysing domestic investments. A local bank can also be a hub to connect and co-ordinate those who seek finance with financiers, experts on particular technologies and local authorities as well as local civil society organisations. Channelling finance through local banks would be effective since they tend to have significant advantages in acquiring knowledge of the local business environment (Lindenberg, 2014).

Co-operation to enhance fiduciary, environmental and social standards in recipients for their ownership of accessing, managing and using climate finance

Any climate finance institutional arrangements under the 2015 agreement could also urge Parties to further collaborate on enhancing fiduciary, environmental and social standards of recipients of international climate finance. Enhancing such standards could facilitate trust building between contributors and recipients. This could in turn enhance ownership of accessing, managing and using climate finance by institutions in developing countries. Such standards can also be prerequisite for ensuring the direct access to climate finance (as for the Adaptation Fund), which allows funding to be delivered through recipient country institutions. Indeed, experiences of ODA show that development efforts can have a greater impact, when support is aligned with country development plans (Brown et al., 2013). OECD (2014a) and Brown et al. (2013) stress that strengthening country ownership would help to maximise development impact by aligning international support with country development plans and priorities.

Developing provisions in the 2015 agreement regarding country ownership could build on the experience of various on-going multilateral initiatives, especially those under the Adaptation Fund (AF), as well as international agreements such as the Paris Declaration (2005) and the Global Partnership for Effective Development Co-operation (2011). For instance, the UNEP's Direct Access Support Programme for National Implementing Entities (NIEs) under the AF has already made progress in improving the supported countries' fiduciary standards. The approaches taken in the programme include (i) raising awareness about anti-fraud policies, (ii) preserving institutional knowledge and enhancing internal management such as documentation skills, and (iii) facilitating co-ordination and communication across different government ministries (AF, 2012).

Encouraging a timeline for improvements in pull factors

The period to 2020 will be especially important to develop enabling environments to prepare for the post-2020 period. More climate finance is likely to flow to countries with better enabling environments (OECD, 2012). Thus, enhancing in-country pull factors could help countries obtain a better share of the USD 100 bn p.a. by 2020 that has been committed by developed countries (Arias, 2014).

Further, the 2015 agreement could recognise the importance of allocating dedicated funds to capacity building and policy support for particular countries. This is because some countries, especially LDCs and SIDS, may not have sufficient domestic resources to develop their enabling environments. Such finance could be channelled through the GCF. Indeed, the Fund has already decided that it will provide resources for readiness and preparatory activities and technical assistance for low-emission development strategies¹⁰ (GCF, 2014a).

¹⁰Such activities and supports will include the preparation or strengthening of low-emission development strategies or plans, NAMAs, NAPs, and NAPAs.

3.3 The role of the agreement in enhancing the push factors

Enabling environments also need to be enhanced in terms of ways in which contributing countries provide climate finance support for the use in recipient countries (“push” factors). Specifically, previous studies and experience of development partners to date show the importance of co-ordination at various aspects such as reducing fragmentation of support (e.g. donors) (GCCA 2013; OECD, 2012) and inter-agency co-ordination among different ministries within a contributing country (e.g. Pickering et al. 2013; OECD 2011; Djankov et al. 2009). Further, enhanced use of innovative sources of climate finance could also be a push factor to further mobilise climate finance (AGF, 2010). The discussion at the LTF raised a point that “clarity on the expected levels of climate finance” could facilitate mobilising climate finance in the 2014-2020 period (LTF, 2014a). However, it is also unclear to what extent the clarity could be provided for the longer-term, given that developed countries may be constrained (e.g. by domestic, annual budget cycles) in making further commitments beyond the USD 100 bn p.a. by 2020 (see also Tyndall, 2014).

Box 4: What could the 2015 agreement do to help Parties enhance the push factors?

- Stressing the need to reduce fragmentation of international climate finance by reiterating the provision in the agreement on the Global Partnership for Effective Development Co-operation, agreed during the 4th High Level Forum on Aid Effectiveness, Busan (2011).
- Encouraging Parties to facilitate inter-agency co-ordination within and between contributing countries.
- Encouraging Parties to further use innovative sources of climate finance in addition to “conventional” public climate finance sources such as Official Development Assistance (ODA).

Stressing the need for reducing fragmentation of international climate finance

The 2015 agreement could take note of, or reiterate, the provision in the agreement of the Global Partnership for Effective Development Co-operation to reduce fragmentation (OECD, 2012). Some research shows that fragmentation of support could result in negative consequences of aid effectiveness (Djankov et al. 2009), and destabilise recipient countries’ institutions (Knack and Rahman, 2007). Experience of the Fast Start Finance (FSF) also shows that a lack of donor co-ordination (together with the weak capacity of some of the governments) made it difficult for some recipient countries to manage new inflows of finance effectively. This is because of the sometimes extensive administrative and reporting requirements to access funding (Pacific Calling Partnership, 2011).

Although Parties have agreed that a significant portion of climate finance will be channelled through the GCF, ways in which the finance is mobilised in a co-ordinated manner are still unclear. Diverse channels including bilateral financing and multilateral financing through international financial institutions are likely to remain in the post-2020 period. In this case, donor co-ordination will also remain important after 2020.

Inter-agency co-ordination within a contributing country

The 2015 agreement could also encourage Parties to enhance co-ordination among government departments and agencies within a partner country, as well as between donor countries. Making public funding decisions on climate finance often engages a range of ministries and other governmental agencies

such as ministries of environment, energy, climate change, finance, economy and industry, and foreign affairs. Thus understanding and co-ordinating intra-governmental dynamics in a contributing country regarding financial decision-making can be an important step to efficiently and effectively mobilise climate finance.

However, it also remains unclear whether or not there could be a specific role for the 2015 agreement in helping Parties co-ordinate work across different agencies, other than providing general encouragement for countries to do so. An analysis by Pickering et al. (2013) shows that different views and interests across public agencies within a contributing country often lead to the disagreement on thematic (i.e. mitigation and adaptation) and geographical balance in mobilising climate finance¹¹. For instance, development ministries tend to be in favour of more adaptation funding given the close links between adaptation and development objectives as well as disaster risk management. On the other hand, environment or economic affair ministries are prone to focus more on mitigation which they could more easily justify on the basis of their own expertise and the interest of industrialised countries in reduced emissions in developing countries (Pickering et al., 2013).

In addition, thematic prioritisation by the 2015 agreement (or specific windows under the FM) on particular objectives of support (e.g. adaptation, capacity building and LDCs/SIDS) might also streamline lengthy discussion among ministries within a contributing country on funding decision making. This is because such prioritisation could be a “guide” for the governmental agencies, which more explicitly shows where more climate finance would be expected to flow. A range of studies show that in general political institutions tend to be “path dependent” because they make alternative actions that deviate from their original mandates more costly over time. Yet, such institutions are more likely to change when they are under external pressures (see also Ovodenko, 2014; Mahoney and Thelen, 2010).

Encouraging the use of innovative sources of climate finance

Innovative sources of climate finance could also be a push factor to further mobilise climate finance. The 2015 agreement could therefore encourage the use of innovative sources of climate finance. In 2010, the UN Secretary General’s High-Level Advisory Group on Climate Finance (AGF) examined various possible innovative sources of climate finance, and concluded that new public sources have the potential to generate flows of “tens of billions of dollars annually (AGF, 2010)”.

Studies based on the AGF’s recommendations have also proposed several potential innovative sources of climate finance. For instance, Conservation International (2012), the WB et al. (2011) and Weaver (2011) suggest and analyse following sources:

- Redirecting fossil fuel subsidies in developed countries.
- Carbon pricing policies that also aim to raise funds for climate finance.
- Market-based instruments in international transport (e.g. aviation and maritime traffic).
- Offset markets – depending on the level of mitigation ambition in countries.
- Financial Transaction Taxes (FTTs) and Currency Transaction Taxes (CTTs).
- Special Drawing Rights.
- Private finance sources.

¹¹ Pickering et al. (2013) conducted the interview survey on inter-agency dynamics and differences in funding decision-making processes in Australia, Denmark, Germany, Japan, Switzerland, the United Kingdom, and the United States.

The agreement could recommend Parties to explore opportunities to obtain funding from innovative sources. This could partly contribute to increasing the outflows of climate finance from contributing countries, in addition to “conventional” climate finance sources such as ODA and concessional loans. However, there are also issues to be addressed for the innovative sources to be taken into account in the new agreement. For instance, political acceptability of using particular types of innovative sources might be an issue for some countries. There might also be a definitional issue on what types of innovative sources could be counted to fulfilment of developed countries financing goals (for further discussion on those issues, see Conservation International 2012; Weaver 2011).

3.4 Enabling environments for technology transfer

Creating enabling environments for transfer of environmentally-sound technology is a prerequisite for such transfer, and will involve a wide range of actors from public and private sectors. A report by the IPCC stresses that delays in technology development and transfer could lead to a lock-in of high emission systems for decades to come (Halsnæs et al., 2007). Technology transfer includes several aspects such as research, development, demonstration and deployment of technologies.

Barriers to technology transfer and diffusion can be caused by multiple issues including economic and market circumstances, regulatory framework, human capacity and awareness of relevant actors. A synthesis report¹² by the SBSTA based on Technology Needs Assessments and National Communications found that economic and market factors as well as human resource factors were the most frequently identified barriers to technology transfer (UNFCCC, 2013). In the dialogue on enabling environments for technology transfer, organised by the TEC in 2013, the World Business Council for Sustainable Development highlighted certain market drivers for the private sector, which include scale of the market, well-developed legal framework (for protecting intellectual property, legal redress if needed etc.) and the capacity to deliver technologies (e.g. supply chains) (TEC, 2013a).

The 2015 agreement could encourage both developed and developing countries to enhance environmentally-sound technology transfer. Technology transfer involves various actors including private manufacturers that develop and produce technologies, international and national public development institutions, institutions that manage intellectual property right issues, public and private financial entities, and governments at various levels, which support research and development. Therefore, the extent to which provisions in the 2015 agreement could directly influence the promotion of technology transfer might be limited. However, the agreement could also indirectly promote technology transfer by encouraging Parties to take the following actions that could enhance enabling environments.

¹² The report is based on 70 Technology Needs Assessments (TNAs) and 39 National Communications from non-Annex I parties.

Box 5: What could the 2015 agreement do to enhance technology transfer?

i) Directly contributing to technology related issues

- Encouraging Parties to consider dedicating certain bilateral or international climate funds for building capacity in developing countries for both (i) absorbing and deploying technologies transferred and (ii) developing and commercialising their own endogenous technologies.

ii) Indirectly contributing to technology transfer at a national policy level

- Encourage Parties to establish, implement and improve domestic legal frameworks and policies needed for giving private entities sufficient confidence to transfer their technologies (e.g. the enhanced rule of law, technical codes, certifications and standards).
- Co-ordinating multiple stakeholders (e.g. financial institutions, manufacturers, research institutions, local stakeholders and CSOs, and public authorities) to develop efficient and effective strategies for large-scale demonstration schemes and roll-out of key technologies.

iii) Indirectly contributing to technology transfer through international institutional arrangements

- Further elaborating the inter-linkages between Technology Needs Assessment (TNAs) and other processes for Nationally Appropriate Mitigation Actions (NAMAs), National Adaptation Plans (NAPs) and National Communications (NCs) (e.g. exchanging quantitative and qualitative information, outputs and policy recommendations from TNAs).

To date, the issue of Intellectual Property Rights (IPRs) have been a sticking point in the UNFCCC climate negotiations. Thus, any text on technology transfer in the 2015 agreement could benefit from being informed by further empirical analyses on possible influence of IPRs on technology transfer. Some developing countries have claimed that IPRs are a barrier to transferring environmentally-sound technologies (e.g. Zhuang, 2011). On the other hand, some developed countries consider that robust policy frameworks to manage IPRs in recipient countries are an enabling factor to technology transfer and innovation (Dechezleprêtre et al. 2013).

4. Financial instruments and tools

A variety of financial instruments and tools are available for supporting mitigation, adaptation and other climate-related activities such as capacity building, and enhancing enabling environments and transparency. In the context of the international negotiations, the 2015 agreement could encourage the use of all relevant financial instruments and tools since which instruments are best suited to targeted types of climate activities can be highly case-specific. Some instruments, such as grants, are particularly useful for capacity building and mobilising financial support for adaptation in the most vulnerable countries. Concessional loans could improve risk-return profiles of projects with greater risks such as large up-front investment requirements. Other tools are better suited for generating interest from the private sector finance in more financially mature markets, such as green bonds and equity provision.

A potentially important tool in the context of the UNFCCC, de-risking interventions can help mitigate risk for investment in developing countries. De-risking can include a wide array of government interventions, including credit enhancement and mitigating currency fluctuations or the risk of default on an investment.

Several recent studies have provided an overview and discussion of financial instruments that are being used to channel and disburse climate finance (e.g. Kaminker, et al. 2014; Lindenberg 2014; Caruso & Ellis 2013; and Venugopal 2012). Building on this previous work, this section considers the application of financial instruments to climate project types, within the context of the UNFCCC climate finance discussions.

4.1 Overview and targeted application of financial instruments and tools

The overarching objective of climate finance in the context of the UNFCCC is to mobilise climate finance for mitigation and adaptation in developing countries. Embedded within this objective, several nuanced aims can be extrapolated (UNFCCC, 2014a), including:

- Targeting adaptation of the most vulnerable countries.
- Enhancing climate-resilient development and climate-risk management.
- Encouraging private finance flows.
- Shifting of investments from ‘brown’ to ‘green’.

Some of these nuanced objectives may require a unique set of financial instruments and tools to address them. The range of available financial instruments and tools is reviewed in table 1, according to how it may be applied to meet climate finance objectives, from the early stage of establishing a local market to the more advanced stage of a mature local financial market. The targeted application notes the project types, country types and technological maturity where the instrument may be the most beneficial. Additional considerations such as transparency and interaction with the private sector are also included in the table. In the early phase of establishing a market for financing of climate action, more direct government intervention may be required, e.g. through the provision of grants or concessional loans for technical assistance and development assistance. Public sector grants and concessional loans are referred to as Official Development Assistance (ODA). These instruments are useful for targeting climate projects where the private sector is not very active, such as capacity building, adaptation activities, and action in the least developed and most vulnerable countries. ODA (grants and concessional loans) to developing countries is transparently measured and monitored through donor reporting to the OECD’s Development Assistance Committee (DAC) Creditor Reporting System, which makes publically available project-level information for every climate-related aid commitment.

Public finance could be usefully provided to mobilise further domestic climate finance in developing countries. Indeed, a recent OECD analysis shows that both bilateral and multilateral development finance has a positive and significant effect on mobilising private finance flows, as have domestic policies (Haščič et al., 2014). Official development finance can directly attract private co-financing for climate activities, support policy reform processes and build local capacity and conditions for sustained climate finance (OECD 2013).

As markets mature for project types, de-risking interventions by the public sector can help attract private sector finance. Examples of de-risking interventions include insurance, credit-enhancement, currency de-risking, and guarantees. The threshold for public sector de-risking interventions is relatively low: because up-front capital is not required for de-risking, it may be easier to sway government decision makers to take actions. However, there is little transparency on how much private sector finance is leveraged through such actions at a global scale. At a project-level, some specific information is available to calculate leveraging, although a variety of definitions and methods are used in practice (Caruso and Ellis, 2013).

When a more mature market exists, traditional financial instruments such as debt and equity are applicable. Projects such as established mitigation technologies in emerging economies might be a suitable target for such instruments. Both debt and equity instruments can attract a significant degree of private sector finance. Determining the amount of private sector finance mobilised, and to which actors it can be attributed, is complex (Caruso and Ellis, 2013). Further, there is a lack of consistent data to track private sector finance (Clapp et al., 2012).

There are a variety of ways in which these instruments can be combined to provide financial support to climate projects. For example, the public sector can play an active role in de-risking debt instruments. A combination of grants or concessional loans with de-risking interventions has been shown to be effective to mobilising private finance in a variety of case studies (Buchner et al., 2012).

Although financing through green bonds is only a fraction of the total bond market, the outstanding value of green bonds is currently 45 billion USD - a value greater than annual ODA for climate-related activities (CBI, 2014a & 2014b). The burgeoning use of green bonds is an interesting application of an instrument for climate and environmental actions that combines elements of public and private sector interactions. Green bonds can be issued by either a public or private sector entity. Governments also have a strong role to play in de-risking bonds, including providing guarantees and supplementing credit ratings. In the current market, 75% of green bonds are government-backed (CBI, 2014b). See Box 2 for further discussion on the application of green bonds in developing countries.

Table 1: Financial Instrument Overview

Type	Financial Instruments and Tools	Mitigation or adaptation	Focus of project types	Local financial market maturity	Development level of countries	Technological maturity	Considerations	
Other	-Grants <i>(for projects/programme)</i>	Both, but may be more critical for adaptation	Projects with low/no tangible profits or revenue streams;	Early market phase	With limited institutional capacities or resources	Early stage of development	<ul style="list-style-type: none"> - Can contribute to enhancing readiness to unlock investment - Can cover/reduce up-front or operating costs, and country contexts, which are too risky - Difficult to determine leveraging of private sector finance (for tracking purposes) - Limited public resources might constrain the extent to which climate finance provision is increased 	
	-De-risking interventions	Both						
Debt	-Loans <i>(Concessional)</i>	Both	Projects with large up-front investment requirements	Established market phase	With greater institutional capacities & resources	Mature/proven (*)		<ul style="list-style-type: none"> - Many debt securities offer fixed returns for a set period of time, thus are attractive for institutional investor - Bonds can be applied to an array of projects across sectors, thus facilitate scaling up (similar to programmatic approach).
	-Loans <i>(Non-concessional)</i> -Debt securities <i>(e.g. Bonds)</i>	Both						<ul style="list-style-type: none"> - Higher investor risk than other instruments - Can be more complicated to track
Equity	- Stock and equity provision	Mainly mitigation	Larger mitigation projects with high risk-return profile	Established market phase	With greater institutional capacities & resources	Mature/proven (*)	<ul style="list-style-type: none"> - Higher investor risk than other instruments - Can be more complicated to track 	
* Equity finance can also be provided for early stage technologies through (e.g.) venture capital funds.								

Source: Based on Kaminker, et al. (2014), Lindenberg (2014) and Buchner et al. (2013).

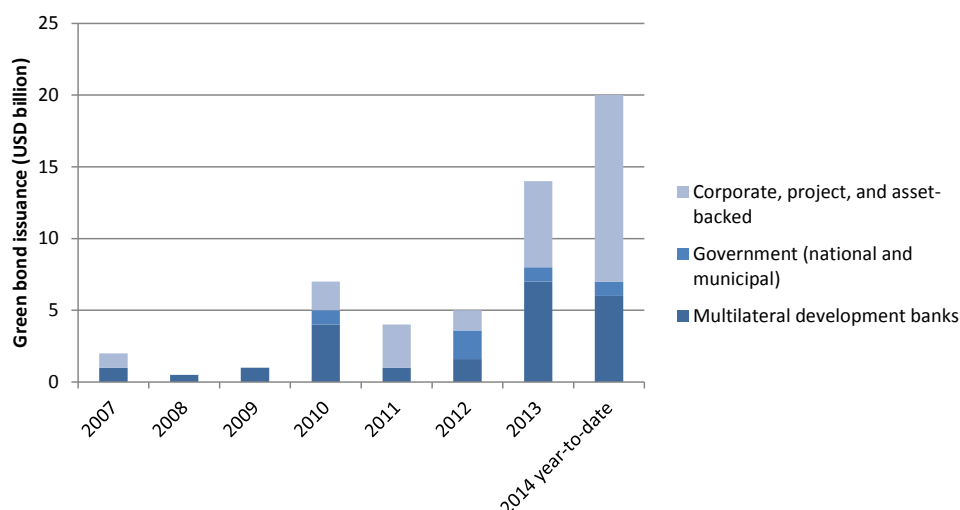
Note: This table represents a selection of financial instruments and tools most applicable to climate activities.

Box 6: The application of green bonds in developing countries

Since the inception of the green bonds with the first World Bank issuance in 2007, the market has grown rapidly. Green bonds have already doubled in issuance in the first half of this year. However, only a fraction of the total bond market - 0.04% - could currently be considered green (Clapp, 2014). If the green bond market is developed with environmental integrity, there is an interesting potential to apply green bonds for financing climate action in developing countries.

Development banks have played a major role in establishing the market to target climate activities in developing countries. Multilateral development banks have dominated the market to date, with issuers including the African Development Bank, the European Bank for Reconstruction and Development, and the World Bank Group.

Green Bond Issuance by Type



Source: Adapted from BNEF (2014), CBI (2014a, b)

Another promising application of green bonds is at the municipal level. Several green bonds have been issued by cities, municipalities, and municipal banks. Although most of the local government bond issuance has occurred in Europe and North America, the city of Johannesburg issued its first green bond in 2014 (equivalent to USD 138 million).

For some adaptation project types, financing through a green bond may be a possibility, if the risk/return profile is attractive to investors. However, the majority of green bonds have targeted mitigation activities, with the exception of the development banks. Recently a bond targeting regional adaptation through water management was issued by the Netherlands Water Bank. Thus, for adaptation or climate-resiliency projects in developing countries that are less profitable, other financial tools such as grants are likely to be more appropriate.

As a relatively new adaptation of a financial instrument, green bonds also face a number of challenges. Large institutional investors are calling for increased liquidity in green bonds to enable trading on a larger scale. From an environmental perspective, the biggest challenge is the lack of green definitions and environmental oversight. There are several institutions that are active in environmental due diligence and working towards definitions and environmental standards in the green bond market. Approximately 60% of the green bonds issued have undergone a 3rd party review of potential environmental impacts of the investments, while the remaining 40% of the market are 'self-labelled' green by the issuer (CBI, 2014b).

4.2 The role of the agreement in using the full range of financial instruments and tools

Considering the full basket of climate activities that need financing in developing countries, financial instruments and tools need to be applied where they can be the most effective in mobilising finance. For adaptation and mitigation activities in least developed countries, the public sector has a strong role to play in providing technical assistance, capacity building and project finance through grants and concessional loans. In the emerging economies, and particularly for mitigation projects, the public sector can facilitate the private sector to take a more active role through the de-risking of financial instruments and tools, and catalysing further domestic investments.

However, it would not be straightforward to consider how the 2015 agreement could stipulate provisions relevant to the use of financial instruments and tools. This is because which instruments are best suited with particular purposes highly depends on targeted types of climate activities as well as the level of market maturity. Nevertheless, the agreement could contribute to the use of the full range of financial instruments and tools by the following

Box 7: What could the 2015 agreement do to encourage the use of full range of financial instruments and tools?

- Explicitly encouraging the use of the full range of relevant financial instruments, tools and vehicles.
- Providing opportunities for information-exchange on the use of financial instruments and tools (especially newer or innovative ones), which could build greater confidence among private investors.
- Encouraging the further involvement of multiple financial instruments/tools and multiple actors (e.g. financial intermediaries, technical experts, civil society organisations and other public and private entities) in financing and implementing a climate action.

Explicitly encouraging the use of the full range of financial instruments, tools and vehicles

If all types of the financial instruments and tools in Table 1 can be counted as mobilised climate finance, governments might further pursue a wider range of public interventions to promote the diverse use of those instruments and tools. For this reason, the 2015 agreement could have a provision that explicitly encourages the use of the full range of financial instruments and tools, in addition to “a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance” that was already taken note of at COP15. The wider range of financial instruments and tools may include grants and non-concessional loans in early-stage projects/programmes, and the wider use of de-risking tools to improve the risk/return profile of projects. Moreover, it might also be argued that leaving “climate finance” undefined in terms of financial instruments used could also contribute to a use the full range of them.

Opportunities for information and knowledge exchange

One option is that the agreement could encourage Parties to share information and knowledge on the utilisation of the financial instruments and tools. For instance, strengthening an institutional arrangement or a forum for such information exchange would benefit countries and private sector investors in terms of understanding in which situation a particular instrument functions effectively. Further knowledge on the cost-effectiveness and associated risks of the instrument (especially newer or innovative instruments) could also inform private sector investors or their gatekeeping investment managers of enhanced opportunities for investment.

In order to facilitate such information sharing, the provisions in the 2015 agreement may be developed on the basis of existing institutional arrangements. These would include the common tabular format for the UNFCCC biennial reporting guidelines for developed country Parties and the guidelines for preparation of biennial update reports from non-Annex I Parties to the Kyoto Protocol. Further, the existing environments for knowledge sharing such as the Long Term Finance in-session workshops, the SCF forums and the Technical Expert Meetings under the ADP could also be a basis for institutional arrangements in the 2015 agreement. Such arrangements would help to share policies, practices and technologies and to identify the most relevant finance instruments.

Encouraging the active involvement of multiple financial instruments/tools and multiple actors

The 2015 agreement could also explicitly encourage the involvement of multiple financial instruments/tools and multiple actors in planning, financing and implementing projects or programmes. Case studies on climate finance interventions that have been scaled up or replicated illustrate that the interventions are most likely successful, if they accurately identify and target all key barriers by involving multiple stakeholders, and if they use multiple financial instruments and tools to deploy environmentally sound goods and services (Kato et al., 2014). For instance, the CHUEE¹³ project in China supported by the IFC and the GEF combined grants and loans to establish and implement a partial guarantee scheme for energy efficiency projects.

There are also cases of scaled up interventions where different types of financial instruments or tools are effectively combined with other forms of public interventions. Those interventions include: among others, information exchange and capacity development (e.g. tea sector energy efficiency and renewable energy in India, and adaptation projects in African and Latin American countries), technical assistance (e.g. energy efficiency programme in China, and geothermal projects in Indonesia), and building and enhancing networks between different actors at different levels (e.g. solar home systems in Bangladesh). For further details of the cases, see Kato et al. (2014).

International financial institutions (IFIs) such as multilateral development banks and bilateral financial institutions are a cornerstone of channelling climate finance (CPI, 2013) through utilising a range of financial instruments and tools. Such instruments include grants, concessional and non-concessional loans, bonds and public direct spending for financial tools (e.g. guarantees and insurance). IFIs are also a 'hub' that connects and co-ordinates different climate funds and institutions. Further, large IFIs may have in-house expertise that allows them to properly analyse risks of promising but unproven technologies or pioneer innovative, through relatively more complex, structured financial products.

¹³ The CHUEE (the China Utility-Based Energy Efficiency Finance Program) is an energy efficiency intervention that includes establishing an institutional set-up for energy efficiency lending in the participating Chinese banks.

5. Enhanced transparency and possible roles of MRV of finance

Increased transparency regarding what levels of climate finance have been mobilised, where it is directed, and the impacts that it has, can help identify successful approaches. This in turn can help identify intervention types with an attractive risk-return profile, and thus help to increase mobilisation of climate finance. An analysis of the Fast-Start Finance also shows that transparency is key to building trust amongst countries (Ballesteros, 2012).

Measurement, reporting and verification, MRV, is an essential element to ensure transparency. Measurement is a technical and political process that can include making definitions on what climate finance flows are to be measured, and identifying and collecting relevant data. Reporting relates to the formats and the processes that make relevant financial information reported by providers of finance available individually or collectively to third parties. Verification covers evaluation activities to ensure that the reported data is correct and accurate and that errors like double-counting are prevented. (GIZ, 2014).

5.1 The current state of play on MRV under the UNFCCC

At present, MRV of climate finance is patchy: there is no definition of the project types, flows and interventions that climate finance encompasses (Clapp et al 2012). Further, not all types of mobilised climate finance (e.g. climate finance leveraged by multilateral funds) are required to be reported (Caruso and Ellis 2013). Reporting of climate finance received is also very patchy (Caruso and Ellis 2013). In addition, there are large data gaps on climate finance flows, particularly for private adaptation finance. Furthermore, methods used by different organisations to track climate finance flows differ, particularly for private climate finance (Caruso and Jachnik 2014, SCF 2014b). Further, the point of measurement of a specific flow is counted as public or private, as well as its geographical origin (Caruso and Jachnik 2014). Moreover, estimating and attributing mobilisation of private finance to specific public interventions and countries raises complex methodological questions. (Caruso and Ellis, 2013; Srivastava and Venugopal, 2014; Haščič and al. 2014)

Thus, despite progress made in the Cancun Agreements (which strengthened MRV provisions, including for MRV of support), there are still remaining challenges and gaps. In order to facilitate MRV-related work for support, the SCF has been mandated by COP to prepare a biennial assessment and overview of climate finance flows (BA). The SCF is also meant to work on the issue of MRV of support beyond the BA given the close inter-linkage between those two issues (SCF, 2014b).

Outside the SCF, work on MRV of support provided under the Convention has been conducted under SBI and SBSTA. For example, work has been done by the Adaptation Committee on the monitoring and evaluation of adaptation, and the Technology Executive Committee has monitored the finance flows with regard to technology transfer and enabling environments (SCF, 2014a).

5.2 The role of an MRV system in the 2015 agreement

The 2015 agreement would need to facilitate the effort by all countries to develop methodologies on what financial flows need to be measured, reported and verified under the 2015 agreement. Such efforts could also influence how it could contribute to mobilising climate finance in the post-2020 period. Ensuring the transparent and accountable use of climate finance would be needed throughout the timeframe from financial commitment to disbursement. Further, information obtained through international and domestic MRV processes itself could also be useful resource for countries and private investors when they make financing decisions. In this regard, an enhanced transparency under the 2015 agreement could contribute to mobilising climate finance in the following different, but possibly interlinked, ways.

Box 8: What could the 2015 agreement do to enhance transparency?

- Encourage further reporting of information on international public climate finance provided to developing countries, as well as the amount of private climate finance that this has mobilised, could help build trust between countries that climate finance is flowing at significant levels and identify promising ways of scaling up mobilised climate finance.
- Using MRV as a tool to generate and disseminate information on results from particular climate finance interventions, instruments or funds. This could facilitate a learning process on how climate finance can be accessed, managed and used in an efficient and effective manner, which in turn may encourage increased use of successful approaches, and therefore greater mobilisation of climate finance.
- Encouraging a balance between costs of and benefits from implementing MRV.

Further elaboration on methodologies MRV of climate finance flows

Contributing countries generally would like to ensure that public climate finance has been used accountably and effectively. Thus, enhancing accurate and cost-effective methodologies especially for measuring and reporting international climate finance flows and their effects would help to build confidence among providers of finance. In addition to the relevant institutions under the UNFCCC, the OECD¹⁴ and other institutions (e.g. MDBs and the Climate Policy Initiative) measure and monitor climate finance from public sources and are working to do so for private sources. An element of MRV in the new agreement could build on the progress in methodological development made by those institutions inside and outside the Convention.

Using MRV as a tool to generate and disseminate information

In order for MRV of support to enable mobilising further climate finance, the 2015 agreement could also encourage Parties to develop the MRV system as a tool not only for measuring and monitoring finance flows but also for communicating useful information on enabling environments. Verification could also help Parties to see whether financial resources have been used effectively and efficiently to support low-carbon and climate-resilient development, in addition to the importance of verifying accuracy and correctness of information (GIZ, 2014; Buchner et al., 2011).

Using MRV as a tool to exchange information may substantially expand the current scope of MRV, thus the progress in this function may be incremental. However, a better MRV system that helps communication could facilitate learning about what and how climate finance interventions or activities are effectively and efficiently implemented. Such MRV system could contribute to aligning the international support and private finance flows with domestic needs of recipient countries. (e.g. Buchner et al., 2011; Berliner et al., 2013)

¹⁴ For further information, see OECD/DAC's work on measuring and monitoring climate-related aid <http://www.oecd.org/investment/stats/rioconventions.htm> , and details of the Joint ENVIRONET-WP-STAT Task Team on improvement of the Rio markers, environment and development finance statistics <http://www.oecd.org/dac/environment-development/statistics.htm#taskteam> and <http://www.oecd.org/env/researchcollaborative/> on the OECD-coordinated Research Collaborative on tracking private climate finance.

The higher level of accountability supported by greater transparency under the 2015 agreement could also help contributors make decisions on allocating the next round of public funding. For instance, implementing agencies and bilateral financial institutions need to report on the rational use of their tax payers' money, which is needed to justify future funding. An enhanced MRV system could provide decision makers with a wider range of information (in terms of quantity or quality, or both) on effectiveness of the climate finance interventions, which could be a trigger for deciding on allocating further climate finance. Moreover, such information would facilitate discussion on inter-agency and inter-donor co-ordinations as discussed in sections 3.2 and 3.3.

Finally, how information on climate finance should be communicated can be different, depending on who uses the information (LTF, 2014b). For instance, the main interest of contributing country governments may be information on progress towards fulfilling the countries' financial goals. On the other hand, practitioners (e.g. project developers, implementing agencies and investors) may be more interested in specific information such as, sources, purposes of interventions, design and plans of activities, and channels through which the money flows (ibid).

The balance between cost and benefits of implementing MRV

As MRV requires resources, an enhanced system for MRV of support would need to be carefully designed so that it avoids perverse incentives and high administrative burdens that can impede efficiently accessing, managing, and using further climate finance. The 2015 agreement could reiterate the necessity for supporting countries, especially LDCs, LLDCs and SIDS to develop capacities to implement MRV. Those countries often lack the sufficient institutional capacity to collect necessary data. Experience from country-led evaluations of aid effectiveness illustrates that, to overcome issues caused by insufficient capacity, some projects and programmes indeed earmarked funding for data collection to monitor and evaluate the initiative (Bedi et al., 2006). Further, the OECD (2013e) also suggested that the SCF further discuss reporting guidelines for financial support received so that the guidelines could play an integral role in a future MRV system.

Given the increasing inter-connectedness of private sector flows (e.g. due to joint ownership of entities), the 2015 agreement may need to recognise that some information may only be able to be estimated at a collective level. For example, (Caruso and Jachnik, 2014) highlight that several databases relevant to climate finance generally do not allow for analysis of private finance simultaneously across multiple dimensions (e.g. sector, public or private, geographic origin and destination) without investing significant time and effort to combine, reconstruct, and re-process data at the level of individual transactions. In some cases (e.g. adaptation finance), even such “post-processing” may not be enough to accurately determine the level of international climate finance mobilised.

6. Initial insights

The majority of climate finance that has been internationally mobilised is private sector finance. Those financial flows may be difficult for the UNFCCC and national governments to influence directly, although both can provide significant indirect influence. Thus the key challenge of climate finance within the context of the international climate negotiations is to consider how the UNFCCC can support mobilisation of climate finance at scale, including to keep the increase in global average temperature below 2 °C above pre-industrial levels, and to support adaptation to climate change in vulnerable countries.

The 2015 agreement could encourage this support in both a direct and indirect manner. In terms of direct support, the 2015 agreement could mandate the operating entities under the Convention (such as the GCF and the GEF), or encourage Parties, to prioritise a certain portion of their funding to specific countries, regions or issues where climate finance is rarely directed autonomously. Such objectives include adaptation, technology transfer, readiness, and actions in countries with limited institutional capacities (e.g. LDCs, LLDCs and SIDS). Indeed, the GCF has established thematic windows for mitigation and adaptation, and started to consider the specific funding for readiness (GCF, 2014a). Indirect ways of contributing to mobilising climate finance could include: encouraging Parties to take up specific policies (e.g. carbon pricing) or to reduce others (e.g. fossil fuel subsidies), encouraging Parties to strengthen enabling environments, encouraging better co-ordination at various levels (e.g. donors, ministries and institutional arrangements), and improving transparency by enhancing MRV systems.

Mobilising climate finance by strengthening enabling environments

In-country enabling environments are an essential basis for attracting and incentivising investment in low carbon and climate resilient development. Therefore the agreement would need to facilitate countries' work on strengthening the push and pull factors for enabling environments. A range of policy and regulatory frameworks can be employed, aligned with national development strategies and sequenced over time. A feedback loop process for periodically revisiting, evaluating and updating policy goals and instruments would help ensure enabling environments remain appropriate and effective. Strengthening

enabling environments may have only indirect effects on mobilising climate finance, since the agreement is unlikely to be specific about what domestic policies that Parties would need to establish. However, these aspects are likely to have positive knock-on effects.

The agreement could also encourage Parties to develop and improve explicit and implicit carbon pricing policies. The former includes emission trading schemes and carbon taxes, while the latter includes feed-in-tariff schemes and phasing out inefficient fossil fuel subsidies. An increasing number of developed and developing countries have introduced carbon pricing policies. In order to help Parties to shift the incentive structure from “brown” to “green”, the agreement could urge Parties to ensure stability of carbon pricing policies and to improve policy coherence across countries.

Mobilising climate finance by enhanced MRV for trust building and information exchange

Enhancing transparency through developing the MRV system under the 2015 agreement is important for building mutual trust between countries. Yet, it would be necessary to strike a balance between the benefits from but costs of MRV. For instance, methodologies to track private climate finance flows are less developed to date, thus the 2015 agreement could urge Parties to strengthen this aspect so as to enhance transparency. Yet, tracking private climate finance mobilised for developing countries is challenging both at the level of individual entities and at the level of individual countries, as it is difficult to define and attribute ownership of many private (or mixed public/private) companies who mobilise such climate finance (Caruso and Jachnik, 2014).

The 2015 agreement could also encourage Parties to develop MRV provisions for obtaining and sharing information on climate finance readiness in countries. Such information could include: what enabling environments are put in place; what institutions are missing, duplicating or not sufficiently functioning; who the main actors are; how they are (or can be better) co-ordinated; and what the effective use of available financial instruments or tools is. The agreement could also encourage countries to highlight (e.g. in their national reports to the UNFCCC) positive and negative lessons learned in climate finance mobilisation and expenditure

The nature of mitigation and adaptation activities is very context-specific, which will affect the efficiency and effectiveness of international climate finance. Thus, it would be important to design information exchange environments or methods, or both, to disseminate and exchange information so that it could be modified to suit with different contexts.

Mobilising climate finance by efficient institutional arrangements at various levels

All Parties in principle would like to spend money efficiently. The 2015 agreement could encourage Parties to identify opportunities to improve efficiency in delivering climate finance. Examples could include enhancing the inter-linkages of international institutional arrangements, inter-agency co-ordination both within a recipient and within a contributing country, and donor co-ordination. Regarding donor co-ordination, the 2015 agreement could stress the need for reducing fragmentation of co-operation, while managing diversity of support, by reiterating the provisions in the agreement of the Global Partnership for Effective Development Co-operation.

There are several existing international institutional arrangements for climate finance under the UNFCCC. The 2015 agreement could encourage further interaction among these institutions (such as the GEF and GCF) with other institutions active in mobilising or using international climate finance. This could help to maximise synergies and minimise duplication of work.

In addition to the discussion on the possible provisions in the 2015 agreement, the process of how the new agreement is developed is also important. There have been an increasing number of fora whereby Parties

and practitioners meet and exchange their views and experiences related to climate finance (e.g. the SCF forums, the Technical Expert Meetings, the Durban Forum on capacity building and the CIF partnership forums). Increasing private sector voices in discussions, even informally, on developing the agreement could help to ensure that private sector viewpoints are usefully taken into account.

Including flexibility in a finance element of the agreement to respond to the changing climate finance landscape

The current circumstances of the Financial Mechanism of the Convention are very different since its early years. There have been significant changes in terms of: the development levels of countries, contributors of (and destinations for) international climate finance, the sources and types of funding available, and the proportion of adaptation finance in public funding (e.g. Gomez-Echeverri and Müller, 2009). For example, several Economies in Transition, as well as some higher-income Non Annex I countries have started to provide climate finance to less developed countries, and South-South climate finance flows are also increasing in some sectors (see e.g. Zadek and Flynn, 2013). There is also an evolution in the use of new and innovative financial instruments and tools such as green bonds and risk-sharing facilities.

Therefore, it will be important that a finance element in the 2015 climate agreement is flexible enough to reflect sometimes rapidly changing circumstances, and encourage and include new sources of, and instruments or tools for, climate finance. This may mean focusing the text in the 2015 agreement itself on issues that are unlikely to change significantly over time (such as the need for enabling environments, transparency etc.), with other issues being covered in e.g. COP decisions.

Concluding remarks

The paper highlights several ways in which the 2015 agreement could facilitate the mobilisation of further climate finance both directly and indirectly. Direct ways could include mandating the operating entities of the Convention, or encouraging Parties, to prioritise the funding for certain objectives where climate finance is rarely allocated autonomously. Such objectives could include technology transfer and diffusion, readiness, and actions in countries with limited capacities. Indirect ways could include encouraging Parties to enhance: enabling environments for climate finance investments; co-ordination at various levels within each country; co-ordination among international institutional arrangements; and transparency of climate finance mobilised and used.

References

- AGF (The U.N. Secretary-General's High-level Advisory Group on Climate Change Financing) (2010), "Report of the Secretary-General's High-level Advisory Group on Climate Change Financing", www.un.org/wcm/webdav/site/climatechange/shared/Documents/AGF_reports/AGF_Final_Report.pdf.
- AF (The Adaptation Fund) (2012), "The Adaptation Fund and Direct Access -Supporting developing countries in undertaking concrete measures to adapt to the adverse effects of climate change", www.adaptation-fund.org/sites/default/files/DirectAccessMemo29_Oct_2012_0.pdf.
- AFB (Adaptation Fund Board), 2012, "Prioritization of Projects in the Pipeline: Submission Dates", www.adaptation-fund.org/sites/default/files/AFB.PPRC_.10.5%20Prioritization%20of%20projects%20in%20the%20pipelines.pdf.
- AFB, 2014, "Adaptation Fund Trust Fund: Financial Report Prepared by the Trustee", [www.adaptation-fund.org/sites/default/files/AFB.EFC_.14.7%20AF%20Trustee%20Report%20at%20December%2031,%202013%20\(w%20cover%20page\).pdf](http://www.adaptation-fund.org/sites/default/files/AFB.EFC_.14.7%20AF%20Trustee%20Report%20at%20December%2031,%202013%20(w%20cover%20page).pdf).
- Arias, G (2014), Personal communication.
- Asian Development Bank (2010), "Financing Partnership Facilities", <http://www.oecd.org/derec/adb/47187256.pdf>.
- Ballesteros, A. (2013), "3 Important Messages from this Week's UNFCCC Workshop on Scaling Up Climate Finance", WORLD RESOURCE INSTITUTE, www.wri.org/blog/2013/09/3-important-messages-week's-unfccc-workshop-scaling-climate-finance.
- Balsiger, J., M. Prys, and N. Steinhoff (2012), "The Nature and Role of Regional Agreements in International Environmental Politics: Mapping Agreements, Outlining Future Research". SSRN Scholarly Paper ID 2170324. Rochester, NY: Social Science Research Network. <http://papers.ssrn.com/abstract=2170324>.
- Bedi. T. A., Coudouel, M. Cox, M. Goldstein and N. Thornton (2006), "Beyond the Numbers: Understanding the Institutions for Monitoring Poverty Reduction Strategies. Washington, DC: World Bank.
- Berliner. A et al. (2013), "How monitoring climate finance can really help", the Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance, <http://fs-unep-centre.org/publications/how-monitoring-climate-finance-can-really-help>.
- BNEF (Bloomberg New Energy Finance) (2014), "Green Bonds Market Outlook 2014", Bloomberg New Energy Finance, 2 June 2014.
- Brown, L. C. Polycarp, and M. Spearman (2013), "Within Reach. Strengthening Country Ownership and Accountability in Accessing Climate Finance." Working Paper. Washington, DC: World Resources Institute, www.wri.org/sites/default/files/Ownership%20and%20Accountability%20Final%20Paper.pdf.
- Buchner, B., J. Brown and J. Corfee-Morlot (2011), "Monitoring and Tracking Long-Term Finance to Support Climate Action", *OECD/IEA Climate Change Expert Group Papers*, No. 2011/03, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k44zcbbj42-en>.
- Buchner, B., T. Heller and J. Wilkinson (2012), "Effective Green Financing: What Have We Learned So Far?", Climate Policy Initiative.
- Buchner, B., M. Herve-Mignucci, C. Trabacchi, J. Wilkinson, M. Stadelmann, R. Boyd, F. Mazza, A. Falconer and V. Micale (2013), "The Global Landscape of Climate Finance 2013", Climate Policy Initiative, <http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2013/>.
- Butzlaff, I, et al. (2013): Regional Agreements to Address Climate Change: Scope, Promise, Funding, and Impacts, Courant Research Centre: Poverty, Equity and Growth - Discussion Papers, No. 152.

- Campiglio, E. (2014), “Beyond carbon pricing: The role of banking and monetary policy in financing the transition to a low-carbon economy” (No. 160), Grantham Research Institute on Climate Change and the Environment.
- Caruso, R. and R. Jachnik (2014), “Exploring Potential Data Sources for Estimating Private Climate Finance”, *OECD Environment Working Papers*, No. 69, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jz15qwz4hs1-en>.
- CBI (Climate Bonds Initiative) (2014a), “Climate Bonds Initiative Blog”, Climate Bonds Initiative, <http://www.climatebonds.net/category/blog/>.
- CBI (2013), “Bonds and Climate Change: The State of the Market in 2013”, HSBC and Climate Bonds Initiative.
- CBI (2014b), “Bonds and Climate Change: The State of the Market in 2014”, HSBC and Climate Bonds Initiative.
- CFAS (Climate Finance Advisory Service) (2014a), “Daily Briefing, 6th SCF Meeting”, 4–5 March 2014, Bonn, <https://germanwatch.org/en/download/8912.pdf>.
- CFAS (2014b), “Daily Briefing, 7th Standing Committee on Finance Meeting”, 16-18 June 2014, <https://germanwatch.org/en/download/9321.pdf>.
- Chuffart, S (2013), “Technology Transfer and Dissemination Under the UNFCCC: Achievements and New Perspectives, Graduate Institute of International and Development Studies (HEI); Columbia Law School - Centre for Climate Change Law, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2294642.
- Clapp, C. (forthcoming 2014), “Climate Finance: Capitalising on Green Investment Trends”, *The Way Forward in International Climate Policy*, Climate Strategies and CDKN.
- Clapp, C., et al. (2012), “Tracking Climate Finance: What and How?”, *OECD/IEA Climate Change Expert Group Papers*, No. 2012/01, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k44xwtk9tvk-en>.
- Clapp, C., G. Briner, and K. Karousakis (2010), “Low-Emission Development Strategies (LEDS): Technical, Institutional, and Policy Lessons”, *OECD/IEA Climate Change Expert Group Papers*, No. 2010/02, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k451mzrnt37-en>.
- Clarke, D. J., and R. V. Hill (2013), “Cost-benefit analysis of the African risk capacity facility” (Vol. 1292), International Food Policy Research Institute.
- Conservation International (2012), “Policy Background: Sources of International Climate Finance”, http://sp10.conservation.org/Documents/CI_Policy_Background_Climate_Finance_Sources.pdf.
- Corfee-Morlot, J., B. Guay and K. Larsen (2009), “Financing Climate Change Mitigation: Towards a Framework for Measurement, Reporting and Verification”, *OECD/IEA Climate Change Expert Group Papers*, No. 2009/06, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k453xh6h4r6-en>.
- Corfee-Morlot, J., et al. (2012), “Towards a Green Investment Policy Framework: The Case of Low-Carbon, Climate-Resilient Infrastructure”, *OECD/IEA Environment Working Papers*, No. 48, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k8zth7s6s6d-en>.
- CPI (Climate Policy Initiative) (2013), “Global Landscape of Climate Finance 2013”, CPI Report, <http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2013/>.
- De Coninck, H., C. Fischer, R. G. Newell, and T. Ueno (2008), “International Technology oriented Agreements to Address Climate Change.” *Energy Policy* 36 (1): 335–356.
- De Sepibus, J., Sterk, W. and Tuerk, A. (2013), “Top-down, bottom-up or in-between: how can a UNFCCC framework for market-based approaches ensure environmental integrity and market coherence?” *Greenhouse Gas Measurement and Management*, 3(1-2), 6-20.
- Dechezleprêtre, A., Glachant, M., and Ménière, Y. (2013), “What drives the international transfer of climate change mitigation technologies? Empirical evidence from patent data”, *Environmental and Resource Economics*, 54(2), 161-178.

- Djankov, S., J. G. Montalvo and M. Reynal-Querol (2009), "Aid with Multiple Personalities." *Journal of Comparative Economics* 37:217–229.
- EBRD (European Bank for Reconstruction and Development) (2013), *DFI Guidance for Using Investment Concessional Finance in Private Sector Operations*, www.ebrd.com/downloads/news/roundtable.pdf.
- Ellis, J., R. Caruso, and S. Ockenden (2013), "Exploring Climate Finance Effectiveness", OECD/IEA Climate Change Expert Group Papers, No. 2013/04, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jzb44nmmbd2-en>.
- G20 (2009), "Leaders' Statement The Pittsburgh Summit"
www.g20.org/sites/default/files/g20_resources/library/Pittsburgh_Declaration.pdf.
- Gaveau, V. and S. Ockenden (2014), "A Stock-take of OECD DAC Members' Reporting Practices on Environment-Related Official Development Finance and Reporting to the Rio Conventions", OECD Development Co-operation Technical Paper.
- GCF (The green Climate Fund) (2013a), "Relationship with UNFCCC and External Bodies",
www.gcfund.net/fileadmin/00_customer/documents/pdf/B-04_14_relations_with_other_bodies_final_19Jun13.pdf.
- GCF (2013b), "Business Model Framework: Initial Result Areas and Performance Indicators", GCF/B.05/02, Green Climate Fund, September 2013.
http://gcfund.net/fileadmin/00_customer/documents/pdf/GCF_B05_02_Initial_Results_PI_fin_20130920.pdf.
- GCF (2014a), "Initial Modalities for the Operation of the Fund's Mitigation and Adaptation Windows and its Private Sector Facility", http://gcfund.net/fileadmin/00_customer/documents/MOB201406-7th/GCF_B07_08_Initial_Modalities_fin_20140512.pdf.
- GCF (2014b), "Investment Framework", GCF/B.07/06, 9 May 2014.
http://gcfund.net/fileadmin/00_customer/documents/MOB201406-7th/GCF_B07_06_Investment_Framework140509__fin_20140509.pdf.
- GCF (2014c), "Initial Proposal Approval Process, Including the Criteria for Programme and Project Funding (Progress Report)",
http://gcfund.net/fileadmin/00_customer/documents/pdf/GCF_B06_Proposal_Approval_Process_fin_20140211.pdf.
- GEF (The Global Environmental Facility) (2002), "Cofinancing", GEF Council October 14-15, 2002,
www.thegef.org/gef/sites/thegef.org/files/documents/C.20.6.pdf.
- GEF (2010), "The System for Transparent Allocation of Resources (STAR)", www.thegef.org/gef/pubs/STAR.
- GEF (2013), "Final Report; The fifth overall performance study", www.thegef.org/gef/sites/thegef.org/files/documents/OPS5-Final-Report-EN.pdf.
- GEF (2014a), "GEF-5 Funding Retrospective", Fifth GEF Assembly May 28 – 29, 2014,
www.thegef.org/gef/sites/thegef.org/files/documents/GEF.A.5.06_GEF-5_Funding_Retrospective_May_14_2014_0.pdf.
- GEF (2014b) "Record Funding for the Global Environment", press release, Paris.
www.thegef.org/gef/Record-Funding-for-Global-Environment.
- GGCA (Global Climate Change Alliance) (2013), "Climate Finance Working Groups Feedback",
www.gcca.eu/sites/default/files/GCCA/working_group_plenary_feedback_climate_finance_-_mr_neil_bird.pdf.
- Gillenwater, M. and S. Seres (2011), "The Clean Development Mechanism: A review of the first international offset program",
www.c2es.org/docUploads/clean-development-mechanism-review-of-first-international-offset-program.pdf.
- GIZ (Gesellschaft für Internationale Zusammenarbeit) (2013), "The Climate Finance Cascade, A NAMA financing mechanism in a nutshell", <http://mitigationpartnership.net/sites/default/files/giz2013-en-climate-finance-cascade.pdf>.
- GIZ (2014), *Measuring, Reporting and Verifying Climate Finance -International state of play and future perspectives*,
<http://mitigationpartnership.net/sites/default/files/giz2014-en-climate-finance-mrv.pdf>.

- Gomez-Echeverri, L., and Müller, B (2009). The Financial Mechanism of the UNFCCC: A brief history. ECBI policy brief, European Capacity Building Initiative.
- Gurría, A (2013), “The climate challenge: Achieving zero emissions”, Lecture by the OECD Secretary-General, London, 9 October 2013, www.oecd.org/about/secretary-general/the-climate-challenge-achieving-zero-emissions.htm.
- Hall, B. H., & Helmers, C. (2013), “Innovation and diffusion of clean/green technology: Can patent commons help?” *Journal of Environmental Economics and Management*, 66(1), 33-51.
- Halsnæs, K., et al. (2007), “Framing issues. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*” [B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, L. A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Haščič I., et al. (2015), “Public Interventions and Private Finance Flows: Empirical Evidence from Renewable Energy financing”, *OECD Environment Working Papers*, No. 80, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5js6b1r9lfd4-en>.
- Hood, C. (2013), “Managing interactions between carbon pricing and existing energy policies, Guidance for Policymakers”, The International Energy Agency, www.iea.org/publications/insights/insightpublications/managinginteractionscarbonpricing_final.pdf.
- IIGCC, INCR, IGCC, UNEP FI & UN PRI (2010), “Global Investor Statement on Climate Change: Reducing Risks, Seizing Opportunities & Closing the Climate Investment Gap”, November 2010, www.unpri.org/files/Globalinvestorstatement.pdf, accessed 6 June 2012.
- JICA (Japan International Cooperation Agency) (2013), “Summary of Mid-term Review: Project of Capacity Development for Climate Change Strategy in Indonesia”, the English version report can be seen from page 43, <http://libopac.jica.go.jp/images/report/12128633.pdf>.
- Kaminker, C. et al. (2013), “Institutional Investors and Green Infrastructure Investments: Selected Case Studies”, *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 35, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k3xr8k6jb0n-en>.
- Kato, T., et al. (2014), “Scaling up and Replicating Effective Climate Finance Interventions”, *OECD/IEA Climate Change Expert Group Papers*, No. 2014/01, OECD Publishing, Paris <http://dx.doi.org/10.1787/5js1qffvmnhk-en>.
- Klein, R.J.T. et al. (2007), “Inter-relationships between adaptation and mitigation”, *Climate Change 2007: Impacts, Adaptation and Vulnerability, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 745-777.
- Knack, S. and A. Rahman (2007), “Donor fragmentation and bureaucratic quality in aid recipients.” *Journal of Development Economics* 83(1):176–197.
- Koplow, D. (2012), “Phasing Out Fossil-Fuel subsidies in the G20, A progress update” www.iisd.org/gsi/sites/default/files/g20lib_oilchange_2012_phasingoutffs.pdf.
- Kossoy, A. et al., (2014) “State and Trends of Carbon Pricing 2014” Washington, DC: World Bank. <https://wdronline.worldbank.com/handle/10986/18415>.
- LEG (LDC Expert Group) (2012), “Best practices and lessons learned in addressing adaptation in least developed countries, vol. 2”, unfccc.int/resource/docs/publications/ldc_publication_bbl1_2012.pdf.
- Lindenberg, N. (2014), “Public Instruments to Leverage Private Capital for Green Investments in Developing Countries”, Deutsches Institut für Entwicklungspolitik (DIE), Discussion Paper, www.die-gdi.de/en/discussion-paper/article/public-instruments-to-leverage-private-capital-for-green-investments-in-developing-countries/.
- LTF (the in-session workshop on Long Term Climate Finance) (2014a), “Long-term climate finance in the period 2014-2020Draft Informal discussion note by the secretariat”, http://unfccc.int/files/cooperation_support/financial_mechanism/long-term_finance/application/pdf/ltf2014_webinar__informal_note_.pdfhttp://unfccc.int/cooperation_support/financial_mechanism/long-term_finance/items/8168.php.

- LTF (2014b) “Video recording on part I”, the UNFCCC Climate Change Conference, Bonn, Germany, the 11th of June 2014, http://unfccc.int/cooperation_support/financial_mechanism/long-term_finance/items/8168.php.
- Mahoney, J., and Thelen, K. (2010), “Explaining institutional change: Ambiguity, agency, and power”, Cambridge: Cambridge University Press.
- Marcu, A. (2014), “The Role of Market Mechanisms in a Post-2020 Climate Change Agreement”, CEPS Special Report No. 87/May 2014. UNSPECIFIED.
- McGray, H., Hammill, A., and Bradley, R. (2007), “Weathering the storm; Options for Framing Adaptation and Development”, Washington DC: World Resources Institute, http://pdf.wri.org/weathering_the_storm.pdf.
- Michaelowa, A (2012), “Strengths and weaknesses of the CDM in comparison with new and emerging market mechanisms”, www.cdmpolicydialogue.org/research/1030_strengths.pdf.
- Montes, M.F. (2012), “Understanding Long-Term Finance Needs of Developing Countries, presentation at UNFCCC”, Bonn, 9 July 2012, https://unfccc.int/files/cooperation_support/financial_mechanism/long-term_finance/application/pdf/montes_9_july_2012.pdf.
- Nakhooda, S., T. Fransen, T. Kuramochi, A. Caravani, A. Prizzon, N. Shimizu, H. Tilley, A. Halimanjaya, and B. Welham (2013), “Mobilising International Climate Finance: Lessons from the Fast Start Finance Period”, ODI, WRI, IGES and OCN, www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8686.pdf.
- Nunnenkamp, P., H. Öhler, and R. Thiele (2013), “Donor coordination and specialisation: did the Paris Declaration make a difference?”, *Review of World Economics*, 149(3), 537-563.
- OECD (2011), *Aid Effectiveness 2011: Progress in Implementing the Paris Declaration*, Better Aid, OECD Publishing, Paris <http://dx.doi.org/10.1787/9789264125780-en>.
- OECD (2012), “The Busan Partnership for Effective Development Cooperation”, www.oecd.org/dac/effectiveness/Busan%20partnership.pdf.
- OECD (2013a), “*Policy Guidance for Investment in Clean Energy Infrastructure - Expanding access to clean energy for green growth and development*”, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264212664-en>.
- OECD (2013b), “Summary Report: OECD roundtable consultation on “Achieving a level playing field for international investment in solar and wind energy””, www.oecd.org/daf/inv/investment-policy/2013-Roundtable-Investment-Solar-Wind-Energy-Summary-Report.pdf.
- OECD (2013c), “LOW-CARBON MEASURES: AN OECD PERSPECTIVE”, www.umweltbundesamt.at/fileadmin/site/presse/news2013/LowCarbonMeasures_anOECDPerspective.pdf.
- OECD (2013d), “Climate and Carbon: Aligning Prices and Policies”, *OECD Environment Policy Papers*, No. 1, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k3z11hjg6r7-en>.
- OECD (2013e), “OECD submission to the Standing Committee on Finance” 31 July 2013, https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/oecd_submission_on_mrv_july_31_2013.pdf.
- OECD (2014a), “*Climate Resilience in Development Planning: Experiences in Colombia and Ethiopia*”, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264209503-en>.
- OECD (2014b), “Update on the OECD’s Work on Climate Finance and Investment”, [www.oecd.org/mcm/C-MIN\(2014\)19-ENG.pdf](http://www.oecd.org/mcm/C-MIN(2014)19-ENG.pdf).
- Ovodenko, A. (2014), “The Global Climate Regime: Explaining Lagging Reform”, *Review of Policy Research*, 31(3), 173-198.
- Pacific Calling Partnership (2011), “Unpacking the “Fast Start Finance” Initiative: A Review”, file:///Users/Takayoshi/Downloads/FastStartFinance_paper.pdf.

- Parry, M. et al. (2009), "Assessing the Costs of Adaptation to Climate Change: A Review of the UNFCCC and Other Recent Estimates." International Institute for Environment and Development (IIED), Imperial College London.
- Pickering et al (2013), "Acting on Climate Finance Pledges; Inter-Agency dynamics and relationships", www.climate-eval.org/sites/default/files/news/Australian%20National%20University%20Study%20in%20Climate%20Finance%201.pdf.
- Prag, A., G. Briner and C. Hood (2012), "Making Markets: Unpacking Design and Governance of Carbon Market Mechanisms" *OECD/IEA Climate Change Expert Group Papers*, No. 2012/03, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k43nhks65xs-en>.
- SCF (The Standing Committee of Finance) (2014a), "Background paper on the linkages with the Subsidiary Body for Implementation and the thematic bodies of the Convention", http://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/scf_background_paper_on_linkages_final.pdf.
- SCF (2014b), "Background paper on the measurement, reporting and verification of support beyond the biennial assessment and overview of financial flows" Seventh meeting of the SCF, June 2014, http://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/mrv_of_support_background_paper_rev_12june_.pdf.
- Srivastava A. and S. Venugopal (2014), Evaluating Methods to Estimate Private Climate Finance Mobilised from Public Interventions, unpublished discussion paper, World Resources Institute, Washington DC, www.oecd.org/env/researchcollaborative/activities.htm.
- TEC (The Technology Executive Committee) (2013a), "Report on the thematic dialogues on enabling environments and barriers to technology development and transfer", http://unfccc.int/ttclear/sunsetcms/storage/contents/stored-file-20130822120401473/TEC%20-%20Report%20of%20the%20thematic%20dialogues%20on%20enablers%20and%20barriers_22Aug.pdf .
- TEC (2013b), "Draft TEC technology policy brief. The results of the TNAs and integration of TNAs with NAMAs and NAPs", http://unfccc.int/ttclear/sunsetcms/storage/contents/stored-file-20130621092831708/TEC%20policy%20brief%20-%20TNA%20results%20and%20interlinkages_final_draft.pdf.
- TEC (2014), "Elements for draft recommendations by the TEC to COP 20 on linkages between the Technology Mechanism and the financial mechanism", <http://unfccc.int/ttclear/pages/ttclear/templates/ttclear/sunsetcms/storage/contents/stored-file-20140804150554843/Linkages%20TM-fm%20draft%20recommendations.pdf>.
- TERI (The Energy and Resources Institute) (2009), "Emerging Asia contribution on issues of technology for Copenhagen", New Delhi, (Project Report No. 2008RS09).
- Terpstra P. (2013), "The Difficulty of Defining Adaptation Finance", World Resource Institute, www.wri.org/blog/2013/10/difficulty-defining-adaptation-finance.
- The Third World Network (2014), "ADP: Call for \$15 billion capitalisation of Green Climate Fund" TWN Bonn update No 14, http://www.twinside.org.sg/title2/climate/news/Bonn13/TWN_update14.pdf.
- UN (1998), "Kyoto Protocol to the United Nations Framework Convention on Climate Change", New York, NY: United Nations.
- UNDESA (UN Department of Economic and Social Affairs)(2009), "Financing Mitigation and Adaptation by Developing Countries", Policy Brief no. 22, New York.
- UNECE (UN ECONOMIC COMMISSION for EUROPE) (2014) "Activities to Support SE4ALL Initiative", www.carecprogram.org/uploads/events/2014/ESCC-Meeting-KGZ/Presentation-Materials/Day-2/005_104_209_Session-VI-UN-Initiatives-Viktor-Badaker.pdf.
- UNEP (2006), "Ways to Increase the Effectiveness of Capacity Building for Sustainable Development", www.unpei.org/sites/default/files/PDF/institutioncapacity/Ways-to-increase-effectiveness-SD.pdf.

- UNEP (2008), "UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) Framework Document", www.un-redd.org/Portals/15/documents/publications/UN-REDD_FrameworkDocument.pdf.
- UNEP (2014), "Aligning the Financial system with Sustainable development", www.unep.org/greeneconomy/financialinquiry/Portals/50215/Inquiry_summary_final%20June%202014.pdf.
- UNFCCC (2007), "Decision 1/CMP.3 Adaptation Fund", <http://unfccc.int/resource/docs/2007/cmp3/eng/09a01.pdf#page=3>.
- UNFCCC (2009), "Report of the Conference of the Parties on its fifteenth session, held in Copenhagen from 7 to 19 December 2009", FCCC/CP/2009/11/Add.1, <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf>.
- UNFCCC (2012), "Report of the Conference of the Parties on its eighteenth session, held in Doha", FCCC/CP/2012/8/Add.1 <http://unfccc.int/resource/docs/2012/cop18/eng/08a01.pdf>.
- UNFCCC (2013), "Third synthesis report on technology needs identified by Parties not included in Annex I to the Convention", <http://unfccc.int/resource/docs/2013/sbsta/eng/inf07.pdf>.
- UNFCCC (2014a), "Reflections on progress made at the fourth part of the second session of the Ad Hoc Working Group on the Durban Platform for Enhanced Action", ADP.2014.3.InformalNote, <http://unfccc.int/resource/docs/2014/adp2/eng/3infnot.pdf>.
- Watson, C, van Rooji, J. and Nakhooda, S. (2013) Understanding Climate Finance Readiness Needs in Zambia, www.cbd.int/financial/climatechange/zambia-climate-giz.pdf.
- Weaver (2011), "Innovative sources of climate finance", <http://tilz.tearfund.org/~media/files/tilz/research/innovative%20sources%20short%20briefing%20paper.pdf>.
- WB (World Bank) (2010), "World Development Report 2010: Development and Climate Change", Washington, DC. <https://openknowledge.worldbank.org/handle/10986/4387>.
- WB, the IMF, the OECD and the Regional Development Banks (2011) "Mobilizing Climate Finance; A Paper prepared at the request of G20 Finance Ministers", <http://www.imf.org/external/np/g20/pdf/110411c.pdf>.
- WB (2013a), "Adaptation Fund Trust Fund Financial Report", http://fifitrustee.worldbank.org/webroot/data/AF_TR_09_13.pdf.
- WB (2013b), "UN Secretary-General Ban Ki-moon and World Bank Group President Jim Yong Kim Outline Plans to Mobilize Financing for Sustainable Energy for All", <http://www.worldbank.org/en/news/press-release/2013/11/27/secretary-general-ban-ki-moon-world-bank-group-president-jim-yong-kim-outline-plans-mobilize-financing-sustainable-energy-for-all>.
- WB (2013c), Mapping Carbon Pricing Initiatives: Developments and Prospects 2013.
- Carbon Finance at the World Bank, Washington DC.
- Zadek and Flynn (2013), "South-Originating Green Finance: Exploring the Potential", the Geneva International Finance Dialogue by UNEP Finance Initiative, Swiss Agency for Development and Cooperation, International Institute for Sustainable Development, www.unepfi.org/fileadmin/documents/South-originating_Green_Finance_01.pdf.
- Zhuang, W. (2011), "Intellectual property rights and transfer of clean energy technologies", Int. J, Public Law and Policy, Vol.1, No. 4, 2011.

GLOSSARY

AC	The Adaptation Committee
ADP	The Ad Hoc Working Group on the Durban Platform for Enhanced Action
AF	The Adaptation Fund
AGF	The U.N. Secretary-General's High-level Advisory Group on Climate Change Financing
AFB	The Adaptation Fund Board
BNEF	Bloomberg New Energy Finance
BA	A biennial assessment and overview of climate finance flows
CB	Capacity building
CBI	Climate Bonds Initiative
CCXG	The Climate Change Expert Group (of the OECD and IEA)
CDM	Clean Development Mechanism
CFAS	Climate Finance Advisory Service
CHUEE	China Utility based Energy Efficiency financing programme (of the IFC)
CIF	Climate Investment Funds
COP	Conference of the Parties (of the UNFCCC)
CPI	Climate Policy Initiative
CSO	Civil Society Organisation
CTCN	The Climate Technology Centre and Network
CTF	Clean Technology Fund (of the CIF)
FM	The Financial Mechanism of the UNFCCC
FSF	The Fast-Start-Finance
FVA	Framework for Various Approaches
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIB	European Investment Bank
ETS	Emission Trading Scheme
EUR	Euros
GCCA	The Global Climate Change Alliance
GCF	The Green Climate Fund
GCFM	The Global Climate Financing Mechanism
GEEREF	the Global Energy Efficiency and Renewable Energy Fund
GEF	The Global Environment Facility
GHG	Greenhouse gas
GIZ	Gesellschaft für Internationale Zusammenarbeit (German development agency)
IFC	International Finance Corporation
IFI	International financial institution
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual Property Right
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau (German development bank)

LCCR	Low-carbon and climate-resilient
LDC	Least Developed Countries
LDCF	The Least Developed Countries Fund
LEG	The Least Developed Countries Expert Group
LTF	The work programme on long-term finance
MDB	Multilateral development bank
NDB	National development bank
NMM	New Market Mechanism
NIE	National implementing entity
ODA	Official Development Assistance
OECD	The Organisation for Economic Co-operation and Development
OECD DAC	The OECD Development Assistance Committee
PPCR	Pilot Program for Climate Resilience (of the CIF)
RIE	Regional Implementing Entity
SBI	The Subsidiary Body for Implementation
SBSTA	The Subsidiary Body for Scientific and Technological Advice
SCCF	The Special Climate Change Fund
SCF	The Standing Committee on Finance
SE4ALL	the Sustainable Energy for All (initiative by the U.N.)
SIDS	Small Island Developing States
SPA	Strategic Priority for Adaptation
TEC	The Technology Executive Committee
TA	Technical assistance
UNDP	United Nations Development Programme
UNECE	UN ECONOMIC COMMISSION for EUROPE
UNEP	United Nations Environment Programme
UNFCCC	The United Nations Framework Convention on Climate Change
USD	United States Dollars
WB	The World Bank
WBCSD	World Business Council for Sustainable Development

www.oecd.org/cc/ccxg.htm

www.iea.org