UNFCCC Standing Committee on Finance

2016 Biennial Assessment and Overview of Climate Finance Flows Report

United Nations
Framework Convention on
Climate Change

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Within the SCF, the 2016 biennial assessment and overview of climate finance flows (BA) was prepared under the guidance of the co-facilitators of the dedicated working group, Outi Honkatukia and Hussein Alfa (Seyni) Nafo. The 2016 BA has benefited from inputs and guidance from the working group and other committee members including: Diann Black-Layne, Purdie Bowden, Georg Børsting, Jozef Buys, Randy Caruso, Kate Dowen, Yorio Ito, Edith Kateme-Kasajja, Stephan Kellenberger, Kyekyeku Yaw Oppong Boadi, Paul Herbert Oquist Kelley, Russell Miles, Bernarditas Muller, Debasish Prusty, Ayman Shasly, Richard Sherman, Mark Storey and Ismo Ulvila.

1) Further information on the technical meetings, including lists of participants, is available at <http://unfccc.int/8034>.

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SUMMARY AND RECOMMENDATIONS BY THE STANDING COMMITTEE ON FINANCE ON THE 2016 BIENNIAL ASSESSMENT AND OVERVIEW OF CLIMATE FINANCE FLOWS

I. Context and mandates

1. The Standing Committee on Finance (SCF) assists the Conference of the Parties (COP) in exercising its functions with respect to the Financial Mechanism of the Convention, including, inter alia, in terms of measurement, reporting and verification of support provided to developing country Parties, through activities such as the biennial assessment and overview of climate finance flows (BA).[1]

2. Subsequent to the 2014 BA, the COP requested the SCF to consider: the relevant work of other bodies and entities on measurement, reporting and verification of support and the tracking of climate finance;[2] ways of strengthening methodologies for reporting climate finance;[3] and ongoing technical work on operational definitions of climate finance, including private finance mobilized by public interventions, to assess how adaptation and mitigation needs can most effectively be met by climate finance.[4] It also requested the Ad Hoc Working Group on the Paris Agreement (APA), when developing the modalities, procedures and guidelines for the transparency framework for action and support, to consider, inter alia, information in the BA and other reports of the SCF and other relevant bodies under the Convention.

3. The 2016 BA outlines improvements made and identifies areas for further improvements in the UNFCCC reporting guidelines and formats for developed and developing countries and for improvements in climate finance tracking and reporting of data producers and aggregators. The BA presents estimates of flows from developed to developing countries, available information on domestic climate finance and South–South cooperation, as well as the other climate-related flows that constitute global total climate finance flows. It then considers the implications of these flows, including composition, purpose and emergent trends relevant to the UNFCCC objectives, including the new goals set out in the Paris Agreement.

4. The 2016 BA comprises this summary and recommendations, and a technical report. The summary and recommendations was prepared by the SCF. The technical report was prepared by experts under the guidance of the SCF, and draws on information and data from a range of sources. It was subject to extensive stakeholder input and expert review, but remains a product of the external experts.

II. Challenges and limitations

5. The 2016 BA presents a picture of climate finance to the extent possible. Due diligence has been undertaken to utilize the best information available from the most credible sources. Challenges were nevertheless encountered in collecting, aggregating and analysing information from diverse sources. The limited clarity with regard to the use of different definitions of climate finance limits comparability of data.

6. There are uncertainties associated with each source of data, and these have different underlying causes. Uncertainties are related to the data on domestic public investments, resulting from the lack of geographic coverage and differences in the way methods are applied, significant changes in the methods for estimating energy efficiency every few years and the lack of available data on sustainable private transport and other key sectors. Uncertainties also arise from the lack of procedures and data to determine private climate finance, methods for estimating adaptation finance, differences in the assumptions of underlying formulas to attribute finance from multilateral development banks (MDBs) to developed countries, the classification of data as ‘green finance’ and incomplete data on non-concessional flows.

1) Decision 2/CP.17, paragraph 121(f).
2) Decision 1/CP.18, paragraph 71.
3) Decision 5/CP.18, paragraph 11.
4) Decision 3/CP.19, paragraph 11.

7. The limitations outlined above need to be taken into consideration when deriving conclusions and policy implications from this BA. The SCF will contribute, through its activities, to the progressive improvement of the measurement, reporting and verification of climate finance information in future BAs, to help address these challenges.

III. Key findings

A. Methodological issues relating to measurement, reporting and verification of public and private climate finance

Improvements made in tracking and reporting of climate finance since the 2014 biennial assessment and overview of climate finance flows

8. Following the recommendations made by the SCF in the 2014 BA, the 2016 BA identifies the improvements listed below in the tracking and reporting of information on climate finance:

Developed countries

(a) Enabling Parties to provide additional information on their underlying definitions, methodologies and assumptions used, including on how they have identified finance as being "climate-specific", as well as making these data more accessible to the public and recipient Parties, thereby enhancing consistency and transparency;
(b) Improving guidance on application of the Rio Markers for adaptation and mitigation and adjustments to the Rio Marker definitions for adaptation;

International organizations

(c) Making available MDB and multilateral climate fund activity-level data through the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD);
(d) Applying common principles for tracking mitigation and adaptation finance by MDBs and International Development Finance Club (IDFC) members;
(e) Making available data on climate co-financing flows through utilization of a joint methodology for tracking public and private climate co-finance by a consortium of seven MDBs.

Insights into reporting by developed countries and developing countries

9. The current biennial report (BR) guidelines[5] were designed to accommodate reporting on a wide range of climate finance instruments and activities. This required a reporting architecture that was flexible enough to accommodate a diversity of reporting approaches. In some cases, limited clarity with regard to the diversity in reporting approaches limits comparability in climate finance reporting. Further improvements in reporting guidelines and formats are needed to enhance transparency on the approaches used by individual Parties and to enable greater comparability across reporting by Parties.

10. Current biennial update report (BUR) guidelines[6] for reporting by developing countries on financial, technical and capacity-building needs and support received do not require information on the underlying assumptions, definitions and methodologies used in generating the information. Limited institutional capacity to track climate finance received, as well as the lack of data, can pose challenges in developing country reporting.

Insights into broader reporting aspects

11. Information on domestic climate-related finance is available including through a few BURs, Climate Public Expenditure and Institutional Reviews (CPEIRs) and other independent studies. However, such information is difficult to compare.

12. There is a lack of systematic collection of data on climate-related private finance flows globally, due to difficulties in identifying climate-related finance, restrictions based on confidentiality, and conceptual and accounting issues. The primary sources cover mainly renewable energy and draw upon industry and sector databases, relying on voluntary disclosures. Efforts to develop methodologies for estimating mobilized private finance by public interventions are under way by the OECD DAC and the Research Collaborative on Tracking Private Climate Finance.

13. Ongoing efforts at the international and national levels aimed at improving climate-related financial risk disclosures are important for improving the transparency and promoting the alignment of finance and investment flows in accordance with Article 2.1(c) of the Paris Agreement.

5) Decision 2/CP.17.
6) Ibid.

Insights related to review of climate finance information

14. Practices exist within the UNFCCC to review the information on support provided by Parties, including the international assessment and review of BRs and the international consultation and analysis of BURs. However, there are no internationally agreed methods for reconciling financial support provided against support received. Also, MDBs and IDFC do not have a standard procedure to review their climate finance data. In addition, BRs are not reviewed in time for aggregating data for the BAs.

B. Overview of current climate finance flows in 2013–2014

Flows from developed to developing countries as reported in biennial reports

15. USD 25.4 billion in 2013 and USD 26.6 billion in 2014 of climate-specific finance was reported in BRs, of which USD 23.1 billion in 2013 and USD 23.9 billion in 2014 was channelled through bilateral, regional and other channels (see Figure 1). This represents an increase of about 50% from public finance reported through the same channels in 2011–2012.

Multilateral climate funds

16. USD 1.9 billion in 2013 and USD 2.5 billion in 2014 was channelled through the UNFCCC funds and multilateral climate funds on the basis of their financial reports. Although this is a small share of the total climate finance, information on their activities is mostly complete.

Climate finance from multilateral development banks

17. Climate finance provided by MDBs to developing countries from their own resources was reported as USD 20.8 billion in 2013 and USD 25.7 billion in 2014. The methodology used in the 2014 BA to attribute MDB finance from developed countries to developing countries suggests that USD 11.4 billion in 2013 and USD 12.7 billion in 2014 was delivered by developed countries. A more advanced methodology, which captures better the mobilization effect through the MDBs, suggests that USD 14.9 billion in 2013 and USD 16.6 billion in 2014 can be attributed to developed countries.

Private climate finance

18. The major source of uncertainty regarding flows to developing countries relates to the amount of private climate finance provided. Initial partial estimates of direct and mobilized private finance are available. Based on project-level data, renewable energy finance by developed country companies in developing countries is estimated at USD 1.8 billion in 2013 and USD 2.1 billion in 2014. Foreign direct investment in greenfield alternative and renewable energy in developing countries was estimated at USD 26.4 billion in 2013 and USD 21.6 billion in 2014. Both estimates are likely to be conservative. OECD and the Climate Policy Initiative (CPI) compiled an initial partial estimate of private finance mobilized by developed countries and identified USD 12.8 billion in 2013 and USD 16.7 billion in 2014 of private co-finance. These figures include private finance mobilized from international sources in addition to private finance mobilized domestically in developing countries. These partial estimates of direct private finance and mobilized finance are distinct, and cannot simply be aggregated.

Instruments

19. The mix of instruments used to channel support differs by funding source (see table 1). About 35% of the bilateral, regional and other finance reported to the UNFCCC in BRs is spent as grants, 20% as concessional loans, 10% as non-concessional loans, and the remainder through equity and other instruments. About 38% of the reported finance is channelled through multilateral institutions, many of whom are MDBs that utilize capital contributions and commitments from member countries to raise low-cost capital from other sources of funding, including for donor contributions. This enables MDBs to offer a range of instruments and financial products, including grants (9%), loans, including concessional loans, (83%), equity (2%) and other instruments (6%). About 53% of funding from multilateral climate funds is provided as grants, and the remainder is largely concessional loans, which have increased as a share of approved funding over time. 49% of bilateral climate finance reported to the OECD is provided as grants, and 47% as concessional loans.

Recipients

20. Climate finance goes to a wide range of governmental, private and non-governmental entities in recipient countries. However, reporting on recipient institutions is incomplete. For example, recipient data are available for about 50% of the bilateral finance reported to the OECD DAC. For 2013–2014, developing country governments are specified as the recipients of about 40% of the total flow. Climate finance channelled through other intermediaries may also reach national governments, but this is not captured in the data. Improving data on the recipients of climate finance could be an area for further work.

Global finance flows

21. On a comparable basis, global total climate finance has increased by almost 15% since 2011–2012. In dollar terms estimated global total climate finance increased from a high bound estimate of USD 650 billion for 2011–

2012 to USD 687 billion for 2013 and to 741 billion for 2014. Private investment in renewable energy and energy efficiency represents the largest share of the global total; however, the energy efficiency data are much less certain than the renewable energy data. Levels of finance have increased as the costs of clean technology have continued to fall. The coverage of data in the 2016 BA has increased and improved since the 2014 BA, but nevertheless the quality and completeness of data on global total flows are lower than those for flows to developing countries.

22. The estimate of global total climate finance in the 2016 BA includes adjustments to the CPI estimate that were not part of the 2011–2012 estimate reported in the 2014 BA. Partial data on domestic public finance expenditures of USD 192 billion per year were compiled. If these additional adjustments are included, they raise the upper end of the range to USD 880 billion in 2013 and USD 930 billion in 2014. However, the volume of the climate-related finance and investment flows globally may be higher, given that there are still significant data gaps in critical sectors such as sustainable transportation, agriculture, energy efficiency and resilient infrastructure.

23. *Domestic climate finance:* Comprehensive data on domestic climate expenditures are not available. Limited information is included in the BURs; estimates of climate-related finance included in national budgets, domestic climate finance provided by national development banks and commitments by developing country national climate funds. These indicative estimates suggest flows of USD 192 billion per year in developed and developing countries.

24. Some studies suggest that most climate finance in aggregate is mobilized and deployed domestically, both in developed and developing countries. In the limited number of developing countries for which information on domestic public climate finance is available, the data suggest that, in these countries, domestic public finance significantly exceeds the inflows of international public climate finance from bilateral and multilateral sources.

25. *South–South cooperation:* Data are limited, and mainly sourced from the OECD DAC, complemented with reports from a small number of other countries. On this basis, South–South cooperation was estimated to be in the range USD 5.9–9.1 billion for 2013 and USD 7.2–11.7 billion for 2014, of which about half was channelled through multilateral institutions.

C. Assessment of climate finance flows

26. An assessment of the data underlying the overview of climate finance flows offers insights into key questions of interest in the context of the UNFCCC negotiations, including support for adaptation and mitigation, levels of finance for different regions and how finance is delivered. Key features of different channels of climate finance for developing countries are summarized in table 1.

27. Mitigation-focused finance represented more than 70% of the public finance in developing countries reported in 2013 and 2014. Adaptation finance provided to developing countries accounted for about 25% of the total finance. This is similar to 2011–2012, although there has been a slight increase in the proportion of adaptation finance from climate funds and bilateral concessional channels. More than 80% of MDB investments focused on mitigation, and less than 20% on adaptation.

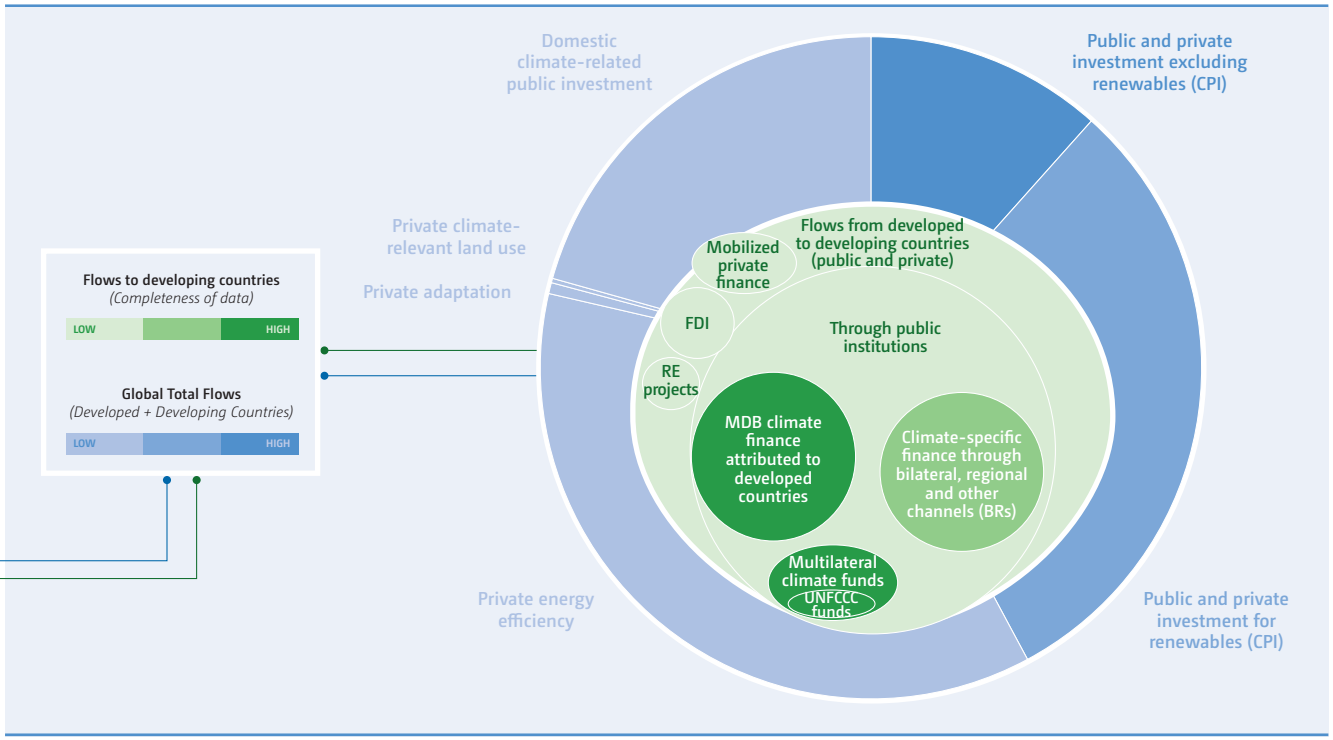
28. There has been a significant role for grants in adaptation finance. Grants represent 88% of adaptation finance approved climate funds and 56% of the bilateral finance reported to the OECD DAC with adaptation as a principal objective. Some least developed countries and small island developing States in Africa and Asia have been among the largest recipients of adaptation finance.

29. About 33% of funding from dedicated climate funds, 42% of climate-related finance in the OECD DAC and 31% of climate finance reported by MDBs is for Asia, often in countries with attractive investment climates. This funding has largely supported mitigation, including REDD-plus[7], reflecting the significant greenhouse gas (GHG) emissions from the region. About 21% of finance from dedicated multilateral climate funds, 28% of climate-related finance in the OECD DAC and 15% of MDB climate finance is directed to African countries. There has been a growing emphasis on adaptation in this finance. About 23% of funding from dedicated multilateral climate funds, 15% of climate-related finance reported to the OECD DAC and 16% of the climate finance reported by MDBs is directed to Latin America and the Caribbean.

30. There are costs associated with fund management, project development and implementation. These

7) In decision 1/CP.16, paragraph 70, the COP encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.

Figure 1: Climate finance flows in 2013–2014 (USD billion and annualized)



Abbreviations: BR = biennial report, CPI = Climate Policy Initiative, FDI = foreign direct investment, MDB = multilateral development bank, RE = renewable energy.

Note: Figure is not to scale, but seeks to show the relative size of flows. Flows to developing countries are a subset of global total flows.

		2013 (USD billion face value)	2014 (USD billion face value)	Sources of data and relevant chapter n the technical report
Flows to developing countries 2013–2014 average total **Public:** USD 41 billion **Private:** USD 2 billion renewables USD 24 billion FDI USD 14.8 billion mobilized	**UNFCCC funds**[a]	0.6	0.8	Chapter 2.2.1 Fund financial reports, climate funds update
	Multilateral climate funds (including UNFCCC funds)	1.9	2.5	Chapter 2.2.2 Fund financial reports, climate funds update
	Climate-specific finance through bilateral, regional and other channels	23.1	23.9	Chapter 2.2.3 CTF table 7(b)
	Of which grants and concessional loans	11.7	12.4	Chapter 2.2.3 CTF table 7(b)
	MDB climate finance attributed to developed countries (own resources only)[b]	14.9	16.6	Chapter 2.2.5 MDB climate finance reporting
	Renewable energy projects[c]	1.8	2.1	Chapter 2.2.9 CPI landscape of climate finance, BNEF
	FDI in greenfield alternative and renewable energy	26.4	21.6	Chapter 2.2.9 CPI landscape of climate finance, fDi Intelligence
	Mobilized private finance[d]	12.8	16.7	Chapter 2.2.9 OECD CPI report 2015
Global total flows (inclusive of flows to developing countries above) 2013–2014 average total USD 714 billion	**Public and private investment excluding renewables (CPI)**	95–102	102–112	Chapter 2.4.1 CPI landscape of climate finance
	Public and private investment for renewables (CPI)	244	285	Chapter 2.4.2 BNEF, CPI landscape of climate finance
	Private energy efficiency	334	337	Chapter 2.4.3 IEA energy efficiency market report
	Private sustainable transport	Not available	Not available	Chapter 2.4.4
	Private climate-relevant land use	5	5	Chapter 2.4.5 CPI land-use studies
	Private adaptation	1.5	1.5	Chapter 2.4.6
	Domestic climate-related public investment	192	192	Chapter 2.4.7 CPEIRs (UNDP, World Bank ODI), GFLAC climate finance studies, BURs

Abbreviations: BNEF = Bloomberg New Energy Finance, BUR = biennial update report, CPEIR = Climate Public Expenditure and Institutional Reviews, CPI = Climate Policy Initiative, CTF = common tabular format, FDI = foreign direct investment, GFLAC = Climate Finance Group for Latin America and the Caribbean, IEA = International Energy Agency, MDB = multilateral development bank, ODI = Overseas Development Institute, OECD = Organisation for Economic Co-operation and Development, UNDP = United Nations Development Programme.

[a] Includes commitments approved during 2013 and 2014. Almost all contributions are contributed by Annex II Parties. The values do not reflect pledges to the Green Climate Fund amounting to USD 10.2 billion by the end of 2014. [b] From Annex II Parties to non-Annex I Parties. Values are derived by excluding climate finance to Annex I Parties from the total climate finance provided by MDBs from their own resources to arrive at climate finance provided to non-Annex I Parties, and by attributing 85% of this to Annex II Parties. [c] From Annex II Parties to non-Annex I Parties. [d] From Annex II Parties as well as the Czechia, Poland, Slovakia and Slovenia.

Table 1: Characteristics of public finance in developing countries for 2013–2014

	Average (2013 and 2014 in billion USD)	Purpose (%)			Implementing entities	Instrument (%)				
		Adaptation	Mitigation	Cross-cutting		Grants	Loans	Concessional Loans	Equity	Other
UNFCCC funds[a]	0.7	50	50		United Nations agencies, MDBs, bilateral development agencies, accredited national institutions, NGOs and private banks / funds	100				
Multilateral climate funds (including UNFCCC funds listed above)	2.2	27	70	3	MDBs, United Nations agencies and bilateral development finance institutions	53		47		
Climate-related bilateral[b]	14.9–25.3	27	53	20	Bilateral development finance agencies (e.g. GIZ, DFID, USAID, NORAD)	49	2[c]	47	2[c]	
MDB climate finance	15.8	18	82		MDBs	9		83	2	6

Note: All values are based on approvals.

Abbreviations: DFID = Department for International Development, GIZ = Deutsche Gesellschaft für Internationale Zusammenarbeit, MDB = multilateral development bank, NGO = non-governmental organization, NORAD = Norwegian Agency for Development Cooperation, USAID = United States Agency for International Development.

[a] Adaptation Fund, Global Environment Facility, Special Climate Change Fund and Least Developed Countries Fund. No Green Climate Fund projects were approved during 2013–2014.
[b] The values for bilateral finance are based on biennial report data for table 1 in this document. The percentages for bilateral climate finance in this table are based on Organisation for Economic Co-operation and Development data due to data availability.
[c] Not primarily development or concessional. One per cent of the equity reported is concessional equity.

costs are recovered through mechanisms including administrative budgets and implementing agency fees, which vary across funds and institutions. Administrative costs range from less than 1% to nearly 12% of the approved funding. The actual costs are not necessarily proportional to the volumes of finance approved for projects.

31. A broad range of issues can present challenges in accessing climate finance, including: low levels of technical capacity to design and develop projects/programmes and to monitor and evaluate progress; difficulties in following the procedures of the funds to access finance; and low levels of awareness of the need for action and available sources of funding. Several efforts to strengthen "readiness" to access and make use of climate finance are now under way, and the Green Climate Fund (GCF) has recently stepped up its efforts in this regard. Investment in domestic capacity to structure and attract a range of sources of finance is also needed.

32. Ownership of climate finance and alignment of this finance with national climate change priorities and emerging policies and strategies is well recognized as an important element for ensuring effectiveness. Another important dimension is engagement of key stakeholders across government, particularly ministries of finance and planning, and across society, including civil society and the private sector. Most intended nationally determined contributions (INDCs) submitted by developing country Parties outlined, in varying levels of detail, the estimated financial costs of the future emission reduction and climate adaptation scenarios they describe. In general, methodologies used to estimate financial needs or definitions of scope were not specified, and differed substantially. Beyond INDCs, few efforts to assess national or global climate finance needs have been completed since the 2014 BA. INDCs may provide a framework for strengthening ownership in the future.

33. Impact monitoring systems are beginning to mature, although reporting of results remains nascent and relatively slow. GHG emission accounts are a primary metric of impact and effectiveness used for climate finance mitigation, often complemented with relevant output data such as the volume of installed clean energy or reductions in energy consumption. Consistency of methodologies for GHG accounting continues to be a challenge, though progress has been made by development finance institutions, which have adopted common principles.

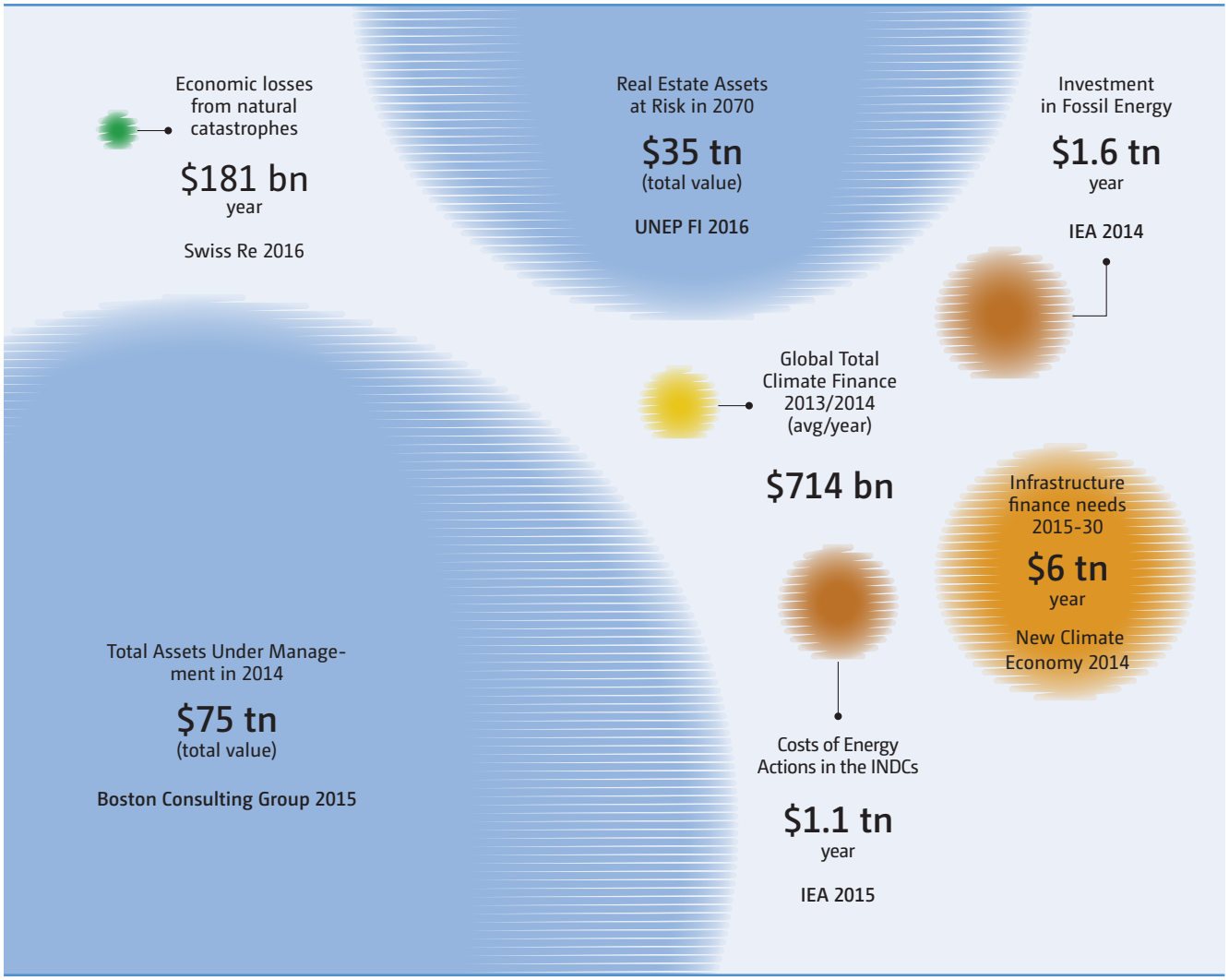
34. Most adaptation interventions seek to identify the specific number of people that are likely to benefit from

the proposed interventions, either directly or indirectly in terms of increased resilience. Ensuring the accuracy of estimates can be challenging, due to difficulties in identifying beneficiaries, establishing baselines and data collection, and defining and tracking resilience over time to what may be slow onset, or 1-in-100 or 1-in-500 year events.

35. Many funders use co-financing as best available evidence of private finance mobilization, and many climate funds use leverage ratios as one of their key results indicators. However, co-finance does not necessarily equate to mobilization, which is often used to imply a more causal relationship between public intervention and associated private finance, which is more complex to prove. High leverage ratios may not always indicate an effective use of public finance, as ratios can also be high in interventions that are the most commercially viable.

36. The 2016 BA identified climate-related global climate finance flows of USD 714 billion on average in 2013-2014 (see figure 1); this is a significant amount, but is relatively small in the context of wider trends in global investment (see Figure 2). For example, while investment in clean energy is rising, volumes of finance for high carbon energy in all countries remain considerably higher. Infrastructure and assets are at risk from the impacts of climate change, with serious potential consequences for the global economy.

Figure 2: Global climate finance in context



Note: This figure seeks to put the total volume of global finance flows in the context of wider trends in global investment. The flows featured on this diagram are not strictly comparable, and are presented for illustrative purposes only. Full details of the underlying studies are included in Chapter 3 of the 2016 BA.

Abbreviations: avg = average, bn = billion, IEA = International Energy Agency, INDC = intended nationally determined contribution, tn = trillion, UNEP FI = United Nations Environment Programme Finance Initiative, $ = United States dollar.

IV. Recommendations

37. The SCF invites the COP to consider the following recommendations:

(a) Invite Parties, the APA, the Subsidiary Body for Scientific and Technological Advice, the Subsidiary Body for Implementation and other relevant bodies under the Convention to consider the 2016 BA, particularly its key findings, in order to improve guidelines for the preparation and reporting of financial information,[8] as well as to develop the modalities, procedures and guidelines, as appropriate, for the transparency of support in accordance with Articles 9 and 13 of the Paris Agreement;

(b) Request the SCF, in fulfilling its function on measurement, reporting and verification of support, and in the context of its workplan, to cooperate with relevant institutions and experts and to consider ongoing work under the Convention;

Engaging with international organizations and the private sector

(c) Encourage climate finance providers to enhance the availability of granular, country-level data and for the UNFCCC secretariat to make such information more accessible, including via enhanced web-based data platforms;

(d) Encourage relevant institutions and experts, including from the private sector, to devise practical options for estimating and collecting data on private climate finance, taking into consideration ongoing work by the OECD Research Collaborative on Tracking Private Climate Finance and by MDBs;

Ownership, needs and impact

(e) Encourage developing countries to take advantage of the resources available through the operating entities of the Financial Mechanism to strengthen their institutional capacity to programme their priority climate actions as well as to track and report climate finance;

(f) Request the SCF in preparing future BAs to assess available information on investment needs and plans related to Parties' nationally determined contributions and national adaptation plans;

(g) Encourage Parties and relevant international institutions to enhance the availability of information that will be necessary for tracking global progress on the goals outlined in Article 2 of the Paris Agreement;

(h) Invite the Board of the GCF to consider information in the BA in its annual dialogues with climate finance delivery channels in order to enhance complementarity and coherence between the GCF and other funds at the activity level;

(i) Invite multilateral climate funds, MDBs, other financial institutions and relevant international organizations to continue working to further harmonize methods for measuring climate finance and to advance comparable approaches for tracking and reporting on impacts.

8) This includes enhanced information on: sectors, financial instruments, the methodology used for reporting financial support through bilateral channels, the methodology used to identify climate-specific portions of public financial support through multilateral channels, and disaggregated data at the activity level.

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INTRODUCTION

1. Background and objectives

1. This report is the second biennial assessment and overview of climate finance flows (BA). The 2016 BA comprises a summary and recommendations prepared by the Standing Committee on Finance (SCF) and submitted to the Conference of the Parties (COP), at its twenty-second session, and this technical report that was prepared by external experts under the guidance of the SCF.

2. The basis for preparing the 2016 BA was mandates given to the SCF by the COP. In addition, the 2016 BA was prepared with due consideration to the outcomes of the historic Paris Agreement, particularly:[2]

- The transparency and consistency of information on support for developing countries provided and mobilized through public interventions biennially in accordance with the modalities, procedures and guidelines of the enhanced transparency framework established by the Paris Agreement;[3]
- The purpose of the framework for transparency of support to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions under Articles 4, 7 and 9–11 of the Paris Agreement, and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake under Article 14 of the Paris Agreement.[4]

3. The Paris Agreement also identifies "making finance flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development"[5] as one of the ways for enhancing the implementation of the Convention, including its objective, and strengthening the global response to the climate change threat, in the context of sustainable development and efforts to eradicate poverty. Against this background, the SCF, in preparing the 2016 BA, has also sought to contribute to developing an understanding of the climate finance flows in the broader context.

4. The specific objectives of this report include to:

- Take stock of efforts aimed at improving the methodologies used for measuring, reporting and verifying public and private finance flows – including the use of operational definitions of climate finance and limitations of methodologies – following recommendations made in the 2014 BA;
- Provide an overview of global climate finance flows, particularly finance flows from developed to developing countries as well as other climate-related finance flows based on available data;
- Identify data gaps as well as ways to strengthen, enhance and improve methodologies for reporting and verifying financial information;
- Consider implications of climate finance flow, including composition, purpose and emergent trends relevant to the objectives of the Convention, including the new goals set out in the Paris Agreement.

2. Scope

5. This report focuses on climate finance flows for the years 2013 and 2014. It draws from a wide range of sources of information, including but not limited to biennial reports (BRs) and biennial update reports (BURs), and supplemented with other data from the Organisation for Economic Co-operation and Development (OECD), international financial institutions (IFIs), United Nations organizations, non-governmental organizations (NGOs) and the private sector. Data from these organizations enhance the comprehensiveness of this report and provide further insights into climate finance flows.

6. The report outlines improvements made in reporting on climate finance to the United Nations Framework Convention on Climate Change (UNFCCC) and to other institutions over the last two years, and identifies areas for further improvements in: the UNFCCC reporting guidelines and formats for

2) Decisions 2/CP.17, paragraph 121(f), 1/CP.18, paragraph 71, 5/CP.18, paragraph 11, and 3/CP, paragraph 11.

3) Article 9, paragraph 7. In decision 1/CP.21, paragraph 94(e), the COP requested the Ad Hoc Working Group on the Paris Agreement, when developing the modalities, procedures and guidelines referred to in paragraph 91 in the same decision, to consider, inter alia, information in the BA and other reports of the SCF and other relevant bodies under the Convention.

4) Article 13, paragraph 6.

5) Article 2, paragraph 1(c).

developed and developing countries; ways for reviewing information; and climate finance tracking and reporting of data producers and aggregators. The BA presents estimates of flows from developed to developing countries, available information on domestic and South–South climate finance and other climate-related flows that constitute global total climate finance flows. The former includes flows from Parties included in Annex II to the Convention (Annex II Parties) to fulfil their commitments under the Convention to assist developing countries in addressing climate change. The BA then considers the implications of these flows, including composition, purpose and emergent trends relevant to the objective of the Convention, including the new goals set out in the Paris Agreement.

3. Challenges and limitations

7. While the 2016 BA has benefited from ongoing improvements in the quality and coverage of data, there is still no comprehensive system for tracking all climate-related finance flows. Due diligence has been undertaken to utilize the best data and information available from the most credible sources.

8. This BA encountered challenges in collecting, aggregating and analysing information from diverse sources. For example, most of the data for 2013 and 2014 were produced before ongoing efforts aimed at harmonization of reporting approaches by data producers and aggregators gathered pace, in response to the recommendations made by the SCF in the 2014 BA. Furthermore, at the time of preparing the 2016 BA, methodologies for measuring mobilized private finance by public interventions were nascent, thereby posing challenges in collecting data on private finance. The wide range of delivery channels and instruments used for climate finance continues to pose a challenge in quantifying and assessing finance. These limitations need to be taken into consideration when deriving conclusions and policy implications from this report.

4. Approaches used in the preparation

9. This technical report is a metadata study. It draws on existing analytical work and available data on climate finance flows.

The term "climate finance" as used in this report

10. As was the case with the 2014 BA, the term "climate finance" refers to the financial resources devoted to adapting to and mitigating climate change globally and to financial flows to developing countries. Global climate finance is important to make progress towards the objective of the Convention and the goals set out in the Paris Agreement, such as holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.

Work undertaken to improve the quality and coverage of data

11. Additional work was undertaken with a view to improve the quality and coverage of the data with the objective of contributing to the progressive improvement of measurement, reporting and verification of climate finance information. The following activities were undertaken with the support of external expertise:

- Data gap analysis and identification of areas of improvements;
- Harmonization of data sets used for estimating the global total to minimize misalignment between data reported according to fiscal and calendar years;
- A survey aimed at collecting new climate finance data for 2013 and 2014 that were not captured previously.

Approach taken in organizing information and data

12. Climate finance data were classified as follows:

- Climate finance flows from developed to developing countries. This report focuses on climate finance provided and mobilized through bilateral and multilateral channels in the period 2013–2014, including through the operating entities of the Financial Mechanism of the Convention. The report draws from the second BR (BR2) common tabular format (CTF) tables, the reports of multilateral climate funds and the joint report on multilateral development bank (MDB) climate finance, as well as other studies and databases. To the extent possible, the report has also drawn information from BURs submitted as at 30 June 2016. While initial and partial estimates of direct and mobilized private finance were available from several sources, this report does not provide an aggregate-level estimate due to: (1) the challenge in separating flows from developed to developing countries from domestically mobilized flows in the co-finance data and (2) the distinct natures of direct and mobilized private finance.

- Global total climate finance flows. The global total includes all financial flows whose expected effect is to reduce net greenhouse gas (GHG) emissions and/or to enhance resilience to the impacts of climate variability and the projected climate change. This covers private and public finance, international climate finance flows, South–South cooperation and domestic climate finance, including expenditures for mitigation and adaptation to current climate variability as well as future climate change. It covers the full value of the financial flow rather than the share associated with the climate change benefit, for example, the entire investment in a wind turbine rather than the portion attributed to the emission reductions (Intergovernmental Panel on Climate Change (IPCC), 2014). For the global total, this report follows a two-step approach:
  - The 2013 and 2014 data are first aggregated in the same way as in the 2014 BA in order to provide estimates comparable with the estimates of the global total climate finance flows in the 2014 BA. This is used as the reference estimate in the 2016 BA.
  - Adjustments to the Climate Policy Initiative (CPI) estimate that were not part of the 2011–2012 estimate reported in the 2014 BA are then included in the estimate of global total climate finance in the 2016 BA.

5. Approach taken in organizing the technical work

13. The technical work combined a literature review and technical meetings involving data providers and representatives of organizations specializing in climate finance tracking and reporting such as MDBs, development finance institutions (DFIs), international organizations, research institutions, think tanks and private sector financial institutions networks.

14. Numerous IFIs, United Nations agencies, NGOs and representatives of the private sector and civil society have supplied valuable inputs to the preparation of the technical report by providing data and sharing their experiences in tracking of and reporting on current climate finance flows.

Chapter I

METHODOLOGICAL ISSUES RELATING TO THE MEASUREMENT, REPORTING AND VERIFICATION OF CLIMATE FINANCE

1.1 Introduction

15. This chapter introduces ongoing work on the measuring and reporting of climate finance information and guidelines since the publication of the 2014 BA. It also discusses definitional and methodological issues that affect the compilation and assessment of climate finance data, particularly the methods for reporting on, accounting for and reviewing public and private climate finance from various sources.

16. As in the 2014 BA, this chapter responds to a request by the COP for the SCF to look into relevant work by other bodies and entities on the measurement, reporting and verification of support and the tracking of climate finance (decision 1/CP.18, para. 71) and to consider ways of strengthening methodologies for reporting climate finance (decision 5/CP.18, para. 11). Furthermore, recognizing the challenges posed by the lack of a common definition of climate finance, the COP requested the SCF to consider ongoing technical work on the operational definitions of climate finance (decision 3/CP.19, para. 11).

17. Reporting on climate-related finance is undertaken for different purposes, using different processes. This can compound the difficulty in developing aggregate estimates of volumes of climate finance. It is therefore important to understand the accounting methods and reporting of data through the lens of transparency, accuracy and consistency. To respond to the needs of stakeholders, such data would ideally include both mitigation and adaptation, as well as disaggregated information by funding source, sector, financial instrument, objective and commitment to disbursement by channel.

18. Chapter I is structured as follows:

(a) Section 1.2 introduces issues relating to converging on a climate finance system and important definitions;
(b) Section 1.3 provides an overview of the reporting and review processes for the various forms of financial support flowing from developed to developing countries in fulfilment of their commitments, including support channelled through multilateral institutions;
(c) Section 1.4 highlights the reporting and review processes for climate finance received by developing countries;
(d) Section 1.5 touches upon issues relevant to estimating global total finance flows, such as domestic and private finance, South–South flows, subsidies and green bonds. This section relates to flows that contribute to addressing climate change, but are not specifically intended as climate finance towards developing countries;
(e) Section 1.6 introduces a discussion on key issues in accounting for climate finance and frameworks for addressing these issues;
(f) Section 1.7 summarizes the key messages.

1.1.1 Paris Agreement and provisions for transparency of support

19. The Paris Agreement and its accompanying decision include provisions for providing transparent and consistent information on support in Article 9 (on finance) as part of the enhanced transparency framework established in Article 13 (on transparency), which builds on the existing arrangements under the Convention. Furthermore, Article 13 stipulates that the purpose of the framework for transparency of support is to provide clarity on support provided and received by relevant individual Parties and, to the extent possible, to provide a full overview of financial support provided, to inform the global stocktake.

20. The elements relevant to the provision of financial information, technical expert review, facilitative multilateral consideration of progress and accounting of financial resources are set out in Articles 9 and 13 of the Paris Agreement. Elements specific to reporting and accounting of financial resources include the following (UNFCCC, 2016a):

(a) The development of common modalities, procedures and guidelines for the transparency of action and support (under the Ad Hoc Working Group on the Paris Agreement (APA)). These will build upon and eventually supersede the measurement, reporting and verification system established by decisions 1/CP.16 and 2/CP.17. Consideration of this was initiated at APA 1, and the work is due for completion by 2018;
(b) The development of modalities for the accounting of financial resources provided and mobilized through public interventions (under the Subsidiary Body for Scientific and Technological Advice (SBSTA)). Consideration of this was initiated at SBSTA 44 and is also due by 2018.

21. Furthermore, the Paris Agreement (Article 9, para. 5), stipulates that developed country Parties shall biennially communicate indicative quantitative and qualitative information related to the provision and mobilization of climate finance, as applicable. Other Parties providing resources are encouraged to communicate biennially such information on a voluntary basis. A process to identify such information to be provided by Parties will be initiated at COP 22.

1.2 Towards a comprehensive system for measuring, reporting and reviewing climate finance information

1.2.1 Converging on a comprehensive system for measuring, reporting and reviewing climate finance information

22. Developing a complete system for measuring, reporting and reviewing climate finance information requires consideration of a number of issues including, but not limited to: (1) definitions of climate mitigation and adaptation finance; (2) transparency; (3) reporting guidelines and formats; (4) frequency of reporting; (5) completeness in coverage of sectors, countries and instruments; and (6) review processes. All of these should be considered in totality, keeping in mind the goals of promoting completeness and transparency for tracking climate finance to the extent possible while minimizing overlaps.

23. However, not all efforts to converge on such a system may be appropriate and replicable in the current reporting landscape, because countries and institutions are often at different stages of progress. Most notably, developing and developed countries have different experiences and capacities to track climate finance as do different organizations. In the latter case, MDB and International Development Finance Club (IDFC) common principles represent a preliminary step in harmonization efforts, as evidenced from the overarching nature of the principles; other institutions may already have more sophisticated guidance. However, the common principles represent significant progress in terms of fostering the adoption, by a diverse set of institutions, of the same set of definitions. Replicating this harmonization in definitions, and in the associated reporting processes, may be difficult to achieve across other institutions because of their differing mandates.

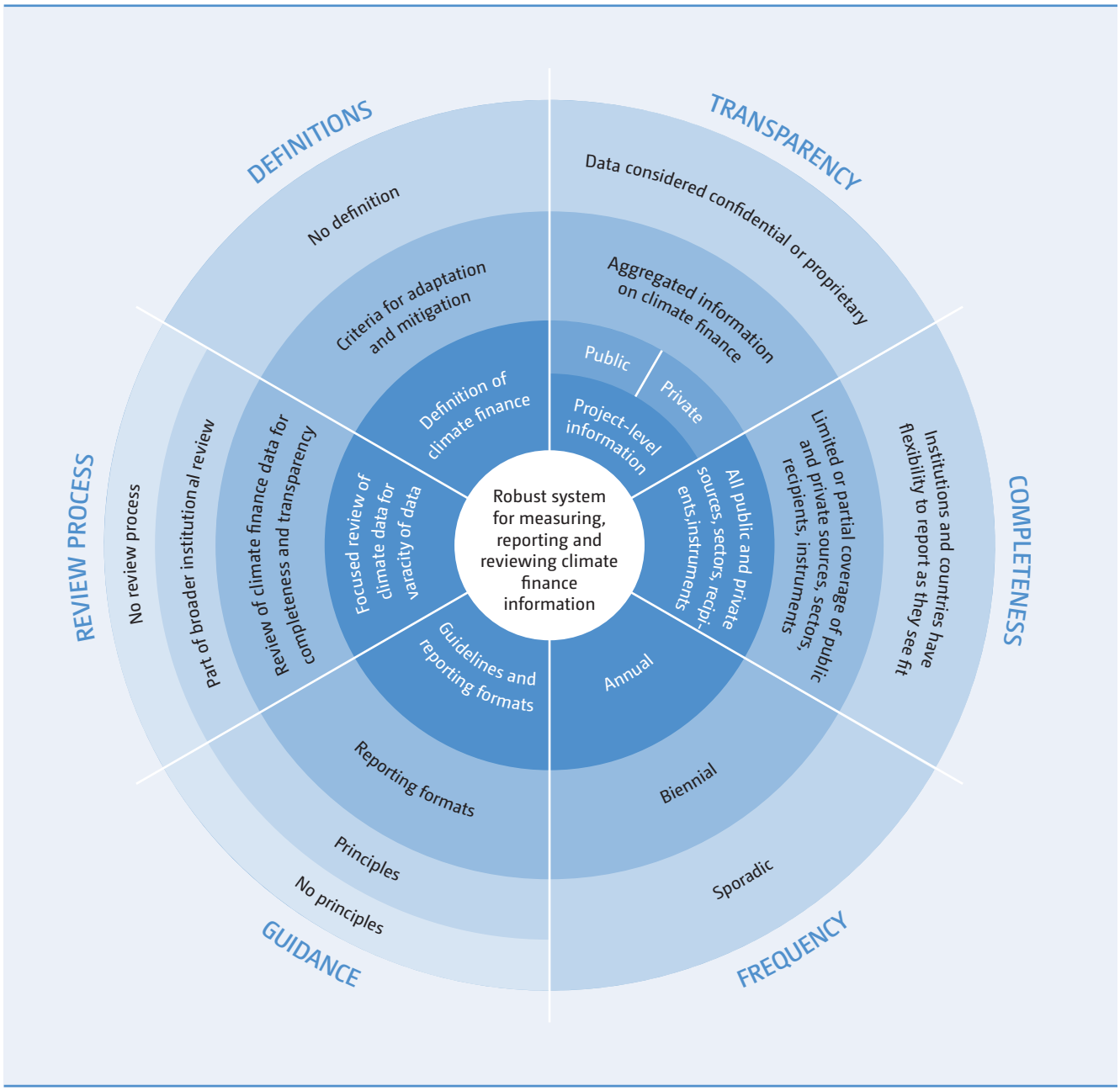
24. Figure 1.1 visualizes the aforementioned six key elements that must be considered in the development of a robust system for measuring, reporting and reviewing climate finance information. A robust system would be one in which all institutions broadly converge towards the innermost layers of each issue slice in the figure, recognizing that it might not be fully feasible in cases of differing mandates and reporting processes. However, it may be used as a tool for institutions to assess their current levels of progress and identify pathways for continued progress.

1.2.2 Converging on a simple definition of climate finance

25. In determining the amounts to be reported as climate finance, reporting entities rely on their own operational definitions of the underlying concepts, such as climate finance, climate change and sector delineations. Differences in interpretation of these concepts affect estimates of overall finance flows. Efforts to harmonize these definitions are ongoing.

26. Table B.1 (annex B) summarizes the definitions adopted by international institutions for climate finance – complemented by their definitions of mitigation and adaptation. The core language collectively adopted by OECD, MDBs and IDFC is

Figure 1.1: Characteristics of a robust system for measuring, reporting and reviewing climate finance information



generally in accordance with the definition suggested in the 2014 BA as "Climate finance aims at reducing emissions, and enhancing sinks, of GHG and aims at reducing vulnerability, and maintaining and increasing the resilience, of human and ecological systems to negative climate change impacts". While this remains a robust working definition, it may be noted that the Paris Agreement (Article 2, para. 1(c)) refers to finance flows that are "consistent with", rather than aimed at, a pathway towards low-carbon and climate-resilient development.

1.2.3 Converging on definitions of adaptation and mitigation relating to climate finance

27. As noted above, there is general consistency with a simple definition of climate finance among international organizations, as well as ongoing efforts to further harmonize their definitions in accordance with their respective objectives. Most importantly, however, to make their definitions operational, these organizations complement the above definition with activity lists and supporting guidelines that include criteria, examples and definitions of adaptation and mitigation to help

classify projects in a generally consistent manner. The UNFCCC reporting guidelines do not include criteria or examples to support preparation of financial information by either developed or developing countries.

28. An effort by the UNFCCC to develop consistency with terminology adopted by other international organizations could consider the following definitions and key terms:

(a) Step 1: Consideration of the definitions of adaptation finance used by different institutions:
  (i) OECD: An activity that intends to reduce the vulnerability of human or natural systems to the current and expected impacts of climate change, including climate variability, by maintaining or increasing resilience, through increased ability to adapt to, or absorb, climate change stresses, shocks and variability and/or by helping reduce exposure to them;
  (ii) IDFC and MDBs: An activity will be classified as related to climate change adaptation if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience;
  (iii) CPI: Adaptation finance is defined as resources directed to activities aimed at reducing the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience;
  (iv) IPCC: The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects;
(b) Step 2: Consideration of the following key terms: reduce vulnerability, human and natural, current and expected, climate change and climate variability, increasing resilience, absorb, climate change stresses, shocks and variability, maintaining or increasing adaptive capacity, adjustments to actual and expected climate and its effects, moderate or avoid harm or exploit beneficial opportunities and facilitate adjustment to expected climate and its effects;
(c) Step 3: Consideration of definitions of mitigation finance used by the following institutions:
  (i) OECD: It is mitigation if it contributes to the objective of stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration;
  (ii) IDFC and MDBs: An activity will be classified as related to climate change mitigation if it promotes efforts to reduce or limit GHG emissions or enhance GHG sequestration;
  (iii) CPI: Mitigation finance is defined as resources directed to activities contributing to reducing or avoiding GHG emissions, including gases regulated by the Montreal Protocol; or maintaining or enhancing GHG sinks and reservoirs;
  (iv) IPCC: A human intervention to reduce the sources or enhance the sinks of GHGs. This report also assesses human interventions to reduce the sources of other substances that may contribute directly or indirectly to limiting climate change;
(d) Step 4: Consideration of the following key terms to assess how they should be treated by the UNFCCC: limit emissions, enhance sequestration, stabilization of GHG concentrations at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration, Montreal Protocol, GHG sinks and reservoirs, and lock-in;
(e) Step 5: Adoption of definitions and incorporation into guidance as appropriate.

1.3 Reporting and reviewing climate finance flows from developed to developing countries

29. This section focuses on the methods for reporting on public and private climate finance flows. It also provides information on ongoing efforts to develop and improve methods for reporting on private and domestic climate finance using diverse data sources, as well as on approaches for aggregating data from all types of flows. A detailed comparison of approaches used by different institutions reporting on climate finance is presented in table C.1 in annex C.

1.3.1 Reporting on climate finance

1.3.1.1 Reporting on climate finance flows from Annex II Parties to non-Annex I Parties

30. This section summarizes developments in the different reporting approaches used by multilateral climate funds and Parties to the Convention. In understanding these developments, it is worthwhile to keep in mind the recommendations of the 2014 BA (UNFCCC, 2014a). Some of the data reported in subsequent chapters may predate the changes in reporting methods noted in this section.

1.3.1.1.1 Reporting on climate finance by Annex II Parties in their biennial reports

31. Annex II Parties are required to provide information on financial resources provided to developing country Parties through their national communications (NCs) as well as their BRs and CTF tables 7, 7(a) and 7(b). Annex II Parties are also required to provide information on how the financial support is determined as being "new and additional".[6]

32. Although the guidelines for the preparation of NCs adopted through decision 4/CP.5 and those for BRs adopted through annex I to decision 2/CP.17are separate, the NC guidelines are currently being revised towards harmonization with the BR guidelines and CTF tables.

33. To improve the transparency and consistency of reporting financial information under the Convention, improvements have also been made to the CTF tables through decision 9/CP.21, including:

(a) Creating fields for Parties to explain the definitions they have used for reporting on amounts by: "climate-specific" versus "core/general", "status", "funding source", "activity", "financial instrument", "type of support" and "sector";
(b) Aligning the term "status" of support (which previously included "pledged", "committed" and "provided") with the terms used by other international institutions ("committed" and "disbursed").

34. Forty-two Parties have submitted their BR2s as at 30 June 2016 (UNFCCC, 2014b). In general, Annex II Parties increased the qualitative information on public financial support reported in their BR2s compared to their first BRs (BR1s). Additionally, four Annex II Parties have included financial information on climate-related private finance. Overall, according to the compilation and synthesis of BR2s (UNFCCC, 2016b), BR2s witnessed a lower number of reporting issues compared to BR1s. However, the compilation and synthesis also notes that Annex II Parties continued to use different methodological approaches to the provision of financial data. For example, differences were noticed in currencies used, reporting periods and amounts provided in BRs versus CTF tables.

35. While the technical review of BR2s was still ongoing at the time of preparation of this report, a review of the financial information included in CTF tables that was drawn upon for the 2016 BA suggests potential for further improvements in terms of transparency and consistency (see annex D). Areas of improvement include:

(a) Provision of information on sectoral distribution when reporting under the category "Other";
(b) Provision of information on the methodology used when drawing Rio Marker data for quantitative reporting of public bilateral support through CTF tables;
(c) Provision of information on how and what portions of the public financial support through multilateral channels are climate-specific;
(d) Provision of disaggregated information (i.e. information by recipient country, region, project and programme).

36. The current BR guidelines[7] were designed to accommodate reporting on a wide range of climate finance instruments and activities. This required a flexible reporting architecture to accommodate a diversity of reporting approaches. Consequently, while each Party is required to provide a description of its approach for tracking of the provision of support to Parties not included in Annex I to the Convention (non-Annex I Parties) as well as of its assumptions and methodologies used to produce information on finance in their BRs, there is, as yet, no specific guidance under the Convention for how such information should be reported by developed countries. For instance, the BR guidelines require

6) As noted in the 2014 BA, several countries did not provide details on the criteria on which they had considered their contributions to be "new and additional".
7) Decision 2/CP.17; UNFCCC (2012).

Box 1.1: Divergence in reporting on bilateral climate finance

A survey of 27 donor countries and the European Commission – included in annex C to the report *Climate Finance in 2013-2014 and the USD 100 Billion Goal* – provides useful insights on the divergence in coverage and approaches in reporting bilateral climate finance:

(a) Twelve donors include data on other official flows, in addition to official development assistance (ODA);

(b) Eight donors measure the amounts at point of commitment, three at the point of commitment and disbursement, and the rest only at disbursement;

(c) Four donors provide data on a fiscal year basis, while the rest are on a calendar year basis;

(d) Twenty-six donors use the OECD Development Assistance Committee Rio Markers guidance to define climate actions; France additionally uses the guidance in the MDB joint approach;

(e) Two countries use the UNFCCC non-Annex I Party list to determine recipients; all others rely on the list of ODA-eligible countries; the United States of America and Canada use both;

(f) Only 12 donors provide activity-level data; the rest provide aggregate data.

Source: OECD (2015a).

Parties to report on the amounts of resources, the sources of funding, financial instruments, sectors and mobilized private finance, but do not define the sources, sectors and instruments and how leverage should be calculated, leading to divergence in reporting (see box 1.1).

37. Differences in data from one source to another also arise due to limitations and divergence in guidelines under different reporting systems. For example, European Union (EU) member States are required to report on their climate finance support to the EU, under Article 16 of the Monitoring Mechanism Regulation (MMR). The reported values are used to produce aggregate numbers of EU climate finance provided to developing countries, which is used by the European Commission and EU in reports to the COP. Even though the reporting by EU member States under the MMR and in BRs requires the same information, the amounts of climate finance reported differ between the two by up to 6.30%. The sources of differences include inconsistent applications by member States, to BRs and reporting under the MMR, of coverage of funding sources, points of measurement and instruments. The exercise thus adds a layer of additional reporting requirements to member States and further highlights the limited comparability in climate finance reporting brought about by unclear reporting guidelines (Oko-Institut, 2016).

38. To improve clarity, consistency and transparency, efforts to further improve reporting guidelines and formats could aim to address the issues noted above.

1.3.1.1.2 Reporting on climate finance of climate funds administered by the operating entities of the Financial Mechanism of the Convention and the Kyoto Protocol

39. The report of the Global Environment Facility (GEF) at COP 21 (GEF, 2015) covered the first year of the GEF sixth replenishment period (July 2014 to June 2018). The report of the Green Climate Fund (GCF) at COP 21 (UNFCCC, 2015a) included information on its contributions since the 2014 Pledging Conference and its ongoing operationalization; it did not include data on financial support, with the exception of a decision to establish two pilot programmes because it had not, at that time, commenced financing projects and programmes.

40. As discussed in the 2014 BA, these entities are not required to follow any standard methodologies or reporting formats. The information provided in their reports, however, includes responses to guidance provided by the COP and the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, policy decisions, status of project implementation and financial reports. The GEF reports also provide information on co-financing and leverage ratios. There have been no major changes to the way these entities report between the 2014 BA and the 2016 BA.

1.3.1.2 Reporting on climate finance and other official flows by public international organizations

1.3.1.2.1 Reporting on climate finance from the Development Assistance Committee to countries eligible for official development assistance

41. A complete picture of climate finance flows from OECD Development Assistance Committee (DAC) members to countries eligible for official development assistance (ODA) includes bilateral financial flows, multilateral financial flows and private finance. On official bilateral flows, the OECD collects information on ODA and other official flows (OOF).

42. OECD DAC specifically collects and monitors information on development finance – ODA and OOF – to developing countries from a range of providers (OECD, 2016a) through its Creditor Reporting System (CRS) (OECDa). Information is collected at the activity level, and climate change mitigation and adaptation activities are identified using the Rio Markers (OECD, 2016b), a qualitative marker system that identifies the objective of the support, as noted in the 2014 BA. For OECD DAC purposes, grants and concessional loans are recorded at face value of the activity at the date a grant or loan agreement is signed with the recipient; repayments of loans are thus deducted when accounting for development finance on a net basis.[8]

43. The DAC statistical system allows for ODA to be considered from what it terms the "provider" and "recipient" perspectives. Under the provider perspective, bilateral contributions targeting climate change objectives are identified using the Rio Markers. Contributions to dedicated multilateral climate funds are counted in totality as multilateral contributions for climate purposes.[9] Core contributions to multilateral agencies partly active in the climate field – which are not Rio-marked to avoid overestimations – are estimated on the basis of "imputed multilateral contributions" and attributed back to donors (to the extent possible) (OECD, 2016c). The formula involves drawing upon the climate-related disbursements from the agencies to impute a country's contribution (i.e. inflows into the agencies). As agencies have access to additional financing through their retained earnings and money leveraged from global capital markets, the disbursements are significantly greater than the inflows that are captured in countries' BRs and DAC reporting (see box 2.1 in chapter 2). Thus the imputed amounts are approximated, and uncertainties are difficult to capture (OECD, 2015c).

44. Under the recipient perspective, DAC includes, in addition to bilateral data, data on multilateral outflows from seven MDBs (MDBs have been reporting project-level data to OECD DAC since 2013; see OECD, 2014), climate funds and other institutions[10] through the Rio Markers. To avoid double counting with contributions already reported in DAC statistics, only outflows financed out of the own resources of MDBs are collected (i.e. excluding external resources) (OECD, 2015c). This is an important step in making data on bilateral finance, MDB own resources and multilateral climate funds available from one source.

45. OECD DAC is continuously seeking to improve the robustness of its data. For example, the 2013–2015 joint Task Team of the DAC Network on Environment and Development Co-operation and the Working Party on Development Finance Statistics, with participation from representatives of MDBs and IDFC, was established in 2013 to review the Rio Marker methodology and system, including improving the transparency of reporting and the Rio Marker definitions, eligibility criteria and guidance. The task team came to a close in November 2015, which yielded inter alia: (1) adjustments of the definition of the adaptation marker to better align it with the definition used by the IPCC; (2) to include a three-step approach to guide scoring on the adaptation marker; and (3) to develop an indicative table with examples for each sector category to guide Rio marking on climate change adaptation and mitigation.

46. Data on non-ODA bilateral flows are reported by OECD DAC members as "other official flows" and reported by bilateral development banks that are members of IDFC. Current reporting on OOF is voluntary, with the result that coverage of other official flows is limited and project-level information is not always available.

47. In reporting to the UNFCCC on climate finance in their BRs, several OECD DAC members draw on their climate-related reporting to OECD, but in doing so, many report only a share of climate-related aid and apply a range of adjustments (OECD, 2015a).

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8) While repayments of loans are subsequently deducted from ODA reporting, there is currently no application of climate Rio Markers on such deductions; thus, unlike ODA, climate-related loans are counted as climate finance when issued but not deducted when repaid. This may change as OECD moves to a grant-equivalent form of reporting in 2017 (OECD 2015b).

9) This includes the Least Developed Countries Fund and the Special Climate Change Fund, but for the GEF itself, the share is calculated based on its activity-level reporting to OECD (OECD 2015c).

10) Including the Adaptation Fund, Climate Investment Funds, GEF, International Fund for Agricultural Development, Islamic Development Bank and the Nordic Development Fund.

Box 1.2: Export credit agencies

Export credit agencies provide government-backed loans, guarantees and insurance to corporations from their countries to conduct business in developing countries. Although this financial support may be directed towards climate change actions beneficial to developing countries, it is provided domestically within developed countries, and may not have the pursuit of climate benefits as its principal objective.

Export credits are reported to the OECD Export Credits Individual Transactions Database. The Arrangement on Officially Supported Export Credits, with participation from nine members including the EU, is an informal agreement on the use of officially supported export credits and contains specific provisions to encourage support for renewable energy and climate change mitigation and adaptation projects.

Some climate-related export credits are additionally captured in Annex II Party reporting. For instance, in its BR2, the United States captures the financial support provided by its Export-Import Bank, while Canada has recorded one instance of export credit support in CTF table 7(b), in its BR2.

To date, climate-related export credit support largely extends mainly to renewable energy undertakings. Some export credit agencies have also played a role in supporting coal power capacity expansions.

Source: ODI (2012, 2015); OECD (2015a, 2016d); UNFCCC (2014b).

1.3.1.2.2 Reporting on climate finance provided to developing countries by multilateral development banks

48. In 2011, the seven main MDBs[11] started jointly reporting on their mitigation and adaptation finance activities. Their fifth joint report, outlining their climate finance in 2015, was released in August 2016 (Asian Development Bank (ADB), 2016) in which they also include estimates of co-finance (EBRD, no year) – see section 1.3.1.3 below.

49. The MDB joint approach for mitigation finance reporting is based on the following principles: (1) it is activity-based, that is, it focuses on the type of activity to be implemented, and not on its purpose or actual results; (2) the classification is based on ex ante project implementation; (3) an activity can be a project or a project component, subcomponent, element or proportion; and (4) an activity can be labelled as contributing to climate change mitigation if it promotes "efforts to reduce or limit GHG emissions or enhance GHG sequestration".

50. The list of activities published in the fifth joint report as part of the MDB joint methodology is limited to those that are expected to achieve mitigation impacts (World Bank (WB), 2015a, section 2, part D); it includes improvements to brownfield energy activities such as retrofits and improved efficiency,[12] in addition to greenfield projects. In this, it differs from the OECD DAC approach, which is based on a list of sectors relevant to development objectives (categorized in DAC reporting by purpose codes; OECD, 2016e) and use of the Rio Marker "purpose-based" guidance to assess whether these are compatible with climate objectives.

51. The MDB joint approach for adaptation finance reporting uses a context- and location-specific approach that is intended to reflect the specific focus of adaptation activities. The methodology comprises the following: (1) setting out the context of climate vulnerability of the project; (2) making an explicit statement of intent to address climate vulnerability as part of the project; and (3) articulating a clear and direct link between the climate vulnerability context and the specific project activities. Only activities that have this direct link are counted. For projects where adaptation is included in projects with other objectives, the incremental cost is estimated. MDBs take a granular approach in adaptation and count the component/subcomponent element or proportion that is adaptation activity. The MDB approach is consequently more conservative than the OECD approach and leads to lower estimates.

11) The African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), European Investment Bank, Inter-American Development Bank (IADB), International Finance Corporation and World Bank (WB) from the World Bank Group (WBG).

12) In the case of brownfield efficiency investments, new technologies are required to be substantially more efficient than the replaced technologies, or to be substantially more efficient than those normally used in greenfield projects.

52. At the same time, as noted earlier, MDBs participated in the activities of the OECD joint task team (OECD, 2015d, annex I) and are also now reporting project-level data on their climate finance to OECD DAC.

53. In 2015, MDBs and IDFC members, in a step towards harmonized reporting approaches, adopted a set of common principles for tracking mitigation (WB, 2015b) and adaptation finance (European Investment Bank (EIB), 2015a). The common principles are similar in spirit to those used in the joint MDB reporting; they are intended to improve comparability of different sets of numbers and to reduce double counting. They are voluntary, and their implementation is the responsibility of each institution. MDBs are reporting following these common principles.

1.3.1.2.3 Reporting on climate-related other official flows by the International Development Finance Club

54. IDFC, which now comprises 23 development banks of national, subregional and international origin, was formed in 2011. While most IDFC members are based in developing countries, the discussion on IDFC is included here rather than in section 1.5 below because of the close collaboration with MDBs and the coordination by the German development bank Kreditanstalt für Wiederaufbau (KfW). IDFC members have mapped their green finance contributions by collating and disclosing their aggregated green finance flows since 2012, with their latest report released in December 2015 (IDFC, 2015).

55. IDFC has, in its reports, drawn upon the definitions and methodologies employed by OECD DAC and MDBs in reporting data. One unique feature is that it reports green finance[13] flows from institutions based in OECD and non-OECD countries. However, while it publishes figures for overall climate finance provide by its members, it does not adequately disaggregate these flows. For instance, it provides numbers for mitigation/adaptation commitments by institutions in developing countries, including overall amounts of domestic and international financing, but without indicating where the international financing is directed. Mitigation and adaptation commitments into geographic region and sector are provided, but there is no information on where these commitments were sourced from.

56. Such a lack of disaggregation reduces comparability with reporting from other institutions and increases the risk of double counting. In particular, this risk of double counting may be even higher because members such as the Japan International Cooperation Agency, KfW and Agence Française de Développement (AFD) report on their climate finance activities to OECD DAC, in addition to their green finance reporting under IDFC.

57. IDFC does not currently have standardized reporting guidelines, although the survey templates that are sent out to member institutions during the data-collection process do contain some guidance on reporting. Such guidance typically relates to mitigation activity lists, without going into how to account for these activities. It also does not have a common database of climate-relevant activities of its members.

1.3.1.3 Estimations of mobilized private finance relevant to reporting by Parties and members of the Development Assistance Committee

58. In their BR2s, Annex II Parties provided more qualitative information with regard to private finance compared to their BR1s, and some Parties provided information on their efforts to mobilize private investments and on the measures they took to encourage private investment. Some Parties noted difficulties in identifying the origin of private finance and addressing the issue of causality between public interventions and private finance mobilization. However, some Parties are exploring options on how the tracking of private finance can be conducted (UNFCCC, 2016b).

59. A consortium of seven MDBs, in 2015, proposed a joint methodology for tracking of and reporting on co-finance, including private finance. The methodology aims to: (1) define a common approach on how to report on co-financing and (2) harmonize definitions and indicators that estimate co-financing for climate projects (EIB, 2015b). The MDB approach distinguishes between public and private sources, and does not include double counting of co-finance reported by different MDBs from the same source. Moreover, when the co-financing cannot be accurately tracked, only the amounts that are known with certainty are reported.

60. Recently, there has been increasing research focused on methods for estimating climate finance mobilized by public financial support provided by developed countries. This includes the work of the OECD-led research collaborative on tracking private climate finance (RC). RC serves as a platform to contribute to the development of more robust methodologies and systems to estimate

13) Green finance includes climate finance, but is not limited to it. It also refers to a wider range of "other" environmental objectives, for example, industrial pollution control, water sanitation or biodiversity protection.

Box 1.3: Leverage, co-finance and mobilization

Entities use a range of terms to describe the financial support that flows together with, or as a consequence of, their support. Some of the key terms used are leverage, co-financing and mobilization. These terms are sometimes used interchangeably; however, different entities can also have difference definitions for each.

The Climate Investment Funds use three indicators of leverage: co-financing leverage, private finance leverage and private finance shares. A climate strategies paper defines leverage factors as the ratio between mobilized private funding and mobilizing public finance.

A World Resources Institute CPI paper uses "mobilize" to refer to the provision of climate finance for developing countries via developed countries' use of financial instruments and interventions such as policies and measures, and "leverage" in reference to "discrete financial instruments".

Source: WB (2014); Climate Strategies (2011).

and track private climate finance.[14] An earlier review of various commercial and public data sources, such as Bloomberg, Thomson Reuters, FactSet, United Nations Conference on Trade and Development (UNCTAD) and OECD, found that these databases captured a vast amount of at least partial data on private finance, investment and instruments in climate-relevant sectors (Jachnik et al., 2015); see section 1.5.1.2 below for a discussion on data sources. However, it also identified a number of significant limitations that complicate efforts to meaningfully identify and characterize climate-specific private finance (OECDb; OECD 2014a).

61. The current emphasis of RC (OECDc) is on exploring data availability and methodologies for estimating private finance mobilized through both public finance and policy interventions, from both developed and developing countries. This is, in collaboration with a range of partners, shaping a number of pilot studies, to develop estimates of publicly mobilized private finance for climate action in developing countries (see section 1.6 below).

62. In 2012, OECD DAC was mandated to improve statistics on external development finance beyond ODA, and in 2014, this mandate was expanded to establish an international standard for measuring the volume of private investment mobilized by official interventions. As an initial result, DAC provides guidance on how to report finance mobilized from the private sector, including amounts mobilized through guarantees, syndicated loans and shares in collective investment vehicles (Benn et al., 2015). From 2017, reporting on amounts mobilized will be included in regular DAC data collection (OECD 2016f; 2016g).

63. It should be noted that there is, as yet, no common understanding of what constitutes mobilized private finance; see box 1.3. This may be partly due to the difficulty in identifying the country of origin of the private finance and defining the boundaries of mobilized climate finance. Further, as mobilized private finance does not necessarily flow from developed to developing countries, and can also originate in the recipient or other developing countries, such mobilized flows are not reported in the overview of flows covered in chapter 2.

1.3.2 Processes to review and verify reporting on climate finance

1.3.2.1 Processes to review information reported on climate finance by Annex II Parties

64. The UNFCCC review guidelines, outlined in decision 13/CP.20, mandate expert review teams (ERTs) to: assess the completeness of BRs in accordance with the reporting requirements contained in decisions 2/CP.17 and 19/CP.18; undertake a detailed technical review of the information provided in the individual sections of BRs; and identify issues relating to completeness, transparency, timeliness and adherence to the reporting guidelines. In this regard, ERTs provide technical review reports (TRRs) for each Party's BR, taking into account the comments of the Party included in Annex I to the Convention (Annex I Party), within four weeks of receipt of the comments.

14) OECD is also developing methods to measure the private finance mobilized by official development finance. From 2017, reporting on amounts mobilized will be included in the regular DAC data collection; this will initially extend to only guarantees, syndicated loans and shares in common investment vehicles (OECD, 2016e).

65. The technical review of BRs is a first step of a two-step international assessment and review (IAR) process. The overall objectives of the IAR process are to review the progress made by developed country Parties in achieving emission reductions, and to assess the provision of financial, technological and capacity-building support to developing country Parties. In addition, the IAR process aims at assessing the implementation of methodological and reporting requirements. The recently submitted BR2s are being reviewed in 2016 through centralized reviews in four rounds (UNFCCC, 2016c).

66. The first cycle of the IAR process covering BR1s (2011–2012) was concluded in 2015. BR1s and sixth NCs of 44 Parties were reviewed, including 43 TRRs of BR1s by the ERTs (UNFCCC, 2016c). During the reviews of BR1s, ERTs used four gradations to assess the completeness and transparency of the information reported by Parties: "fully", "mostly", "partially" and "not" complete or transparent. The analysis of TRRs showed that most reports were "mostly" or "partially" complete/transparent. With regard to individual sections of TRRs, most recommendations for completeness and transparency were related to information on the provision of financial, technological and capacity-building,

67. In some cases, where information was not easily quantifiable, the ERTs had difficulty in consistently applying their assessments of completeness/transparency. These cases created areas in which the same findings led to different gradations. Therefore, further guidance was requested to enhance consistency in the assessment of completeness and transparency (UNFCCC, 2016d). The difficulty was addressed by BR and NC lead reviewers at their 3rd meeting (UNFCCC, 2016e).

68. One of the limitations of the IAR process is that the review of the substantive information in BRs is not in the remit of ERTs. Furthermore, BRs are not reviewed in time for aggregating data for BAs.

1.3.2.2 Processes to review reporting on climate finance and other official flows by public international organizations

69. OECD member reporting is reviewed annually by the OECD DAC secretariat, and results are shared with the OECD DAC Working Party on Development Finance Statistics. This includes issues such as timeliness, consistency of aggregate versus activity reporting, accuracy of coding (sectors, types of aid, channels – bilateral versus multilateral) and quality of descriptive information.

70. Donor reporting also periodically goes through quality reviews carried out by the OECD DAC secretariat to identify possible anomalies. Reports are provided to members for consideration and ultimately to improve the consistency of reporting (OECD, 2016h).

71. MDBs and IDFC do not have a standard procedure to review their data. In a few instances, this is due to the proprietary nature of some private information.

However, individual MDBs may have their own internal processes to facilitate data reviews and quality control.[15] Additionally, a dedicated working group facilitates exchange of information among MDBs on how individual MDBs identify activities eligible for classification as climate finance, accounting practices and the criteria that guide the selection of case studies for inclusion in the joint report on MDB climate finance.

72. There have not been any evaluations of the IDFC methodology, including on the quality of guidance provided to individual banks. IDFC has received external guidance on reporting methodologies, and some members have received individual assistance in preparing inputs for the "Green Finance Mapping" report (IDFC 2015). Data quality reviews have been limited, and are not systematic. Issues encountered by some IDFC participants include insufficient reporting systems, a lack of resources dedicated to collecting data, non-availability of data and confidentiality issues.[16]

1.3.2.3 Verifying reporting on climate finance and other official flows

73. As noted above, there are established practices to review the technical information relating to emissions inventories and policies submitted in NCs and BRs, including the transparency, consistency and completeness of reporting against international guidelines. Some features of reviews by ERT teams address aspects that could be considered to be verification, for example, through the use of alternative sources of emission data.

74. However, the specific objectives and dimensions of verification of financial information are yet to be defined by the COP. Verification could address, for example, adherence to guidelines for reporting, the authenticity of reported data, the confirmation that funds were delivered and used for their intended purposes and the reconciliation of reporting on finance provided with reporting on finance received. Depending on the objective, verification might require expanding or clarifying the mandate of the ERTs when it comes to financial information. Another issue that might need to be clarified is whether financial information from sources other than those in the UNFCCC, such as MDBs, should be verified.

75. Potential ways for verifying climate finance data include:

(a) Using data on finance received in BURs and recipient country-level data in BRs, to partially confirm data on financial support provided in BRs;
(b) Using data provided by MDBs on co-financing to help to verify what other institutions have done.

76. A key challenge to any verification exercise is the lack of harmonization in definitions, modalities for accounting of financial information, availability of project-level data on climate finance provided and received, and specific provisions and principles in the reporting guidelines. Another challenge is the inadequacy of financial management systems in some developing countries. In the context of BURs, a World Resources Institute (WRI) study found that developing countries could benefit from more accurate information about climate finance. It could help them develop financial strategies for climate change, improve their ability to report the support received in their BURs and allow for the verification of information reported by developed countries, thus promoting transparency and integrity (WRI, 2015a).

77. Improved data collection, particularly through bottom-up, disaggregated approaches, and strengthening the institutional capacity to do so would also improve the comparability of data across multiple sources. Such comparisons and verification could also be undertaken by independent civil society and other research organizations.

1.3.3 Specialized methods

1.3.3.1 Adaptation finance

78. Understandings of what constitutes adaptation finance can vary significantly. Adaptation refers to the "process of adjustment to actual or expected climate and its effects" (IPCC, 2014). Adaptation in human systems seeks to moderate or avoid harm, or exploit beneficial opportunities. Adaptation finance can be understood in terms of investments in activities that address current and expected effects of climate change. These are often part of mainstream development efforts, and can therefore be difficult to distinguish from wider investments for development. Indeed, mainstreaming understanding of climate change risks and opportunities to respond into core development efforts is an important dimension of adaptation.

15) For example, the WB Independent Evaluation Group conducts data reviews that are made available through its "Handbook on Data Analysis and Portfolio Review".
16) Discussions with consultants to IDFC (2015).

79. Different actors in the international financial system have adopted different definitions and approaches to identifying adaptation finance. In their reporting to the UNFCCC, Parties can individually decide what to include as adaptation finance, in part informed by reporting on adaptation-related multilateral spending by DFIs through which they channel funds.

80. Since 2012, MDBs have adopted common guidelines to identify adaptation spending. These require that the documentation for relevant projects and programmes: (1) set out vulnerabilities to the impacts of climate change; (2) state an intent to address identified risks; and (3) link the project to measures to address the identified risks, vulnerabilities and impacts. The MDB methodology captures the finance of the component, subcomponent, element or proportion of a project that covers the adaptation activities, and not the whole investment or financing that is made more resilient to climate change. MDBs are also considering introducing an additional metric to monitor the resilience of all investments to the impacts of climate change, and to capture wider mainstreaming efforts.

81. When donors report on development projects to DAC, they can also identify projects that support adaptation to climate change using the Rio Markers. To be counted as having adaptation as an objective, projects must "intend to reduce the vulnerability of human or natural systems to the current and expected impacts of climate change, including climate variability, by maintaining or increasing resilience, through increased ability to adapt to, or absorb, climate change stresses, shocks and variability and/or by helping reduce exposure to them". Adaptation objectives should be explicitly indicated in the activity documentation. Vulnerability assessments are encouraged in the definition, but not expressly required in order for a project to be defined as adaptation.

82. Several NGOs and international organizations have proposed additional guidance on what should count as adaptation finance.[17] While many private businesses and actors are making investments that respond to the emerging impacts of climate change and seeking to improve resilience to potential climate-related vulnerabilities, very few identify or report such spending as adaptation finance.

1.3.3.2 Forest finance

83. In 2015, a forum organized by the SCF focused on forest finance. A background paper for the forum reviewed coherence and coordination issues related to finance for forests (UNFCCC, 2015b). The paper notes a lack of reliable data on financing for forests, due to inconsistencies in definitions and incomplete coverage of the activities funded, actors involved or finance channelled. The SCF report on the forum notes opportunities to enhance coherence and coordination, improve data compilation and scale up forest finance. The key role for REDD-plus finance within the broader forest finance landscape was also highlighted in the SCF forum.

84. In decision 1/CP.16, paragraph 70, the COP encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks. This includes activities that are country-driven, promote co-benefits and biodiversity, actions that are in accordance with conservation of natural forests, involvement of indigenous peoples and local communities as well as transparent forest governance (Sánchez, 2010). A number of initiatives to monitor international climate finance mobilized to support REDD-plus objectives have been established, including the Voluntary REDD-plus Database and the Climate Funds Update (CFU), which monitors dedicated multilateral funds including those that support REDD-plus and forest-related activities. NGOs also seek to monitor the receipt of finance related to REDD-plus within key countries. In practice, a wide range of activities and approaches that affect decisions around land-use management affect REDD-plus objectives (Falconer et al., 2015), and a very small share of initiatives are likely to self-identify themselves as contributing to REDD-plus (Norman and Nakhooda, 2014). Understanding of the sources of finance for activities that influence land use (and thereby REDD-plus outcomes) is incomplete, and the share of this finance that supports efforts to reduce emissions as opposed to activities that drive deforestation and forest degradation is quite unclear.

1.3.3.3 Capacity-building

85. Capacity-building support is intended to enhance the ability of developing countries to take effective

17) For example, guidance on adaptation spending has been developed to support the completion of climate public expenditure and institutional review by the Overseas Development Institute and the United Nations Development Programme.

climate change actions through the facilitation of technology transfer, education and training, and the appropriate communication of information (for a complete definition, see UNFCCC, 2014c).

86. Capacity-building can be supported at various levels. Capacity-building targeting the individual level refers to training, education, awareness, outreach, public participation and stakeholder engagement. Institutional-level capacity-building refers to the establishment or strengthening of a body, an entity or an institution, including support to a government or local authority and support to civil society or the private sector. The systemic level refers to the development or adoption of national or local policies, strategies and action plans, adoption and enforcement of legislation, integration of climate change in national planning and budgeting for the creation of enabling environments.

87. The COP adopted two frameworks through decisions 2/CP.7 and 3/CP.7 for capacity-building that address the needs, conditions and priorities of developing countries and of countries with economies in transition. The frameworks provide a set of guiding principles for capacity-building, as well as guidance on the support of financial and technical resources. The Subsidiary Body for Implementation (SBI) monitors and reviews progress on the implementation of the capacity-building frameworks – Parties report on progress on capacity-building activities in their NCs, while the GEF and United Nations agencies also submit information. The third review of the implementation of the framework was initiated during the SBI 44 in May 2016 (UNFCCC, 2014c and 2016f).

88. There is also a growing emphasis on investing in readiness for climate finance, or the capacity of institutions in developing countries to plan for and make effective use of available finance that can support their efforts to respond to climate change. It can be difficult to distinguish readiness finance from wider climate finance, and efforts to finance improved capacity to respond to climate change. However, in 2014, the GCF sought to create an inventory of readiness-related activities of existing DFIs and climate funds (based on self-reporting by these entities in response to a survey circulated by the secretariat), in order to situate its own efforts in this regard (see also GCF, 2013).

89. Support for capacity-building activities is primarily provided via bilateral channels; it is reported through CTF table 9, and is also described in BRs, in the chapter dedicated to capacity-building. Reporting in CTF table 9 captures reporting parameters such as recipient country and targeted area (see UNFCCC, 2016g).

90. The GEF annual reports to the COP provide information on its enabling activities and capacity-building.[18] This information includes the number of projects with capacity-building components and the amount of support provided towards these activities through the GEF core trust funds, the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) (GEF, 2015).

91. However, capacity-building activities are often integrated into stand-alone projects and are difficult to isolate. In addition, estimating capacity-building support directed to areas such as adaptation and forestry (particularly in REDD-plus governance), faces particular challenges (see sections 1.3.3.1 and 1.3.3.2 above). There are currently no estimates of the total support provided for capacity-building.

1.3.3.4 Loss and damage

92. Financing arrangements to address loss and damage that occurs as a result of climate change has been an issue of growing importance for Parties to the Convention. There are currently no methods to account for various response measures, including financial instruments, in comparable monetary terms (e.g. insurance mechanisms will only offer a pay-out to beneficiaries when they experience impacts). Common understandings of loss and damage are still being formulated, supported substantially by the efforts of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its Executive Committee. A core mandate of the Executive Committee is to enhance knowledge and understanding of comprehensive risk management approaches.

93. In 2016, the SCF accepted the invitation of the Executive Committee to dedicate its forum, held in September 2016, to the theme of "financial instruments that address the risks of loss and damage associated with the adverse effects of climate change".[19] The forum discussed various instruments, including risk transfer schemes, social protection schemes, catastrophe and

18) The reports also provide information on the GEF cross-cutting capacity development support, a different concept that refers to targeted support provided to countries to strengthen their capacities to meet their commitments under the Rio Conventions and other multilateral environment agreements.

19) The 2016 SCF forum website including presentations and further information material is available at <http://unfccc.int/9410.php>.

resilience bonds, and contingency finance, and their respective benefits, challenges, limitations and gaps. It also explored ways for scaling up, replicating good practices and finding new financing options.

94. The key conclusions of the 2016 SCF forum included the following:

(a) In order to make instruments operational and sustainable, having a good understanding of the risks is a key prerequisite. However, countries often face capacity constraints in data gathering and risk modelling, as well as a lack of accessible, complete and adequate climate change data on which to base financial instruments. On this aspect, the forum underlined the importance of providing support to build the capacity of institutions.
(b) There is a diverse set of financial instruments that can be used to address the risks of loss and damage on the basis of different country contexts and the multi-causality of the risks faced. This means that there is no 'one-size-fits-all' approach, and no single financial instrument can cover all the risks associated with loss and damage.
(c) Complementary approaches are needed that build long-term resilience while putting countries in a position to be able to immediately respond to disasters after they occur. Finding smart ways of combining instruments will be crucial for addressing the risks of loss and damage in a comprehensive and holistic manner.
(d) More work will be needed on how to address slow-onset events, because current approaches are directed towards extreme weather events and other rapid-onset events. On the basis of its existing experiences and data utilized for existing instruments, the insurance sector can contribute to the discussion and support the development of new instruments in this field.
(e) While opportunities for scaling up financial instruments exist, governments can promote the take-up of good practices by strengthening policies and regulatory frameworks that incentivize stakeholders to avert, minimize and address loss and damage.
(f) Greater discussion will be needed on the sustainability, affordability and accessibility of financial instruments, in particular for the most vulnerable. To this end, participants at the forum noted opportunities for funding at the national level (e.g. fiscal measures, carbon pricing or fossil fuel subsidy reform) and the international level (e.g. debt relief).

1.4 Reporting and reviewing climate finance received by developing countries

1.4.1 Reporting on climate finance received by non-Annex I Parties

95. In their BURs, non-Annex I Parties submit updated information on national GHG inventories, including a national inventory report and information on mitigation actions, needs and support received.

96. The first BURs were submitted in 2014. Thirty-two non-Annex I Parties had submitted their BURs as at 30 June 2016. The "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention" (in annex III to decision 2/CP.17) state that "Non-Annex I Parties should also provide updated information on financial resources, technology transfer, capacity-building and technical support received from the Global Environment Facility, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current biennial update report". However, there is no common reporting format, and the guidelines do not require information on underlying assumptions, definitions and methodologies used in generating the information. In the absence of more specific guidance, the time periods over which the finance is reported as received vary widely (for more information, refer to annex D). Countries decide what to report as climate finance on an individual basis (UNFCCC, 2014d), and some countries report only finance received by their national governments. For example:

(a) India's BUR details only the GEF as an international source of support; reference to "other sources of bilateral and multilateral" support is mentioned briefly though this represents a much larger volume of funding to India in dollar terms;
(b) Indonesia reports that it has received a fraction (1.18 trillion Indonesian rupiah) of the finance commitments reported internationally (3.04 trillion Indonesian rupiah). This apparently is only for support officially registered with the Government and appears to not include funding to other recipients such as NGOs.

97. Twenty of these Parties provided summary information on climate finance received during a certain period. Other non-Annex I Parties indicated climate finance received for a selective number of projects/activities, sectors or donors, or did not include quantitative financial information. Among the 20 non-Annex I Parties that provided summary

information on climate finance received, 11 reported on finance received per project/activity in tabular format. Four Parties reported per donor and one Party reported per thematic area (i.e. mitigation or adaptation) in tabular format. The remaining four Parties only provided headline figures of total finance received. Additionally, 5 of the 20 Parties included information on domestic finance flows in their BURs. Four Parties also provided information on co-financing. Limited institutional capacity to track climate finance received, as well as the lack of data, can pose challenges in developing countries' reporting.

98. With regard to needs, 11 Parties provided quantitative information on total needs. Among the 11 Parties, 6 reported quantified needs at the activity level in tabular format, with few Parties also identifying preferred financial instruments and level of priority for each activity.

99. The information provided on overall climate finance received and needed varies as noted above, and it is not possible to accurately tabulate the amount that non-Annex I Parties report as support needed or received.

1.4.2 Processes to review and verify reporting on climate finance received by non-Annex I Parties

100. As a result of the variations in reporting in countries' BURs arising from the lack of provisions for reporting within the current guidelines, it is not possible to aggregate the total support received by and financial needs of developing countries (see section 1.4.1 above). Consequently, it is very challenging to assess progress made towards the achievement of financial commitments under the Convention.

101. COP 16 adopted a decision (decision 1/CP.16) to conduct international consultation and analysis (ICA) of BURs from non-Annex I Parties. While the primary objective of the ICA process is to enhance the transparency of mitigation actions, it is also expected to contribute towards improvements in the quality of BURs over a period of time. ICA includes two steps: a technical analysis of BURs by a team of technical experts and a facilitative sharing of views. As at 12 June 2016, summaries and technical reports of 13 Parties were available at the UNFCCC website (UNFCCC, 2014e). While the ICA process serves as a review for the information on support provided by Parties, there are no internationally agreed methods for reconciling financial support provided against support received.

1.5 Tracking of and reporting on global total climate finance

102. There are a number of potential ways in which global total climate finance flows could be calculated, whether by aggregating deployed finance, mobilized finance, finance received or finance flowing into any sector, and so on. However, complete data on global total climate finance are not available for any of these approaches, so the totals must be estimated using available data in a way that avoids double counting. The only published estimates of global total climate finance are those by CPI, which itself cannot track domestic public finance nor private finance to sectors such as transport, land use and adaptation due to a lack of data (CPI, 2015).

103. The approach used to estimate global total climate finance in chapter 2 of this report is to adjust the CPI estimates for components it did not estimate, based on information in the literature or from international organizations. This section discusses issues relevant to tracking of and reporting on specific components of global total climate finance flows.

1.5.1 Methods to track domestic and private finance

1.5.1.1 Methods to track domestic finance

104. Information on domestic climate-related finance is available including through a few BURs and some climate public expenditure and institutional reviews (CPEIRs). Other partial data on domestic climate finance are sourced from national climate funds and national development banks such as IDFC members.[20] Most other efforts to estimate domestic finance have been characterized either by 'one-off' studies that are not conducted routinely, or by country analyses every two to four years.

105. The CPEIR process aims to help countries to review how their national climate change policies are being reflected in public expenditures. The CPEIR methodology is based on the WB public expenditures reviews. A key challenge is to identify climate-relevant expenditures within the national budget. In addition to a review of central government expenditures, the analysis examines local government spending and other sources of public expenditure, including international support that lies outside the national budget – countries have some flexibility in identifying these components, which can create inconsistencies in the way they report their estimates (UNDP, 2012; WB, 2013).

20) OECD compiles data on the development finance support provided by a number of developing countries, and also estimates data on the development cooperation programmes of 10 developing countries. However, it does not have information on what shares of these flows are climate-related (OECDd).

106. The CPEIR methodology has been used by UNDP and WB to estimate the share of the budget devoted to climate change for 10 developing countries for various years since 2007.[21]

107. In addition, a number of other studies also provide estimates of the climate finance share of select countries' national budgets (CPI, 2014). These initiatives include the Group for Climate Finance in Latin America and the Caribbean (GFLAC) tracking of international climate finance received by eight Latin American countries and the Overseas Development Institute (ODI) national climate finance analyses – building upon its earlier work on CPEIRs – for four African countries (a summary of the methodology used can be found in ODI, 2016).

108. Separately, domestic finance needs can also be captured in or imputed from some countries' intended nationally determined contributions (INDCs). For example, Mexico's INDC notes that its commitments to action are dependent on, inter alia, access to low-cost financial resources. On this basis, the INDC separately estimates the amounts of conditional reductions in GHG emissions below the baseline, assuming international support. Furthermore, the INDC has a section on Capacity Building, Transfer of Technology and Finance for Adaptation (ODI, 2015).

109. Information on domestic climate-related finance is difficult to compare because reporting is not conducted using consistent methodologies or approaches. While there is a growing body of research on these issues, the identified efforts use different methods to estimate climate finance (although several efforts cross reference each other's approaches).

1.5.1.2 Methods to track and estimate total private finance

110. Private finance is estimated to be the largest component of global total climate finance flows (CPI, 2015b). However, it also yields the least accurate estimates due to difficulties in identifying climate-related finance within broader private investment data, restrictions based on confidentiality, as well as numerous conceptual and accounting issues (see section 1.6 below). Some of these issues are unlikely to be meaningfully resolved, implying that full and accurate estimates of private finance may never be available.

111. The main sources for estimating private sector climate finance data have traditionally been foreign direct investment (FDI) and investments in renewables. FDI data cover only cross-border investments that qualify,[22] and official statistics that are classified by standard economy and industry sector classifications, which cannot be directly related to climate change projects and activities. Data on investment in renewables come primarily from Bloomberg New Energy Finance (BNEF), a commercial database, which has data gaps and issues related to methodological transparency and coherence in terms of tracking the origin of the funds (see below). The remaining available data come from various other sector and industry databases. Although reporting on private finance is still underdeveloped, some of these entities that estimate or aggregate partial private sector data of relevance to climate finance are listed below.

112. Bloomberg New Energy Finance. BNEF is a commonly used source of data on private finance; it tracks public, private and hybrid investment deals in clean energy and, to a lesser extent, in energy efficiency including 'advanced transport' (such as electric vehicles and batteries, biofuels and clean fuel infrastructure):

(a) It covers mainly Group of 20 (G20) countries and gathers information on project-level financial flows from mostly asset (project) finance, as well as, to a lesser extent, venture capital, private equity, mergers and acquisitions, and equity market transactions;
(b) For renewable energy finance, it counts all projects above a certain size and estimates smaller distributed technologies. Where deal values are not disclosed, it assigns an estimated value based on comparable transactions;
(c) In energy efficiency, it captures a small proportion of investment where the cash flows are identifiable, although this is likely to exclude a large share of efficiency investments that are funded internally by companies and households.
(d) BNEF relies on its clients and independent companies to review and cross check data. It provides an annual report and synthesis of its data on a quarterly basis, in which it includes its coverage and definitions of asset classes and sectors (BNEF, 2016). Access to more granular data is available through a subscription.

21) UNDP has developed a methodological handbook to guide the CPEIR process (UNDP, 2015b).
22) FDI is defined as cross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy.

113. Clean development mechanism. The clean development mechanism (CDM) was, until the end of 2012, a significant source of finance for climate projects. However, the low price of carbon credits has rendered many projects unviable and – coupled with the lack of a third commitment period – has contributed to a steep reduction in new project registrations (UNFCCC, no year). The CDM Pipeline of the United Nations Environment Programme (UNEP) and the Technical University of Denmark (DTU) reports regularly on new CDM project submissions and registrations and estimates the associated investments (UNEP DTU, 2016). Most of the CDM renewable energy projects, which account for the vast majority of registered projects, are also included in BNEF data.

114. International Energy Agency. The International Energy Agency (IEA) has been slowly improving its methodologies for estimating investments in energy efficiency equipment. For calendar year 2012, the method used by IEA was to quantify all of the MDB and bilateral development financing going to energy efficiency and then multiply those by a leverage ratio obtained from UNCTAD (IEA, 2013). For calendar year 2013 (used in this BA), IEA estimated investments in energy efficiency based on changes in energy intensity in major economies and the weighted average price for world energy. To obtain an estimate of the global investments in energy efficiency, it merely multiplies the change in energy intensity by the average price, leading to a very gross estimate (IEA, 2014).

115. In a forthcoming report, global incremental investment in energy efficiency is estimated using a bottom-up approach for three sectors: industry, transport and buildings. The methodology varies by sector and subsector, but aims to ensure that the estimate is based on money spent for additional energy efficiency over a baseline case. For example, the buildings sector considers the building envelope (insulation and windows) and the systems (heating, ventilation, air conditioning and controls) to estimate incremental investment based on whether the investment is in a new or existing building (IEA, 2016). In the future, this bottom-up approach is likely to result in a global estimate that is significantly lower than the estimates captured in the 2014 BA and 2016 BA.

116. IEA also undertakes annual surveys of energy use by sector to determine the annual energy demand and energy infrastructure investments in developed countries and major emerging economies. It also conducts surveys to determine the cost of technologies in the same countries, using top-down and bottom-up approaches to estimate investments in energy efficiency. Both sets of data are fed into the simulated World Energy Model, to produce forecasts of energy investment needs and costs (IEA, 2015).

117. Other institutions. There are other institutions and initiatives that aggregate data on various climate-related private sector flows, relying on voluntary reporting by their members and/or on BNEF, as well as IEA, data:

(a) United Nations Principles for Responsible Investment (UNPRI) requires signatories – primarily asset owners and investment managers – to report on their responsible investment activities using its reporting framework (UNPRI, no year). It has aligned its definitions with the Global Sustainable Investment Alliance. It thus keeps a record of the aggregate assets under management of its signatories. Although these assets are not specifically targeted towards addressing climate change, it also analyses voluntary reporting to understand signatory reactions to climate change and showcases themes in data. UNPRI does not collect product-level data, only portfolio-level data (UNPRI, 2016

(b) The Global Investor Coalition on Climate Change (GICCC) keeps a voluntary and public Low Carbon Investment Registry, a database of sample low-carbon institutional investments (Global Investor Coalition on Climate Change, 2015). Entries to this registry are made on the basis of the Low Carbon Investment Registry Taxonomy of Eligible Investments, which is in turn based upon the Climate Bonds Initiative (CBI) definitions (GICCC, 2015).

(c) The Frankfurt School-UNEP Centre and the BNEF Global Trends in Renewable Energy Investment is an annual report that draws upon data from BNEF, including on: biomass and waste-to-energy, geothermal and wind generation projects of more than 1 MW; all hydropower projects of between 1 MW and 50 MW; wave and tidal energy projects; biofuel projects with a capacity of 1 million litres or more per year; and solar projects, with those less than 1 MW estimated separately and referred to as small-scale projects, or small distributed capacity. It does not include energy-smart technologies, nor large hydropower projects; however, it includes secondary markets and research and development (R&D) expenditures (Frankfurt School-UNEP Centre, 2016).

(d) CPI publishes an annual "Global Landscape of Climate Finance", which draws largely upon self-reporting from various institutions and on data from BNEF, and estimated from IEA and the Frankfurt School-UNEP Centre. Private finance estimates in the landscape therefore tend to focus on renewable energy. CPI aggregates these numbers from various sources using an established methodology (CPI, 2015).

(e) Thematic, sector-specific or other voluntary data are collected and disclosed by several sources such as the International Institute for Applied Systems Analysis Global Energy Assessments, BCC Research, REN21 and various industry associations.

1.5.2 Other methodological issues

118. This section includes brief discussions on a range of other issues that are not specific to reporting and review, but that are nevertheless important issues to consider in estimating and contextualizing climate finance flows.

1.5.2.1 South–South cooperation

119. South–South finance flows are becoming increasingly relevant to investments that affect climate change, and are potentially a significant component of global climate finance. Their role in contributing to reducing GHGs and increasing climate resilience is particularly unclear. They are under no reporting obligations, often have limited transparency, may be disbursed from a large number of sources, and are often bundled under development finance, trade facilitation, infrastructure projects and OOF.

120. Some initiatives, such as the UNEP Inquiry into the Design of a Sustainable Financial System, aim to expand understanding of South–South flows, particularly at the country level (UNEP, no year). The Network of Southern Think Tanks (NeST), founded in 2014 by think tanks from developing countries, is also developing a common analytical framework for South–South cooperation that would improve upon the current definitions – such as the OECD DAC definition of ODA – of such cooperation, accounting for it, and tracking and reporting it (NeST Africa, 2015).

121. Data on bilateral flows are currently limited,[23] though better data exist on multilateral South–South flows through MDBs and regional development banks such as IDFC members. As developing countries continue to ramp up their efforts to support low-carbon and climate-resilient sustainable development, it may be beneficial to further consider how to identify, estimate and track these flows.

1.5.2.2 Subsidies

122. Several governments currently subsidize various goods and services, in the interest of promoting or protecting their development. Among the sectors that typically receive such subsidies, the ones with a direct impact on global GHG emissions are energy and agriculture.

123. In the energy sector, many governments subsidize the consumption or production of fossil fuels. Calculating the value of these subsidies is challenging because the subsidies rarely involve financial transactions; their values are instead estimated, for example, by comparing the subsidized prices with international market prices (McKenzie and Mintz, 2011). Organizations such as IEA and OECD provide estimates of fossil fuel subsidies. The International Monetary Fund (IMF) also estimates the value of the environmental impacts of fossil fuel use (IMF, 2014).

124. In 2009, G20 pledged to phase out inefficient fossil fuel subsidies, but progress has been limited. It also recently announced a methodology for voluntary peer reviews of inefficient fossil fuel subsidies that will be tested in a few countries (ODI, 2015b). In May 2016, the Group of 7(G7) pledged to end inefficient fossil fuel subsidies by 2025, although the statement did not define what G7 considers to be a subsidy (Mathiesen, 2016); there is not yet any analysis on the implications of this pledge, although previous research has indicated that eliminating global energy subsidies could reduce carbon emissions related to fossil fuels by over 20% (IMF, 2015).

125. Agriculture subsidies are often given to create employment, protect indigenous cultures and otherwise benefit rural populations. These include subsidies for input materials such as fertilizers, which could encourage the inefficient use of such fertilizers and contribute to increased GHG emissions. Similarly, irrigation subsidies can encourage crops that are farmed intensively, which, in turn, can also lead to increased fertilizer use (IISD, 2016). Agricultural subsidies also shape agricultural practices and may encourage, for example, livestock and dairy farming. Quantifying the impacts of these subsidies on GHG emissions is challenging because of various scientific and technical issues, although some initiatives have attempted to partially capture these emission impacts (Eshel and Martin, 2006).

126. Conversely, practices such as oversubsidized insurance can, in addition to incentivizing farmers to overfarm, also lead farmers to maintain practices or crops that are vulnerable to the impacts of climate change (OECD, 2015e).

127. Public expenditures towards these subsidies need to be considered in the context of global GHG emissions, while keeping in mind the impacts of these subsidies on welfare, income distributions and other indicators of economic and social development.

1.5.2.3 Green bonds

128. Green bonds are a relatively new and rapidly growing asset class; they are used specifically to fund projects that have positive environmental and/or climate benefits.[24]

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23) OECD compiles data on the development finance support provided by a number of developing countries, and also estimates data on the development cooperation programmes of 10 developing countries. However, it does not have information on what shares of these flows are climate-related.

24) An overview of private finance – instruments, markets, functioning – is available in BNEF (2016b).

Since the first climate-focused bond in 2007, the market for reported green bond issuances had grown to USD 37 billion in 2014 (WB, 2015b). However, their relative newness means that there is not yet much standardization in this market; as a result, there is a risk of 'greenwashing', that even projects without significant climate benefits may be financed by green bonds. Additionally, they may not reflect the total cost, or the actual climate components, of a project, and risk repackaging existing financial products rather than providing new finance. There is a need for improved standards or certifications to improve confidence and transparency.

129. CBI offers a standard and certification process, based on a taxonomy of sectors, to assess and verify such bonds (Climate Bonds Initiative, 2016). Additionally, on the basis of the experiences of MDBs with issuing such bonds, in 2014, a group of stakeholders in the green bonds market, together with the International Capital Market Association, published the Green Bond Principles, a set of voluntary guidelines that encourage transparency and disclosure by clarifying the process for issuing a green bond (International Capital Market Association, 2016); these principles recognize several broad categories of potentially eligible projects. The Investor Network on Climate Risk has offered some guidance on how to determine if such bonds are 'green' (WB, 2015b). However, the market relies mainly on disclosures and opinions, and there are no guidelines for reporting such information and no means of collecting information in a systematic way.

130. Future efforts may focus on improving the tracking of these bonds and further harmonizing their categorizations with other definitions of climate finance. As green bonds can be issued by both public and private institutions, further consideration needs to be given on how to treat them in future BAs.

1.5.2.4 Efforts aimed at improving climate-related reporting of the private sector

131. Article 2.1(c) of the Paris Agreement identifies consistency of finance flows with a pathway towards low GHG emissions and climate-resilient development as a means to strengthen the global response to the threat of climate change in the context of sustainable development. Additional efforts aimed at aligning the activities within the financial sector with climate considerations, keeping in line the aim of the Paris Agreement, are described in the remainder of this section.

132. Compatibility with 2 °C: There are various initiatives to assess the compatibility of financial investments with the international goal to limit the global temperature increase to well below 2 °C above pre-industrial levels. Many IFIs integrate climate considerations into their finance decisions to some degree, and are familiar with different types of criteria, including positive and negative lists, qualitative and quantitative benchmarks, and the use of shadow carbon pricing. However, it is possible to go beyond that and link to the 2 °C limit by developing investment criteria for individual projects on the basis of 2 °C scenarios. For instance, a report commissioned by G7 in 2015 proposes an approach to develop such criteria on a sector basis. A separate EU-funded project published a paper in 2015 as the first in a series; it develops a framework to measure the exposure of financial portfolios to the 2 °C target and translates the energy technology road maps from IEA into a benchmark. The 2 °C benchmark could be used for investors to assess the alignment of an equity portfolio with a decarbonization pathway. However, further research is required, as are efforts to link such investments to a 1.5 °C target (Thomä, et al., 2015; Germanwatch, 2015).

133. Climate risk disclosures: Climate-related financial disclosure has emerged as a key issue, driven both by policy support and voluntary initiatives. In December 2015, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD) to undertake an assessment of the current state of play on climate-related risk disclosures and to design a set of voluntary recommendations to help shape best practices for such disclosures going forward. TCFD is considering various risks associated with climate change, and what constitutes effective financial disclosures across industries.

134. The Phase I report, published in April 2016, provides an overview of progress; it surveys the landscape of existing climate disclosures, discusses fundamental principles of effective, relevant disclosure and sets out the scope and objectives of the next phase of work. TCFD will present its final report by the end of 2016, with recommendations on disclosures frameworks and guidelines that are expected to go beyond the initial mandate (Task Force on Climate-related Financial Disclosures, 2016).

135. Sustainable insurance: As the risks and impacts of extreme weather events increase, insurance against damage can greatly strengthen resilience, reduce vulnerabilities and offset loss and damage. It is thus important that the insurance sector understands and considers these risks in its business. In 2012, the United Nations Principles for Sustainable Insurance were signed as a way for insurance companies to voluntarily commit to aligning their business models with Sustainable Development Goals. To demonstrate accountability and transparency to the public, a fundamental aspect of the principles is for insurers to publicly disclose their implementation progress every year (UNEPFI, no year).

136. Separately, the Bank of England's Prudential Regulatory Authority (PRA) in September 2015 published

a report on the impact of climate change on the insurance sector, with a focus on adaptation needs. This risk assessment report aims to provide a framework for considering risks from climate change keeping in mind the PRA objectives (Bank of England, 2015). Such initiatives are expected to help strengthen the response of the financial sector to climate change, and should be broadly replicated.

1.6 Issues and initiatives in accounting for climate finance

137. The development of modalities for the accounting of financial resources provided and mobilized through public interventions under the SBSTA in line with the common modalities, procedures and guidelines of the transparency of support, is an additional important dimension to the reporting that will promote enhanced transparency and consistency of information on support. Addressing it may require the development of improved guidelines and formats for reporting and accounting of financial resources and for the review of information. However, the amounts that are reported as financial support provided and received are shaped by the ways in which they are accounted for. Thus for the work to meaningfully progress, there will need to be an improved understanding among Parties as to how to consider underlying accounting challenges.

138. As stated in the Paris Agreement (Article 13, para. 6), the purpose of the framework for transparency of support is to also, to the extent possible, provide a full overview of aggregate financial support provided, to inform the global stocktake.

1.6.1 Recent developments

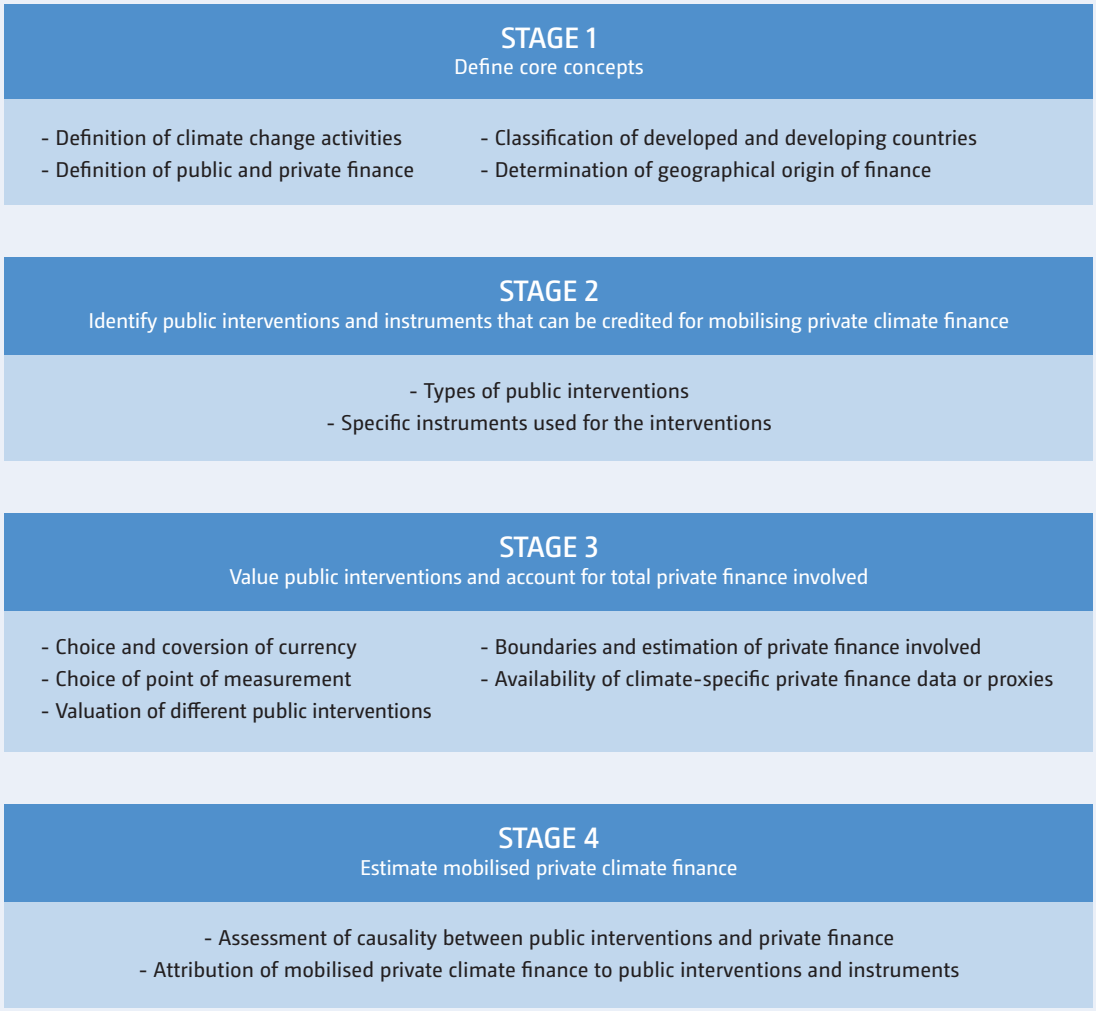
139. A study by OECD RC outlines a framework (figure 1.2) to structure key accounting questions into four sequential yet interrelated stages (OECD, 2015f). The framework offers a number of options by which to address each of these questions; it further encourages interest groups to choose options based on their objectives. Following the framework can thus help to resolve accounting issues in a number of ways – subject to whether the objective is to improve accuracy, enable standardization, ensure feasibility or incentivize specific types of support – as a means of helping different groups define and reach agreement on these issues. Though the focus of the framework is on mobilized private climate finance, it addresses issues relevant to accounting for broader climate finance.

140. In 2015, Trinomics released a report, "Promoting Private Sector Actions in the Fight against Climate Change in Belgium and Abroad: International Climate Finance". It relies upon the four-stage framework proposed by the OECD RC study in approach I, and explains the choices made to address the accounting issues (Trinomics, 2015). A key outcome of the study was a greater recognition of the challenges associated with conducting such an exercise – these are captured in recommendations relating to the methodology, data collection and results. This and other pilot studies (OECDc) are expected to contribute to an improved picture of overall mobilized private finance.

141. Accounting frameworks for providing an overview of aggregate financial support are nascent. The following two studies provide useful insights in this regard.

142. Report to assess progress towards the joint USD 100 billion goal. This report was prepared and published on the request of the COP 20 and COP 21 Presidencies ("Climate Finance in 2013-2014 and the USD 100 Billion Goal"; OECD, 2015), and estimated the amount of

Figure 1.2: Conceptual four-stage framework



Source: OECD (2015f).

climate finance mobilized by developed countries in 2013 and 2014 by collecting, analysing and aggregating information from a range of sources. Its accounting framework provides explanations of the funding sources it includes, its classification of developed and developing countries, its underlying definitions and the bases for measurement of climate finance. The framework further outlines the steps that the report takes to avoid double counting and to account for the share of multilateral finance that is attributable to developed countries.

143. Determining stakeholder preferences. This approach, proposed by a joint study of WRI, CPI and ODI (WRI, 2015b) evaluates the choices for addressing a similar set of decision variables according to the notional political consensus among stakeholders on whether they should be included in developing estimates. The two studies offer insights into the factors that must be considered in addressing various accounting issues, and provide a basis for assessing and comparing various methods employed in accounting and reporting exercises.

144. There is considerable effort under way to improve collective understanding of total climate finance, mobilized finance and future trends. Such exercises would continue to benefit from a careful consideration of the underlying accounting issues, leading to clear and comparable pictures of climate finance flows.

1.7 Key messages

Improvements made in tracking and reporting of climate finance since the 2014 biennial assessment and overview of climate finance flows

145. Following the recommendations made by the SCF in the 2014 BA, the 2016 BA identifies the improvements listed below in the tracking and reporting of information on climate finance:

Developed countries

(a) Enabling Parties to provide additional information on their underlying definitions, methodologies and assumptions used, including on how they have identified finance as being "climate-specific", as well as making these data more accessible to the public and recipient Parties, thereby enhancing consistency and transparency;

(b) Improving guidance on application of the Rio Markers for adaptation and mitigation and adjustments to the Rio Marker definitions for adaptation;

International organizations

(c) Making available MDB and multilateral climate fund activity-level data through the OECD DAC;

(d) Applying common principles for tracking mitigation and adaptation finance by MDBs and IDFC members;

(e) Making available data on climate co-financing flows through utilization of a joint methodology for tracking public and private climate co-finance by a consortium of seven MDBs.

Insights into reporting by developed countries and developing countries

146. The current BR guidelines[25] were designed to accommodate reporting on a wide range of climate finance instruments and activities. This required a reporting architecture that was flexible enough to accommodate a diversity of reporting approaches. In some cases, limited clarity with regard to the diversity in reporting approaches limits comparability in climate finance reporting. Further improvements in reporting guidelines and formats are needed to enhance transparency on the approaches used by individual Parties and to enable greater comparability across reporting by Parties.

147. Current BUR guidelines[26] for reporting by developing countries on financial, technical and capacity-building needs and support received do not require information on the underlying assumptions, definitions and methodologies used in generating the information. Limited institutional capacity to track climate finance received, as well as the lack of data, can pose challenges in developing country reporting.

Insights into broader reporting aspects

148. Information on domestic climate-related finance is available including through a few BURs, CPEIRs and other independent studies. However, such information is difficult to compare.

149. There is a lack of systematic collection of data on climate-related private finance flows globally, due to difficulties in identifying climate-related finance, restrictions based on confidentiality, and conceptual and accounting issues. The primary sources cover mainly renewable energy and draw upon industry and sector databases, relying on voluntary disclosures. Efforts to develop methodologies for estimating mobilized private finance by public interventions are under way by the OECD DAC and the Research Collaborative on Tracking Private Climate Finance.

150. Ongoing efforts at the international and national levels aimed at improving climate-related financial risk disclosures are important for improving the transparency and promoting the alignment of finance and investment flows in accordance with Article 2.1(c) of the Paris Agreement.

Insights related to review of climate finance information

151. Practices exist within the UNFCCC to review the information on support provided by Parties, including the international assessment and review of BRs and the international consultation and analysis of BURs. However, there are no internationally agreed methods for reconciling financial support provided against support received. Also, MDBs and IDFC do not have a standard procedure to review their climate finance data. In addition, BRs are not reviewed in time for aggregating data for the BAs.

25) Decision 2/CP.17.
26) Decision 2/CP.17.

Chapter II

OVERVIEW OF CURRENT CLIMATE FINANCE

2.1 Introduction

152. As is clear from chapter II, a comprehensive system to track climate finance does not exist. Rather, estimates of climate finance must be assembled from multiple sources. This chapter compiles information from numerous sources to piece together as complete a picture as possible of climate finance flows for 2013 and 2014. When combining data from different sources, care must be exercised to avoid double counting. For this reason, the focus is on primary finance – the finance for a new physical item such as a wind turbine.[27]

153. As in the 2014 BA, estimates are compiled of climate finance flows from developed to developing countries and for global total climate finance. In addition, this report includes available information on climate finance flows among developing countries: South–South cooperation.

2.2 Climate finance flows from developed to developing countries

154. This section reviews data on climate finance flows (both public and private) from developed to developing countries. Data on the flows of public climate finance are of higher quality than private climate finance flows, which are neither consistently monitored, estimated nor reported. Public climate finance consists of flows through bilateral channels – national governments, bilateral DFIs and national climate funds – and multilateral channels – MDB and multilateral climate funds.

155. Some data sources report flows from Annex II to non-Annex I Parties, while others report flows from OECD to non-OECD countries. Some sources, CPI for example, report estimated flows from OECD member countries to non-OECD member countries. Other sources, such as OECD DAC, report flows from DAC members (29 of the 35 OECD members) to ODA-eligible countries.

156. The data used in this section come from multilateral climate funds, BRs, OECD DAC CRS, BURs, reports of MDBs, relevant private sector sources and special reports. Each of these sources of climate finance data is discussed in turn.

2.2.1 Climate funds administered by the operating entities of the Financial Mechanism of the Convention and the Kyoto Protocol

157. The GEF has been an operating entity of the Financial Mechanism of the Convention since 1996. The GEF also manages the LDCF and SCCF. The Adaptation Fund (AF), established under the Kyoto Protocol, is administered by its own board. Data on these funds are provided in table 2.1 below. Together, they committed USD 0.77 billion in 2013 and USD 0.56 billion in 2014. The GCF, an operating entity of the Financial Mechanism, received its initial capital and approved its first projects in 2015.

2.2.2 Climate finance provided to developing countries through multilateral climate funds

158. Multilateral climate funds provide financial support to climate-related projects in multiple developing countries from funds contributed by multiple developed countries. Funds tend to specialize, with several funds each devoted to adaptation, REDD-plus and other mitigation projects. The funds pledged and the commitments approved by each fund are shown in table 2.1. Commitments approved amounted to USD 1.85 billion for 2013 and USD 2.49 billion for 2014.[28] Almost all of the resources are contributed by Annex II Parties.[29]

159. Four of the funds, accounting for 56% of the total pledges, are part of the Climate Investment Funds (CIF) administered by an administrative unit hosted by WB and governed by a committee that includes representatives of developed and developing countries.[30] Three of the adaptation funds and one mitigation fund operate under the UNFCCC, and account for 31% of the pledged funds. The contributions pledged to the adaptation, REDD-plus and mitigation funds represent 25%, 14% and 61% of the total, respectively. At the end of 2014, 77% of funds pledged for adaptation had been committed to projects. The corresponding figures for mitigation and REDD-plus were 65% and 37%, respectively. These patterns are very similar to those reported in the 2014 BA.

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27) Finance related to existing assets, such as the finance mobilized by a buyer to purchase an existing wind turbine, makes no further contribution to addressing climate change.

28) Annex II Parties reported contributions of USD 1.98 billion and USD 2.19 billion to multilateral climate change funds for 2013 and 2014 in their BRs, respectively, for a total inflow of USD 4.17 billion. The approvals during the period of (USD 1.85 +2.49 =) USD 4.34 billion slightly exceed the inflows, which is possible due to differences in the timing of inflows and commitment disbursements.

29) The fund with the lowest share of Annex II Party contributions is the Forest Carbon Partnership Facility (Carbon Fund) at 96.8%.

30) The MDB committee includes representatives of AfDB, ADB, EBRD and IADB and WBG.

Table 2.1: Overview of commitments approved during 2013 and 2014 by multilateral climate funds (millions of USD)

	Pledged through 2014 FY	Commitments through 2012 FY	Commitments during 2013 FY	Commitments during 2014 FY
Adaptation Funds				
Adaptation for Smallholder Agriculture Program	359.48			191.00
Adaptation Fund[a]	478.70	197.66	26.53	67.63
Least Developed Countries Fund (LDCF)[a]	916.49	355.70	299.60	234.60
Pilot Program for Climate Resilience (PPCR)[b]	1148.00	273.60	225.50	332.90
Special Climate Change Fund (SCCF)[a]	348.45	199.90	54.36	48.42
Sub-total Adaptation Funds	3251.12	1026.86	605.99	874.55
REDD-plus Funds				
Congo Basin Forest Fund (CBFF)	164.65	82.12		
Forest Carbon Partnership Facility – Readiness (FCPF)	357.63	39.44	46.93	33.41
Forest Carbon Partnership Facility – Carbon Fund (FCPF)	470.24	2.09	2.12	2.06
Forest Investment Program (FIP)[b]	595.00	57.00	47.80	179.20
UN REDD	268.27	102.75	52.19	34.44
Sub-total REDD-plus Funds	1855.79	283.40	149.04	249.11
Mitigation Funds				
Clean Technology Fund (CTF)[b]	5191.00	2169.10	686.40	1063.50
GEF Trust Fund 5th Replenishment[a]	1260.00	586.11	387.80	168.06
GEF Trust Fund 6th Replenishment[a]	1130.00			42.17
Scaling Up Renewable Energy Program (SREP)[b]	516.00	32.83	25.65	95.47
Sub-total Mitigation Funds	8097.00	2788.04	1099.85	1369.49
Green Climate Fund (GCF)[a]	10126.80			
Total excluding the GCF	13203.91	4098.30	1854.88	2493.13

Note: Amounts may not sum to the total due to rounding. The total does not reflect the pledges amounting to USD 10.2 billion to the GCF by the end of 2014.

[a] Denotes a fund under the UNFCCC.
[b] Denotes a fund that is part of CIF.

Source: Climate Funds Update, April 2016.

Abbreviations: Pledged = contributor pledges, approved = funds committed to approved projects, FY = the fund's fiscal year ending during the specified calendar year.

2.2.3 Climate finance reported by Annex II Parties in their biennial reports

160. In their BRs, Annex II Parties include financial information on public financial support to non-Annex I Parties as provided through multilateral, bilateral, regional and other channels. For each channel, they report finance provided for adaptation, mitigation, cross-cutting and other climate change actions. In addition, they report the provision of "core general" public financial support to multilateral institutions that Parties cannot confirm as being climate-specific.

161. The total climate finance reported by Annex II Parties in their CTF tables 7, 7(a) and 7(b) for 2011–2014 is summarized in table 2.2. The amounts provided by each Annex II Party for the years 2011–2014 are shown in annex F.[31]

31) Further information can be found in the compilation and synthesis report on BR2s (document FCCC/SBI/2016/INF.10.).

Table 2.2: Climate-specific finance and core general funding provided by Annex II Parties to developing countries, 2011–2014, as reported in their CTF tables 7, 7(a) and 7(b) (billions of USD)

Year	Bilateral, regional and other channels				Multilateral				Total climate-specific finance[a]	Core general[b]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
2011	8.79	2.64	2.00	0.65	1.33	0.44	0.96	0.17	16.97	11.78	28.75
2012	9.91	2.00	1.79	0.68	0.99	0.44	1.22	0.05	17.08	11.83	28.92
2013	15.17	4.25	3.02	0.71	0.58	0.43	1.20	0.06	25.42	15.11	40.52
2014	17.07	3.55	2.50	0.74	0.45	0.29	1.88	0.12	26.60	16.63	43.24

Note: Data accessed on 4 May 2016. The 2011 and 2012 amounts differ slightly from those published in the 2014 BA due to subsequent updates to BR1 data.
For 2013, Germany indicates in its BR that it mobilized public climate finance amounting to EUR 1.47 billion (approx. USD 1.95 billion (EUR 0.753 to USD 1)). For, 2014, Germany indicates in its BR that it mobilized public climate finance of roughly EUR 2.79 billion (approx. USD 3.70 billion (EUR 0.754 to USD 1)). These amounts are not captured in the totals in Germany's CTF tables. If these amounts are included, the total amounts of climate-specific finance provided by Annex II Parties rise to USD 27.4 billion in 2013 and USD 30.3 billion in 2014, and consequently, the grand totals provided by Annex II Parties rise to USD 42.5billion in 2013 and USD 46.9 billion in 2014.

[a] Sum of mitigation, adaptation, cross-cutting and other climate finance provided via bilateral, multilateral, regional and other channels.
[b] Support provided to multilateral and bilateral institutions that Parties do not identify as climate-specific.

Source: Annex II Party BRs for 2014 and 2016 as compiled in annex F, tables F.1 to F.4.

162. The amount of climate finance provided increased substantially over the period. Total finance reported, including "core general" funding, grew from USD 28.8 billion in 2011 to USD 40.5 billion in 2013 and USD 43.2 billion in 2014. Total climate-specific finance rose from USD 17.0 billion in 2011 to USD 25.4 billion in 2013 and USD 26.6 billion in 2014, representing an increase of about 50%. Most of the climate-specific finance was provided through bilateral, regional and other channels. USD 23.1 billion in 2013 and USD 23.9 billion in 2014 was reported as climate-specific finance channelled through bilateral, regional and other channels.

163. In addition to the amounts reported in its CTF tables, Germany has reported since 2013 mobilized public climate finance in its BR (i.e. climate-related credit financing provided by KfW Entwicklungsbank and Deutsche Investitions- und Entwicklungsgesellschaft mbH that uses market funds). This amounted to approximately USD 1.95 billion in 2013 and USD 3.70 billion in 2014. If these amounts are included, the total amount of climate-specific finance provided by Annex II Parties rises to USD 27.4 billion in 2013 and USD 30.3 billion in 2014; consequently, the grand total provided by Annex II Parties rises to USD 42.5 billion in 2013 and USD 46.9 billion in 2014.

2.2.4 Climate finance flows from Development Assistance Committee members to countries eligible for official development assistance

164. Data on climate-related development assistance are collected by OECD, which includes information on whether projects target climate change adaptation and mitigation in its comprehensive database of development assistance projects using the Rio Markers. Reporting to OECD is one of the sources of information on which many developed countries base their BRs. The Rio Markers were originally designed to track the mainstreaming of environmental considerations into development cooperation. To qualify as development assistance, finance must be provided as grants or concessional loans with a grant element of at least 25% calculated at a discount rate of 10%. As part of their reporting, members "mark" projects that have climate change mitigation or adaptation as a "principal" or "significant" objective. The total value of projects with climate change objectives is reported; no attempt is made to estimate the climate-related share of the project budget.

165. As discussed in chapter I above, the scope of the bilateral climate finance that countries report in their BRs differs from that reported to DAC.[32] Some countries include a subset of the finance that has climate change as one of its objectives in their reporting to the UNFCCC; of course, countries also include information

32) OECD (2015), annex C summarizes the coverage and approaches for public bilateral climate finance by country for 2013–2014.

Table 2.3: Bilateral assistance reported by OECD DAC members for climate change mitigation and adaptation-related projects, 2011–2014 (thousands of USD)

Year	Mitigation		Adaptation		Overlap		Total	
	Principal	Significant	Principal	Significant	Principal	Significant	Principal	Significant
2011	8,816,393	4,929,887	2,593,150	6,081,430	1,308,584	2,519,711	10,100,959	8,491,607
2012	11,292,592	5,189,072	3,798,145	6,934,470	2,026,466	2,541,621	13,064,271	9,581,921
2013	11,699,867	5,499,991	4,105,855	7,350,033	1,905,488	2,721,981	13,900,234	10,128,042
2014	13,401,784	6,294,083	4,546,271	7,880,266	2,064,186	3,583,988	15,883,869	10,590,361

Note: (1) Adaptation projects were not tracked prior to 2010; (2) Many activities target multiple climate objectives, the total adjusts for this overlap to ensure there is no double counting.
Source: OECD DAC CRS statistics, accessed 13 May 2016.

on non-concessional flows, which are not monitored through DAC. Nevertheless, the project-level data reported to OECD DAC include substantial detail on issues such as theme, geography, instrument and type of recipient, and can be used to offer deeper insights into some of the issues of interest with respect to climate finance. Project-level detail is not consistently available in BRs.

166. Table 2.3 shows the bilateral assistance reported by OECD DAC members for climate change mitigation and adaptation projects. Bilateral assistance reported by OECD DAC members for projects with climate change as a principal objective amounted to USD 13.9 billion in 2013 and USD 15.9 billion in 2014. For projects with climate change as a significant objective, the amount is USD 10.1 billion for 2013 and USD 10.6 billion for 2014.

2.2.5 Climate finance provided by Annex II Parties to non-Annex I Parties through multilateral development banks

167. Since 2011, ADB, the African Development Bank (AfDB), the European Bank for Reconstruction and Development (EBRD), EIB, the Inter-American Development Bank (IADB) and the World Bank Group (WBG) (including the International Finance Corporation (IFC)) have produced a joint report on their financing that supports mitigation

Box 2.1: Financial structure of MDBs

MDBs can borrow funds, which means their development finance commitments can exceed the funds provided by their shareholders. Although the details differ by bank, each MDB has a number of developed and developing country shareholders that contribute funds called paid-in capital. Shareholders also commit to providing additional funds, callable capital, under specified circumstances. Unlike the shareholders of a private firm, a bank's shareholders receive no dividends or interest on their capital.

Traditionally, MDBs have provided concessional finance to the poorest countries and non-concessional finance to wealthier countries. Concessional finance is funded mainly by developed country contributions and retained earnings. Non-concessional finance is funded mainly with money borrowed from global capital markets.

An MDB is able to borrow funds from commercial lenders partly because, if necessary, it could draw on its callable capital to repay the debt. An MDB can borrow on favourable terms, in part because some of the bank's developed country shareholders have excellent credit ratings, and also because the developing country recipients of MDB finance have a strong track record of repayment. An MDB can then lend funds to its developing country clients on more favourable terms than they would get from other lenders. The interest and principal payments by clients are used by the bank to service its debt.

MDBs largely provide loans rather than grants, but are able to commit large volumes of finance. The seven MDBs committed development finance of USD 137.055 million in 2014. The "core general" contributions reported by Annex II Parties in their BRs went mostly to those MDBs and amounted to USD 16.630 billion for 2014. In other words, MDB outflows are eight times greater than the government contributions or "inflows" reported in BRs by Annex II Parties.

and adaptation to climate change.[33] MDBs are capitalized by contributions from developed and developing member countries, and then raise further finance on capital markets (see box 2.1). The report suggests that MDBs provided USD 20.8 billion in 2013 and USD 25.7 billion in 2014 of their own resources in developing countries, as detailed in table 2.4.[34] In addition, MDBs manage about USD 2.2 billion of external resources per year (including grants or other concessional funds that are managed in trust funds or accessed from multilateral climate funds).

168. To estimate the finance committed by Annex II Parties to non-Annex I Parties via MDBs, two adjustments are necessary. First, climate finance committed by MDBs to Annex I Parties, mainly countries with economies in transition, must be excluded to calculate the climate finance committed to non-Annex I Parties. Second, each MDB is owned by both developed and developing countries, so the share of this finance that can be attributed to Annex II Parties must be estimated.

169. There is no agreed formula for attribution of MDB climate finance to the developed country shareholders (see annex H for a discussion of possible approaches). The methodology used in the 2014 BA to impute the Annex II Party share of MDB finance to non-Annex I Parties is based on the share of equity held by developed countries as aggregated for the seven banks, resulting in an estimate that about 65% of the finance to developing countries can be attributed to Annex II Parties. Using this approach, USD 11.4 billion in 2013 and USD 12.7 billion in 2014 was delivered by developed countries. In 2014, OECD and CPI developed a new, more advanced, methodology that captures the mobilization effect through MDBs, and suggest that about 85% of the finance to developing countries can be attributed to

Table 2.4: Climate finance commitments by MDBs from their own resources, 2013-2014 (millions of USD)

Year	Adaptation	Mitigation	Dual	Total
2013	3951	16793	34	20779
2014	4521	21223		25744

Source: Annex G, table G.2.

33) Two new MDBs were launched during the period covered by the BA: the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB) established by Brazil, Russia, India and China. AIIB was not operational during 2014. The bank has 37 regional and 20 non-regional prospective founding members. The bank started operation after the agreement entered into force on 25 December 2015. It has expressed an intention to be "lean, clean and green". NDB aims to fund infrastructure and sustainable development needs across BRICS [Brazil, Russia, India, China and South Africa] nations and developing countries. The first projects were announced in 2016, and included several renewable energy programmes. Given that all its members are developing countries, NDB may emerge as an important channel for voluntary South–South cooperation on climate finance in the future.

34) Some of this climate finance is provided to Annex I Parties.

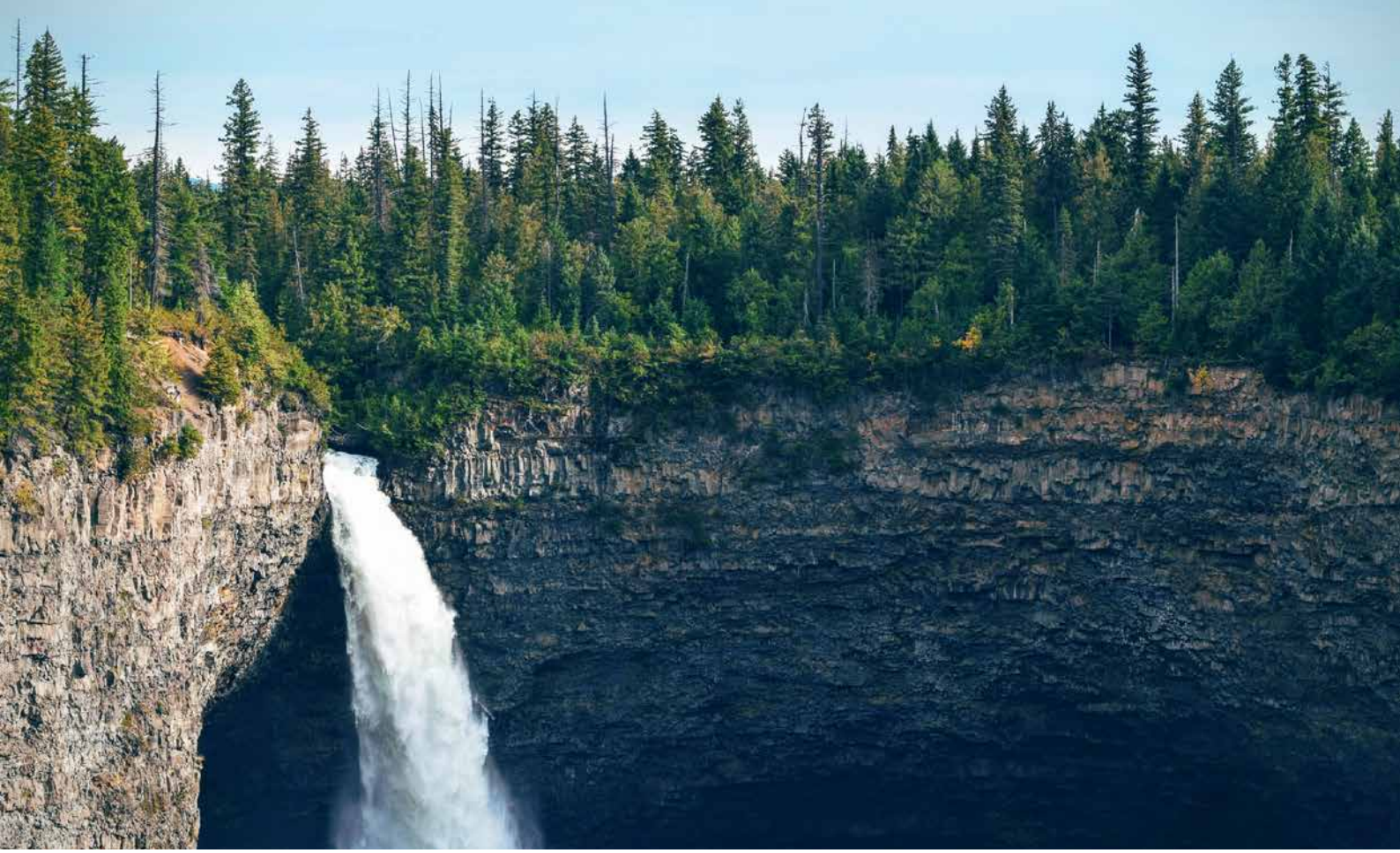


Table 2.5: Commitments by MDBs attributable to Annex II Parties and climate finance provided to non-Annex I Parties, 2013 and 2014

	2013	2014
Commitments of own resources by MDBs from table 2.4 (USD billion)	20.799	25.744
– Less commitments to Annex I Parties (USD billion)	–3.299[a]	–6.273[b]
= Commitments to non-Annex I Parties (USD billion)	17.5	19.471
× Share of non-Annex I commitments attributable to Annex II Parties (%)	65–85	65–85
= MDB own resources climate finance commitments to non-Annex I Parties attributable to Annex II Parties (USD billion)	11.4–14.9	12.7–16.6

[a] Commitments of MDB resources to EU 13 countries from table 2 of AfDB, ADB, EBRD, EIB, IADB, IFC and WB (2014).
[b] Commitments of MDB resources to all Annex I Parties provided by ADB in response to a request from the UNFCCC secretariat. The commitments to EU 13 countries amounted to USD 3,375 million (tables 6 and 10 of AfDB, ADB, EBRD, EIB, IADB, IFC and WB (2015)).

Source: Calculations discussed in paragraph 169.

Annex II Parties. On this basis, USD 14.9 billion in 2013 and USD 16.6 billion in 2014 can be attributed to developed countries. It is important to note, however, that attributed shares for individual institutions vary significantly between banks: for example, 99% for EIB and 59% for AfDB. While MDB data on climate co-benefits have been used for these estimates, MDBs have not been part of these attribution efforts. Table 2.5 summarizes the results of these two approaches. The remainder of the climate finance committed to non-Annex I Parties by MDBs is treated as South–South cooperation in section 2.3 below.

2.2.6 Climate-related other official flows

170. Finance provided to ODA-eligible countries by DAC member governments and their institutions that are not primarily aimed at development or do not meet the concessionality threshold for ODA are called OOF. OOF includes finance provided by bilateral financial institutions.

171. The amount of OOF reported by Annex II Parties in their CTF tables amounted to USD 2.1 billion in 2013 and USD 3.1 billion in 2014. Another estimate of OOF is available through voluntarily reporting by some bilateral

Table 2.6: Estimated non-concessional climate finance flows from OECD to non-OECD countries, 2013 and 2014

	2013	2014
IDFC OECD member institution green finance flows to non-OECD countries, Annex J, table J.2 (USD billion)	15	18
Climate finance share of green finance, Annex J, table J.1 (%)	88	87
Estimated climate finance flows from OECD member institutions to non-OECD countries (USD billion)	13.2	15.7
Non-concessional share, Annex J, table J.4 (%)	30–50	30–50
Estimated non-concessional climate finance flows from OECD member institutions to non-OECD countries (USD billion)	4.0–6.6	4.7–7.8
OPIC renewable energy and energy efficiency finance for non-OECD countries (USD billion)	0.5	0.6
Total (USD billion)	4.6–7.2	5.2–8.3

Source: IDFC and OPIC.

financial institutions of their other official finance to OECD DAC. The total they reported was USD 0.68 billion in 2013 and USD 0.87 billion in 2014.

172. Furthermore, data on green finance flows of IDFC institutions can be used to estimate the non-concessional flows from OECD to non-OECD countries by first scaling down the green finance to the climate finance share and then estimating the non-concessional amount. The non-concessional share of IDFC member finance varies widely (see annex J, table J.4), so a range of 30–50% can be applied to estimate the non-concessional share. In addition, the Overseas Private Investment Corporation (OPIC), which is not an IDFC member, committed USD 1.3 billion in finance and insurance to renewable energy and energy efficiency projects during each of its 2013 and 2014 fiscal years, of which USD 1.3 billion and USD 1.0 billion, respectively, went to non-OECD countries. When OPIC climate finance is added to IDFC non-concessional finance, the estimated non-concessional flow is USD 4.6–7.2 billion for 2013 and USD 5.2–8.3 billion for 2014. These calculations are shown in table 2.6.

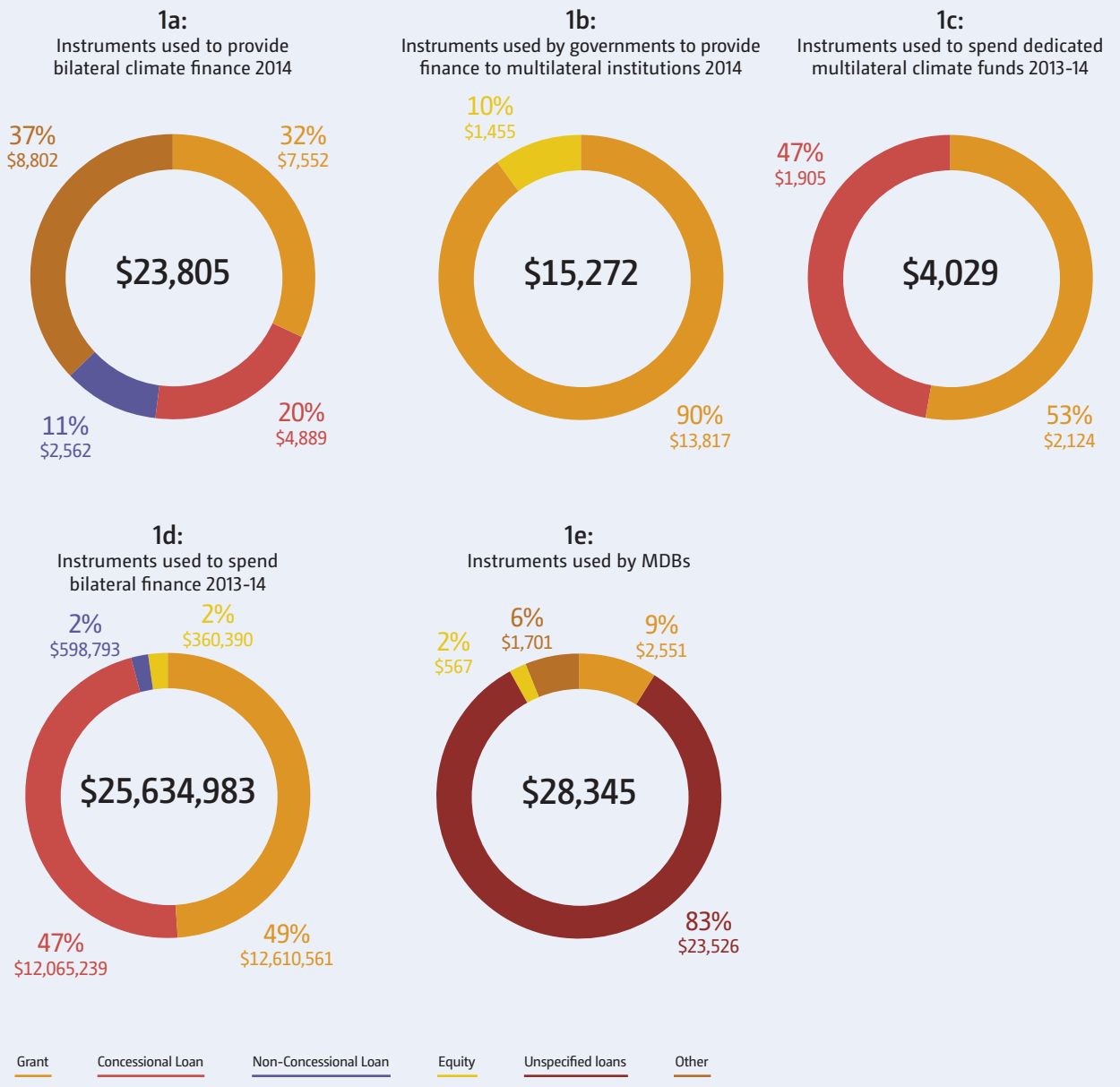
173. With regard to export credits, the OECD CPI report "Climate Finance in 2013-14 and the USD 100 Billion Goal" estimates the value of export credits provided to ODA-eligible countries to be at USD 1.6 billion for both 2013 and 2014 (OECD, 2015a). The estimate comprises the value of officially supported export credits to the renewable energy sector from the OECD Export Credits Individual Transactions Database supplemented by Party reporting.

2.2.7 Instruments used for climate finance

174. Figure 2.1 shows that the mix of instruments on offer varies significantly by source of funding. About 32% of bilateral, regional and other finance reported to the UNFCCC in BRs is spent as grants, 20% as concessional loans, 11% as non-concessional loans, and the remainder through equity and other instruments in 2014. About 38% of the reported finance in BRs is channelled through multilateral institutions. Most of finance provided by developed countries to multilateral institutions is reported as grant or equity contributions, and the available data suggest that this has not changed much over time. These grant and equity investments are then used by MDBs to either raise additional money from other sources such as the capital markets, or used as grants and blended with core MDB resources in order to reduce the overall cost of their financing to recipients. See box 2.1 for further details on how the inflows to MDBs are used to increase the overall amount of finance available to clients.

175. About 53% of funding from multilateral climate funds is provided as grants, and the remainder is largely concessional loans. Over time, the use of concessional loans, particularly through CIF, has increased. The GCF now also makes concessional loans, equity and guarantees available. Concessional loans are most widely used for mitigation activities in energy and transport, which have strong revenue generation potential. Concessional loans have also been used to support adaptation activities in middle-income countries, particularly for revenue-generating investments in infrastructure services that support adaptation (e.g. roads and irrigation). There has been strong interest in the use of instruments such as

Figure 2.1a-e: Instruments of finance reported in 1(a, b) BRs CTFs, 1(c) multilateral climate funds, (1d) bilateral climate-related spending and (1e) MDBs



Source: (1a) Data drawn from second BR CTFs; (1b) Data drawn from second BR CTFs; (1c) CFU 2016; (1d) OECD DAC, 2016; (1e) MDB reports, 2014 and 2015.

guarantees and equity that may help unlock or de-risk private investment by these mechanisms, but so far the use of these instruments in practice has been quite modest.

176. 49% of bilateral climate finance reported to the OECD in 2013-2014 is provided as grants, and 47% as concessional loans.

177. Climate finance provided by MDBs is primarily provided as loans (83%) whose concessionality is not specified in their climate finance reporting. About 9% was provided as grants, 2% as equity and 6% as other instruments in 2013-2014. As noted, MDBs have sought to blend concessional finance from donors and climate funds with their own resources, to make larger packages of more affordable capital available to partner countries. Annex P lays out the general cost of public

sector finance from MDBs, which is based on the average interbank interest rate at which a selection of banks on the London money market are prepared to lend funds. The terms of loans are generally more flexible than if accessed from a private institution, and the costs are generally lower. Low-income countries are generally eligible for concessional lending from these institutions. The use of instruments reflects purpose, sector and region or recipient country. Non-concessional financing from MDBs tends to target revenue-generating mitigation activities in countries where viable investments can be identified.

2.2.8 Recipients of climate finance

178. Climate finance goes to a wide range of government, private and non-governmental entities in recipient countries. However, reporting on recipient institutions is incomplete. While the BR CTFs include reporting parameters on "recipient country/region/project/programme", the reporting guidelines do not require further specific details on recipients. As such, information on the recipients of climate finance is relatively scant in the BR data.

179. There is a lack of detail on the recipient entities of climate finance in data on climate-related spending. For example, a review of data in OECD CRS for 2013 - 2014 suggested that developing country governments were specified as the recipients of about 40% of total flows. In comparison, 11% went to multilateral institutions, and 46% to other broadly known recipients (public sector, NGOs & public–private partnerships, others including universities). However, details on the recipient government versus provider government breakdown of the public sector category were missing for 21% of the finance, and the recipient entity was entirely unspecified in another 3%.[35] As a result, detailed recipient data were not available for about 25% of the reported funding. Climate finance channelled through other known recipients and multilateral channels may also reach national governments, but this is not captured in the data. Improving data on the recipients of climate finance could be an area for further work that might help to enhance the understanding of where finance is going, and how effectively it is being used.

180. Non-Annex I Parties report climate finance received in their NCs and BURs. The first BURs were submitted in 2014. The information provided on climate finance received varies due to the lack of a standardized reporting format. Of the 32 BURs received as at 30 June 2016, 20 provided some information on total international climate finance received over a certain period. Other countries indicated climate finance received for a selective number of projects, activities, sectors or donors, or did not include quantitative financial information.

181. Due to the differences in reporting across BURs, it is not possible to accurately tabulate the amount that non-Annex I Parties report as support received by year. A number of countries report annual amounts for various years, while others report aggregate amounts for various periods.

182. Initiatives to track climate finance received have also been taking place outside the Convention. For example, GFLAC has tracked the international climate finance received by eight Latin American countries since 2010. The information is provided in annex I. The total amount received is USD 5.6 billion, about USD 1.1 billion per year.

2.2.9 Estimates of private climate finance flows from developed to developing countries

183. The major source of uncertainty regarding flows from developed countries to developing countries relates to private finance for activities that address climate change. As discussed in chapter I above, very limited data on private investment in climate change activities are available, and are largely focused on renewable energy projects. Relevant examples include private renewable energy project finance, private FDI, private purchases of certified emission reductions, and private donations to support climate-related actions. However, it is clear that there is potential for the private sector to invest in a wide range of other sectors and activities with strong climate co-benefits, even if data are not available. Data on private climate finance flows from developed to developing countries are limited.

184. Initial partial estimates of private finance are available. Direct primary investment of developed country companies into renewable energy projects located in developing countries was estimated at USD 1.8 billion in 2013 and USD 2.1 billion in 2014 (CPI, 2016, based on BNEF project-level data). This estimate is likely to be conservative, as tracking direct investment into projects captures only one dimension of often complex financial value chains. Analysing the ownership structure of private companies operating in developing countries may reveal other aspects such as additional international investment channelled through local subsidiaries from parent companies that are headquartered in other countries, or seemingly private financial flows that are ultimately owned by government entities. Understanding these complex structures requires information that is often unavailable.

35) Data on the recipient government versus provider government breakdown of the public sector category were missing for about 30% of the finance reported.

Table 2.7: Summary of estimated climate finance flows from developed to developing countries, 2013 and 2014

		2013 (USD billion face value)	2014 (USD billion face value)	Sources of data
Flows to developing countries **2013–2014 average total** **Public:** USD 41 billion **Private:** USD 2 billion renewables USD 24 billion FDI USD 14.8 billion mobilized	**UNFCCC funds**	0.6	0.8	Fund financial reports, CFU
	Multilateral climate funds (including UNFCCC funds)	1.9	2.5	Fund financial reports, CFU
	Climate-specific finance through bilateral, regional and other channels	23.1	23.9	CTF table 7(b)
	Of which grants and concessional loans	11.7	12.4	CTF table 7(b)
	MDB climate finance attributed to developed countries (own resources only)	14.9	16.6	MDB climate finance reporting
	Renewable energy projects[c]	1.8	2.1	CPI landscape of climate finance, BNEF
	FDI in greenfield alternative and renewable energy	26.4	21.6	CPI landscape of climate finance, fDi Intelligence
	Mobilized private finance[d]	12.8	16.7	OECD CPI report (2015)

[a] Includes commitments approved during 2013 and 2014. Almost all contributions are contributed by Annex II Parties. The values do not reflect pledges to the GCF amounting to 10.2 billion USD by the end of 2014.
[b] From Annex II Parties to non-Annex I Parties. Values are derived by excluding climate finance to Annex I Parties from the total climate finance provided by MDBs from their own resources to arrive at climate finance provided to non-Annex I Parties, and by attributing 85% of this to Annex II Parties.
[c] From Annex II Parties to non-Annex I Parties.
[d] From Annex II Parties as well as Czechia, Poland, Slovakia and Slovenia.

185. FDI in greenfield alternatives and renewable energy in developing countries was estimated at USD 26.4 billion in 2013 and USD 21.6 billion in 2014[36] (CPI, 2016; based on fDi Intelligence, 2014, 2015; FT, 2015). However, FDI project-level data are not available. The lower figure for 2014 reflects a reduction in the number of projects and related capital expenditures in some emerging countries, which may be a sign of the increasing maturity of clean energy technologies (further explained by the continuing reductions in their cost) and macroeconomic factors. Despite the decline in FDI, there is wider evidence that investment in developing countries continued to increase during 2013 and 2014.

186. Since the 2014 BA, OECD and CPI have produced an initial partial estimate of private finance mobilized by public investments supported by developed countries, in the context of an effort to assess progress towards a USD 100 billion goal (OECD, 2015a). The method draws on available data on private co-financing mobilized by bilateral and multilateral sources for climate projects in developing countries.

187. The study estimated that USD 12.8 billion in private co-finance was mobilized in 2013 (of which USD 6.5 billion came from bilateral sources and USD 6.2 billion from multilateral finance) and USD 16.7 billion in 2014 (of which USD 8.1 billion was from bilateral sources and USD 8.6 billion was from multilateral sources). This includes private finance mobilized by both MDB own resources and external resources that MDBs manage on behalf of bilateral providers and dedicated climate finance funds (such as CIF, the GEF and the IFC Catalyst Fund). The co-finance identified included private finance mobilized from international sources in addition to private finance mobilized domestically in developing countries. Ideally, it would have been possible to specify which finance originated in developed countries and which originated in developing countries, but this was difficult in practice. Some studies have questioned whether finance that originates in developing countries should be counted towards the USD 100 billion goal (Dasgupta, 2015; Oxfam, 2015; Third World Network, 2015).

188. These partial estimates of direct private finance and mobilized finance are distinct, and cannot simply be aggregated.

2.2.10 Summary of climate finance flows from developed to developing countries

189. The climate finance flows from developed to developing countries as described in this section are summarized in table 2.7.

36) Figures include the private finance estimates described in the previous paragraph.

2.3 South–South cooperation on climate finance

190. Public and private collaboration among developing countries is increasing, including on climate finance. These activities are voluntary and distinct from the efforts of developed countries to scale up climate finance in the context of the UNFCCC. But they contribute equally to achievement of the goals of the Convention. This section considers available information on South–South climate finance defined as climate finance flows among non-Annex I Parties. Financial flows among developing countries are not systematically tracked, so information on such climate-related flows is limited. Bilateral flows, multilateral flows and private finance flows are considered in turn.

191. Information on bilateral climate finance is available for the Republic of Korea and the United Arab Emirates (UAE) from DAC. The Republic of Korea is a member of the DAC, and UAE reports voluntarily.[37] The Republic of Korea's bilateral climate finance was USD 263 million for 2013 and USD 224 million for 2014. The bilateral climate finance of UAE was USD 576 million for 2013 and USD 257 million for 2014. AidData indicates that in addition to the Republic of Korea and UAE, Brazil, Chile, Colombia, India, Kuwait, Qatar, Saudi Arabia, South Africa and Thailand provide bilateral assistance to other developing countries, but the amount of climate finance provided is not available (Tierney et. al., 2016).

192. Climate finance provided by China to other developing countries has risen from an annual average of USD 30 million in 2005–2010 to an annual average of USD 72 million for 2011–2015 (Weigel, 2016).[38] In a show of greater support, China announced in September of 2015 the establishment of an RMB 20 billion South-South Climate Cooperation Fund. The vast majority of the development finance that China provides to developing countries takes the form of export credits, non-concessional loans and overseas investment support (Snell, 2015). How much of this support is climate-related is not known.

193. A 2015 IDFC report indicates that member institutions in non-OECD countries provided USD 3 billion in 2013 and USD 4 billion in 2014 of "green", mostly climate-related, finance to other non-OECD countries (see annex J, table J.2). The climate-related shares of these flows are estimated by applying coefficients of 88% and 87%, respectively, for 2013 and 2014 (see annex J, table J.1), which is the same methodology as used in section 2.2.7 above. With these adjustments, South–South bilateral flows are estimated to be USD 2.6 billion in 2013 and USD 3.5 billion in 2014 (see section 2.2.7 and table 2.6 above).

194. Many developing countries are shareholders of MDBs. As discussed in section 2.2.5 above and annex H below, 65–85% of the climate finance provided by MDBs is attributed to developed countries. The balance is attributed to developing countries and amounts to USD 2.4–5.6 billion for 2013 and USD 3.3–7.7 billion for 2014.

195. As noted earlier, private climate finance is not systematically tracked. Mazza et al. (2016) estimated at least USD 2.7 billion of private finance flowing between different developing countries in 2013 and USD 1.1 billion in 2014.

196. The data on South–South climate finance are summarized in table 2.8. The flows are estimated at USD 5.9–9.1 billion for 2013 and USD 7.2–11.7billion for 2014. These estimates compare with CPI estimates of USD 11 billion per year for 2013 and USD 10 billion per year for 2014 (annex L, tables L.3 and L.4). About half of the South–South climate finance is multilateral: the developing country share of climate finance provided by MDBs and the climate finance provided by the Islamic Development Bank.

Table 2.8. Estimated South–South climate finance flows, 2013 and 2014 (billions of USD)

	2013	2014
Bilateral flows		
Republic of Korea and UAE	0.8	0.3
IDFC member institutions	2.6	3.5
Multilateral flows		
Share of MDBs finance[a]	2.4–5.6	3.3–7.7
Islamic Development Bank	0.1	0.1
Private flows	No data available	No data available
Total	5.9–9.1	7.2–11.7

[a] The lower bound reflects an attribution of 85% of finance to Annex II countries, and the higher bound is on the basis of a 65% attribution.

37) The Republic of Korea's BUR has data on Korean contributions to multilateral institutions and its bilateral climate aid by year, 2010–2013.

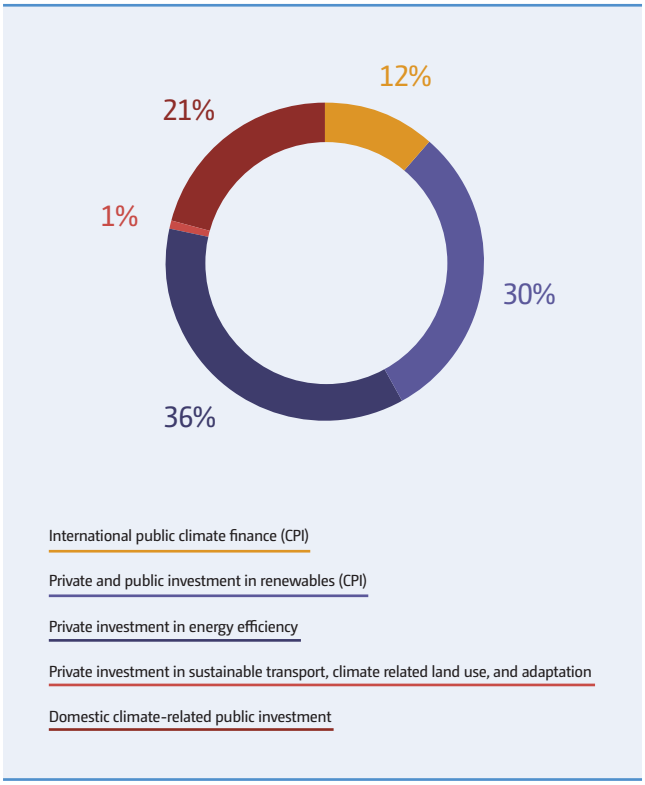
38) This is 1–2% of China's estimated bilateral assistance of USD 6.4 billion in 2013 (Kitano and Harada, 2014).

2.4 Estimates of global total climate finance

197. On a comparable basis, global total climate finance in 2013–2014 increased by almost 15% since 2011–2012. In dollar terms, estimated global total climate finance increased from a high-bound estimate of USD 650 billion for 2011–2012 to USD 687 billion for 2013 and to 741 billion for 2014. Private investment in renewable energy and energy efficiency represents the largest share of the global total; however, the energy efficiency data are much less certain. Levels of finance have increased as the costs of clean technology have continued to fall. The coverage of data in the 2016 BA has increased and improved, but nevertheless the quality and completeness of data on global total flows are lower than for flows to developing countries.

198. The components of global total climate finance are shown in figure 2.2. The 2016 BA estimate of global total climate finance starts with estimates published by CPI in its "Global Landscape of Climate Finance" reports, and then seeks to include further data on private investment in energy efficiency, sustainable transport, land use and adaptation and domestic public climate finance, in order to provide a complete picture of global total climate finance. This section provides insights into the core elements of the CPI data, and then discusses adjustments that can be made (see table 2.10 below).

Figure 2.2: Components of global total climate finance



2.4.1 Climate Policy Initiative estimates of global total climate finance

199. The main elements of the climate finance tracked by CPI include: (1) public and private investments in renewable energy; (2) international climate finance provided by governments and public entities (including multilateral and bilateral DFIs and climate funds); and (3) climate finance provided by a number of national DFIs. These flows include grants, concessional loans and non-concessional loans from the public sector, as well as market rate investments. The financing volumes reflect the total value of primary financial transactions and investment costs in adaptation and mitigation measures (e.g. the total cost of a wind turbine) and, where this information is specified, components of activities that directly contribute to adaptation and/or mitigation, plus public framework expenditures.[39] CPI estimates do not include policy-induced revenues and other public subsidies (e.g. feed-in tariff and fiscal incentives), secondary market transactions (e.g. mergers and acquisitions) and risk management instruments (e.g. guarantees). The estimates draw on data from numerous sources, including OECD DAC, MDB and IDFC reporting, with an effort to make figures consistent and to avoid double counting.

200. CPI estimated global total climate finance at USD 364 billion (USD 343–385 billion) for 2011, USD 359 billion (USD 356–363 billion) for 2012,USD 342 billion (USD 339–346 billion) for 2013 and USD 392 billion (USD 387–397 billion) for 2014 (Buchner et al., 2012-2015).[40] The scope of the estimates has changed over time, so the amounts are not exactly comparable.

2.4.2 Estimates of investment in renewable energy technologies

201. The largest sum of finance identified in the CPI estimates is investment in renewable energy technologies, which is based on data compiled by BNEF (discussed in chapter I above). The Frankfurt School-UNEP Centre and

39) CPI uses data from MDBs and IDFC members that estimates climate finance for adaptation by project component, an approximation of the incremental cost.

40) Mazza et al. (2016) present more accurate estimates of 2013 and 2014 climate finance compared to the previous estimates of USD 331 billion and USD 391 billion published in Buchner et al. (2014, 2015). Among the improvements, is the complete harmonization to a single calendar or fiscal year of 2013 and 2014 global climate finance. Previously, for example, 85% of the data used to estimate 2014 global climate finance flows was derived from 2014 data, the remaining portion came from 2013 data.

BNEF use the same data source to produce an annual report on Global Trends in Renewable Energy Investment (GTREI).[41] CPI and GTREI estimates are compared in table 2.9. CPI estimates are about 5% higher than GTREI figures because CPI include investment in solar water heaters, which is not covered by GTREI, and draws on data from additional sources. GTREI include secondary markets and R&D expenditures, which are excluded by CPI.

202. Private sources (corporations, households and capital markets) account for the majority of this finance. Commercial finance (e.g. balance sheet finance, market rate debt and project equity) are predominant, overshadowing the amount of public sector instruments at more favourable terms (grants and low-cost debts).

2.4.3 Estimates of private investment in energy efficiency

203. Estimating global investment in energy efficiency is challenging due to the difficulty of defining an efficiency baseline, and because the efficiency investment is often part of a larger expenditure. The efficiency baseline for a new automobile, for instance, could be the average for the existing fleet or the average for new automobiles, and the efficiency investment would be part of the purchase price of the vehicle. CPI avoids these difficulties by counting only explicit payments for energy efficiency measures, such as government and utility incentive payments. Its estimate of global total climate finance includes USD 31 billion of energy efficiency payments for 2013 and USD 26 billion for 2014. CPI notes that this is likely to significantly understate global energy efficiency investment. IEA and other organizations attempt to estimate the energy efficiency component of investments in buildings (including appliances, equipment and lighting), industry and transport. Estimates vary due to differences in the methodology and coverage, and because the energy efficiency component of the overall investment must be imputed. Available estimates of the imputed investment in energy efficiency for 2010–2014 are summarized in annex M, table M.1.[42] Global estimates for buildings, transport and industry range from USD 130 billion to USD 365 billion. Using the upper end of that range increases the estimated global total climate finance by about USD 334 billion for 2013 and USD 337 billion for 2014.[43] As a result of revisions to its methodology, the IEA estimate of global energy efficiency investment for 2015 is expected to be substantially lower than those reflected in the 2014 and 2016 BAs.

Table 2.9: Estimates of global public and private investment in renewable energy technologies, 2011–2015 (billions of USD)

	2011	2012	2013	2014	2015
CPI		265	244	284	
GTREI	278.5	257.3	234.0	273.0	285.9

Note: (1) Figures for earlier years have been revised from previous publications for GTREI. (2) CPI figures for 2013 and 2014 are for calendar years. See footnote 50.

Source: Buchner et al. (2013); Mazza et al. (2016); Frankfurt School-UNEP Centre (2016).

2.4.4 Estimates of private investment in sustainable transport

204. There is no universally agreed operational definition of low-carbon transport, or source of data that tracks investment in sustainable transport.[44] The CPI estimate includes USD 17 billion for public investment in sustainable transport for 2013 and USD 22 billion for 2014, but there are no estimates of private investment (which would include energy efficiency investments). However, the energy efficiency investment estimates from IEA include about USD 180 billion per year for the transport sector. Further research and data on investment in low-carbon transport and adaptation and resilience measures in the transport sector would allow a more complete understanding of ongoing efforts to respond to climate change in this important sector.

2.4.5 Estimates of private climate-relevant land-use expenditures

205. Another important component of global total climate finance are investments that support adaptation and mitigation measures related to forests and land use, although as discussed in section 1.3.3.2 above, defining and finding robust data on finance for forests can be quite challenging. One study estimated that at least USD 4 billion of private investment in forest and land-use activities related to mitigation and adaptation took place in 2014 (Falconer et al., 2015), which is not included in the CPI estimate of global total climate finance. A more recent study estimates private sector financing for forestry ranging from USD 1.8 billion for 2013 to USD 15 billion for 2014 (Singer, 2016). A 2015 survey from Forest Trends suggested that companies and governments committed USD 705 million in new finance globally for avoided deforestation, tree-planting, or carbon-conscious agriculture or forest management in 2014 (Forest

41) Frankfurt School-UNEP Centre (2016). There are some differences between the reports. GTREI, for example, includes an estimate for small-scale renewables, such as roof-top photovoltaic units, not tracked by BNEF.

42) The estimates undoubtedly include some public investment, such as efficiency measures for public buildings, in addition to private investment.

43) Energy efficiency investment of USD 365 billion less the USD 31 billion already included as part of the CPI global estimate for 2013 equals USD 334 billion and USD 365 billion less the USD 28 already included for 2014 equals USD 337 billion.

44) MDBs and IDFC have agreed some types of low-carbon transportation projects, but not on an operational definition of sustainable transport.

Trends Association, 2015). Climate-related private land-use investment is likely to exceed the private investment in forestry: on this basis, an estimated additional USD 5 billion per year for private investment in land use is included in the 2016 BA estimate.[45]

2.4.6 Estimates of private investment in adaptation

206. As discussed in chapter 1 above, defining and identifying adaptation finance can be challenging. Estimates of adaptation investments are compiled project by project, often relying on expert judgement using criteria and guidelines adopted by each institution that reports on adaptation spending.

207. The need for better data on private investment in adaptation is well recognized, and no additional estimates were available. The OECD estimate of mobilized private co-finance associated with developed countries' bilateral and multilateral public climate finance can be used to obtain a partial estimate of the private investment in adaptation.[46] The average amount of private co-finance for 2013–2014 was USD 14.7 billion, of which 10% was for adaptation projects (OECD, 2015a). On this basis, USD 1.5 billion per year in private adaptation finance was included in the 2016 BA global total estimate.

2.4.7 Estimates of domestic public climate finance

208. Domestic climate expenditures by national and subnational governments help to address climate change and constitute an important part of global total climate finance. Comprehensive data on these expenditures are not available, however, and for the 2016 BA, we were able to reflect partial data from 30 countries on domestic public finance expenditure data, as summarized in annex N.

209. Some countries have included information on domestic public finance in their BURs, approximately USD 98 billion per year, mainly in India. CPEIRs supported by UNDP estimate domestic public finance in nine developing countries amounting to USD 25 billion per year, mainly in China. ODI compiled estimates of domestic public finance in four African countries using an approach based on the CPEIR methodology, which add up to less than USD 1 billion per year. GFLAC has estimated domestic public finance in seven Latin American countries of about USD 2.9 billion per year. In addition, three studies of domestic public finance in developed countries were available, as was reporting on climate spending by the European Commission, which amounted to about USD 65 billion per year excluding international climate change finance contributions.

210. On this basis, domestic public expenditures on climate change are estimated to be about USD 192 billion per year: USD 127 billion in developing countries and USD 65 billion in developed countries.[47]

2.5 Summary of global total climate finance

211. Estimates of global total climate finance for 2013 and 2014 are shown in table 2.10. The total is between

45) At least USD 4 billion plus USD 705 million in new finance.

46) Section 2.2.7 notes that mobilized private co-finance data are excluded from estimates of private finance flows from developed to developing countries because the country where the mobilized private finance originates is not known. However, for the estimate of global total climate finance, the origin of the finance is not important so the mobilized private co-finance data can be used here.

47) The amounts exclude international climate finance received by developing countries and international climate finance provided by developed countries.

Table 2.10: Estimates of global total climate finance, 2011–2012, 2013 and 2014 (billions of USD)

	2016 BA		2014 BA
	2013	2014	2011-2012
Global estimate (CPI)	High bound 346 (low bound 339)	High bound 397 (low bound 387)	343–385
Of which public and private investment in renewables	244	284	265
+ Adjustments to CPI estimates[a]			
Private investment in energy efficiency, section 2.4	334[a]	337[a]	270
Private investment in sustainable transport, section 2.4.4	Not available	Not available	No adjustment
Private climate-relevant land-use expenditures, section 2.4.5	5[a]	5[a]	No adjustment
Private investment in adaptation, section 2.4.6	1.5[a]	1.5[a]	No adjustment
Total global climate finance reported in the BA	687	741	340–650[b]
+Domestic climate-related public investment, section 2.4.7	192[a]	192[a]	No adjustment
Total including domestic climate-related public investment	880[b]	930[b]	No adjustment

[a] The data used to estimate the adjustments do not relate to specific years, so the same amounts are applied to both 2013 and 2014. For energy efficiency, the global total is taken to be USD 365 billion for both years. The adjustments are USD 365 billion less the USD 31 billion already included in the CPI total USD (365 – 31 =) USD 334 billion for 2013 and less the USD 28 billion already included in the CPI total USD (365 – 28 =) USD 337 billion for 2014.
[b] Rounded values.

USD 340 billion and USD 880 billion for 2013 and between USD 390 billion and USD 930 billion for 2014. For each year, this estimate consists of adjustments to the CPI estimate for energy efficiency (to a global total of USD 365 billion), sustainable transport (not available), land use (USD 5 billion) and adaptation (USD 1.5 billion), as discussed above. The adjustments are the same for both 2013 and 2014 because the data on which they are based usually do not relate to these specific years. As some components cannot be estimated, and others are partial figures, the total may well be higher. On the other hand, future estimates of investment in energy efficiency are likely to be substantially lower due to revisions to the methodology.

212. On a comparable basis, the high-bound estimate of global total climate finance increased from USD 650 billion for 2011–2012 to USD 687 billion for 2013 and USD 741 billion for 2014.[48] The 2011–2012 total in the 2014 BA had two components: the CPI estimate dominated by renewable energy and the imputed energy efficiency investment. Between 2011–2012 and 2013, the CPI estimate of renewable energy investment declined by USD 21 billion, while the estimated investment in energy efficiency increased by almost USD 64 billion.[49] From 2013 to 2014, the CPI estimate increased by about USD 50 billion, mostly due to increased investment in renewables.[50]

2.6 Key messages

Flows from developed to developing countries as reported in biennial reports

213. USD 25.4 billion in 2013 and USD 26.6 billion in 2014 of climate-specific finance was reported in BRs, of which USD 23.1 billion in 2013 and USD 23.9 billion in 2014 was channelled through bilateral, regional and other channels (see figure 2.3). This represents an increase of about 50% from public finance reported through the same channels in 2011–2012.

Multilateral climate funds

214. USD 1.9 billion in 2013 and USD 2.5 billion in 2014 was channelled through the UNFCCC funds and multilateral climate funds on the basis of their financial reports. Although this is a small share of the total climate finance, information on their activities is mostly complete.

Climate finance from multilateral development banks

215. Climate finance provided by MDBs to developing countries from their own resources was reported as USD 20.8 billion in 2013 and USD 25.7 billion in 2014. The methodology used in the 2014 BA to attribute MDB finance from developed countries to developing countries suggests that USD 11.4 billion in 2013 and USD 12.7 billion in 2014 was delivered by developed countries. A more advanced methodology, which captures better the mobilization effect through the MDBs, suggests that USD 14.9 billion in 2013 and USD 16.6 billion in 2014 can be attributed to developed countries.

48) The range is calculated as the lower end of the CPI range and the upper end of the CPI range plus the investment in energy efficiency; for 2013, this is USD 339 billion and USD 346+334 billion = USD 680 billion, and for 2014, it is USD 387 billion and USD 397+337 billion = USD 734 billion.

49) Investment in renewable energy fell from USD 265 to 244 billion, while investment in energy investment rose from USD 270 billion to USD 334 billion.

50) The midpoint of the CPI range increased from USD 342.5 billion for 2013 to USD 392 billion for 2014, while renewable energy investment grew from USD 244 billion to USD 285 billion.

Private climate finance

216. The major source of uncertainty regarding flows to developing countries relates to the amount of private climate finance provided. Initial partial estimates of direct and mobilized private finance are available. Based on project-level data, renewable energy finance by developed country companies in developing countries is estimated at USD 1.8 billion in 2013 and USD 2.1 billion in 2014. Foreign direct investment in greenfield alternative and renewable energy in developing countries was estimated at USD 26.4 billion in 2013 and USD 21.6 billion in 2014. Both estimates are likely to be conservative. OECD and the Climate Policy Initiative (CPI) compiled an initial partial estimate of private finance mobilized by developed countries and identified USD 12.8 billion in 2013 and USD 16.7 billion in 2014 of private co-finance. These figures include private finance mobilized from international sources in addition to private finance mobilized domestically in developing countries. These partial estimates of direct private finance and mobilized finance are distinct, and cannot simply be aggregated.

Instruments

217. The mix of instruments used to channel support differs by funding source (see table 3.4). About 35% of the bilateral, regional and other finance reported to the UNFCCC in BRs is spent as grants, 20% as concessional loans, 10% as non-concessional loans, and the remainder through equity and other instruments. About 38% of the reported finance is channelled through multilateral institutions, many of whom are MDBs that utilize capital contributions and commitments from member countries to raise low-cost capital from other sources of funding, including for donor contributions. This enables MDBs to offer a range of instruments and financial products, including grants (9%), loans, including concessional loans, (83%), equity (2%) and other instruments (6%). About 53% of funding from multilateral climate funds is provided as grants, and the remainder is largely concessional loans, which have increased as a share of approved funding over time. 49% of bilateral climate finance reported to the OECD is provided as grants, and 47% as concessional loans.

Recipients

218. Climate finance goes to a wide range of governmental, private and non-governmental entities in recipient countries. However, reporting on recipient institutions is incomplete. For example, recipient data are available for about 50% of the bilateral finance reported to the OECD DAC. For 2013–2014, developing country governments are specified as the recipients of about 40% of the total flow. Climate finance channelled through other intermediaries may also reach national governments, but this is not captured in the data. Improving data on the recipients of climate finance could be an area for further work.

Global finance flows

219. On a comparable basis, global total climate finance has increased by almost 15% since 2011–2012. In dollar terms estimated global total climate finance increased from a high bound estimate of USD 650 billion for 2011–2012 to USD 687 billion for 2013 and to 741 billion for 2014. Private investment in renewable energy and energy efficiency represents the largest share of the global total; however, the energy efficiency data are much less certain than the renewable energy data. Levels of finance have increased as the costs of clean technology have continued to fall. The coverage of data in the 2016 BA has increased and improved since the 2014 BA, but nevertheless the quality and completeness of data on global total flows are lower than those for flows to developing countries.

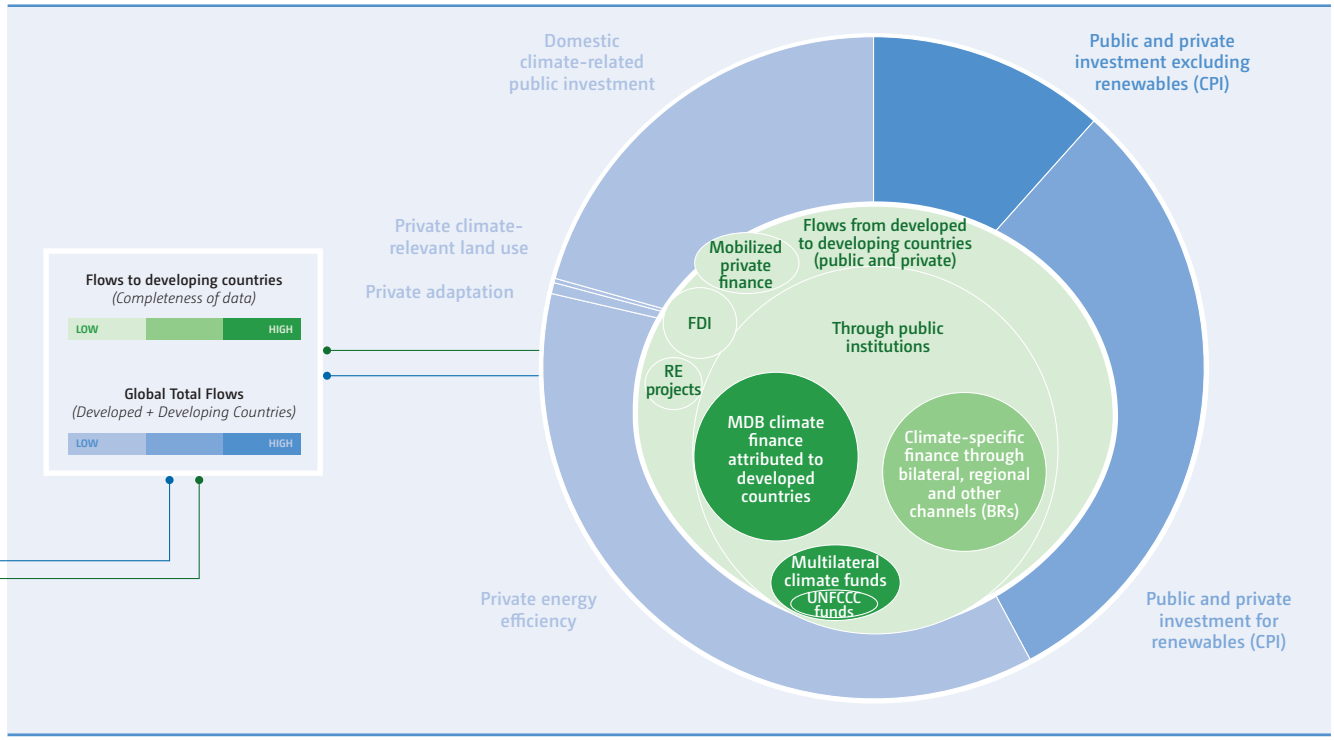
220. The estimate of global total climate finance in the 2016 BA includes adjustments to the CPI estimate that were not part of the 2011–2012 estimate reported in the 2014 BA. Partial data on domestic public finance expenditures of USD 192 billion per year were compiled. If these additional adjustments are included, they raise the upper end of the range to USD 880 billion in 2013 and USD 930 billion in 2014. However, the volume of the climate-related finance and investment flows globally may be higher, given that there are still significant data gaps in critical sectors such as sustainable transportation, agriculture, energy efficiency and resilient infrastructure.

221. Domestic climate finance: Comprehensive data on domestic climate expenditures are not available. Limited information is included in the BURs; estimates of climate-related finance included in national budgets, domestic climate finance provided by national development banks and commitments by developing country national climate funds. These indicative estimates suggest flows of USD 192 billion per year in developed and developing countries.

222. Some studies suggest that most climate finance in aggregate is mobilized and deployed domestically, both in developed and developing countries. In the limited number of developing countries for which information on domestic public climate finance is available, the data suggest that, in these countries, domestic public finance significantly exceeds the inflows of international public climate finance from bilateral and multilateral sources.

223. South–South cooperation: Data are limited, and mainly sourced from the OECD DAC, complemented with reports from a small number of other countries. On this basis, South–South cooperation was estimated to be in the range USD 5.9–9.1 billion for 2013 and USD 7.2–11.7 billion for 2014, of which about half was channelled through multilateral institutions.

Figure 2.3: Climate finance flows in 2013–2014 (USD billion and annualized)



Abbreviations: BR = biennial report, CPI = Climate Policy Initiative, FDI = foreign direct investment, MDB = multilateral development bank, RE = renewable energy.

Note: Figure is not to scale, but seeks to show the relative size of flows. Flows to developing countries are a subset of global total flows.

		2013 (USD billion face value)	2014 (USD billion face value)	Sources of data and relevant chapter in the technical report
Flows to developing countries 2013–2014 average total **Public:** USD 41 billion **Private:** USD 2 billion renewables USD 24 billion FDI USD 14.8 billion mobilized	**UNFCCC funds**[a]	0.6	0.8	Chapter 2.2.1 Fund financial reports, climate funds update
	Multilateral climate funds (including UNFCCC funds)	1.9	2.5	Chapter 2.2.2 Fund financial reports, climate funds update
	Climate-specific finance through bilateral, regional and other channels	23.1	23.9	Chapter 2.2.3 CTF table 7(b)
	Of which grants and concessional loans	11.7	12.4	Chapter 2.2.3 CTF table 7(b)
	MDB climate finance attributed to developed countries (own resources only)[b]	14.9	16.6	Chapter 2.2.5 MDB climate finance reporting
	Renewable energy projects[c]	1.8	2.1	Chapter 2.2.9 CPI landscape of climate finance, BNEF
	FDI in greenfield alternative and renewable energy	26.4	21.6	Chapter 2.2.9 CPI landscape of climate finance, fDi Intelligence
	Mobilized private finance[d]	12.8	16.7	Chapter 2.2.9 OECD CPI report 2015
Global total flows (inclusive of flows to developing countries above) 2013–2014 average total USD 714 billion	**Public and private investment excluding renewables (CPI)**	95–102	102–112	Chapter 2.4.1 CPI landscape of climate finance
	Public and private investment for renewables (CPI)	244	285	Chapter 2.4.2 BNEF, CPI landscape of climate finance
	Private energy efficiency	334	337	Chapter 2.4.3 IEA energy efficiency market report
	Private sustainable transport	Not available	Not available	Chapter 2.4.4
	Private climate-relevant land use	5	5	Chapter 2.4.5 CPI land-use studies
	Private adaptation	1.5	1.5	Chapter 2.4.6
	Domestic climate-related public investment	192	192	Chapter 2.4.7 CPEIRs (UNDP, World Bank ODI), GFLAC climate finance studies, BURs

Abbreviations: BNEF = Bloomberg New Energy Finance, BUR = biennial update report, CPEIR = Climate Public Expenditure and Institutional Reviews, CPI = Climate Policy Initiative, CTF = common tabular format, FDI = foreign direct investment, GFLAC = Climate Finance Group for Latin America and the Caribbean, IEA = International Energy Agency, MDB = multilateral development bank, ODI = Overseas Development Institute, OECD = Organisation for Economic Co-operation and Development, UNDP = United Nations Development Programme.

[a] Includes commitments approved during 2013 and 2014. Almost all contributions are contributed by Annex II Parties. The values do not reflect pledges to the Green Climate Fund amounting to USD 10.2 billion by the end of 2014. [b] From Annex II Parties to non-Annex I Parties. Values are derived by excluding climate finance to Annex I Parties from the total climate finance provided by MDBs from their own resources to arrive at climate finance provided to non-Annex I Parties, and by attributing 85% of this to Annex II Parties. [c] From Annex II Parties to non-Annex I Parties. [d] From Annex II Parties as well as the Czechia, Poland, Slovakia and Slovenia.

Chapter III

ASSESSING THE STATE OF CLIMATE FINANCE

3.1 Introduction

224. This chapter considers the implications of the climate finance flows presented in chapter 2 above, and emergent trends relevant to international efforts addressing climate change, drawing on available data and research. The chapter first considers key features of the public finance from developed countries to developing countries given relevant commitments in this context under the UNFCCC, and their implications.[51] These include:

- The thematic focus and objectives of climate finance (particularly support for adaptation, mitigation, REDD-plus and / or cross-cutting activities);
- The geographic distribution of climate finance;
- The financing instruments used;
- The pledges, approvals and disbursements of climate finance.

225. Emerging insights into how finance is supporting developing countries to achieve the needs and priorities related to climate change, and the impact of climate finance are then presented.

226. The chapter concludes by reflecting on the overall amount of climate finance, including global total flows and flows to developing countries. It seeks to put the identified climate finance flows in context, taking the new goals set out in the Paris Agreement to, over time, make all financing flows low carbon and climate resilient in the context of sustainable development.[52]

3.2 Thematic objectives and geographic distribution of climate finance flows to developing countries

227. Section 2.2 above summarized the major flows of climate finance from developed to developing countries. Total public climate finance was estimated at an average of USD 41 billion for 2013–2014. An average of USD 2.2 billion was channelled through multilateral climate funds including UNFCCC funds. An average of USD 23.5 billion of bilateral, regional and other finance was reported in CTF tables of Annex II Parties. MDB climate finance attributed to developed countries was estimated at USD 15.8 billion annually in 2013–2014, using an advanced attribution methodology that captures the mobilization effect through MDBs.

228. This section turns to look more closely at key features of the public finance that developed countries have delivered to developing countries. It relies on BR data where possible, supplemented with detailed reporting on the activities of multilateral climate funds, as well as data reported to DAC on bilateral finance that has climate change adaptation or mitigation as part of its objectives. These complementary sources include more complete and granular data, which allows deeper insights on key trends in climate finance to be drawn than if only BR data are used.

3.2.1 Thematic objectives of climate finance

229. Historically, most climate finance has supported mitigation efforts (ODI, 2015), but developing countries (particularly least developed countries (LDCs) and small island developing States (SIDS)) are highly vulnerable to the impacts of climate change. In this context, the Copenhagen Accord and Cancun agreements seek to achieve a "balance" between adaptation and mitigation finance, and this goal is also reflected in the Paris Agreement. As a result, many Parties to the Convention have a strong interest in understanding the thematic objectives of climate finance and how these are changing. Thematic objectives are specified for a relatively small share of the funding included in official BRs by developed countries on climate finance (see figure 3.1). This is, in part, because more than 37% of the reported finance is for "core" contributions to the operating budgets or portfolios of multilateral organizations including United Nations agencies and MDBs, who then channel this funding towards climate projects. The thematic objectives for this share are not generally specified in CTF tables. Of the financing reported in BRs, 12% had adaptation as a specified objective in 2013, which dropped slightly to 9% in 2014. Of the total finance in the 2013 BRs, 39% had a specified mitigation objective, which increased to 41% in 2014, and 10% had cross-cutting objectives.

230. Nearly 30% of finance channelled through dedicated climate funds, including the operating entities of the Convention, supported adaptation during 2013-2014, representing continued growth in the share of climate

51) The primary sources of information used for this purpose include data on multilateral climate from CFU, including a review of project-level data; data from OECD DAC on bilateral concessional climate-related finance, including a review of project-level data; and MDB reporting on their spending on climate change activities.

52) As in chapter 2, OECD data supplement UNFCCC data in this section to provide insights when appropriate.

Figure 3.1a-b: Objectives of finance in developed country biennial reports (BRs) in (2a) 2013 and (2b) 2014

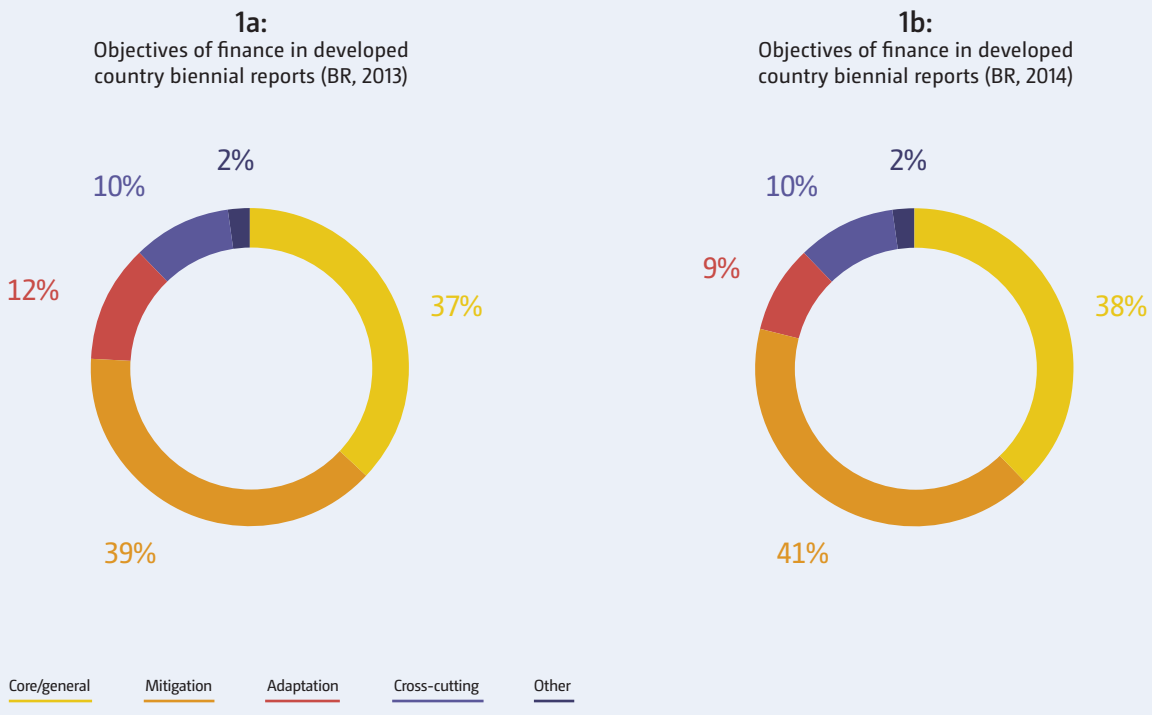
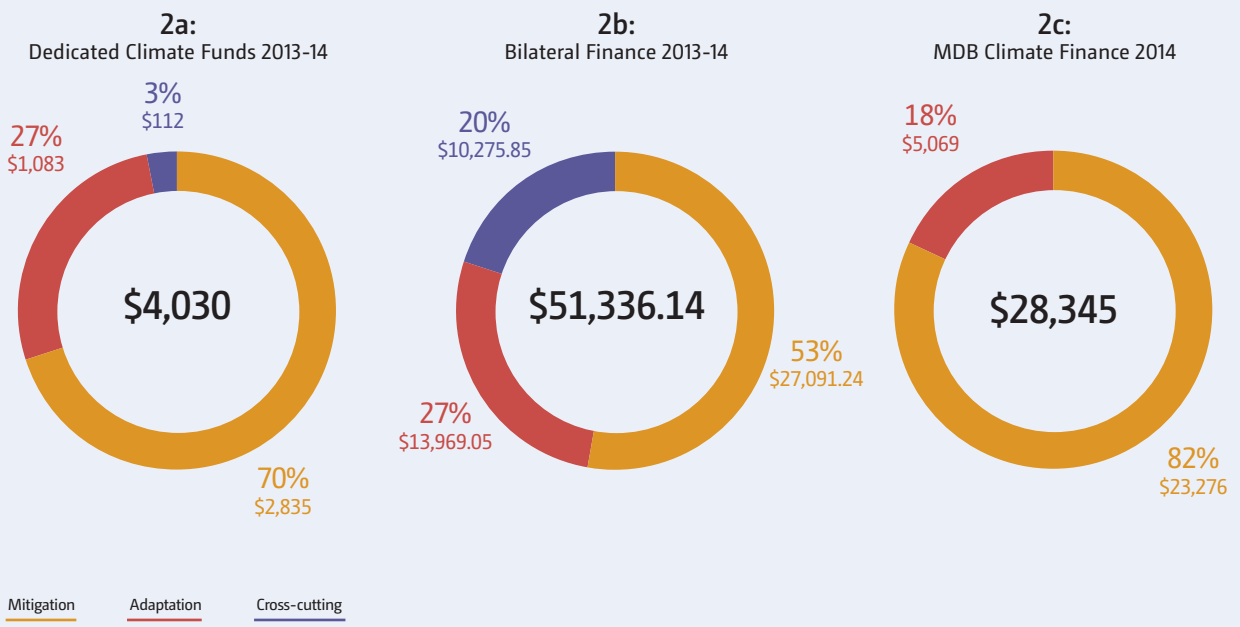


Figure 3.2a-c: Thematic objectives of reported climate finance to developing countries by (3a) dedicated climate funds, (3b) bilateral finance, and (3c) MDB climate finance. All figures in USD millions



Source: (2a) CFU 2016; (2b) OECD DAC, 2016; (2c) MDB Reports.

fund support for adaptation in recent years (see figure 3.2a). This responds to concerted efforts to scale up funding for adaptation activities, and the relatively greater availability of concessional funding through these channels. A similar share of bilateral finance with a climate objective reported to DAC (about 27%) supported adaptation activities during this period (see figure 3.2b).

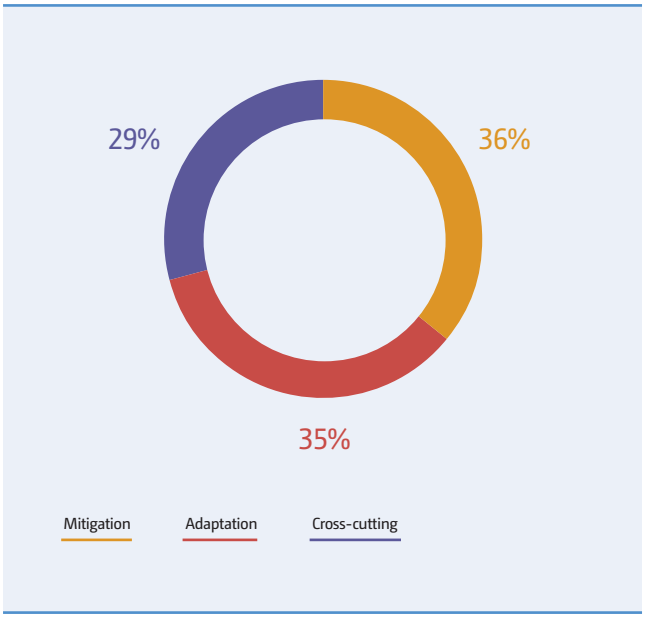
231. The higher proportional scale of funding for mitigation (more than 80%) in MDB finance for climate-related activities has remained relatively unchanged since 2012 (see figure 3.2c). This is explained in part by the fact that MDBs generally provide finance to revenue-generating projects and programmes, and mitigation projects are increasingly viable and cost-effective. It is also explained by the fact that familiarity and understanding of adaptation and climate risk are nascent within financial institutions, and methodologies to identify adaptation spending are relatively new: as understanding of these issues increases, reported finance is also likely to increase. Nevertheless, the absolute increase in climate-related spending resulted in an absolute increase in adaptation finance of USD 243 million.[53] WB was the channel for 61% of the total adaptation finance reported by MDBs in 2013 and 2014 (MDB Report, 2015). IDFC also reported an increase in adaptation-related finance in proportional terms among its members in 2014 and 2015. In addition, MDBs have also sought to advance their systems for tracking adaptation-relevant spending, and to pay attention to the climate risk part of their mainstream portfolio development and management processes.

Adaptation finance in focus

232. Given the strong interest in scaling up adaptation finance under the Convention, it is worth considering key characteristics of adaptation finance in 2013/2014 in more detail here. The types of instruments used to support adaptation activities were also considered in greater detail. Of the adaptation finance provided by multilateral climate funds, 88% has been as grants (CFU, 2016). Of the concessional bilateral finance reported to DAC with adaptation as a principal objective in

53) MDB reporting to DAC, however, suggests an increase in adaptation finance from USD 3.326 billion in 2013 to USD 5.430 billion in 2014, an increase of more than USD 2 billion in adaptation finance.

Figure 3.3: Objectives of grant finance relevant to climate change as reported by OECD DAC (2013-2014)



Note: In this figure, "adaptation" is the sum of grants tagged with a climate objective for adaptation only, "mitigation" is for those grants tagged only for mitigation objectives, while "cross-cutting" includes all grants tagged with both mitigation and adaptation objectives in OECD CRS.

Source: OECD 2015.

2013–2014, 56% was provided as grants and 42% as loans. Grant ODA finance with climate as a principal or significant objective targeted adaptation, mitigation and a mixture of the two in roughly equal proportions (see figure 3.4). By contrast, about 72% of concessional loans reported to OECD DAC as having climate change as a principal or significant objective solely supported mitigation.

233. Some of the poorest countries in Africa and South Asia have been among the largest recipients of adaptation finance (CFU, 2015; OECD DAC, 2015; UNEP Adaptation Gap Report, 2016). SIDS have been among the top recipients of adaptation finance from climate funds for disaster risk reduction purposes.

234. Many stakeholders have strong interest in the role of the private sector in supporting adaptation efforts. Some have noted that an approach based on a climate change impact risk assessment can provide a framework through which investments in adaptation can be identified, which may help to address some of the challenges noted in chapter I on the difficulties of distinguishing investments (Nakhooda and Watson, 2016). Nevertheless, reporting on exposure to climate risk and financing responses by governments and private investors is just beginning, and data are scant. Some analysts have highlighted the fact that LDCs that are highly vulnerable to the impacts of climate change attract very low levels of foreign private investment generally, raising questions about the likely role of international private finance in supporting adaptation in vulnerable countries (Brown et al., 2015; Dzebo and Pauw, 2015). Nevertheless, a potential role has been highlighted for international remittances in supporting household-level adaptation to the impacts of climate change (UNEP Adaptation Gap Report, 2016).

235. Several significant efforts to support adaptation and to reinforce resilience to the impacts of climate change have been launched in recent years. Some are closely linked to efforts to manage losses and damages from climate finance, and extend access to insurance cover. These include continued investment in the Caribbean Catastrophic Risk Insurance Facility, the scaling up of the Africa Risk Capacity initiative of the African Union (which is also structured to incentivize domestic investments in adaptation- and resilience-enhancing measures) to USD 1.5 billion[54] and the G7 InSureResilience Initiative, which aims to extend coverage to an additional 400 million poor and vulnerable people by 2020 through a mix of indirect and direct approaches.[55]

3.2.2 Geographic distribution of climate finance

236. Figure 3.4 analyses the geographic distribution of different sources of climate finance. Spending patterns vary significantly depending on the channel and type of finance involved, and largely reflect the purpose of the climate finance spent. In other words, the fact that a substantial sum of the climate finance made available targets mitigation opportunities, the largest volumes of mitigation finance are often spent in countries where emissions are already quite high and growing fast. These tend to be large emerging economies. Geographic distribution can also vary significantly in some regions over time, which is explained, at least in part, by the viability of available project proposals from various regions at different points in time.

54) <http://www.africanriskcapacity.org/home>.

55) <http://www.bmz.de/g7/en/Entwicklungspolitische_Schwerpunkte/Klimawandel/index.html>.

Figure 3.4a-c: Geographic distribution of approved finance from (4a) multilateral climate funds, (4b) bilateral finance, and (4c) MDBs

Source: (4a) Climate Funds Update 2015; (4b) OECD DAC; (4c) MDB Climate Finance Reports 2015.

237. Fast-growing countries in Asia are the destination for some of the highest volumes of climate finance. Much of this finance is provided as loans to project proponents, given the generally favourable investment climate in many countries in the region, and relatively strong capacity to repay at least part of the finance that is provided to growing economies in the region. Given the high emissions in the region, funding from all sources tends to focus on mitigation. Of the funding from dedicated multilateral climate funds in 2013-2014,

30% targeted projects in Asia, largely financing large-scale grid-connected renewable energy and energy efficiency projects. Of the climate-related finance reported by OECD DAC, 42% supports projects in Asia and Oceania. Japan is one of the largest donors in the region. Some of the largest projects reported were for lower-carbon transport and energy infrastructure[56] (OECD, 2015g). Some large adaptation-related projects were also reported, including post-disaster lending and transport projects in large, highly vulnerable countries such as the Philippines and Bangladesh. Of the climate finance reported by MDBs, 31% supported projects in South Asia, East Asia and the Pacific. The vast majority of this funding was for mitigation projects, and largely came from the balance sheets of MDBs, with 5% of the directed funding in 2014 coming from external resources. Finance was also directed to a large number of projects (though a smaller total volume of finance) in the Pacific, largely focused on adaptation and often in the context of efforts to support fishery management, water resource management, disaster risk reduction and environmental management.

238. UNFCCC recognizes the vulnerability of African countries to the impacts of climate change, and the role that climate finance can play in supporting adoption of low-carbon and green approaches as these countries seek development progress. 20% of the finance from dedicated climate funds in 2013-2014 supported projects in Africa. There are a large number of projects that support adaptation to climate change across the region (although volumes of finance are often smaller), particularly from the LDCF and the Global Climate Change Alliance (GCCA). Some of the largest volumes of finance from climate funds in the region are for large-scale renewable energy projects in major economies such as South Africa, where concerted efforts have been made to promote investment in clean energy in recent years. Efforts have also been made to scale up finance for adaptation through engagement on development planning in partnership with ministries of finance, in countries such as Niger and Zambia, where the Pilot Program for Climate Resilience (PPCR) is now supporting major programmes. In these cases, the contributions of climate funds are complemented with significant volumes of co-finance from MDBs of their own resources. The amount of finance for projects in the Middle East and North Africa has varied substantially over time, which is explained, in part, by political disruptions to anticipated projects and programmes in the region. Finance to the region from multilateral climate funds for projects in the Middle East and North Africa grew from 3% in 2013 to 16% in 2014. Of the climate-related spending reported by MDBs, 15% was directed to sub-Saharan African countries, and 9% of MDB finance in 2014 was directed to projects in North Africa and the Middle East, although this value was lower at 2% in 2013. OECD DAC classifies sub-Saharan Africa and North Africa as one region, which together receives about 28% of climate reported finance. This includes large mitigation projects in countries such as Morocco and South Africa and a large number of projects that support adaptation activities and improved access to clean energy across sub-Saharan Africa.

239. Projects in Latin America and the Caribbean attracted about 23% of funding from dedicated climate funds (including the Amazon Fund) and 16% of the climate finance reported by MDBs in 2013-2014. Of the climate finance reported to OECD DAC, 15% was spent in the Americas. A substantial share of this funding supports the ongoing efforts of Latin American countries to reduce emissions from deforestation and degradation and support more sustainable land use, including in the context of agriculture. Funding also supports adaptation projects, including in vulnerable Caribbean countries through programmes such as PPCR and GCCA.

3.2.3 Additionality of climate finance provided to developing countries

240. Article 4.3 of the Convention states that financial resources to support climate actions should be “new and additional”. Subsequent COP decisions to scale up finance have also made reference to funding being “new and additional”. For example, at COP 16, Parties “note[d] the collective commitment by developed countries to provide new and additional resources, including forestry and investments through international institutions, approaching USD 30 billion for the period 2010–2012, with a balanced allocation between adaptation and mitigation; funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa.”[57] Understanding of what is “new” and “additional” varies widely across stakeholders. The 2014 BA reviewed key insights from the literature (see annex Q). New research published since then (Roberts

56) Including high-efficiency fossil fuel projects such as combined cycle power plants.
57) Decision 1/CP.16, paragraph 95.

et al., 2015; Stern, 2015) emphasizes the following considerations with respect to how to assess whether funds are "new and additional":

- Funds for projects and programmes that would not have come about without the climate finance investment;
- Funds for projects that have been initiated since a particular baseline year;
- Projects in action areas that were not otherwise covered or financed adequately by other sources;
- Mobilizing new sources of financing that would not otherwise be forthcoming or available.

241. In the agreed guidelines for NCs and BRs, developed countries are required to provide information on how they have determined that the resources provided to developing countries are "new and additional". As emphasized in the 2014 BA, several countries did not provide details on the criteria on which they had considered their contribution to be "new and additional". There has been substantial heterogeneity in reporting in CTF tables, reflecting contributor country circumstances to a large extent.

242. The Paris Agreement does not use the term "new and additional" expressly; however, Article 9.3 states that "developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels [...] such mobilization of climate finance should represent a progression beyond previous efforts". Some stakeholders have stressed that the commitments on finance represent a continuation of past commitments, and reporting guidelines prompt Annex II Parties to define how they determined whether funds are "new and additional".[58]

3.3 Effectiveness of climate finance: ownership, needs and impact

243. It is also important to understand the effectiveness and impact of climate finance, so that progress in meeting objectives can be understood, and practice can be improved. The Paris Agreement recognizes the need to promote the effectiveness of climate finance. The 2014 BA highlighted key issues emerging from the growing literature on the effectiveness of climate finance, and the goals related to climate finance set in 2011 at the Busan High Level Forum on Aid Effectiveness.

244. There is strong interest in understanding the effectiveness of climate finance, and some researchers have developed frameworks in this regard (e.g. Buchner et al., 2012; Nakhooda, 2013). This section considers the following interrelated issues that affect the effectiveness of climate finance:

- Ability of developing countries to access climate finance;
- Ownership of climate finance and its alignment with the needs that developing countries are beginning to identify for themselves;
- Emerging impacts and results of climate finance with respect to mitigation and adaptation.

3.3.1 Access to climate finance

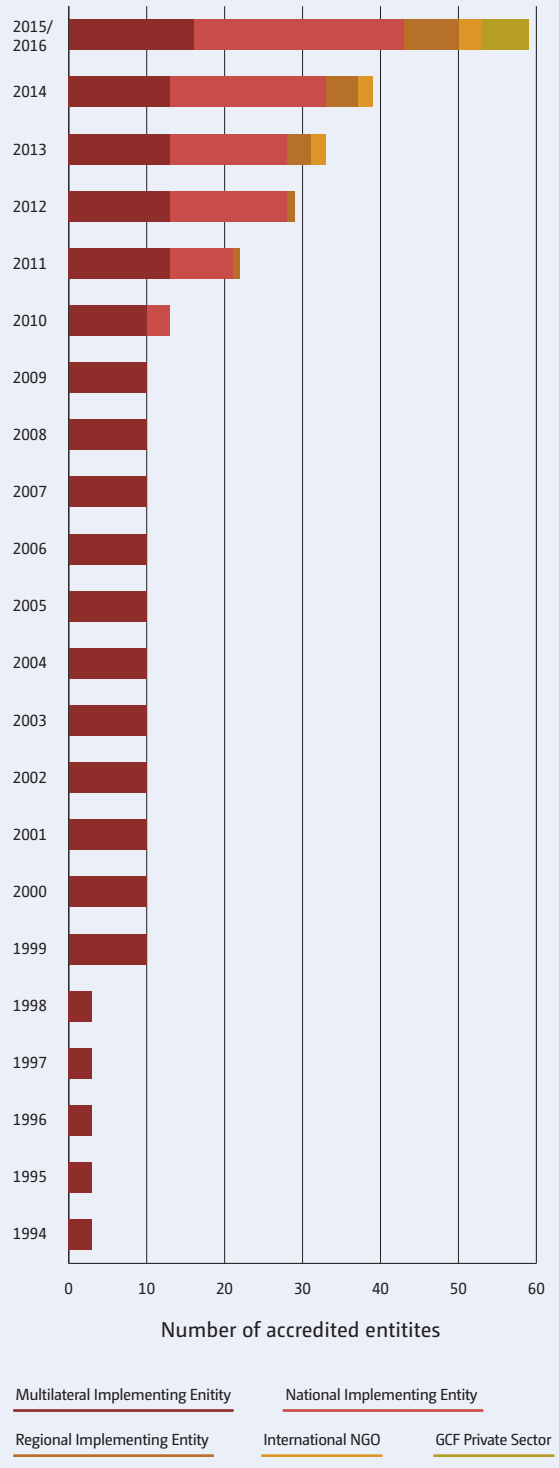
245. The accessibility of climate finance has been an important priority for developing countries. Available literature on climate finance highlights a broad range of possible issues that may cause problems in accessing climate finance. Some are operational and technical constraints, including: a low level of awareness of the need for adaptation and sources of funding; difficulties in following fund procedures to access finance; low levels of technical capacity to design and develop projects/programmes; and limitations to capacity to monitor and evaluate progress (Bird, 2014; OECD, 2015; G20, 2015).

246. There may also be broader issues related to the domestic capacity to integrate climate change into development processes, including: limited availability of and access to climate information; a lack of coherent policies, legal and regulatory frameworks and budget; or a lack of clear priority actions to address climate change identified through transparent multi-stakeholder processes (Nakhooda and Norman et al., 2014; OECD, 2015a).

247. Modalities for delivery and access of finance also have an impact. The operational priorities, experience and networks of the implementing entities through which climate finance is accessed can shape how climate finance is spent. Historically, climate funds have been solely accessed through international partner institutions such as United Nations agencies and MDBs; however, since 2008, there has been a significant push to diversify modalities of access to climate finance, and give institutions based in developing countries "direct access" to international finance. This effort is

58) See inputs from Oxfam International and Care International.

Figure 3.5: Implementing entities of multilateral dedicated climate funds, 1994-2016



Source: Nakhooda and Norman et al. 2014. Data updated through 2016.

closely linked to efforts to strengthen recipient country ownership of climate finance (discussed further below). Figure 3.5 shows that the number of partners through which developing countries can access money from dedicated climate funds has increased from 3 institutions in 1994 to nearly 60 in 2016. In order to have direct access to international finance, however, all accredited implementing institutions are required to meet fiduciary and environmental and social safeguards, to ensure these funds will be well spent. Some institutions based in developing countries have encountered challenges in meeting these standards, and have had to invest in enhancing their processes and institutional capacities in order to do so.

248. A number of efforts to support improved "readiness" for climate finance, and in particular the ability of national institutions within developing countries to meet the fiduciary, environmental and social standards required to access finance from international climate funds, have been launched. Climate funds such as the GCF and the AF have launched dedicated readiness initiatives to support counterpart institutions to meet their standards and to prioritize and develop proposals to make effective use of climate finance. Bilateral development organizations such as Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), and multilateral organizations including UNDP, UNEP, ADB, WBG and others (sometimes in partnership with international think tanks and NGOs such as WRI) have also launched programmes (GCF, 2014; Masullo et al., 2015). The importance of such initiatives was recognized in the Paris Agreement, which states that "the institutions serving this Agreement... shall aim to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States".[59]

249. In addition, the goals attached to various available pools of dedicated public climate finance may affect which countries (and what types of projects within those countries) succeed in attracting funding. For example, some climate funds (such as the GEF) have allocation frameworks that lead to an express focus on the needs of particular countries where there is substantial technical potential to deliver climate-related results at a significant scale. Other sources of climate

59) Article 9, paragraph 9.

finance may have results frameworks or allocation frameworks that encourage a focus on opportunities to leverage private investment, such as the GCF and the CIF. There can be tension between the equitable distribution of climate finance to all countries and the use of this finance to deliver results at the largest possible scale and lowest possible cost.

250. In this context, governments are increasingly interested in options to support the preparation of projects that can attract a range of types of finance, including from return seeking investors (Addis Ababa Agenda for Action on Finance for Development, 2015; G20, 2015). Upstream factors (including the policy, regulatory and governance context within a country, and the ensuing economics of investment in key sectors for various actors) affect project viability. Downstream factors related to the actual structuring and presentation of projects and programmes in ways that will meet the risk and return demands are also relevant, and have often been the focus of project preparation support facilities (Nassiry and Nakhooda, 2016). People with the skills, networks and knowledge to navigate investor and project/ programme proponent demands are essential (Collier, 2015). In recent years, efforts to set up new institutional structures that can attract and retain the requisite capacity have been piloted. Continued innovation and investment in such approaches are needed.

3.3.2 Pledges, approvals, commitments and disbursement of climate finance

251. The pace at which public finance for developing countries is spent can be one indicator of the efficiency of the climate finance system and its constituent institutions. Most institutions report on finance committed, but reporting on disbursement is scant and uneven, and therefore difficult to aggregate. Assessing the rate of approval and disbursement for all flows discussed is therefore challenging.

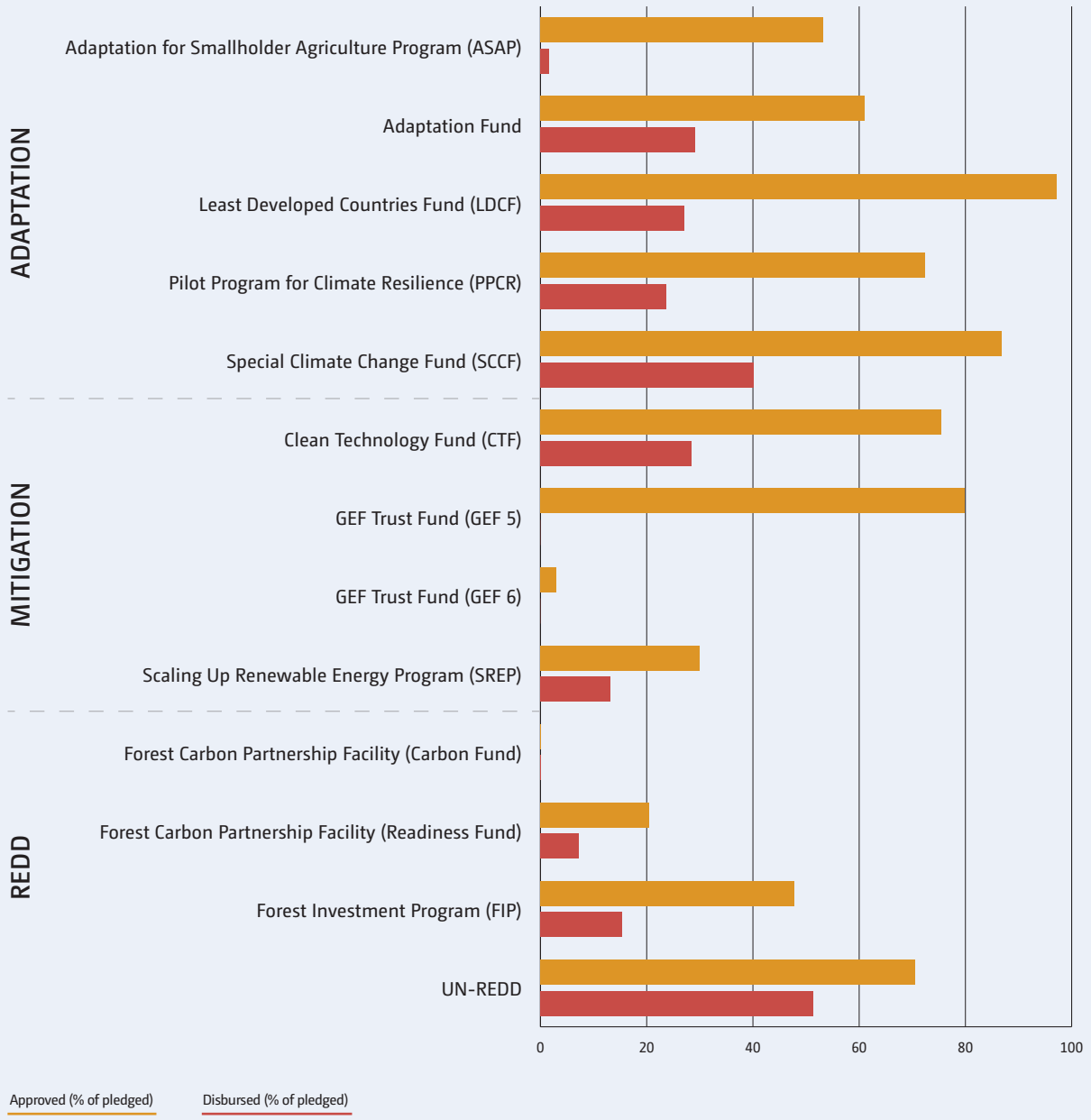
252. To offer insight on this issue, the available information on dedicated climate funds was analysed. The data suggest that there has been progress in approving and disbursing funds since the 2014 BA. More than 80% of finance pledged to multilateral climate funds has now been approved for specific projects. For adaptation, the share is 77%, and for mitigation the share is 62%. The share for REDD-plus remains relatively low at 32%. This is explained in part by the performance-based approach of several REDD-plus funds, which means that disbursements are tied to reported progress, and rates may remain low until the end of a programme, when greater progress has been made in achieving agreed results. Disbursement rates for CIF were also found to be in line with disbursement rates for similar programmes implemented by MDBs without access to concessional finance – or in other words, no slower than MDB business as usual (Brown et al., 2016).

253. For several funds, low approval rates reflect a different approach to delivery. For example, all funding available to PPCR or the Clean Technology Fund has already been "allocated" to a set of approved investment plans for a number of countries, so the remaining funding is essentially committed, even though constituent projects and programmes have yet to be approved (or have changed due to changes in anticipated needs). Several established climate funds (e.g. the LDCF and the multilateral window of the AF) now have a significant pipeline of programmes waiting for support. More than 72 countries have been supported to develop investment plans for the CIFs, requiring substantially more resources than initially pledged and programmed by the CIFs.

254. Relatively slow rates of project approval reflect a number of considerations such as the complexities of structuring projects so that they meet requirements. Lengthy and complex approval procedures within implementing institutions and the competing priorities of staff within institutions entrusted with shepherding projects through to approval can also slow processes down. Delays can also reflect capacity constraints on the part of recipient country government counterparts, as well as the competing priorities and incentives of implementing agencies (Amin and Nakhooda, 2013; CIF Evaluation, 2014). Disbursement is increasing as projects become operational, because payments are often linked to the achievement of concrete milestones. Development banks report that disbursement rates for projects supported by climate funds are largely consistent with those of similar projects that are not supported by climate funds (CIF, 2015).

255. Another dimension of the efficiency of climate finance spending is the amount of money spent on project administration. These are costs that are incurred to implementing agencies to oversee projects supporting their effective implementation, manage finance, provide technical advice and report progress achieved. Nevertheless, it is in the interests of both donors and recipients to maximize the efficiency of funding, and ensure that these functions are delivered quickly and effectively at the lowest possible

Figure 3.6: Status of disbursement of dedicated climate funds (as at the end of 2014)



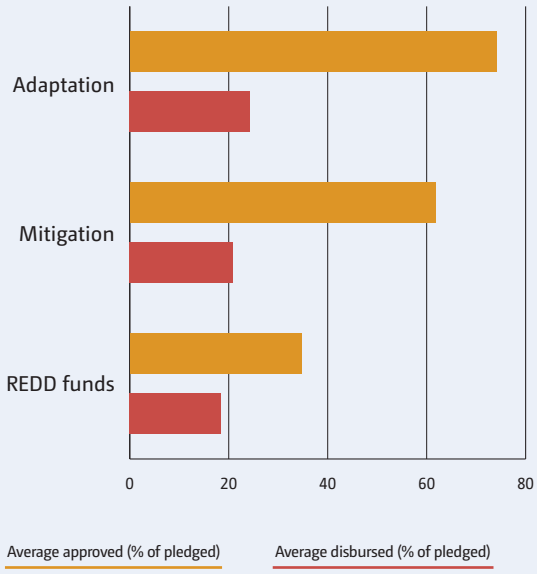
Note: The GCF did not begin approving projects until 2015. By December 2015, the GCF had received USD 10.2 billion in donor pledges and had approved USD 168 million for eight projects. By June 2016, the total approvals had grown to 17 projects worth USD 424 million.

Source: CFU 2015.

cost. Many implementing agencies are allowed to charge fees to help them cover the possible costs of implementation.

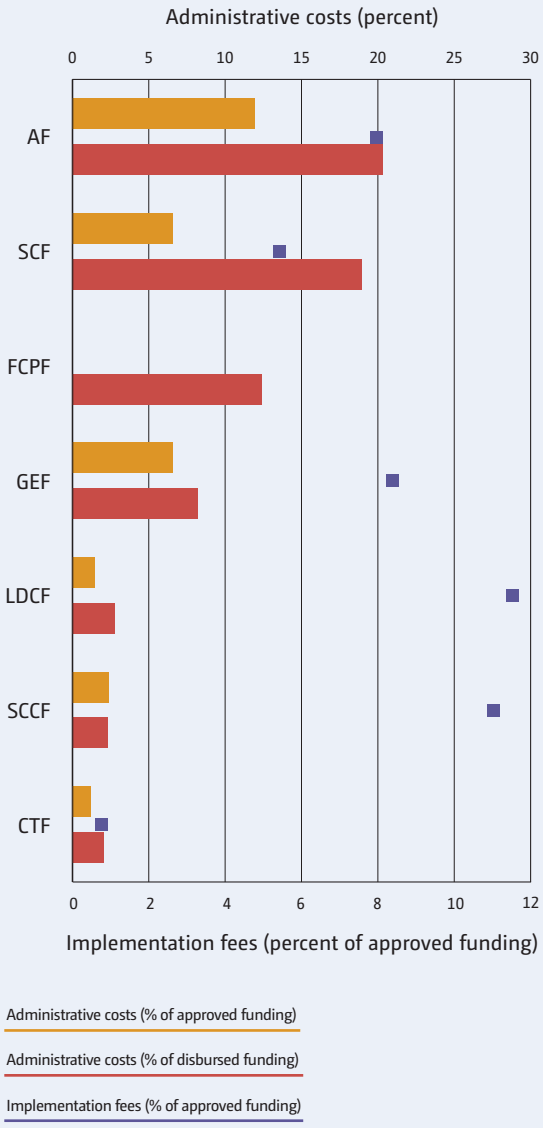
256. Funds have adopted different approaches to setting these fees. Implementing agency fees cover the costs of intermediary organizations in managing approved projects and programmes. Administrative costs refer to the costs of managing the fund as a whole including board meetings, stakeholder engagement efforts, project screening and evaluations. Transaction costs are not directly proportional to

Figure 3.7: Approvals and disbursements of multilateral climate funds by thematic objective



Source: CFU 2015.

Figure 3.8: Administration costs and implementing agency fees for major climate funds



Source: Based on a review of the financial reports of the relevant climate funds and Nakhooda and Norman 2014.

project size; such transaction fees therefore tend to account for a smaller percentage of total funding for funds that administer larger-sized projects, such as the Clean Technology Fund, even though in absolute terms, the sums may be significant. The administrative costs of the SCCF and the LDCF are relatively low as they largely make use of the GEF wider management systems. The costs associated with the AF are relatively high because it accredits a wide range of national and regional implementing entities, and has its own legal personality. A substantial share of the administrative costs of a project may be incurred upfront, and the proportion of spending on administration relative to overall spending generally reduces over time as project funds are released (Nakhooda and Norman, 2014).

3.3.3 Ownership

257. Principles for ensuring the effectiveness of international assistance for developing countries and debates on international climate finance affirm the importance of support for national priorities and national institutions. The Paris Declaration on Aid Effectiveness defines national ownership as "the effective exercise of a government's authority over development policies and activities, including those that rely – entirely or partially – on external resources". The 2011 Busan Partnership Agreement on Aid Effectiveness that emerged from the most recent high-level forum proposed that development cooperation should "continue to support national climate change policy and planning as an integral part of developing countries' overall national development plans, and ensure that – where appropriate – these measures are financed, delivered

and monitored through developing countries' systems in a transparent manner".[60]

258. One important aspect of ownership is to ensure that finance supports emerging climate change policies and strategies articulated by the national government. Better aligning international funding with government priorities and working more closely with government entities have the potential to make obtaining better results more likely, not least because they allow for more cohesive planning processes and a whole-of-government approach (UNDP, 2015b; Bird et al., 2016). As the policy and legislative frameworks to steer a national climate change response develop and mature in countries across the world, the basis for countries to ensure an alignment of financial flows with these priorities is increasing (Nakhmany et al., 2015). Recent efforts to articulate INDCs reinforce this trend (Hedger and Nakhooda, 2015).

259. An area of increasing focus in this context has been the use of national financial systems to spend climate finance. Relevant approaches include spending international climate finance through national budgeting and financial management systems as they evolve to include a strong focus on implementing climate policies (Bird et al., 2014), or through new climate finance institutions that countries have established such as national climate funds (UNDP, 2015b; CDKN and Dalberg, 2015; Rai et al., 2015). One proxy indicator may be the share of finance channelled through national systems, or recorded in national systems.

260. Another important dimension of ownership is the engagement of key stakeholders beyond government, including civil society and the private sector (Nakhooda, 2014; Polycarp et al., 2014). Many international financing institutions have therefore sought to support broad stakeholder consultation and involvement in the conceptualization and implementation of proposed approaches and investments. Such broad-based engagement can increase the viability and impact of proposed programmes. But it can also sometimes pose tensions with an approach focused on the buy-in and use of governmental channels. Several reviews of experience acknowledge that more concerted efforts are required to engage key stakeholders to secure effective engagement in delivery and implementation (ICF International, 2014; Nakhooda and Norman et al., 2014).

261. As chapter II noted, there is a lack of information on the recipients of climate finance. Nevertheless, a review of the effectiveness of international climate funds found increasing engagement with the lead ministries responsible for strategic investment and financial management decisions at the national level in programming. It also stressed that funds are now working

60) <http://www.oecd.org/dac/effectiveness/49650173.pdf>.

with a more diverse group of international institutions and institutions based in developing countries, catalysed by the pioneering innovation of the AF with offering institutions based in developing countries direct access to its resources in the hope of benefiting from their higher familiarity with country contexts and actors (Nakhooda et al., 2014). The GEF has also accredited institutions based in developing countries such as the Development Bank of South Africa, the Foreign Economic Cooperation Office of the Ministry of Environmental Protection of China, Fundo Brasileiro para a Biodiversidade in Brazil and the West African Development Bank implementing agencies. The GCF has continued this trend by substantially expanding its partners to include 33 accredited implementing entities, with 9 national implementing entities and 17 institutions headquartered in developing countries.[61]

3.3.4 Alignment with needs

262. The 2014 BA took stock of efforts to complete national climate finance needs assessments through initiatives such as the UNFCCC-supported NEEDS project, the UNDP climate change investment and financial flows initiative, technology needs assessments, national adaptation programmes of action and compiled financing needs specified in nationally appropriate mitigation actions (NAMAs) submitted to the UNFCCC. Few new assessments along these lines have been completed in the intervening period.[62] However, some information on climate finance needs was included in selected developing country BURs, and in INDCs.

263. As at 30 June 2016, 32 developing countries had submitted their BURs. More than one third of these countries included quantitative information on financial needs in their submissions, although there has been no common format or specific guidance for reporting on this. Some identified needs per economic sector, while others focused on financing needs related to capacity and technology, such as in the case of Indonesia. A few countries (such as Ghana and South Africa) included detailed analysis of financial needs per activity, with information on preferred financial instrument and priority level (high or low). In general, there were more details on financing needs for mitigation activities than for adaptation activities. Usually, countries did not provide detailed information on the methodologies (see also section 1.4.1 above) used to estimate financial needs or whether a country needs assessment had recently been conducted. It was also not always clear how a country defined "needs". Some countries listed the overall cost of implementing proposed activities, while others listed the gap between current financing and expected programme costs, with specific estimates for international climate finance needs. Countries reporting financial needs eithfer included quantitative figures for a set period or on an annual basis. The time frames for activities and financial needs varied significantly and were often unclear. For example, Malaysia estimated annual needs up to 2042 for some proposed actions, while Tunisia estimated financial needs between 2015 and 2020.

264. The emergence of nationally determined contributions as the basis for climate action in all countries creates a new context for finance for developing countries going forward. Most developing country Party INDCs outlined (in varying levels of detail) the estimated financial costs of the emission reduction and climate adaptation scenarios they describe for the period 2015–2030 (Biru and Thwaites, 2015; Hedger and Nakhooda, 2015; Helme et al., 2015). The total costs identified in INDCs are of the order of USD 3.548 trillion from both international and domestic sources (Carbon Brief, 2015). Parties took very different approaches to describing financial needs within INDCs. In many cases, cost figures listed by Parties were lower bound estimates of potential costs. The amount of detail on methodologies for estimating costs presented in INDCs also varied greatly across submissions, making these figures difficult to compare.

265. The types of financing needs identified in BURs cover a different period of time to INDCs, and are very different in amount and character from those highlighted in INDCs. The latter are generally substantially more encompassing. In both cases, however, it is clear that better guidance on the types of needs to consider, and the basis on which to present them, may be necessary if continued reporting of such information to the UNFCCC is to offer a useful insight into the nature of the needs that countries face. More consistency in the approaches taken to reporting on finance needs would also offer better insights into how current levels of effort in delivering finance align with needs both within countries and at an aggregate global level. In principle, in subsequent BURs, countries could begin

61) These include AfDB and ADB.

62) No new technology needs assessments were submitted. No new national NAMAs seeking international support were submitted. Nine NAMAs were submitted to the NAMA Registry seeking recognition.

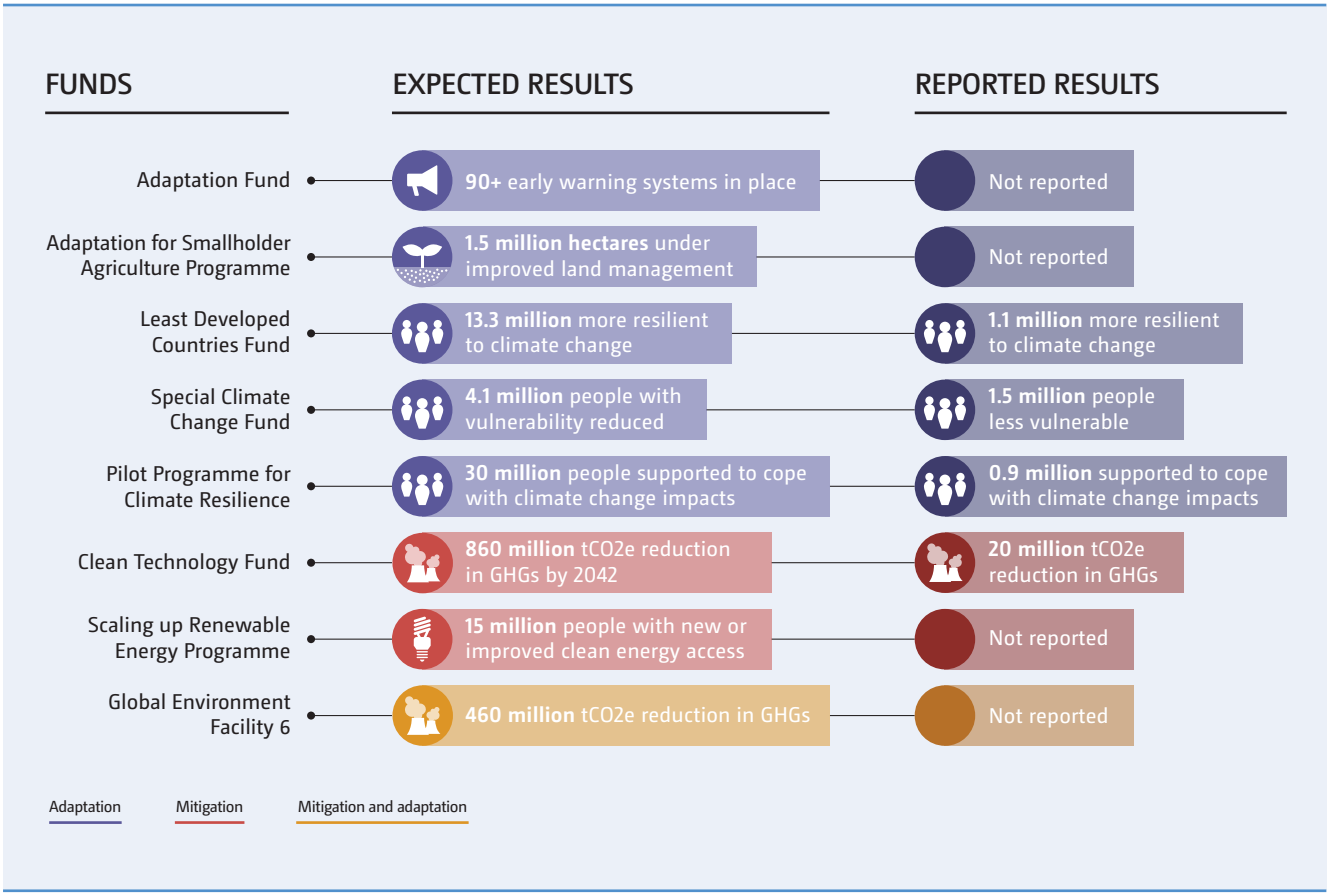
to compare finance received (from international, domestic, public, private and hybrid sources) with the financing needs they set out, if both sets of data could be clearly and systematically set out.

3.3.5 Reported results and impacts of climate finance: selected insights and experience

266. Impact reporting systems and practices among climate funds and IFIs are beginning to mature. The results reported by actors in the climate finance landscape need to be understood in the context of the efficiency of the finance they offer as a whole: results are tied to progress in implementation, and disbursement is usually tied to progress in achieving key milestones. The focus of this section is on the results monitoring approaches that various actors are adopting, and analysis of selected available data on impact. Figure 3.9 presents a snapshot of selected anticipated results of climate funds, and results reported as at December 2015, showing a significant gap that is explained, in part, by the early stages of implementation of several of the programmes involved.

267. Some development banks are beginning to adopt information technology systems that can track approvals and disbursements alongside progress in achieving key climate and environmental objectives, in the context of delivering on new institutional objectives to achieve impacts in line with the Sustainable Development Goals and ecological transitions. For example, EBRD has adopted a new policy to support transitions to a green economy, and a new impact monitoring and assessment framework to support these efforts. Key indicators that the bank is already using to measure its impact in this context include carbon emission reductions (in tonnes/year), annual production of renewable energy (megawatt-hours per year), estimated annual energy savings (terrajoules per year), water savings (cubic metres per year) and waste avoided (tonnes per year). Its Green Economy Transitions paper includes initial data against these metrics, and makes links to relevant Sustainable Development Goals.

Figure 3.9: Selection of expected results of climate funds compared with reported results (December 2015)



Source: ODI 2015.

3.3.5.1 Impact of mitigation finance: selected experiences

268. GHG emission accounts are a primary metric of impact and effectiveness used for climate finance mitigation. This metric is often complemented with output-oriented metrics, such as the amount of clean energy installed (often measured in Megawatts). Table 3.1 summarizes selected results reported by major climate funds related to emission reductions, extended access to energy and installed clean energy capacity, and the extension of access to low-carbon transport options. The Clean Technology Fund reports actual emission reductions of 17.8 million tonnes of carbon dioxide (CO2) avoided (including 5.5 million tonnes of CO2 avoided for the past 12 months); a substantial share of these reported results comes from one of the first projects approved by the Clean Technology Fund to finance renewable energy and energy efficiency in Turkey. Some 460 million tonnes of CO2 are expected to be avoided from projects already approved under the GEF sixth replenishment; the overall programme target is to reduce emissions by 750 million tonnes of CO2.

269. Many funds focused on REDD-plus have sought to support the strengthening of national policies and policy alignment to facilitate forest conservation and emission reductions in the future (Norman and Nakhooda, 2014; Lee and Pistorius, 2015). To date, climate finance flowing through dedicated multilateral funds has supported 35 tropical forest countries to develop a national REDD-plus strategy and reform inconsistent policies. Funds have also sought to support stakeholder engagement in national forest policy development. The UN-REDD Programme, for example, reports that 27 countries have established or enhanced the participation of indigenous peoples in national policy planning processes exceeding the 30% target (UN-REDD Programme Review, 2014). Countries are also starting to set up and transition towards emission reduction programmes where finance will be paid on delivery of verifiable emission reductions. The Forest Investment Program (FIP) currently has a target to reduce emissions by 426 million tonnes of CO2 by 2025. The Forest Carbon Partnership Facility (FCPF) is yet to report on emissions reductions through the Carbon Fund, which remains in the early stages of operationalization and implementation. The Carbon Fund has earmarked, but not formally approved, USD 141.4 million for eight countries for verified emission reductions in the future (Norman, 2016).

270. A growing number of intermediaries have begun to account for GHG emissions associated with their investments. GHG emission reductions are central to most climate fund results frameworks. Many MDBs and IFIs are now also reporting on the volume of low-carbon energy they are supporting as a share of their overall portfolios in the context of commitments to increase their support for clean energy.

271. The parameters and assumptions that underpin accounting frameworks can result in widely different conclusions on emission reductions (potential variations may be by several orders of magnitude). Harmonization efforts are making some progress. The GEF has developed guidance and standardized tools to help its mitigation project implementers to monitor emission reductions that result from its programmes. As at November 2015, a working group of IFIs, including AfDB, AFD, ADB, EBRD, EIB, the GEF, IADB, KfW, the Nordic Development Fund, the Nordic Environment Finance Corporation, the Nordic Investment Bank, the UK Green Investment Bank and WBG, with the involvement of the UNFCCC secretariat, have adopted the basic elements of a common framework for accounting for GHG emissions associated with their direct investments.[63] This approach was informed, in

Table 3.1: Selected mitigation results reported by major climate funds

Emission Reductions	Energy access	Low carbon transport
1.7 billion tonnes in expected CO_2 emissions avoided from CTF, SREP and GEF 6 programmes.	Clean Technology Fund: 2,739 MW in installed capacity; annual energy savings as a result of Clean Technology Fund interventions: 15,138 GWh.	Clean Technology Fund: 6 million additional passengers to use low-carbon transport; no results reported as yet.
Actual emission reductions to date: 17.8 million tonnes of CO_2 avoided.	SREP: 4.9 million people expected to have improved energy access; 1.9 million MW in installed capacity expected from the current portfolio.	

Source: Norman et al. (2015).

63) <http://www.worldbank.org/content/dam/Worldbank/document/IFI_Framework_for_Harmonized_Approach%20to_Greenhouse_Gas_Accounting.pdf>.

part, by efforts led by the GEF and its Scientific Technical and Advisory Panel to advance common practices.[64] The guidelines call for ex ante GHG accounting using one of a (significant) number of international standards including the WRI World Business Council on Sustainable Development (WBCSD) Greenhouse Gas Protocol, and ask that methodologies and assumptions be clearly stated. MDBs have now adopted a set of common guidelines including emission factors to assess the mitigation benefits of grid-connected renewables, and to account for the net GHG emissions of energy efficiency projects. A common set of principles for accounting for emissions from transport, particularly how to approach indirect (scope III) emissions have also been agreed. Nevertheless, the adoption of these principles is relatively recent, and their use varies.

272. Work is also under way to help financial institutions beyond the development finance community account for the climate impacts and risks of their investments in comparable ways. The UNEP Financial Initiative (FI) and WRI/WBCSD-led Greenhouse Gas Protocol, for instance, sought to support banks and institutional investors in assessing their carbon asset risks and for accounting and disclosing GHG emissions related to investments. The initiative engaged a wide cross section of public and private financial institutions as stakeholders to build consensus around key parameters for different types of accounting. Unfortunately, this stakeholder group was unable to come to agreement on core underpinning parameters for developing a new universal set of protocols on GHG accounting for financial institutions. These challenges highlight the stakes at hand for institutions when it comes to GHG accounting.

3.3.5.2 Impact of adaptation finance: selected experiences

273. The IPCC defines resilience as "the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation" (IPCC, 2014). In practice, adaptation- and resilience-building activities within countries may be difficult to distinguish from activities that contribute to "good" development (Fankhauser and Burton, 2011; Jones et al., 2012). Conventional development interventions, such as those that support sustainable livelihoods, social protection or disaster risk reduction programmes can strengthen resilience and adaptive capacity (Levine et al., 2011).

274. Tracking resilience is challenging, and relevant methodologies are diverse. They range from composite indices based on objective indicators (Bahadur et al., 2015) to subjective measures of risk perception (Jones and Tanner, 2015). The timescale on which impacts of climate change may manifest adds further complexity to this effort. "Slow-onset" events may result from incremental changes occurring over many years such as sea level rise, ocean acidification, glacial retreat, salinization and the loss of biodiversity (UNFCCC, 2011a, 2011b), and it is difficult to accurately estimate or measure the number of beneficiaries of an intervention, particularly because these benefits may occur after projects (and reporting processes) have ended. Similarly, building resilience to 1-in-100 year and 1-in-500 year events – extreme weather events that have a 1% and 0.2% probability of occurring in any given year – can prove problematic for result reporting. Such events may never occur, or occur too far into the future for a project proponent to be able to definitively identify beneficiaries.

275. Table 3.2 summarizes the adaptation results reported by existing climate funds. The result areas captured are diverse, reflecting the broad suite of sectors and approaches that are part of adaptation efforts. Most climate funds and adaptation projects seek to identify a specific number of people that are likely to benefit from the proposed intervention either directly or indirectly in terms of increased resilience, and track progress in extending the benefits to that target number of people. Setting these targets accurately, and monitoring progress made towards them, can be a challenging undertaking, and these figures can be difficult to corroborate and verify.

276. Several funds track progress on disaster risk reduction efforts through output-based metrics related to the number and quality of early warning systems that are put in place. These measures can play a role in enhancing resilience to 1-in-100 year or 1-in-500 year events. Given the strong recognition of the links between institutional incentives, capacity and policy, and adaptation to the impacts of climate change, many funds seek to support institutional development to support adaptive decision-making and strengthen economic or community-level resilience, and to strengthen the development of national or sectoral policies to encourage attention directed towards the impacts of climate change and adaptation to possible impacts. Such approaches can play a role in addressing both slow-onset and extreme events.

64) <https://www.thegef.org/gef/ghg-accounting>.

Table 3.2: Reported adaptation results of dedicated climate funds

Direct beneficiaries or number of people now more resilient/less vulnerable to climate change	Improved information and early warning systems	Strengthened policies and plans to adapt to climate change	Increased ecosystem/ natural systems resilience to climate change
Adaptation Fund: 3.52 million people (increased by 1.4 million in 2015).	*Adaptation Fund:* 92 Early Warning systems.	*Adaptation Fund:* 54 policies introduced or amended.	*Adaptation Fund:* 114,095 ha of natural habitat created, protected or restored.
ASAP: 8 million direct beneficiaries by 2020. Programming by Nov 2015 5.66 million beneficiaries.	*LDCF:* 45 projects expected to expand access to better information and early warning systems.	*LDCF:* 86 expected vulnerability assessments. 597,000 people to be trained to monitor and evaluate adaptation strategies. 1378 expected sub national plans and processes and 160 regional, national and sector wide policies strengthened.	*ASAP:* 1 million hectares with improved land management and gender sensitive practices by 2020. Approved projects.
LDCF: 13.3 million expected. As of June 2015, 1.1 million.	*SCCF:* 28 projects expected to expand access to improved information services and access to early warning systems.	*PPCR:* all 16 countries to integrate climate change into national planning. 7 countries have revised national development strategy documents (6 starting, 2 have not). Also aims to integrate climate change into sectoral planning in 67 priority sectors. Progress in, 23 sectors, 23 underway, 23 have not started.	*LDCF:* 2.1 million hectares to be under better land management expected. As of June 2015, 155,000 hectares reported.
PPCR: 30 million total target. To date, 900,000 people supported to date.		*SCCF:* 48 expected risk and vulnerability assessments to be completed. 900,000 people to be trained to identify and evaluate adaptation strategies and measures. 192 regional, national and sub national institutions with strengthened.	*SCCF:* 2.7 million hectares expected to be better managed. As of June 2015, 218,000 hectares reported.
SSCF: 4.1 million. As of June 2015, 1.5 million beneficiaries reported.			

Source: Compilation by Norman, Nakhooda, Canales Trujillo and Barnard 2015.

277. Funds such as the LDCF and the AF therefore track results such as the number of vulnerability and risk assessments that are completed, the number of people trained in issue areas related to adaptation and climate impacts. PPCR expressly tracks the number of policies and planning frameworks on climate change adaptation adopted, given its mandate to support the mainstreaming of adaptation and resilience. Given the strong links between ecosystem health and restoration and efforts to adapt to climate change and ensure resilience, funds also seek to encourage ecosystem-based adaptation and the protection and conservation of natural ecosystems and assets. Metrics used for this include, as in the case of the Adaptation for Smallholder Agriculture Programme (ASAP) and the SCCF, the area of land under better (and in the case of ASAP, more gender-sensitive) land management, or as in the case of the AF, the area of natural habitat created, restored or protected.

278. Innovations in understanding and tracking of progress in strengthening resilience and supporting adaptation continue to attract attention and interest. Several NGO-led efforts in this regard have been launched, including the Oxfam WRI ODI Adaptation Finance Accountability Initiative (Wilkinson et al., 2014; Terpstra and Carvalho, 2015), which seeks to track delivery of climate finance to the local level, and work by the International Institute for Environment and Development and partners on the domestic political economy of climate finance (Sharma et al., 2014; Kaur et

al., 2016). Institutions such as CPI (Brown et al., 2015) and ODI have also completed studies offering insights into the effectiveness of adaptation projects in mobilizing private investment and adaptation funds (Canales et al., 2013; Nakhooda and Canales Trujillo, 2014).

279. Climate change also presents risks for development and economic prosperity in all countries; however, that must also be factored into financing decisions more broadly. These risks have recently been acknowledged by mainstream financial actors including central bankers and the international FSB, which launched an inquiry into disclosure of climate-related risks, including vulnerabilities to climate change. The insurance industry has also developed significant work and systems to understand the impacts of climate change on its business.

3.3.6 Leverage and mobilization

280. Governments and other stakeholders involved in designing and implementing climate policy have expressed strong interest in understanding how to attract private investment in low-carbon and climate-resilient approaches. A range of public finance and policy instruments may be used to address diverse risks that otherwise keep highly heterogeneous private sector actors from making low-carbon and climate-resilient investments. The role that the private sector can play varies across countries, however, and is shaped by the overarching in-country investment climate. The availability of private finance may also vary across countries, and in places where this is weak, leverage may be more difficult to achieve.

281. Many providers of climate finance use co-financing as best available evidence of mobilization, as discussed in chapter I above. Where more than one public actor is involved in a particular project/programme/fund, leveraged amounts may be pro-rated on the basis of the size of their contributions. The availability of co-financing data varies across types of public finance instruments and sources of finance, and is often incomplete. It is generally recognized that co-finance does not necessarily equate to mobilization, and this approach does not capture the mobilization effect of capacity-building/budgetary support/domestic policies. In addition, this approach may not allow assessment of the relative mobilization effect of different forms of public financing.

282. Several climate funds, such as the CIF and the GEF, have placed a significant emphasis on directly leveraging private finance and mobilizing co-finance. A singular focus on leveraging private investment may have problematic outcomes (Jachnik and Raynaud, 2015). First, leverage values are rarely calculated consistently. Second, ensuring an adequate empirical basis for a leverage ratio can be quite challenging. Third, leverage effects represent one, narrow indicator of effectiveness (Brown, 2011; IFC, 2013; Whitley et al., 2014). High leverage ratios may not always indicate an effective use of public finance, as it may be easiest to achieve high leverage ratios where public finance is least needed. There are many reasons for caution in relying on leverage ratios. Nevertheless, this indicator is dominant in the results frameworks of climate funds. Annex R presents reported leverage ratios of selected climate funds, which range from negligible volumes, to an average of USD 3.6 private dollars leveraged by every dollar invested by the Clean Technology Fund. These ratios are substantially lower than those reported by MDBs such as IFC for their core investment portfolios.

283. In compiling a recent review of international climate finance for developing countries, OECD and CPI collected and analysed available data on direct co-finance. They concluded that the amount of private co-finance mobilized by developed country public finance in 2013–2014 for climate action in developing countries was USD 14.7 billion of the USD 62 billion identified (OECD, 2015a).

3.4 Global total climate finance, and developing country flows in context

284. Section 3.1 above summarized flows to developing countries; but climate finance for developing countries needs to be considered in the context of the efforts of all countries to direct finance and investment to support low-carbon and climate-resilient approaches for meeting their economic and development needs. All countries, developed and developing alike, will need to scale up investment in solutions to climate change if the overarching goals of the UNFCCC are to be met. Article 2 of the Paris Agreement links the need to keep "the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels" and the need to "make finance flows consistent with a pathway towards low GHG emissions and climate resilient development".

285. Estimates of global total climate finance flows are based on the extensive efforts of CPI to compile available data on finance that supports action on climate change in a consistent and comparable fashion. CPI identified up to USD 372 billion annually in 2013–2014 in global total climate finance flows The

estimates of global total climate finance in this 2016 BA include adjustments to the CPI estimate, and amount to USD 714 billion annually in 2013–2014. The largest component of this finance in all countries (developed and developing) is private investment in renewable energy, which amounted to USD 265 annually in 2014. This estimate is based on data collected by BNEF (the methodologies for collecting this information were discussed in chapter I above). In order to provide the most complete picture possible of total climate finance, this BA also considers other sources of information on relevant flows, although there is much greater uncertainty associated with this supplementary data. IEA compiled an estimate of private investment in energy efficiency (included in the 2014 BA), which is based on changes in energy intensity, surveys of energy use by sector to determine annual energy demand and data on technology costs (IEA, 2014). In 2013 and 2014, the average annual estimated private investment in energy efficiency was USD 336 billion.[65] Studies on private investment suggest an additional USD 5 billion per year in private investment in activities that affect land-use change and climate impacts of forests, and USD 1.5 billion per year in private investment in adaptation.

286. Estimates of annual domestic public investment in climate change activities are also starting to be compiled. Studies exist for a small number of countries, mostly developing countries, and vary in scope, but a review of available studies suggest financing to the order of USD 192 billion a year. If these sources of complementary data are included, global total climate finance flows might be as high as USD 905 billion annually in 2013–2014. It is also worth noting that these totals reflect the face value of finance identified, and do not distinguish between different types of finance or the associated costs of finance. This is a significant limitation (see section 2.5 above for a summary of global total climate finance).

287. To better understand the overview of financial flows presented in chapter II, climate finance flows need to be put in the context of wider trends in global investment. While current investment flows fall short of the needs to limit temperature rise and meet the Paris Agreement goals, there are several encouraging signals.

288. The levelized costs of some renewable energy technologies have fallen rapidly, and these trends are expected to continue. For example, utility-scale solar energy development and deployment costs are expected to decline by a further 60% from a USD 74–220/MWh range today, to around USD 40/MWh worldwide in 2040 (BNEF, 2016). The cost of onshore wind is expected to drop by 41% by 2040, primarily as a result of improving capacity factors. Developing countries have emerged as leaders in these sectors, investing more in renewables than developed countries in 2014 (CPI, 2016; Frankfurt School, UNEP, BNEF, 2016).

289. At the global level, renewable energy[66] accounted for the majority (53.6%) of new energy capacity brought online in 2015, although it still remains a small share (10%) of the total global capacity currently installed. Continuing reductions in the cost of low-carbon options may mean that even if the volume of installed low-carbon technology increases, the total volume of finance invested in these options may plateau or decrease. It is therefore particularly striking that total investment volumes have risen, despite falling costs.[67] Indeed, some developing countries have succeeded in bringing renewable energy online at lower than global average cost as a result of innovations in procurement in implementation (BNEF, 2016).

290. There has been promising progress on storage technologies, including through batteries and electric vehicles, whose costs are also falling. Breakthroughs in storage technologies and continued reductions in costs could transform the energy systems of the future, by addressing challenges related to the intermittency of renewable energy, and connectivity to centralized grid systems. It is difficult to establish a direct causal relationship between public climate finance to developing countries and these developments, but some studies suggest a supportive role (Nakhooda and Norman et al., 2014; Buchner et al., 2015).

291. There is also growing recognition of climate risk in the mainstream financial sector. As noted in chapter I above, FSB has launched an enquiry into climate-related disclosures. A growing number of public and private financial institutions are beginning to adopt climate change management principles.[68] Some private

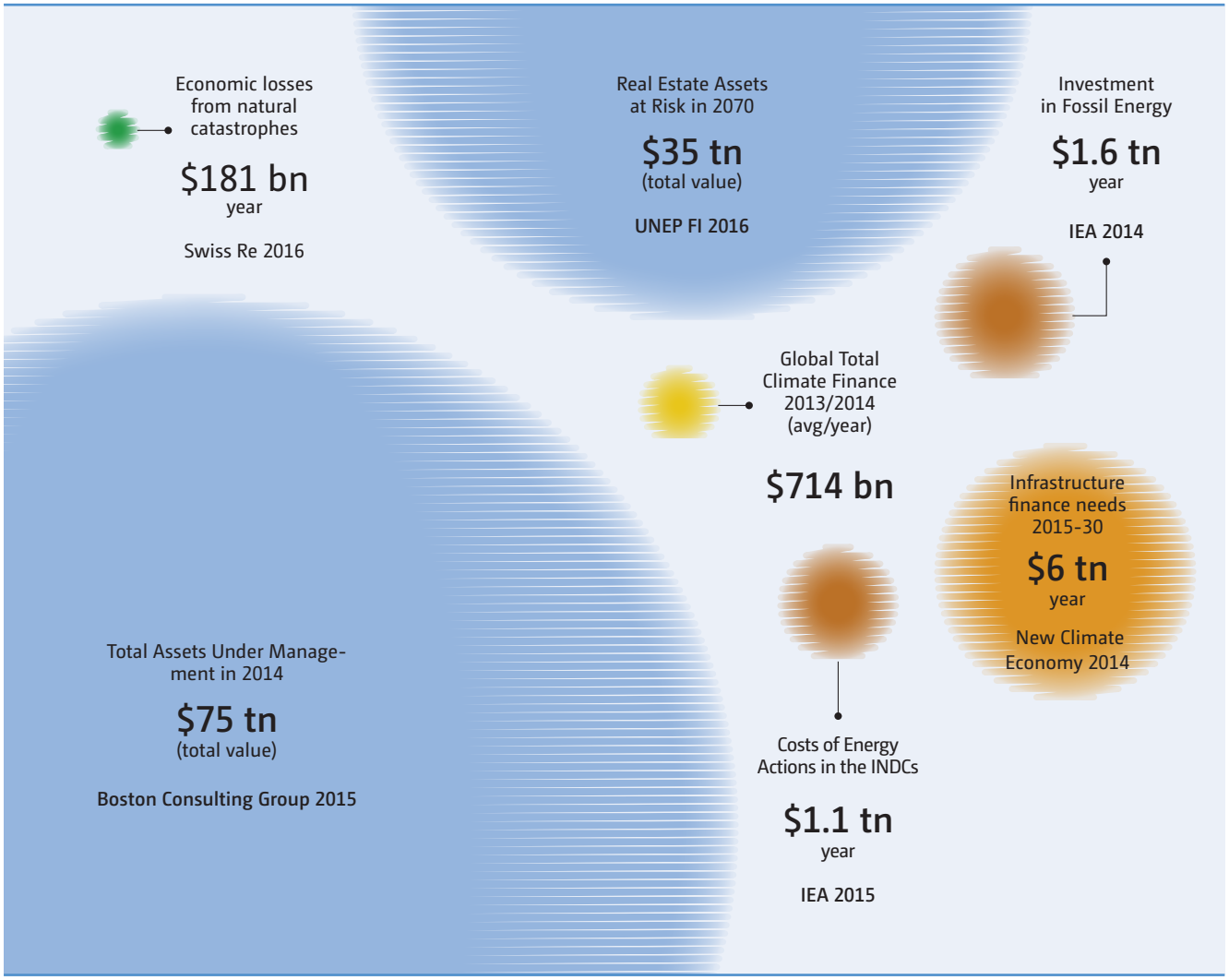
65) IEA has recently updated its methodology for compiling these projections, however, and the methodology to be used in its 2016 report will be more conservative, as noted in chapter 1.

66) Excluding large hydropower projects.

67) In 2014, 10 GW more solar photovoltaic and onshore wind systems were deployed with the same level of investment as in 2012 (CPI, 2016).

68) For example, 26 financial institutions from developing and developed countries with combined balance sheets of more than USD 11 trillion signed on to the voluntary principles to mainstream climate action within financial institutions. In addition, nearly 1,500 signatories, from over 50 countries, representing USD 60 trillion have signed on to the principles for responsible investment that offer a menu of six voluntary principles that guide efforts to incorporate environmental and social governance issues into investment practice, <https://www.unpri.org/about; http://www.worldbank.org/en/news/press-release/2015/12/07/major-financial-institutions-move-to-integrate-climate-change>.

Figure 3.10: Global climate finance in context



Note: This figure seeks to put the total volume of global finance flows in the context of wider trends in global investment. The flows featured on this diagram are not strictly comparable, and are presented for illustrative purposes only. Full details of the underlying studies are included in Chapter 3 of the 2016 BA.

Abbreviations: avg = average, bn = billion, IEA = International Energy Agency, INDC = intended nationally determined contribution, tn = trillion, UNEP FI = United Nations Environment Programme Finance Initiative, $ = United States dollar.

financing institutions are adopting targets for climate-friendly lending. Some investors are divesting from high-carbon assets through initiatives such as the Portfolio Decarbonisation Coalition. G20 has launched a work programme on green finance, and the UNEP Enquiry into the Design of a Green Finance System suggests an emerging awareness of environmental and social considerations in financial regulations in countries as different as Bangladesh and the United Kingdom of Great Britain and Northern Ireland. The adoption of nationally determined contributions as a basis for climate change action in all countries, and commitment to a robust process to review and advance offers of action also create a new context for investment that is recognized by major market players. Credit risk assessment agencies such as Moodys Investor Services have highlighted the implications of implementation of nationally determined contribution and the Paris Agreement for creditworthiness in key sectors (Moodys, 2016).

292. Considered together, these developments are encouraging. Nevertheless, the amount of climate finance identified in this report remains modest when considered in comparison with other relevant flows of costs related to finance and climate change, using the best available data. While the figures are not strictly comparable, they help to give an illustrative sense of relative scale as presented in figure 3.10.

293. Global total climate finance flows can also be considered relative to total needs for finance to address climate change in key infrastructure sectors. IEA, for example, estimated that USD 16.5 trillion will be required from 2015 to 2030, more than USD 1.1 trillion per year. Some studies suggest infrastructure finance needs of the order of USD 5–6 trillion per year globally (Canfin and Grandjean, 2015; New Climate Economy, 2015).

294. The Boston Consulting Group estimates that the global value of professionally managed assets has grown to USD 74 trillion, yielding USD 103 billion in profits in 2014. The UNCTAD "World Investment Report" estimated that FDI in 2014 was worth about USD 1.23 trillion, and inward flows to developing countries were USD 681 billion (UNCTAD 2015). The climate finance flows from developed to developing countries identified in the BA for the same period are much smaller by comparison, at less than USD 45–65 billion.

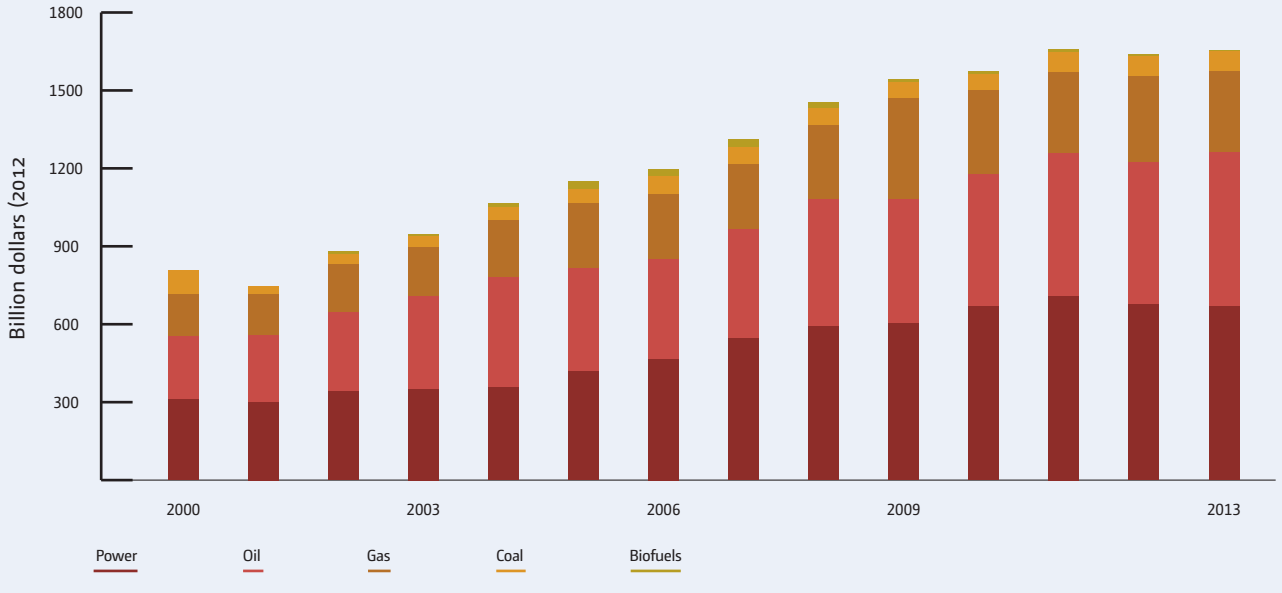
295. Global total climate finance flows can also be considered in the context of total infrastructure finance needs. Some studies suggest infrastructure finance requirements of the order of USD 5 trillion per year globally (Canfin and Grandjean, 2015; New Climate Economy, 2015). The total identified climate finance flows in the 2016 BA represent less than 20% of this sum.

3.4.1 Investment in high-carbon energy

296. IEA tracks investment in energy supply for its annual "World Energy Investment Outlook" reports. IEA investment data for 2000–2013 are summarized in figure 3.11. When electricity generation fired by fossil fuels is included, global investment in the supply of fossil fuels has exceeded USD 1,600 billion in recent years. Total investment has been roughly constant since 2011. About 50% of the total was invested in oil supply, 35% in gas supply and gas-fired generation, and 14% in coal supply and coal-fired power generation. Investment in fossil fuel supply is five times larger than the USD 153 billion investment in renewables in 2013.

297. In recent years, the costs of oil and coal have proven to be volatile, and reached some all-time lows. Recent studies suggest that these trends are unlikely to dissuade a continued increased in investment in low-carbon energy technologies, because of the declining costs of clean energy (BNEF, 2016). In some countries, including the United States of America, substantial new coal capacity has not been brought online in recent years, in part in response to climate-related regulations, but also in response to social concerns related to siting of new facilities (BCSE, 2016).[69]

Figure 3.11: Investment in global energy supply, 2000–2013



Source: IEA, World Energy Investment Outlook (2014).

69) Since 2005, the United States has disconnected over 40 GW of coal-burning power plants, while adding only 19 GW of new coal plants to the grid.

Table 3.3: Estimates of global fossil fuel subsidies, 2011–2015 (billions of USD)

	2011 Clements	2011 Coady	2012 IEA	2013 Coady	2013 IEA	2014 IEA	2015 Coady
Oil	220	241	285	267	285	267	135
Natural gas	116	111	128	112	117	107	93
Coal	6	7	4	5	3	2	5
Electricity	150	163	131	156	127	117	99
Total	**492**	**523**	**548**	**541**	**532**	**493**	**333**

Note: IEA estimates are in 2013 USD; other estimates are nominal USD.
Sources: Clements et al., 2014; Coady et al., 2015; IEA 2016b

3.4.2 Estimates of subsidies

298. It is also relevant to consider the amount of money associated with government subsidies for consumption and/or production of fossil fuels and electricity generated from fossil fuels. As discussed in chapter I, subsidies differ from other direct investment and financing flows, and may have various purposes, including developmental goals related to protecting poor and vulnerable households. Nevertheless, poorly targeted subsidies for fossil fuels can perpetuate investment in high-carbon energy through a number of effects. Consumption is usually subsidized by setting prices below the market price by regulation or instructions to government-owned companies. Production subsidies generally take the form of tax provisions that favour firms in the industry. In a given country, national and subnational governments may offer dozens of different subsidies (OECD, 2015a). Fossil fuel subsidies can facilitate higher GHG emissions, as can subsidies in other sectors. Data on fossil fuel subsidies and land-use practices are reviewed below.

299. Calculating the value of fossil fuel subsidies is challenging because the subsidies rarely involve financial transactions (Bast et al., 2015). Rather, the value of the subsidies must be estimated. The value of consumption subsidies is often estimated by comparing the subsidized price with an international market price for the same fuel. Calculating the value of production subsidies is more difficult because there are often multiple provisions that reduce corporate taxes whose value must be estimated (McKenzie and Mintz, 2011). IMF estimates of the costs of fossil fuel subsidies also reflect the monetized costs of environmental externalities of consumption (Coady et al., 2015).

300. Estimates of the value of global fossil fuel subsidies are shown in table 3.3. The subsidies were over USD 500 billion per year for 2001–2013. Since then, they have declined by about one third, primarily due to falling world oil and natural gas prices. Historically, oil accounted for about 50% of the total, but this share fell to 40% in 2015. Electricity accounted for about 30% of the subsidies and natural gas about 20%.

301. Fossil fuel subsidies can have a range of perverse environmental, fiscal, macroeconomic and social consequences (Bast et al., 2015; Coady et al., 2015). In 2009, G20 pledged to phase out inefficient fossil fuel subsidies. Some progress has been made, particularly in countries such as Indonesia. But in many countries, progress has been scant. IEA estimates that reforms adopted since 2009 reduced the value of fossil fuel subsidies in 2014 by 24% (USD 117 billion).[70] At the G7 summit in Japan in May 2016, however, the governments of the United Kingdom, United States, Canada, France, Germany, Italy, Japan and the EU committed to the "elimination of inefficient fossil fuel subsidies and encourage all countries to do so by 2025" (G7, 2016).[71] G20 also recently announced a methodology for voluntary peer reviews of inefficient fossil fuel subsidies that will be tested in a few countries.

70) <http://www.worldenergyoutlook.org/resources/energysubsidies/fossilfuelsubsidydatabase/>.
71) <http://www.mofa.go.jp/files/000160266.pdf>.

3.4.3 Subsidies and financing measures affecting forests and land-use change

302. Similar challenges affect land use and efforts to reduce emissions from deforestation and degradation. Subsidies to support farmers and agricultural practices may have the additional effect of encouraging deforestation and degradation if poorly targeted, as agriculture is a direct driver for around 80% of deforestation worldwide (Kissinger, 2015). A review of subsidies to beef and soy in Brazil, and timber and palm oil in Indonesia identified more than USD 40 billion in subsidies in the period 2009–2012 (McFarland et al., 2015). While it is hard to quantify their impacts on land-use change, these sums are substantially higher than the international support for REDD-plus activities received by these two countries (Kissinger, 2015).

303. On the other hand, there are some encouraging developments that make the links between forest protection and fiscal policy. India's National Finance Commission, for example, has recently adopted a policy that rewards states for keeping forest cover intact by factoring forest cover into the formula that determines the grants and fiscal incentives they receive from the federal government (Verma et al., 2014; Kissinger, 2015). Since 2008, the Brazilian National Monetary Council has required banks to complete due diligence to ensure that those seeking rural credit in the Amazon Biome demonstrate compliance with legal and environmental regulations that prevent deforestation. Regulations were also adopted to reinforce the environmental compliance of municipalities, by restricting their access to credit when violations were found. Incentives for sustainable forest management and reforestation can also be integrated into agricultural support programmes, as has been attempted in the Brazilian Low Carbon Agriculture Plan.

304. A significant and growing number of investors are beginning to adopt standards related to forest protection practices in the supply chains of the companies in which they invest. In September 2014, a broad coalition including private corporations signed the New York Declaration on Forests, which seeks to achieve 10 goals that could reduce the global emissions of GHGs by 4.5–8.8 billion tonnes of CO2 equivalent annually (Falconer et al., 2015). A core private sector goal includes eliminating deforestation from the production of agricultural commodities such as palm oil, soy, paper and beef products by 2020. Many companies have even more ambitious targets, and sustainability pledges have been ramped up since 2014 (Falconer et al., 2015). Large institutional investors are beginning to consider the forest implications of their investments. For example, the Norwegian Pension Fund has begun to divest shares in companies associated with unsustainable palm oil production, and has introduced new guidelines to exclude investment in companies whose activities entail unacceptable GHG emissions.

3.4.4 Global finance at risk from climate change

305. A much larger amount of finance is at risk from the impacts of climate change than reflected in the current estimates of climate finance (and particularly for adaptation finance) identified in this report. For example, UNEP FI estimates that the investable real estate market is

worth more than USD 50 trillion, and that climate change (including the physical and social impacts of extreme weather) poses "clear and material risks" for the sector.[72] On the basis of research from well-respected climate change research centres including the Tyndall Centre and the Grantham Research Institute (Hanson et al., 2009), it further estimates that in 2070, 150 million people in the world's large port cities will be at risk from coastal flooding, along with USD 35 trillion worth of property.[73] Despite a recognition of the need for more proactive management of environmental social and governance risks in the context of climate change, and likely efforts to respond beginning to take hold in the sector, it is challenging to find data on investments in response to climate risk in this sector.

306. The average annual cost of economic losses induced by natural catastrophes over the past 10 years is estimated at about USD 181 billion per year, resulting in average annual costs to the insurance industry of USD 55 billion per year. In 2014, however, the insurance industry incurred uncharacteristically low total economic losses of USD 104 billion, with direct insurance costs of USD 29 billion (Swiss Re, 2015). Not all of these natural catastrophes are linked to climate change, but continued climate change increases the risks that these costs will spike sharply and continue to rise in the future.

3.5 Key messages

307. An assessment of the data underlying the overview of climate finance flows offers insights into key questions of interest in the context of the UNFCCC negotiations, including support for adaptation and mitigation, levels of finance for different regions and how finance is delivered. Key features of different channels of climate finance for developing countries are summarized in table 3.4.

308. Mitigation-focused finance represented more than 70% of the public finance in developing countries reported in 2013–2014. Adaptation finance provided to developing countries accounted for about 25% of the total finance. This is similar to 2011–2012, although there has been a slight increase in the proportion of adaptation finance from climate funds and bilateral concessional channels. More than 80% of MDB investments focused on mitigation, and less than 20% on adaptation.

309. There was a significant role for grants in adaptation finance. Grants represented 88% of the climate funds approved for adaptation finance and 56% of the bilateral finance reported to OECD DAC with adaptation as a principal objective. Some LDCs and SIDS in Africa and Asia were among the largest recipients of adaptation finance.

310. In 2013-2014, about 33% of funding from dedicated climate funds, 42% of climate-related finance reported by OECD DAC and 31% of climate finance reported by MDBs was for Asia, often in countries with attractive investment climates. This funding has largely supported mitigation, including REDD-plus, reflecting the significant GHG emissions from the region. About 21% of finance from dedicated multilateral climate funds, 28% of climate-related finance in OECD DAC and 15% of MDB climate finance was directed to African countries. There has been a growing emphasis on adaptation in this finance. About 23% of funding from dedicated multilateral climate funds, 15% of climate-related finance reported to OECD DAC and 16% of the climate finance reported by MDBs was directed to Latin America and the Caribbean.

311. There are costs associated with fund management, project development and implementation. These costs are recovered through mechanisms including administrative budgets and implementing agency fees, which vary across funds and institutions. Administrative costs range from less than 1% to nearly 12% of the approved funding. The actual costs are not necessarily proportional to the volumes of finance approved for projects. A broad range of issues can present challenges in accessing climate finance, including: low levels of technical capacity to design and develop projects/programmes and to monitor and evaluate progress; difficulties in following the procedures of the funds to access finance; and low levels of awareness of the need for action and available sources of funding. Several efforts to strengthen "readiness" to access and make use of climate finance are now under way, and the GCF has recently stepped up its efforts in this regard. Investment in domestic capacity to structure and attract a range of sources of finance is also needed.

312. Ownership of climate finance and alignment of this finance with national climate change priorities and emerging policies and strategies are well recognized as important elements for ensuring effectiveness. Another important dimension is engagement of key stakeholders

72) <http://www.unepfi.org/fileadmin/documents/IntegratingClimateRisksInRealEstate.pdf>.
73) <https://academy.rics.org/info/finalpresentationlaunch.pdf>.

across government, particularly ministries of finance and planning, and across society, including civil society and the private sector. Most INDCs submitted by developing country Parties outlined, in varying levels of detail, the estimated financial costs of the future emission reduction and climate adaptation scenarios they describe. In general, methodologies used to estimate financial needs or definitions of scope were not specified, and differed substantially. Beyond INDCs, few efforts to assess national or global climate finance needs have been completed since the 2014 BA. INDCs may provide a framework for strengthening ownership in the future.

313. Impact monitoring systems are beginning to mature, although reporting of results remains nascent and relatively slow. GHG emission accounts are a primary metric of impact and effectiveness used for climate finance mitigation, often complemented with relevant output data such as the volume of installed clean energy or reductions in energy consumption. Consistency of methodologies for GHG accounting continues to be a challenge, though progress has been made by DFIs, which have adopted common principles.

314. Most adaptation interventions seek to identify the specific number of people that are likely to benefit from the proposed interventions, either directly or indirectly in terms of increased resilience. Ensuring the accuracy of estimates can be challenging, due to difficulties in identifying beneficiaries, establishing baselines and data collection, and defining and tracking resilience over time to what may be slow-onset, or 1-in-100 or 1-in-500 year, events.

315. Many funders use co-financing as best available evidence of private finance mobilization, and many climate funds use leverage ratios as one of their key results indicators. However, co-finance does not necessarily equate to mobilization, which is often used to imply a more causal relationship between public intervention and associated private finance, which is more complex to prove. High leverage ratios may not always indicate an effective use of public finance, as ratios can also be high in interventions that are the most commercially viable.

316. The 2016 BA identified climate-related global climate finance flows of USD 714 billion on average in 2013–2014 (see figure 2.3); this is a significant amount, but is relatively small in the context of wider trends in global investment (see figure 3.10). For example, while investment in clean energy is rising, volumes of finance for high-carbon energy in all countries remain considerably higher. Infrastructure and assets are at risk from the impacts of climate change, with serious potential consequences for the global economy.

Table 3.4: Characteristics of public finance in developing countries for 2013–2014

	Average (2013 and 2014 in billion USD)	Purpose (%)			Implementing entities	Instrument (%)				
		Adaptation	Mitigation	Cross-cutting		Grants	Loans	Concessional Loans	Equity	Other
UNFCCC funds[a]	0.7	50	50		United Nations agencies, MDBs, bilateral development agencies, accredited national institutions, NGOs and private banks / funds	100				
Multilateral climate funds (including UNFCCC funds listed above)	2.2	27	70	3	MDBs, United Nations agencies and bilateral development finance institutions	53		47		
Climate-related bilateral[b]	14.9–25.3	27	53	20	Bilateral development finance agencies (e.g. GIZ, DFID, USAID, NORAD)	49	2[c]	47	2[c]	
MDB climate finance	15.8	18	82		MDBs	9		83	2	6

Note: All values are based on approvals.

Abbreviations: DFID = Department for International Development, GIZ = Deutsche Gesellschaft für Internationale Zusammenarbeit, MDB = multilateral development bank, NGO = non-governmental organization, NORAD = Norwegian Agency for Development Cooperation, USAID = United States Agency for International Development.

[a] Adaptation Fund, Global Environment Facility, Special Climate Change Fund and Least Developed Countries Fund. No Green Climate Fund projects were approved during 2013–2014.
[b] The values for bilateral finance are based on biennial report data for table 1 in this document. The percentages for bilateral climate finance in this table are based on Organisation for Economic Co-operation and Development data due to data availability.
[c] Not primarily development or concessional. One per cent of the equity reported is concessional equity.

Chapter IV

SUMMARY AND REVIEW OF PROGRESS MADE SINCE THE 2014 BIENNIAL ASSESSMENT

317. This is the second assessment and overview of climate finance flows undertaken by the SCF. In many respects, this effort is still in its infancy. Discernible trends are not yet evident. Tough methodological issues have not yet been tackled. However, much learning is being achieved, both by the SCF and by its partner institutions.

318. The very nature of this report creates a challenge for many readers unfamiliar with the technical terms, acronyms, institutions and context of finance within the UNFCCC process. Rather than repeat much of what has been said in previous chapters, a set of Frequently Asked Questions is provided below to address many of the issues that are of interest to readers and to stimulate further discussion.

319. This BA raises the possibility that globally, the upper bound of the total value of investments linked to climate change could be approaching USD 1 trillion. This is possible because climate change investments permeate decisions across governments, the private sector and households, both directly and indirectly. They are affected by both macroeconomic and fiscal policies, and in some ways by the decisions each of us makes in our daily lives. These global investments go well beyond the world that the UNFCCC has any direct influence upon.

320. It is important to keep in mind that while finance is essential for achieving the goal of keeping the global temperature rise below 2 °C, abundant finance alone cannot guarantee that it will be achieved. History has shown that the time for transitions to occur varies with the complexity of the technology, the size of the population to be affected, sociopolitical conditions and many other factors. In the case of climate change, the robustness of policies will also be a determinant factor.

321. The upper bound of climate finance flows tries to capture the flows from developed to developing countries, explicit investments of developed countries, investments by international finance institutions and the private sector, and South–South cooperation. The range encapsulates investments by sources and sectors that do not have a climate change label, but are clearly relevant to the efforts to address climate change. These sources have differing types of uncertainties, and some have not been accounted for before (see the section on challenges and limitations in the Introduction). This BA therefore uses more data from more sources and covers more sectors than ever before. Data are depicted in figure 2.3 and shaded differently depending on the level of uncertainty. As noted in chapter II, the most significant changes between the 2014 BA and the 2016 BA in the global total are due to the inclusion of domestic public finance and to changes in the estimate of private investments for energy efficiency. Changes in the flow of finance from developed to developing countries are not as large, with the main difference attributed to lower estimates of the private finance flows from developed to developing countries; changes in methods for reporting and/or the completeness of reporting may also affect the results.

322. The scope recognizes that climate change investments are increasingly being integrated into more parts of the global economy. This reflects the attention given to sustainable development and to efforts to determine whether humankind is moving in the right direction. This latter issue is addressed by providing more information on investments that increase risks and by putting investments in climate change in the context of other investments (see chapter III).

323. To help convey the sense of uncertainty associated with new data, this 2016 BA reverts back to the concepts of completeness, transparency and consistency introduced in the 2014 BA to characterize data, namely that it should be:

- Complete – which means that the data should cover all relevant sources, instruments and uses of funds (types and locations of projects). It refers to finance provided by governments and the private sector;
- Transparent – which means that the methodologies, processes and procedures to estimate financing should be clearly explained and that the sources of information are identified to facilitate the checking of information;
- Consistent – which means that a report should be internally consistent with reports of other years. A report is consistent if the same methodologies are used for all years. Under certain circumstances, a report using different methodologies for different years can be considered to be consistent if it has been recalculated in a transparent manner.

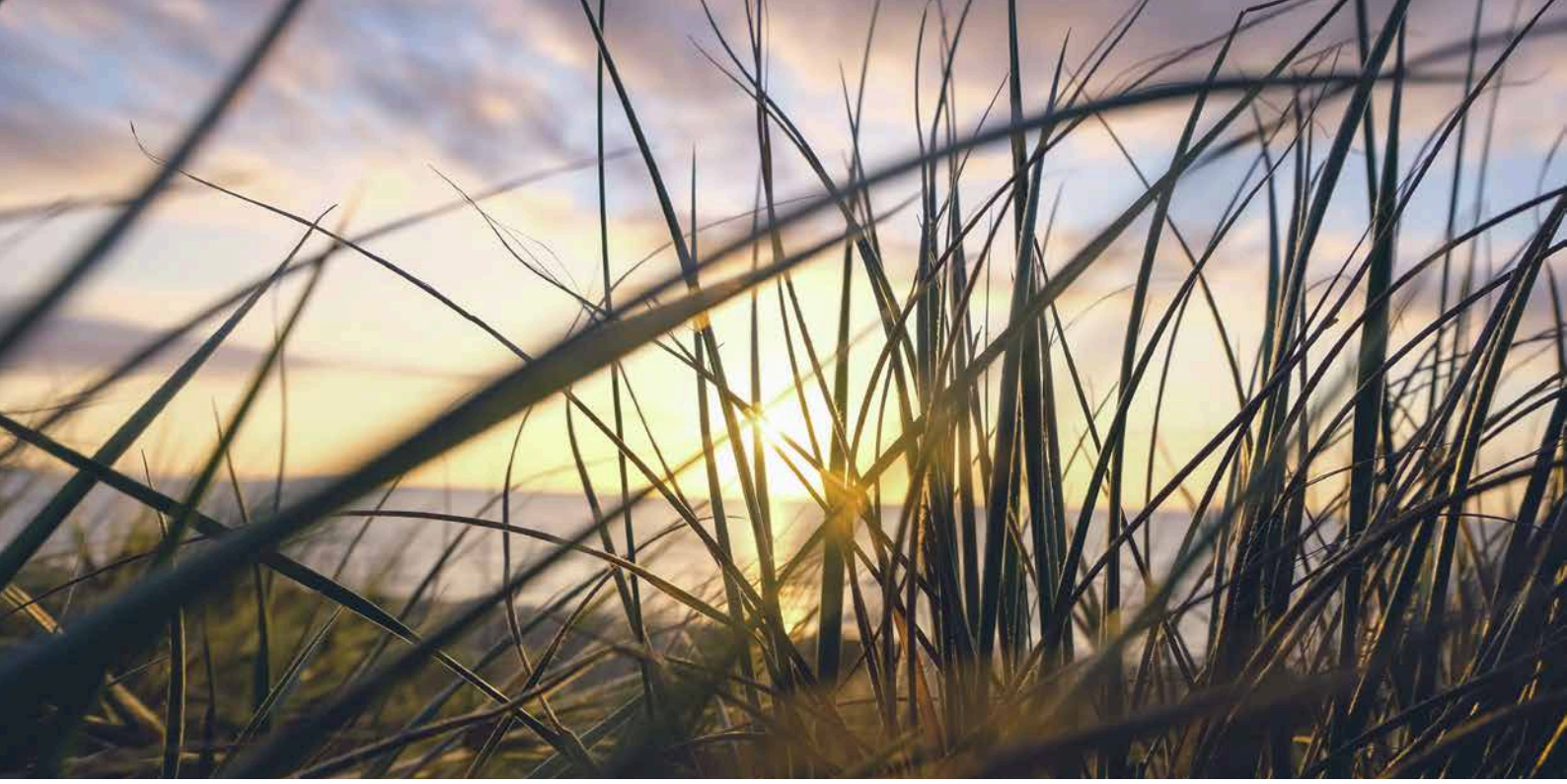
324. Here, these criteria are taken a step further. Table 4.1 attempts to portray, in a simple manner, the elements that affect the quality of data by noting the characteristics of different sources and sectors of data. No single element can be determined to be the source of uncertainty, but collectively they paint a picture that the reader should keep in mind when viewing figure 2.3. A glance at table 4.1 suggests that the sources listed on the left are far more transparent, complete and consistent than those in the right-hand columns where reporting is less periodic and transparent and done differently by various

institutions. As represented in the table, renewable energy is somewhat in between.

325. Table 4.1 can also be used as a rough guide to show where progress is needed if future BAs are to have greater value. Consider, for example, if the community determines that a better estimate of domestic public investment is a high priority because the number in figure 2.3 is large and the current process is found wanting, then an organized effort, including financial resources, might be needed to develop a common method, training and support for annual or biennial reporting.

Table 4.1: Characteristics of different data sources affecting the quality of data

	UNFCCC	OECD DAC	MDBs	Renewable energy finance	Land use	Private investments in energy efficiency	Domestic public climate finance
Transparency	Annex II Parties: All reports are public; limited project-level data available Non-Annex I: Not all reports submitted	All data publically available including project-level data for member countries	Aggregated reports available, some project data on websites; project-level data for all MDB climate finance is provided to OECD and is available through the DAC database	Project-level data available through BNEF, and consolidated analysis available from CPI, UNEP and BNEF in their annual trends report, and others	Depends on the study	Depends on the study	Several different methodologies implemented by different organizations Aggregate data available in UNDP, WB CPEIR and GFLAC
Consistency	Annex II Parties: Reporting formats, but limited specific guidance for reporting on climate finance Non-Annex I Parties: No formats or specific guidance	Reporting guidelines/ formats for countries and reporting by MDBs and multilateral climate funds	Reporting guidelines MDB exchange and review process examines sample projects each year to improve consistency; additionally, some MDB data are audited under their own audit systems	Guidelines for BNEF data collection, but somewhat ad hoc	Depends on the study	Different sources have different coverage	Some differences across methodologies and between organizations Estimates for calendar and fiscal years Estimates for actual expenditures, approved budgets and budget proposals
Completeness: countries, sectors, sources, instruments	Annex II Parties: All countries report a split among adaptation, mitigation, cross-cutting and other for bilateral and multilateral finance	All DAC countries, seven MDBs, most multilateral climate funds and three non-DAC countries; all activities; finance must exceed concessionality threshold	All MDBs, all mitigation and adaptation measures that meet the guidelines; split between own resources and external resources	Compiled analysis from CPI, UNEP and others capture these issues, correcting for some of the limitations of underlying data	Depends on the study	Depends on the study	Each estimate covers one country, total often split between mitigation and adaptation, rarely more detail; usually no detail on instruments
Frequency	Annual data, biennial reporting	Annual data, annual reporting	Annual data, but a mix of calendar and fiscal year annual reporting	BNEF data updated quarterly; annual reporting by UNEP and BNEF on trends (but subject to continued support from UNEP)		Annually	Varies – annual (calendar or fiscal year) data; often multiple years in a single report; ad hoc reports have been generated subject to availability of funding



326. The areas where progress is needed are not new. The 2014 BA report noted that it "encountered challenges in collecting, aggregating and analysing information from diverse sources ... each of these sources uses its own definition of climate finance and its own systems and methodologies for reporting. The wide range of delivery channels and instruments used for climate finance also pose a challenge in quantifying and assessing finance. Efforts to improve the comparability of reported data are beginning. Further efforts to develop common approaches for measuring, and reporting, to the extent feasible, could improve the quality of data of climate finance in future reports".

327. The key findings in the summary and recommendations provide a synthesis of the problems that remain to be tackled or that have been partially addressed. One such issue is the definition of climate finance. This report uses the same definition as put forth in the 2014 BA, namely that "Climate finance aims to reduce emissions of GHGs, and to enhance sinks of GHGs and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts". Settling on a definition (or definitions for climate, mitigation and adaptation finance) would generate higher confidence that at least the finance being reported as flowing from developed countries to developing countries, and eventually the information reported by developing countries, would be comparable. However, the accounting of climate measures is not likely to ever be completely uniform as different institutions have different mandates. This can be partially rectified if all institutions, particularly the UNFCCC, develop guidelines and criteria to promote consistency and transparency in estimating, reporting and reviewing climate finance information.

328. Another issue that warrants clarity is how the type of data used in this report can be verified. Having said that, it should be clear that much of the private sector data cannot be verified because of confidentiality concerns, institutional barriers and costs. However, governments have the ability to make progress by beginning to clarify what is meant by verification. Should it, for example, address adherence to guidelines for reporting, the authenticity of reported data, the confirmation that funds were delivered and used for their intended purposes and/or the reconciliation of reporting on finance provided with reporting on finance received? Narrowing the range of what is meant might help to eventually operationalize an effort to verify.

329. Topics that have not received extensive treatment in this 2016 BA include green bonds, South–South cooperation and leveraged and mobilized private sector finance. These topics could benefit from special analysis in order to improve future BAs.

330. Finally, if the BA is to become the authoritative document on both global finance and flows from developed to developing countries, institutional arrangements will need to evolve. Presently, this document is highly dependent on data from many institutions whose employees cooperate at a technical level, for professional reasons, to make the report happen. The institutions cooperate mostly at no cost, but each has different mandates, priorities and capacities that could change quickly. Changes resulting from budgetary limitations could significantly affect future estimates and the ability to generate trends. Consequently, consideration needs to be given to how the cooperation of other institutions can be enhanced so as to put the BA on a firm footing for years to come.

Frequently Asked Questions

How much finance is identified in the 2016 biennial assessment?

The BA compiles available data on climate finance from a range of credible sources to estimate climate finance flows during the 2013/14 period:

- **Public finance for developing countries:** an average of USD 2.2 billion was channelled through multilateral climate funds including UNFCCC Funds. An average of USD 23.5 billion of bilateral, regional and other finance was reported in the BR CTFs of Annex II Parties. MDB climate finance attributed to developed countries was estimated at USD 15.8 billion annually in 2013-2014, using an advanced attribution methodology that captures the mobilisation effect through the MDBs. If these figures are aggregated at face value, reported public climate finance averages an estimated USD 41 billion for 2013-2014.
- **Private finance to developing countries:** USD 2 billion in direct private finance to renewable energy projects, USD 24 billion in FDI in greenfield alternative and renewable energy, and USD 14.8 billion in mobilized private finance were identified. These estimates of private finance from developed to developing countries cannot simply be aggregated.
- **Global total climate finance:** Flows to developing countries are part of total global climate finance flows, which averaged USD 714 billion during 2013–2014. Partial estimates of domestic climate finance were also reviewed in compiling the 2016 BA, and amounted to USD 192 billion. If these sums are included, they increase the global total climate finance to USD 880 billion in 2013 and USD 930 billion in 2014.

How has climate finance from developed to developing countries changed since the 2014 biennial assessment?

The amount of climate finance provided from developed to developing countries has increased substantially:

- **Biennial Reports:** Climate-specific finance reported in CTF tables increased from about USD 17.0 billion annually in 2011–2012 to USD 26.0 billion annually in 2013–2014;
- **Multilateral climate funds, including UNFCCC funds:** Climate finance increased from USD 1.5 billion annually in 2011–2012 to USD 1.9 billion annually in 2013–2014;
- **MDBs:** Climate finance provided by MDBs to developing countries from their own resources amounted to USD 25.5 billion in 2011, decreased in the following years and then rose to USD 25.7 billion in 2014;
- **Private finance:** This remains a major source of uncertainty and is not comparable between the 2014 BA and the 2016 BA. The 2014 BA drew on a wide range of available data on private finance in developing countries of varying degrees of quality and specificity. The 2016 BA was able to draw on higher quality and more specific sources of data on private finance from developed to developing countries, although coverage remains incomplete. In addition, it was able to reflect efforts to develop an initial partial estimate of mobilized private finance in 2015.The 2016 BA identifies USD 2 billion in direct finance for renewable energy projects, USD 24 billion in FDI in greenfield and renewable and alternative energy, and USD 14.8 billion in mobilized private co-finance. These amounts are distinct and cannot simply be aggregated.

How has global climate finance changed since the 2014 Biennial Assessment?

On a comparable basis, global total climate finance increased by almost 15% since 2011–2012. In dollar terms, estimated global total climate finance increased from a high-bound estimate of USD 650 billion for 2011–2012 to USD 687 billion for 2013 and to 741 billion for 2014. These estimates aggregate reported climate related spending at nominal value. Private investment in renewable energy and energy efficiency represents the largest share of the global total; however, there is much less certainty in the energy efficiency data. Levels of finance have increased as the costs of clean technology have continued to fall. The coverage of data in the 2016 BA has increased and improved, but nevertheless the quality and completeness of data on global total flows are lower than for flows to developing countries.

What are the areas of greatest uncertainty in this report?

There are different uncertainties associated with each source of data used in the 2016 BA. Uncertainties related to the data on domestic public investments result from the lack of geographic coverage and differences in the way methods are applied, significant changes in methodologies for energy efficiency every few years and the lack of available data on sustainable private transport and other key sectors. In general, there is somewhat greater certainty about the nature of flows from developed to developing countries because there is a relatively long history of reporting by developed countries. Nevertheless, uncertainties still arise

and affect these estimates, including the lack of procedures and data to determine private climate finance, methods for estimating adaptation finance, differences in the assumptions underlying formulas to attribute finance from MDBs to developed countries, the classification of data as "green finance" and incomplete data on non-concessional flows to developing countries.

How much finance is being provided through bilateral channels and multilateral development banks?

USD 25.4 billion in 2013 and USD 26.6 billion in 2014 of climate-specific finance was reported by developed countries in their BRs, of which USD 23.1 billion in 2013 and USD 23.9 billion in 2014 was channelled through bilateral, regional and other channels. This represents an increase of about 50% from the public finance reported through the same channels in 2011–2012.

Climate finance provided by MDBs to developing countries from their own resources is reported as USD 20.8 billion in 2013 and USD 25.7 billion in 2014. The methodology used in the 2014 BA to attribute MDB finance from developed countries to developing countries suggests that USD 11.4 billion in 2013 and USD 12.7 billion in 2014 was delivered by developed countries. A more advanced methodology, which better captures the mobilization effect through MDBs, suggests that USD 14.9 billion in 2013 and USD 16.6 billion in 2014 can be attributed to developed countries.

Where is climate finance going?

For 2013-2014, about 33% of funding from dedicated climate funds, 42% of climate-related finance reported by OECD DAC and 31% of climate finance reported by MDBs was for Asia, often in countries with attractive investment climates. This funding largely supported mitigation, including REDD-plus, reflecting the significant GHG emissions from the region. About 21% of finance from dedicated multilateral climate funds, 28% of climate-related finance in OECD DAC and 15% of MDBs climate finance was directed to African countries. There has been a growing emphasis on adaptation in this finance. About 23% of funding from dedicated multilateral climate funds, 15% of climate-related finance reported to OECD DAC and 16% of the climate finance reported by MDBs was directed to Latin America and the Caribbean.

Are investment trends shifting between efforts aimed at mitigation and adaptation?

About 70% of the reported international public climate finance supported mitigation, while 25–30% supported adaptation, except in the case of MDBs where more than 80% of funding supported mitigation during 2013-2014. There is a larger role for grant and concessional finance in adaptation finance. In absolute terms, both adaptation and mitigation finance increased during the 2013–2014 period. The amount of adaptation finance channelled through multilateral climate funds also continues to increase. It is worth noting that the 2016 BA does not capture the GCF project approvals in 2015 and 2016, which included a substantial volume of funding for adaptation. As understanding of climate risk and options to design adaptation-relevant programming increases, these numbers may also rise.

Which instruments have been used to finance climate investments?

Climate finance commitments are generally reported at face value. The mix of instruments used to channel support differs by funding source in 2013-2014. About 35% of the bilateral, regional and other finance reported to the UNFCCC in BRs is spent as grants, 20% as concessional loans, 10% as non-concessional loans, and the remainder through equity and other instruments. About 38% of the reported finance is channelled through multilateral institutions, many of whom are MDBs that utilize capital contributions and commitments from member countries to raise low-cost capital from other sources of funding, including donor contributions. This enables MDBs to offer a range of instruments and financial products, including grants (9%), loans, including concessional loans, (83%), equity (2%) and other instruments (6%). About 53% of funding from multilateral climate funds is provided as grants, and the remainder is largely provided as concessional loans, which have increased as a share of the approved funding over time. Of the bilateral climate finance reported to OECD, 49% is provided as grants and 47% as concessional loans.

Is there a significant gap between what developed countries report and what developing countries estimate as having been received?

There are many reasons for the differences between finance reported and received. Thirty-two countries have provided data to the UNFCCC in BURs (as at 30 June 2016), so the information on which to base any insights into these trends is highly incomplete. Recipient countries have taken diverse approaches to reporting on finance received. For example, some have excluded non-concessional finance, and some have focused only on support that goes directly to government agencies.

How much finance is promoting South–South cooperation related to climate change?

Data are limited, and mainly sourced from OECD DAC, complemented with reports from a small number

of other countries. South–South cooperation was estimated to be in the range of USD 5.9–9.1 billion for 2013 and USD 7.2–11.7 billion for 2014. , About half of this finance was channelled through multilateral institutions.

What portion of financial support is flowing directly to developing country governments and what portion is flowing into other developing country institutions?

Climate finance goes to a wide range of government, private and non-governmental entities in recipient countries. However, reporting on recipient institutions is incomplete. For 2013–2014, developing country governments are specified as the recipients of about 40% of total flows reported to the OECD DAC. 11 % is channelled to multilateral institutions, and another 40% goes to "other known recipients" on which very limited detail is reported though generic categories are noted. Recipients are not specified at all for about 9% of finance. Climate finance channelled through other intermediaries may also eventually reach national governments, but this is not captured in the data.

What progress has been made in improving and harmonizing reporting guidelines?

There have been improvements in reporting on climate finance to the UNFCCC and to other institutions over the last two years. These include:

Developed countries

(a) Enabling Parties to provide additional information on their underlying definitions, methodologies and assumptions used, including on how they have identified finance as being "climate-specific" as well as making these data more accessible to the public and recipient Parties, thereby enhancing consistency and transparency;

(b) Improving guidance on application of the Rio Markers for adaptation and mitigation and adjustments to the Rio Marker definitions for adaptation;

International organizations

(a) Making available MDB and multilateral climate fund activity-level data through OECD DAC;

(b) Applying common principles for tracking mitigation and adaptation finance by MDBs and IDFC members;

(c) Making available data on climate co-financing flows through utilization of a joint methodology for tracking public and private climate co-finance by a consortium of seven MDBs.

What are the most important methodological challenges that need to be addressed?

Within the UNFCCC system:

- The current guidelines for reporting information by Annex II Parties do not contain specific guidance on reporting climate finance (decision 2/CP.17; UNFCCC, 2012). Available templates are used in diverse ways, resulting in a lack of transparency and completeness in reports prepared by Parties. Countries often use different definitions of climate finance, adaptation and mitigation activities, and criteria for determining what types of activities and projects should be included. Information on sources, sectors and instruments used to deliver finance varies, and information on finance mobilized is not provided by all countries. The absence of project-level data that underlie reports makes it difficult to understand what types of programmes are being supported, the recipients and how this support is being provided.
- Current reporting by developing countries on financial, technical and capacity-building needs and support received is not comparable. BUR guidelines do not presently require information on underlying assumptions, definitions and methodologies used in generating the information to be included. Limited institutional capacity to track climate finance received, as well as the lack of data, can pose additional challenges in developing countries.

By other institutions:

- IDFC reporting does not include underlying project data and reports climate finance as part of overall green finance. IDFC also does not yet have common guidelines to assist members to consistently classify projects relevant to climate change.
- Information on domestic climate-related spending is available through BURs, CPEIRs and other independent studies. Diverse definitions and approaches to identifying climate finance are used across these studies, which often rely on expert judgement and the views of national stakeholders rather than objective criteria and guidance. However, such information is incomplete, covering 30 countries, often only for a single year.
- There is a lack of systematic data on private climate finance flows. The primary sources draw upon industry and sector databases, and rely on voluntary disclosures. Existing data largely come from G20 country project finance and mainly cover renewable energy and sustainable transport. Continued efforts to improve the methodologies for estimating mobilized private finance are needed.

What progress has been made in understanding and assessing the impact of climate funds?

Impact monitoring systems are beginning to mature, although result reporting remains nascent and relatively slow. GHG emission accounts are a primary metric of impact and effectiveness used for climate finance mitigation, often complemented with relevant output data such as the volume of installed clean energy or reductions in energy consumption. Consistency of methodologies for GHG accounting continues to be a challenge, though progress has been made by DFIs, which have adopted common principles.

Most adaptation interventions seek to identify the specific number of people that are likely to benefit from the proposed intervention, either directly or indirectly in terms of increased resilience. Ensuring the accuracy of estimates can be challenging, due to difficulties in identifying beneficiaries, establishing baselines, data collection, and defining and tracking resilience over time to what may be slow-onset, or 1-in-100 or 1-in-500 year, events.

What climate finance needs have countries identified?

Few new efforts to assess national or global climate finance needs have been completed since the 2014 BA. Some countries have included information on climate finance needs in their BURs, but have tended to focus on capacity- and technology-related needs. Much of the information included was qualitative. However, Most INDCs submitted by developing country Parties outlined, in varying levels of detail, the estimated financial costs of the future emission reduction and climate adaptation scenarios they describe. In general, methodologies used to estimate financial needs or definitions of scope were not specified, and differed substantially.

How large are the identified climate finance flows relative to other major sources of climate-relevant investment?

The climate finance flows identified in the 2016 BA need to be considered in the context of wider trends in global investment in climate-relevant sectors. An encouraging sign is that the total costs of clean energy are falling, and total levels of investment in clean energy continue to rise. Nevertheless, the amount of climate finance identified in this report (USD 714 billion per year in 2013-2014) remains modest when considered in comparison with other relevant flows of costs related to finance and climate change related costs, using the best available data. For example, USD 6 trillion per year are anticipated to be needed for infrastructure through 2030. The IEA estimate that just implementing the energy actions in the INDCs is will cost more than USD 1.1 trillion per year. Every year USD 1.6 trillion is invested in fossil fuel energy. While these figures are not strictly comparable, they help to give an illustrative sense of relative scale.

ANNEXES

Annex A: Country groupings used in the 2016 biennial assessment

Annex I Parties

Annex I Parties include the industrialized countries that were members of the OECD in 1992, plus countries with economies in transition, including the Russian Federation, the Baltic States, and several Central and Eastern European States.

Full list of Annex I Parties

Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czechia, Denmark, Estonia, EU, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America.

Annex II Parties

The countries included in Annex II to the Convention that have a special obligation to provide financial resources and facilitate technology transfer to developing countries. Annex II Parties include the 23 original OECD members plus the EU.

Full list of Annex II Parties

Australia, Austria, Belgium, Canada, Denmark, EU, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, and United States of America.

OECD member countries

The OECD currently has 35 member countries.

Full list of OECD member countries

Australia, Austria, Belgium, Canada, Chile, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Korea, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom of Great Britain and Northern Ireland and United States of America.

OECD DAC members

The OECD DAC currently has 29 members.

Full list of OECD DAC members

Australia, Austria, Belgium, Canada, Czechia, Denmark, EU, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Korea, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland and United States of America.

Annex B: Compilation of climate finance definitions and criteria

Table B.1: Compilation of definitions of climate finance and criteria used by various institutions

Institution	Climate finance	Mitigation	Eligibility	Adaptation	Eligibility	References
OECD DAC	Rio markers were originally designed to track the mainstreaming of environmental considerations into development cooperation rather than providing a quantification of finance. The Rio markers are based on definitions and eligibility criteria. They distinguish between activities targeting climate change objectives as either "principal" or "significant"	An activity is mitigation if it contributes to the objective of stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration	The activity contributes to (a) the mitigation of climate change by limiting anthropogenic emissions of GHGs, including gases regulated by the Montreal Protocol; or (b) the protection and/or enhancement of GHG sinks and reservoirs; or (c) the integration of climate change concerns with the recipient countries' development objectives through institution-building, capacity development, strengthening the regulatory and policy framework, or research; or (d) developing countries' efforts to meet their obligations under the Convention	An activity that intends to reduce the vulnerability of human or natural systems to the current and expected impacts of climate change, including climate variability, by maintaining or increasing resilience, through increased ability to adapt to, or absorb, climate change stresses, shocks and variability and/or by helping reduce exposure to them. This encompasses a range of activities from information and knowledge generation, to capacity development, planning and the implementation of climate change adaptation actions	(a) The climate change adaptation objective is explicitly indicated in the activity documentation; and (b) the activity contains specific measures targeting the adaptation definition. Carrying out an assessment of vulnerability to climate variability and change, either separately or as an integral part of agencies' standard procedures, facilitates this approach. To guide scoring, a three-step approach is recommended as a "best practice", in particular to justify for a principal score: • Setting out the context of risks, vulnerabilities and impacts related to climate variability and climate change: for a project to be considered as one that contributes to adaptation to climate change, the context of climate vulnerability should be set out clearly using a robust evidence base. This could take a variety of forms, including use of material from existing analyses and reports, or original, bespoke climate vulnerability assessment analysis carried out as part of the preparation of a project • Stating the intent to address the identified risks, vulnerabilities and impacts in project documentation: The project should set out how it intends to address the context- and location-specific climate change vulnerabilities, as set out in existing analyses, reports or the project's climate vulnerability assessment • Demonstrating a clear and direct link between the identified risks, vulnerabilities and impacts and the specific project activities: the project should explicitly address risk and vulnerabilities under current and future climate change as identified in the project documentation	http://www.oecd.org/dac/stats/46782000.pdf, http://www.oecd.org/dac/stats/45303527.pdf, http://www.oecd.org/dac/environment-development/Climate-related%20development%20finance_ENG_June2015_July2015.pdf, http://www.oecd.org/dac/stats/DCD-DAC(2016)3-ADD2-FINAL%20-ENG.pdf

Table B.1: Compilation of definitions of climate finance and criteria used by various institutions (continued)

Institution	Climate finance	Mitigation	Eligibility	Adaptation	Eligibility	References
MDBs	Total climate finance is equal to the sum of mitigation, adaptation and dual benefit finance from the MDB own resources as well as external resources	Has been based on MDB joint typology, will henceforth draw on the closely aligned MDB IDFC common principles. Some MDBs consider additional activities not covered by the joint approach for their own reporting purposes. Drawing on the OECD DAC Rio markers definition, an activity will be classified as related to climate change mitigation if it promotes "efforts to reduce or limit GHG emissions or enhance GHG sequestration"	Based on a positive list of activities; includes brownfield renewable energy, brownfield energy efficiency investments and transport modal shift projects	The adaptation finance tracking methodology uses a conservative and granular approach to reflect the specific focus of adaptation activities, and reduce the scope for over-reporting of adaptation finance. The approach drills down into the 'sub-project' or 'project element' level as appropriate, and aims to ensure that project activities address specific climate vulnerabilities identified as being relevant to the project. The approach might not always capture activities that may contribute to resilience, but that cannot always be tracked in quantitative terms, or may not have associated costs. This approach is not intended to capture the value of the entire investment that may increase resilience as a consequence of specific activities within the project	• Setting out the climate vulnerability context of the project • Making an explicit statement of intent to address climate vulnerability as part of the project • Articulating a clear and direct link between the climate vulnerability context and the specific project activities	http://www.worldbank.org/content/dam/Worldbank/document/Climate/mdb-climate-finance-2014-joint-report-061615.pdf
IDFC	According to the IDFC methodology, "green finance" comprises "climate finance" and finance for "other environmental objectives", with "climate finance" being composed of "green energy and mitigation of greenhouse gases" and "adaptation to climate change"	Uses the definitions and eligibility criteria guidelines provided (defined in annexes B and C of the Green Finance Mapping Report 2015), taking the MDB IDFC common principles for climate mitigation finance tracking into account An activity will be classified as related to climate change mitigation if it promotes "efforts to reduce or limit greenhouse gas (GHG) emissions or enhance GHG sequestration"	Based on a positive list of project categories/activities	The MDB IDFC common principles for climate adaptation finance tracking were not applied in the IDFC green finance mapping for 2014 as they were still under development. Draws on the *Handbook on the OECD-DAC Climate Markers* (September 2011) An activity will be classified as related to climate change adaptation if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience	For a project to be recognized as a "climate/adaptation" project, the analysis must demonstrate that it potentially contributes to reducing the vulnerability to climate change identified in the project area. To demonstrate this, the following should be made available: (a) a study of the vulnerabilities to climate change of the project's geographical area and (b) an analysis of the activities planned by the project in the light of a positive list of actions that can contribute to reducing vulnerability, or to strengthening the resilience, of communities, goods or ecosystems to climate change	https://www.idfc.org/Downloads/Publications/01_green_finance_mappings/IDFC_Green_Finance_Mapping_Report_2015.pdf

Table B.1: Compilation of definitions of climate finance and criteria used by various institutions (continued)

Institution	Climate finance	Mitigation	Eligibility	Adaptation	Eligibility	References
CPI	Aligned with the recommended operational definition of the UNFCCC SCF. Capital flows directed towards low-carbon and climate-resilient development interventions with direct or indirect GHG mitigation or adaptation benefits	Mitigation finance is defined as resources directed to activities: • Contributing to reducing or avoiding GHG emissions, including gases regulated by the Montreal Protocol; or • Maintaining or enhancing GHG sinks and reservoirs. It excludes: • Private R&D in technology and investment in manufacturing for the production of green technologies (e.g. wind turbines), because of double-counting issues with investments in technology deployment; • Fossil-fuel-based lower-carbon and energy-efficient generation (e.g. efficient coal-fired power plants) due to significant future carbon emissions lock-in	Positive list, drawing on OECD DAC, MDB and IDFC approaches	Adaptation finance is defined as resources directed to activities aimed at reducing the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience	Positive list, drawing on OECD DAC, MDB and IDFC approaches	http://climatepolicyinitiative.org/wp-content/uploads/2015/11/A-Closer-Look-at-the-Landscape-2015-Methodology.pdf
IPCC	There is no agreed definition of climate finance. The term 'climate finance' is applied both to the financial resources devoted to addressing climate change globally and to financial flows to developing countries to assist them in addressing climate change	A human intervention to reduce the sources or enhance the sinks of GHGs. The Working Group III Contribution to the Fifth Assessment Report of the IPCC in 2014 also assesses human interventions to reduce the sources of other substances that may contribute directly or indirectly to limiting climate change	NA	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects	NA	https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_full.pdf

Annex C: Comparison of reporting approaches

Table C.1: Comparison of reporting approaches used by selected organizations

Topic	UNFCCC	OECD DAC	MDBs	IDFC	BNEF	Notes/sources
Who submits data	National government	National government (29 DAC members, 3 non-DAC members), 7 MDBs and 10 climate funds	Reporting is done by a central unit in each MDB	Individual development banks	Experts in over 40 countries	See https://www.oecd.org/dac/financing-sustainable-development/Flows-for-development-infographic.pdf
Who prepares integrated report or compilation of information	UNFCCC	OECD DAC (activity level data are compiled and processed by OECD DAC and published online); in addition, OECD DAC publishes statistical analyses	Rotates among MDBs	IDFC secretariat and steering group	Centralized unit in South Africa	Example of UNFCCC compilation: http://unfccc.int/national_reports/annex_i_natcom/compilation_and_synthesis_reports/items/2736.php
Who classifies projects	Countries	OECD DAC members have responsibility for applying the markers, which is shared between project officers, sector experts and central statistical units	MDB staff in central location	Bank staff	Experts in countries	In the case of MDBs, project staff classify the project and later it is checked centrally
Basis for reporting	NA	Objective or purpose (drawing on Rio marker definitions and eligibility criteria)	Activity list for mitigation projects	Activity list	Activity list	
Sectors	Energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other	There are over 30 sectors in the OECD DAC CRS, and additional subsectors, with a few exceptions where Rio markers are not applied (i.e. general budget support, debt relief)	Nine mitigation sectors and 10 adaptation sectoral groupings – determined by criteria	Nine mitigation categories and five adaptation categories	Clean energy: renewable energy, energy efficiency, smart grid, power storage and other new energy technologies	BNEF counts: smaller distributed technologies; energy efficiency technologies where cash flows are identifiable; investments in energy efficiency technology companies and certain larger energy efficiency projects; smart grid and grid-scale power storage; electric vehicle charging networks
Criteria for adaptation eligibility	None	Yes. Detailed eligibility criteria defined	Yes, based on purpose, vulnerability context and activity linkage; will jointly develop common principles	OECD DAC broad definition; will jointly develop common principles	NA	

Table C.1: Comparison of reporting approaches used by selected organizations (continued)

Topic	UNFCCC	OECD DAC	MDBs	IDFC	BNEF	Notes/sources
Criteria for mitigation eligibility	None	Yes. Based on activity and expected emission reduction	Yes, based on positive list of activities; including some brownfield investments	Yes, based on positive list of activities	Yes, based on activity list	
Instruments	Grants, concessional loans, non-concessional loans, equity and other	Bilateral ODA loans, grants and other official flows; work under way to include, from 2017, credit lines, investment in companies and project finance	All	All	All project costs. Includes mergers and acquisitions and carbon markets, but limited to what is public	Bloomberg notes that it may not get all members of a debt syndicate. Separate data sets are maintained for investments by MDBs
Basis for measurement	Committed or disbursed (starting from BR3s)	Commitments (disbursements also tracked; but data not comprehensive)	Commitments	Commitments	Projects are tracked from the first proposal, permitted, financing secured; and in construction, commissioned, decommissioned, abandoned	
Dealing with overlaps		Allows for both adaptation / mitigation markers to be applied to the same activity; activity level database and publications identify overlap to avoid double counting	Individual processes of MDBs determine proportion to be counted as mitigation or adaptation	Split each theme into separate subcategories with clear project activity examples		
Granularity	Recipient country, region, project, programme (activity level added for BR3s)	Activity level data, (average activity size approximately USD 3.6 million for bilateral flows; higher for multilateral flows)	Project component or subcomponent, or element or proportion	Project level	All countries, but better data are available for bigger countries where information is more transparent	
Types or sources of funds	ODA, OOF and other	ODA and OOF, private finance mobilized by three instruments from 2017	Internal and external; external resources managed by MDBs are separated from MDB own resources	Domestic and international banks	No longer keeps track of grants. Includes public (domestic and cross-border) and private (domestic and cross-border) finance	
Type of support (e.g. asset finance, R&D, capacity-building)	Core/general, climate-specific (mitigation, adaptation, cross-cutting and other)	Specified	Investments and technical assistance (including capacity-building); policy-based instruments are included in total finance, but highlighted as a category	Reported in aggregated form	Asset finance, R&D, venture capital, but not by training or capacity-building	Not tracked in general

Table C.1: Comparison of reporting approaches used by selected organizations (continued)

Topic	UNFCCC	OECD DAC	MDBs	IDFC	BNEF	Notes/sources
Recipient	Country, region, project or programme is identified	Country and delivery channels identified	Not clear, except split by private and public sector based on first tier recipient	Project sponsor (e.g. national or local governments, private or public sector companies or civil society organizations)	Private and public sector	
Reporting period	Every two years on calendar basis	Calendar year	Fiscal year	Fiscal year	Annually every January, but subsequently revised. Also available quarterly online	
Form of reporting guidance	Guidelines adopted by the COP, including CTFs	Reporting governed by OECD DAC *Statistical Reporting Directives* (annex 18) The Rio marker handbook also includes information	There is a common reporting sheet that MDBs fill out with project information, including climate finance (started in 2014)	Guidance, template and survey tool	Written guidelines for experts in different countries	
Quality control procedures	Countries are responsible for the data, which is managed by the secretariat	There is a series of automated checks carried out by the secretariat when data are entered into the system, to check for reporting errors, together with a CRS checklist for reporters, providing a list of integrity checks designed to help reporters avoid inconsistencies <http://www.oecd.org/dac/stats/methodology.htm>	Each MDB ensures its data are correct and complete, and in compliance with the methodology. In addition, the central unit checks data submitted by MDBs	Each IDFC member bank carries out quality assurance procedures according to its internal standards. Consultant checks plausibility and works on analysis	Yes, but many small projects make this more challenging than large projects. No formal error bars by country or technology	

Table C.1: Comparison of reporting approaches used by selected organizations (continued)

Topic	UNFCCC	OECD DAC	MDBs	IDFC	BNEF	Notes/sources
Review procedures	According to guidelines adopted by the COP	Members' reporting performance is reviewed annually by the OECD DAC secretariat and results shared with the Working Party on Development Finance Statistics. This includes issues such as timeliness, consistency of aggregate versus activity reporting, accuracy of coding (sectors, types of ODA, channels, i.e. bilateral versus multilateral), quality of descriptive information, etc. Specific quality reviews on Rio markers are conducted periodically	No peer review procedure to date	No peer review procedure	Not formally, but use by wide variety of users and experts identifies gaps and promotes quality control	http://www.oecd.org/dac/peer-reviews/DCD(2013)6-ENG.pdf
Existing data system	All data available on the UNFCCC website	OECD DAC CRS	Data are in Excel files. There is no project-level data submission that could be accessed	Excel standard template applied	Internally managed data system	

Annex D: Reporting guidelines/parameters and reporting issues in common tabular format tables 7, 7(a) and 7(b)

Table D.1: Reporting guidelines/parameters and reporting issues in CTF tables 7, 7(a) and 7(b)

Reporting parameter	Guidance for reporting (including BR guidelines (decision 2/CP.17) and footnotes to CTF tables)	Reporting issues (as analysed from BR2s of a total of 24 Annex II Parties)
Year	NA	• Three Parties report according to fiscal year, while the remaining Parties report according to calendar year
Currency (domestic currency and USD)	• Parties should provide an explanation on methodology used for currency exchange in the box below the CTF tables	• Four Parties only report in domestic currencies • Ten Parties do not indicate exchange rates in their CTF tables, although some provide this information in the text of their BR
Status (provided, committed, pledged (changed to disbursed and committed from BR3s onwards))	• Parties should explain, in their BRs, the methodologies used to specify the funds as provided, committed and/or pledged • From BR3s onwards, Parties to provide information on definitions and methodologies in documentation box	• About half of the Parties provide an explanation of the methodologies used to specify funds as provided, committed or pledged
Funding source (ODA, OOF, other)	• Parties to specify "other" • From BR3s onwards, Parties to provide information on definitions and methodologies in documentation box	• Few Parties do not specify "other" • In some cases in which Parties report as "other" where there is a mix of ODA and OOF, information on distribution is not available
Financial instrument (grant, concessional loan, non-concessional loan, equity, other)	• Parties to specify "other" • From BR3s onwards, Parties to provide information on definitions and methodologies in documentation box	• Few Parties do not specify "other" • In some cases in which Parties report as "other" where there is a mix of instruments, information on distribution is not available
Type of support (mitigation, adaptation, cross-cutting, other)	• Parties to specify "other" • From BR3s onwards, Parties to provide information on definitions and methodologies in documentation box	• Most Parties have no entries categorized as "other" • "Other" was specified as REDD-plus/ forestry for the few Parties that have relevant entries
Sector (energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other)	• Parties to specify "other". Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "other" • From BR3s onwards, Parties to provide information on definitions and methodologies in documentation box	• Almost 40% of total entries for 2013–2014 are categorized as "other" • Some Parties do not specify "other" for a number of entries • Many Parties select several applicable sectors from the given categories and report under "other". Information on sectoral distribution is not available in these cases
Core/general and climate-specific	• Parties should explain in their BRs how they define funds as being climate-specific • Core/general refers to support to multilateral institutions that Parties cannot specify as climate-specific • From BR3s onwards, Parties to provide information on definitions and methodologies in documentation box	• Twenty Parties include some information, although to varying degrees of detail, on how they defined funds as being climate-specific • For bilateral flows, 18 Parties refer to the use of the Rio markers to identify relevant projects. Fifteen Parties provide information on coefficients used to differentiate and scale down funding marked as targeting climate change as a significant objective as opposed to principal objective • For multilateral flows, several Parties noted the difficulty in estimating the climate-specific share of core contributions. Several Parties referred to the application of the methodologies established by either the MDB joint approach or the OECD DAC method

Table D.1: Reporting guidelines/parameters and reporting issues in CTF tables 7, 7(a) and 7(b) (continued)

Reporting parameter	Guidance for reporting (including BR guidelines (decision 2/CP.17) and footnotes to CTF tables)	Reporting issues (as analysed from BR2s of a total of 24 Annex II Parties)
Recipient country / region / project / programme (activity from BR3 onwards)	• Parties should report, as appropriate, on project details and the implementing agency	• For about 9% (467/5239 rows) of the total entries for 2013–2014, the reporting field is left blank or does not specify any recipient countries / regions / projects / programmes (i.e. including wording such as worldwide, global, other) • Nine Parties provide a title or short description of the projects/programmes in the reporting field or in the additional information column, in addition to the recipient country or region. Fourteen Parties only provide information on the recipient country/region. Other Parties leave the reporting field blank in the CTF tables and provide more information in their BR • The level of granularity of the data is not necessarily clear from the information in the CTF tables themselves • Very few Parties include information on implementing agencies

Annex E: Comparison of reporting approaches used by non-Annex I Parties for finance received in their BURs

Table E.1: Parties providing summary information on climate finance received during a certain period

Party	Approach to reporting	Allocation channel	Sector	Financial instrument
Argentina	Reports in textual format on total amount of finance received and top donors Provides information on co-financing	*Top donors:* WB / EIB / IDB / Spain / GEF	NA	NA
Armenia	Reports on finance received per project in tabular format Notes difficulties in collection, analysis and database creation on climate change finance	Multilateral climate change funds[a] Multilateral financial institutions[a] Specialized United Nations bodies[a] Bilateral[a]	NA	Loan / grant
Brazil	Reports on finance received annually per donor in tabular format	IDB / GEF / IBRD / other multilateral / bilateral[a] / bilateral technical cooperation	NA	NA
Chile	Reports on finance received per project in tabular format Provides total amount of finance received Provides information on status of finance (received or approved)	Bilateral[a] Multilateral climate change funds[a] Multilateral financial institutions[a] Other multilateral	(*thematic*) Reporting / mitigation / inventory / adaptation (*economic*) Energy / transport / forestry / agriculture / biodiversity / cross-cutting	NA
Colombia	Reports on finance received per donor in tabular format Provides total amount of finance received	Multilateral climate change funds[a] Multilateral financial institutions[a] Specialized United Nations bodies[a] Bilateral[a]	(*thematic*) Mitigation / adaptation / REDD-plus / report	NA
Ghana	Reports on finance received per activity in tabular format Provides total amount of financial flows including domestic contributions, private sector, co-financing and loans from the China Development Bank	Multilateral[a]/ Bilateral[a]/ GEF Co-financing National funds Private foundations Private sector	(*thematic*) Mitigation / adaptation / means of implementation / sustainable development / enabling activities (*economic*) Energy / agriculture / forestry / transport / development planning / environment / health / interior / water / education / finance	Loan / grant / national budget / result-based payment
Indonesia	Reports on finance received per donor in tabular format Provides information on status of finance (approved, disbursed) Includes information on national and local budget for climate change	Multilateral financial institutions[a] Specialized United Nations bodies[a] Bilateral[a]	NA	Loan / grant indicated for some projects

Table E.1: Parties providing summary information on climate finance received during a certain period (continued)

Party	Approach to reporting	Allocation channel	Sector	Financial instrument
Lebanon	Reports on total amount of finance received in textual format Shows the amount of finance contributed by top donors in graphical format	*Top donors:* Multilateral climate change funds[a] Multilateral financial institutions[a] Bilateral[a]	NA	NA
Malaysia	Reports on finance received per project in tabular format	GEF ADB Specialized United Nations bodies[a] Bilateral[a]	NA	NA
Mauritania	Reports on finance received per project in tabular format	Multilateral financial institutions[a] Specialized United Nations bodies[a] Bilateral[a]	(*thematic*) Mitigation / adaptation / mitigation and adaptation	Loan / grant / leasing
Mexico	Reports on total amount of finance received in textual format	NA	(*thematic*) Mitigation (*economic*) Energy / industrial / residential and commercial / agriculture and forestry / planning and transport *without providing distribution*	Loan / grant
Montenegro	Reports on total amount of ODA received in textual format Also gives percentage received from top donors and distribution between loan and grant	*Top donors:* EU Specialized United Nations bodies GEF	NA	Loan / grant
Morocco	Reports on finance received per project in tabular format Provides total amount of finance received Separately reports on annual budgetary expenditure on climate finance per sector for 2005–2010	Multilateral climate change funds[a] Multilateral financial institutions[a] Specialized United Nations bodies[a] Bilateral[a]	(*thematic*) Mitigation / adaptation	Concessional loan / grant
Paraguay	Reports on finance received per donor (USD and yen) in tabular format	GEF Multilateral financial institutions[a] UNDP Bilateral[a]	NA	Grant
Peru	Reports on finance received per activity in tabular format Provides total amount of finance received including co-financing	Multilateral climate change funds[a] Multilateral financial institutions[a] Bilateral[a] Co-financing[a]	(*thematic*) BUR / inventory / mitigation	Grant / concessional loan Provides information on ODA / non-ODA

Table E.1: Parties providing summary information on climate finance received during a certain period (continued)

Party	Approach to reporting	Allocation channel	Sector	Financial instrument
Republic of Moldova	Reports on finance received per project in tabular format	Multilateral climate change funds[a] Multilateral financial institutions[a] Specialized United Nations bodies[a] Bilateral[a]	(*economic*) Cross-cutting / agriculture / health / water resources / forestry sector and biodiversity protection / transport / energy	Loan / grant indicated for some projects
South Africa	Reports on finance received per activity in tabular format Also provides information on co-financing Separately reports on domestic finance flows	Multilateral climate change funds[a] Multilateral financial institutions[a] Bilateral[a] Co-financing	(*thematic*) Mitigation / adaptation / capacity-building / technical support / technology support / general	Grant / loan Provides information on ODA / non-ODA
Thailand	Reports on finance received per project in tabular format	GEF Specialized United Nations bodies[a] Bilateral[a]	(*thematic*) Mitigation / adaptation / capacity-building / technology assessment	NA
Tunisia	Reports on finance received per project in tabular format Provides total amount of finance received	Bilateral[a] GEF UNDP	(*thematic*) Mitigation	NA
Viet Nam	Shows annual investment including domestic and international finance per thematic area	NA	(*thematic*) Mitigation Adaptation combined with mitigation Adaptation	NA

[a] Further specifications made available in reports.

Table E.2: Parties that do not provide summary information on climate finance received during a certain period

Party	Approach to reporting
Andorra	Reports on having received EUR 0 on activities for which financial support is needed
Azerbaijan	Provides examples of projects in the past few years for which finance has been received
Bosnia and Herzegovina	In a table presenting ongoing and planned mitigation activities, it is indicated that bilateral and multilateral finance has been received for some of the activities
Costa Rica	Reports on finance already received for main mitigation actions for which there are additional financing needs
India	Provides amount of GEF grant (in USD) utilized for climate change during GEF cycles 4 and 5
Israel	Provides description of projects for which it received international support but mostly describes/tabularizes its provision of aid as a donor country
Namibia	Reports on having received finance for some activities for which additional finance is needed
Serbia	No dedicated section on climate finance received
The former Yugoslav Republic of Macedonia	Provides expenditures (in EUR) for major economic sectors Gives percentage of total finance received from top three donors
Uruguay	Provides descriptive examples of projects funded by multilateral and bilateral donors

Annex F: Climate finance reported in common tabular format tables

Table F.1: Amounts of climate-specific finance and core general funding provided to developing countries in 2011 as reported in their CTF tables (millions of USD)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Annex II Parties											
Australia	5.80	76.99	14.98	0.00	60.88	2.49	0.88	0.92	162.94	346.78	509.72
Austria	12.35	10.87	5.48	0.00	0.00	3.89	10.98	0.00	43.57	0.00	43.57
Belgium	0.39	3.46	1.56	0.00	1.67	13.91	22.34	0.00	43.32	0.00	43.32
Canada	2.37	67.15	2.83	0.00	99.50	50.79	223.19	0.00	445.83	54.15	499.98
Denmark	72.90	36.20	0.00	0.00	0.00	0.00	0.00	0.00	109.10	287.00	396.10
EU (28)	119.40	123.32	631.23	0.00	0.00	0.00	0.00	0.00	873.95	0.00	873.95
Finland	11.10	1.50	32.04	0.00	7.70	5.21	27.94	0.00	85.50	353.12	438.62
France	2209.42	565.81	59.12	0.00	139.08	0.00	0.00	0.00	2973.42	1006.96	3980.38
Germany	728.11	454.43	112.66	508.76	173.85	90.40	37.20	35.37	2 140.79	73.08	2213.87
Greece	19.90	0.00	0.36	0.00	0.00	0.00	0.00	0.00	20.26	0.83	21.09
Iceland	0.68	0.78	0.17	0.00	0.00	2.08	3.55	0.00	7.26	5.00	12.26
Ireland	0.24	46.57	0.00	0.07	0.00	14.62	0.00	0.00	61.50	41.18	102.68
Italy	5.90	1.70	43.59	2.78	8.78	1.09	9.79	0.00	73.62	351.88	425.51
Japan	2 818.22	490.86	508.87	0.00	0.00	0.00	323.28	0.00	4 141.23	657.77	4799.00
Luxembourg	6.46	21.95	0.00	0.00	2.78	5.60	1.91	0.00	38.70	0.00	38.70
Netherlands	127.19	15.94	69.48	0.00	1.47	0.00	71.88	0.00	285.95	1476.92	1762.88
New Zealand	9.95	8.05	0.00	8.62	0.00	0.00	0.00	0.00	26.62	33.78	60.40
Norway	11.87	1.53	336.83	0.00	-0.06	0.00	78.74	128.42	557.32	487.08	1044.40
Portugal	21.37	0.26	0.00	0.00	0.00	0.00	0.00	0.00	21.64	36.41	58.05
Spain	166.47	8.00	4.80	0.00	144.79	6.81	0.00	2.22	333.10	531.95	865.04
Sweden	38.34	104.33	166.45	0.00	42.60	60.10	49.19	0.00	461.00	1043.87	1504.87
Switzerland	52.76	66.57	0.00	0.00	3.03	4.73	39.28	0.00	166.38	457.75	624.13
United Kingdom	33.3	18.53	5.05	127.34	373.95	137.52	6.51	0.00	702.20	2722.06	3424.26
United States	2315.32	510.23	0.00	0.00	268.13	45.00	54.91	0.00	3193.59	1813.03	5006.62
Total	8789.82	2635.04	1995.49	647.57	1328.15	444.24	961.57	166.92	16968.80	11780.61	28749.41

Table F.1: Amounts of climate-specific finance and core general funding provided to developing countries in 2011 as reported in their CTF tables (millions of USD) (continued)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Other Annex I Parties											
Belarus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
Czechia	0.002	0.004	0.00	0.00	0.00	0.00	0.001	0.00	0.01	0.10	0.10
Hungary	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	1.30	0.00	1.30
Latvia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Lithuania	0.034	0.011	0.00	0.00	0.037	0.033	0.00	0.00	0.12	0.00	0.12
Malta	0.08	0.07	0.26	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.41
Monaco	0.36	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.46
Poland	0.00	2.38	0.00	9.32	0.00	0.00	0.00	1.33	13.03	13.03	26.05
Romania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20
Slovakia	0.92	0.98	0.22	0.00	0.00	0.00	0.00	0.00	2.12	0.36	2.48
Slovenia	0.96	0.00	1.11	0.00	0.00	0.00	0.61	0.00	2.68	0.97	3.65
Total	2.35	3.55	1.58	9.32	0.04	1.33	0.61	1.33	20.11	14.69	34.80

Note: The amounts differ slightly from those published in the 2014 BA due to subsequent updates to BR1 data. Data accessed on 4 May 2016. Some data relate to national fiscal years rather than calendar years. For countries that only provide information in their respective domestic currency, OECD exchange rates (http://stats.oecd.org/index.aspx?queryid=169) for the respective reporting period were used for conversion to USD. For 2011, EUR 0.719 to USD 1.

[a] Support to multilateral and bilateral institutions that Parties cannot specify as climate-specific. The amount that a few Parties reported as bilateral core general is USD 51 million.

Table F.2: Amounts of climate-specific finance and core general funding provided to developing countries in 2012 as reported in their CTF tables (millions of USD)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Annex II Parties											
Australia	36.80	99.47	11.14	0.00	45.46	15.95	6.74	1.63	217.19	335.94	553.13
Austria	16.49	13.38	12.07	0.00	2.57	0.00	13.35	0.00	57.86	0.00	57.86
Belgium	0.00	3.43	1.48	0.00	0.49	9.18	20.04	1.93	36.54	0.00	36.54
Canada	9.07	80.55	4.97	0.00	114.27	29.79	199.77	0.00	438.42	56.67	495.09
Denmark	83.11	53.67	0.00	0.00	0.00	0.00	0.00	0.00	136.78	264.50	401.28
EU (28)	237.33	101.59	604.20	0.00	0.00	0.00	0.00	0.00	943.11	0.00	943.11
Finland	15.97	3.10	25.24	0.00	6.23	14.67	73.90	0.00	139.11	506.47	645.57
France	3 267.04	86.39	52.70	0.00	132.39	0.00	0.00	0.00	3538.52	889.17	4427.69
Germany	730.95	413.38	162.50	526.96	160.67	51.41	15.10	39.11	2100.08	91.99	2192.07
Greece	0.07	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.61	1.05	1.66
Iceland	0.74	2.18	0.11	0.00	0.00	2.40	4.27	0.00	9.71	4.40	14.11
Ireland	0.20	42.17	0.00	0.30	0.00	0.00	0.00	0.00	42.67	32.78	75.45
Italy	12.52	0.73	37.06	0.00	5.99	1.40	0.00	0.00	57.70	310.81	368.51
Japan	3226.18	401.82	137.14	0.00	0.00	0.00	323.76	5.00	4093.90	704.57	4798.47
Luxembourg	14.20	25.94	0.00	0.00	1.41	3.66	3.27	0.00	48.49	0.00	48.49
Netherlands	110.22	58.74	77.78	0.00	1.59	0.00	108.77	0.00	357.09	1408.87	1765.96
New Zealand	20.86	5.86	0.00	10.44	0.00	0.00	0.00	0.00	37.16	24.33	61.49
Norway	46.79	4.36	462.08	0.00	0.00	0.00	337.72	0.00	850.95	458.60	1309.55
Portugal	18.53	0.11	0.00	0.00	0.00	0.00	0.00	0.10	18.74	16.54	35.28
Spain	192.73	30.07	39.02	0.00	0.00	0.00	0.00	2.55	264.37	84.86	349.23
Sweden	34.19	149.68	159.55	0.00	46.01	47.28	12.89	0.00	449.60	1038.93	1488.53
Switzerland	80.65	71.79	0.00	0.00	2.11	1.07	19.67	0.00	175.28	449.60	624.89
United Kingdom	260.37	9.65	4.61	146.10	148.60	209.98	6.46	0.00	785.77	2812.97	3598.74
United States	1496.61	339.52	0.00	0.00	324.78	53.70	69.91	0.00	2 284.52	2340.29	4624.81
Total	9911.61	1998.14	1791.64	683.80	992.56	440.49	1215.61	50.31	17084.18	11833.34	28917.52

Table F.2: Amounts of climate-specific finance and core general funding provided to developing countries in 2012 as reported in their CTF tables (millions of USD) (continued)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Other Annex I Parties											
Bulgaria	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
Cyprus	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.81
Czechia	0.002	0.003	0.00	0.00	0.00	0.00	0.001	0.00	0.01	0.09	0.09
Hungary	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	1.30	0.00	1.30
Latvia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Lithuania	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.04
Malta	0.04	0.13	0.23	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.41
Monaco	0.16	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Romania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.24
Slovakia	0.00	0.20	4.11	0.00	0.00	0.00	0.00	0.00	4.31	0.78	5.09
Slovenia	0.01	0.78	0.89	0.00	0.00	0.00	0.55	0.00	2.23	0.86	3.08
Total	0.96	1.97	5.23	0.00	0.00	0.00	0.59	0.00	8.75	2.01	10.75

Note: The amounts differ slightly from those published in the 2014 BA due to subsequent updates to BR1 data. Data accessed on 4 May 2016. Some data relate to national fiscal years rather than calendar years. For countries that only provide information in their respective domestic currency, OECD exchange rates (http://stats.oecd.org/index.aspx?queryid=169) for the respective reporting period were used for conversion to USD. For 2011, EUR 0.719 to USD 1.

[a] Support to multilateral and bilateral institutions that Parties cannot specify as climate-specific. The amount that a few Parties reported as bilateral core general is USD 50 million.

Table F.3: Amounts of climate-specific finance and core general funding provided to developing countries in 2013 as reported in their CTF tables (millions of USD)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Annex II Parties											
Australia	38.32	44.56	115.83	0.00	12.26	19.58	5.80	0.00	236.35	310.44	546.79
Austria	101.83	4.14	16.85	0.00	0.00	0.00	65.97	0.00	188.78	0.00	188.78
Belgium	25.16	22.45	10.90	0.00	0.10	27.04	3.33	15.94	104.92	484.36	589.28
Canada	2.96	49.15	6.91	0.00	1.94	6.20	0.24	0.00	67.40	164.57	231.97
Denmark	42.21	12.06	122.34	0.00	9.49	10.24	13.38	0.00	209.73	279.02	488.75
EU (28)	2877.11	452.31	668.91	0.00	0.00	0.00	0.00	0.00	3998.33	0.00	3998.33
Finland	10.31	4.50	27.33	0.00	6.37	10.27	65.15	0.00	123.94	512.90	636.84
France	2319.62	504.65	144.36	0.00	0.00	0.00	14.44	0.00	2983.07	45.12	3028.19
Germany	731.74	748.42	219.93	512.40	176.36	105.71	13.40	40.11	2548.06	104.91	2652.98[b]
Greece	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	1.19	1.23
Iceland	0.08	0.55	0.24	0.00	0.00	0.18	6.38	0.00	7.43	7.63	15.06
Ireland	3.41	30.00	11.15	0.00	0.00	0.21	0.60	0.00	45.35	46.81	92.16
Italy	9.12	17.80	34.63	0.00	3.72	0.80	149.34	0.00	215.41	537.43	752.84
Japan	6280.54	1612.08	179.90	0.00	0.00	0.00	0.00	0.00	8072.52	2337.24	10409.76
Luxembourg	1.60	12.83	16.58	0.00	3.98	2.75	0.00	0.00	37.75	1.35	39.10
Netherlands	98.30	44.70	141.98	0.00	0.71	0.00	94.78	0.00	380.46	1636.90	2017.36
New Zealand	10.49	11.03	1.47	11.99	0.00	0.00	0.00	0.00	34.98	32.78	67.76
Norway	18.67	2.63	1004.83	0.00	62.10	4.25	177.16	0.00	1269.63	468.74	1738.36
Portugal	20.72	0.49	0.00	0.00	0.00	0.00	0.00	0.00	21.21	9.62	30.83
Spain	261.48	48.31	27.51	0.00	0.00	0.13	0.53	0.00	337.96	0.00	337.96
Sweden	44.10	78.18	148.43	0.00	26.87	33.01	10.75	0.00	341.35	599.90	941.24
Switzerland	71.84	112.18	0.00	0.00	0.00	10.79	86.36	0.00	281.17	3210.93	3492.10
United Kingdom	249.41	164.93	121.99	180.65	0.00	78.17	420.57	0.00	1215.72	2175.12	3390.84
United States	1948.22	271.77	0.00	0.00	279.55	123.50	73.43	0.00	2696.48	2139.30	4835.77
Total	15167.25	4249.74	3022.08	705.04	583.45	432.83	1201.60	56.04	25418.04	15106.27	40524.30[b]

Table F.3: Amounts of climate-specific finance and core general funding provided to developing countries in 2013 as reported in their CTF tables (millions of USD) (continued)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Other Annex I Parties											
Croatia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04
Czechia	1.79	3.27	0.00	0.00	0.00	0.00	1.64	0.00	6.70	8.70	15.40
Estonia	0.14	0.00	0.15	0.00	0.00	0.00	0.08	0.00	0.37	0.14	0.52
Latvia	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.02
Lithuania	0.01	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.12	0.00	0.12
Malta	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Monaco	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.10
Poland	0.00	0.05	0.00	0.29	0.00	0.00	0.00	0.00	0.35	2.99	3.33
Russian Federation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	8.00
Slovakia	0.32	0.90	0.00	0.00	0.00	0.00	0.31	0.00	1.52	0.00	1.52
Slovenia	0.36	1.22	0.49	0.00	0.00	0.00	0.54	0.00	2.60	0.00	2.60
Total	2.62	5.50	0.64	0.33	0.12	0.00	2.56	0.00	11.79	19.91	31.69

Note: Data accessed on 4 May 2016. Some data relate to national fiscal years rather than calendar years. For countries that only provide information in their respective domestic currency, OECD exchange rates (http://stats.oecd.org/index.aspx?queryid=169) for the respective reporting period were used for conversion to USD. For 2013, EUR 0.753 to USD 1.

[a] Support to multilateral and bilateral institutions that Parties cannot specify as climate-specific. The amount that a few Parties reported as bilateral core general is USD 3,054 million.
[b] Germany additionally reports on mobilized public climate finance in its BR, stating that in 2013 it "amounted to 1.47 billion euros, so that German climate finance totalled approximately 3.42 billion euros".

Table F.4: Amounts of climate-specific finance and core general funding provided to developing countries in 2014 as reported in their CTF tables (millions of USD)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Annex II Parties											
Australia	0.00	38.52	35.71	0.00	3.02	0.00	64.84	0.00	142.09	325.59	467.68
Austria	94.21	9.13	29.01	0.00	0.00	0.00	55.04	0.00	187.39	-	187.39
Belgium	11.35	24.19	17.60	0.00	0.03	19.98	55.03	0.00	128.19	498.87	627.05
Canada	3.08	61.07	3.97	0.00	0.00	2.20	0.00	0.00	70.31	143.68	213.99
Denmark	53.95	19.62	136.41	0.00	9.29	7.12	17.34	0.00	243.73	251.40	495.13
EU (28)	2913.22	278.63	488.41	0.00	0.00	0.00	0.00	0.00	3680.26	-	3680.26
Finland	31.87	13.61	13.46	0.00	9.07	18.58	67.54	0.00	154.13	673.94	828.07
France	2963.88	370.36	322.82	0.00	0.00	0.00	14.43	0.00	3671.48	45.09	3716.57
Germany	773.76	922.10	277.79	522.78	35.82	129.97	27.35	122.02	2811.58	1149.33	3960.92[b]
Greece	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Iceland	0.56	0.98	2.18	0.00	0.00	0.78	6.40	0.00	10.90	8.64	19.54
Ireland	1.98	27.86	12.58	0.00	0.05	1.73	0.13	0.40	44.74	100.21	144.95
Italy	16.64	2.53	14.69	0.00	0.265	0.00	185.56	0.00	219.70	494.30	714.00
Japan	7346.33	745.03	120.29	0.00	0.00	0.00	0.00	0.00	8211.65	2559.83	10771.48
Luxembourg	8.01	8.46	25.49	0.00	3.98	1.84	6.63	0.00	54.41	1.16	55.57
Netherlands	94.74	176.99	115.05	0.00	16.00	0.00	119.62	0.00	522.40	986.20	1508.60
New Zealand	36.29	10.27	1.2	11.69	0.00	0.00	0.00	0.00	59.45	31.25	90.70
Norway	-27.32	3.31	550.36	0.00	67.58	0.00	373.29	0.00	967.22	427.74	1394.96
Portugal	11.09	1.13	0.00	0.00	0.00	0.00	0.00	0.00	12.23	4.61	16.83
Spain	482.82	24.54	16.49	0.00	39.80	0.22	12.76	0.00	576.63	21.39	598.02
Sweden	33.93	100.81	148.82	0.00	6.57	2.19	10.86	0.00	303.18	532.36	835.54
Switzerland	86.61	115.32	0.00	0.00	0.00	0.00	97.08	0.00	299.00	3003.20	3302.20
United Kingdom	133.76	265.9	170.83	203.36	0.00	4.12	682.9	0.00	1460.87	3005.60	4466.47
United States	2002.87	325.72	0.00	0.00	258.55	101.08	82.72	0.00	2770.94	2367.60	5138.54
Total	17073.62	3546.09	2503.18	737.83	450.02	289.79	1879. 52	122.41	26602.48	16632.64	43235.12[b]

Table F.4: Amounts of climate-specific finance and core general funding provided to developing countries in 2014 as reported in their CTF tables (millions of USD) (continued)

	Bilateral, regional and other channels				Multilateral				Total climate-specific finance	Core general[a]	Grand total
	Mitigation	Adaptation	Cross-cutting	Other	Mitigation	Adaptation	Cross-cutting	Other			
Other Annex I Parties											
Croatia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.044
Czechia	1.53	3.72	0.13	0.00	0.00	0.00	20.77	0.00	26.14	9.28	35.42
Estonia	0.10	0.00	0.71	0.00	0.00	0.00	0.08	0.00	0.89	0.14	1.03
Hungary	0.003	1.44	0.07	0.00	2.09	0.00	0.00	0.00	3.59	9.23	12.82
Latvia	0.00	0.00	0.00	0.03	0.06	0.00	0.00	0.46	0.56	0.00	0.56
Lithuania	0.16	0.00	0.00	0.00	0.11	0.00	0.05	0.00	0.33	0.84	1.16
Malta	0.009	0.030	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.14
Monaco	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.04	0.20
Poland	0.36	0.20	1.42	0.00	0.00	0.00	2.90	0.00	4.88	2.96	7.84
Romania	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.07
Russian Federation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	8.00
Slovakia	0.00	0.81	0.00	0.00	0.21	0.004	0.16	0.04	1.23	0.28	1.51
Slovenia	1.07	0.24	0.82	0.00	0.00	0.00	0.71	0.00	2.83	0.00	2.83
Total	3.22	6.63	3.15	0.03	2.47	0.00	24.67	0.51	40.68	30.96	71.63

Note: Data accessed on 4 May 2016. Some data relate to national fiscal years rather than calendar years. For countries that only provide information in their respective domestic currency, OECD exchange rates (http://stats.oecd.org/index.aspx?queryid=169) for the respective reporting period were used for conversion to USD. For 2013, EUR 0.753 to USD 1.

[a] Support to multilateral and bilateral institutions that Parties cannot specify as climate-specific. The amount that a few Parties reported as bilateral core general is USD 2925 million.
[b] Germany additionally reports on mobilized public climate finance in its BR, stating that in 2014 it "was roughly 2.79 billion euros, so that German climate finance totalled 5.135 billion euros".

Annex G: Characteristics of climate finance commitments made by multilateral development banks

Table G.1: Climate finance commitments made by MDBs from their own resources in 2011 and 2012 (millions of USD)

	2011			2012		
Bank	**Adaptation**	**Mitigation**	**Total**	**Adaptation**	**Mitigation**	**Total**
ADB	585	2196	2781	821	2001	2822
AfDB	593	859	1452	445	1463	1908
EBRD	181	3400	3581	188	2812	3000
EIB	225	2487	2712	179	3484	3663
IADB	288	1741	2029	139	1619	1758
IFC[a]	-	1664	1664	-	1552	1552
WB	2304	6180	8484	3813	6618	9982
Total	4176	18527	22703	5586	19100	24685

Note: Column sums may not equal the totals due to rounding.

[a] IFC began tracking adaptation finance in 2013.

Source: AfDB, ADB, EBRD, EIB, IADB, IFC and WB (2012a, 2012b, 2013, 2014, 2015).

Table G.2: Climate finance commitments made by multilateral development banks from their own resources in 2013 and 2014 (millions of USD)

	2013				2014		
Bank	**Adaptation**	**Mitigation**	**Dual**	**Total**	**Adaptation**	**Mitigation**	**Total**
ADB	879	1946	2	2827	665	1711	2376
AfDB	386	662	-	1048	605	944	1548
EBRD	155	3132	31	3319	188	3760	3948
EIB	166	5058	-	5224	129	4862	4991
IADB	106	825	1	932	81	1993	2074
IFC	8	2481	-	2489	9	2465	2473
WB	2251	2687	-	4938	2846	5488	8334
Total	3951	16793	34	20779	4521	21223	25744

Note: Column sums may not equal the totals due to rounding.

Source: AfDB, ADB, EBRD, EIB, IADB, IFC and WB (2014, 2015).

Annex H: Attribution of multilateral development bank climate finance provided to developed countries

As each MDB is owned by numerous developed and developing countries, the developed country share of the MDB climate finance provided to developing countries must be estimated. There is no agreed formula for such attribution.[1]

Traditionally, MDBs provide concessional finance to the poorest countries and non-concessional finance to wealthier countries. Concessional finance is funded mainly by developed country contributions and retained earnings. Non-concessional finance is funded both by contributions from countries and money borrowed on global capital markets. The terms on which an MDB can borrow depend, in part, on its capital – composed of "paid-in" and "callable" capital – and its "reserves". Callable capital is the amount shareholders can be requested to contribute if the bank is not able to meet its financial obligations.

An MDB is able to borrow funds from commercial lenders partly because, if necessary, it could draw on its callable capital to repay the debt. An MDB can generally borrow on favourable terms, in part because some of the bank's developed country shareholders have excellent credit ratings. An MDB can then lend funds to its developing country clients on more favourable terms than those at which they can borrow.

Given the way MDBs are financed, potential methods to attribute MDB own resources climate finance to shareholders focus on voting power (shareholdings), paid-in contributions (either latest replenishment or historical) and share of callable capital (total or of countries with specified credit ratings).[2] The share of a bank's climate finance attributed to developed countries will differ by bank and may vary over time, depending upon the method chosen and changes to the relative sizes of its concessional and non-concessional windows.

Results have been reported for two approaches:

- Share of the voting power (equity) held by developed countries members;
- Estimated contribution of developed countries to the mobilization of bank resources.

These approaches are described below.

In its 2013 *Landscape Report*, CPI calculated the share of MDB climate finance attributable to OECD member countries based on their ownership share.[3] The owners and their equity shares differ for each bank.[4] Thus, the collective equity share of the developed country shareholders for each bank must be applied to the climate finance commitments of that bank. When the developed country shares of the commitments for all of the banks are summed (weighted by the climate finance committed), they represent approximately 65% of the total MDB own resources climate finance commitments.

In its 2015 report *Climate Finance in 2013-14 and the USD 100 billion goal*, the OECD, in collaboration with CPI, used a methodology based on the contributions of developed countries to the capacity of MDBs to mobilize resources (based on the methodology of the Technical Working Group).[5] Resources used for concessional flows are divided between those from new contributions and those related to retained earnings. The developed country share for new contributions is their contributions in the most recent replenishment cycle, and for retained earnings, their share in historical replenishment rounds (i.e. all replenishments except the most recent one).

The developed country share of non-concessional finance is the ratio of the bank's paid-in capital plus the eligible callable capital for developed countries with a specified sovereign credit rating relative to the total for all member countries. This share varies depending on the fraction of callable capital considered and threshold credit rating assumed. A fraction of 10% of the callable capital for countries with a sovereign credit rating of A or above is assumed.

Again, the shares are applied to each bank's climate finance commitments to get the developed country share of total MDB climate finance commitments. Using this methodology, the developed country share of total MDB climate finance commitments is 86% for 2013 and 84% for 2014, with an average of 85%.[6] It is important to note, however, that shares for individual institutions vary

1) See OECD (2015, part III) and OECD (2016, annex 3) for discussions of this issue.
2) Composite indexes of these variables could also be used.
3) Buchner et al. (2013, box 2, p. 15).
4) Banks use different terms including shares, voting rights and contributed capital.
5) OECD (2015). For a more complete description of the approach see part III and technical annex F of the report.
6) OECD (2015, figure 13, p. 37).

greatly between, for example, the CIFs (100%) or the EIB (99%) on the one hand, and the AfDB (59%) and the IFC (64%) on the other hand. The share for Annex II Parties would be slightly lower because the calculation includes four Annex I countries in addition to the Annex II Parties.

Thus, 65–85% of the MDB climate finance commitments of own resources to non-Annex I Parties are attributed to developed countries, whether defined as Annex II Parties or OECD members. The remainder of the MDB climate finance committed to developing countries is considered to be South–South cooperation.

Annex I: Climate finance received by eight Latin American countries as calculated by the Climate Finance Group for Latin America and the Caribbean

GFLAC has tracked the international climate finance received by eight Latin American countries.[7] The amounts shown in table J-1 are cumulative for the period indicated for each country. The total amount received was USD 5.5 billion, an average of USD 1.16 billion per year. The finance was shared as approximately 25% in grants and 75% in loans. Close to 40% of the funds were for mitigation and 25% for adaptation, with 35% for both/other measures.

Argentina, Chile and Peru report climate finance received in their BURs. When these countries are excluded, the climate finance received by the other five countries is approximately USD 0.66 billion per year.

Table I.1: Estimates of international climate finance received by eight Latin American countries since 2010 as calculated by GFLAC

Country	Period	Amount received (USD million)	Loans (USD million)	Grants (USD million)	Adaptation (USD million)	Mitigation (USD million)	Both/other (USD million)
Argentina	2010–2014	283	164	118	127	66	90
Bolivia	2010–2014	318	-	-	261	6	52
Chile	2010–2014	304	203	101	15	287	-
Ecuador	2010–2014	2223	1959	228	362	830	1030
Guatemala	2010–2015	338	237	101	38	30	268
Honduras	2010–2015	227	79	148	62	91	74
Nicaragua	2010–2015	322	131	192	-	-	-
Peru	2010–2013	1554	1159	396	498	761	296
Total	-	5570	3931	1284	1364	2071	1809
Share of total (%)	-	-	74.9%	24.2%	26.0%	39.5%	34.5%

Note: The amounts for other instruments are not shown, so the sum of grants and loans may not equal the amount received. Column sums may not equal the corresponding totals due to rounding.

Source: GFLAC (2015, 2016), Climate finance landscape country reports for Argentina, Bolivia, Chile, Ecuador, Guatemala, Honduras, Nicaragua and Peru.

7) GFLAC (2015).

Annex J: Climate finance provided by members of the International Development Finance Club

IDFC is a voluntary association of 23 national, bilateral and regional development banks formed in 2011. Member institutions are located in OECD and non-OECD member countries around the world. The IDFC annually reports aggregate commitments by member institutions to "green" and climate finance using the common principles for climate finance tracking developed jointly with MDBs.

The amounts of green and climate finance provided by IDFC members for 2011 through 2014 are shown in table J-1. Climate finance accounts for over 85% of green finance. While mitigation projects receive most of the climate finance, the share of adaptation projects has doubled from 10% to about 20% of the total since 2011.

Table J.1: Amounts of green and climate finance provided by IDFC member institutions for 2011–2014

	2011	2012	2013	2014
Total green finance (USD billion)	89	95[a]	99	98
Climate finance (USD billion)	83	80	87	85
Mitigation (USD billion)	74	65	70.3	66
Adaptation (USD billion)	9	14	15.4	18
Dual (USD billion)	0	1	1	1
Climate share of green (%)	93	85	88	87

Source: Ecofys (2012) and IDFC (2013, 2014, 2015).

[a] Including USD 5 billion of unattributed green finance.

Table J.1: Geographic disposition of green finance provided by IDFC member institutions for 2011–2014 (billions of USD)

	2011	2012	2013	2014
OECD institutions	45	50	51	48
Domestic projects	28	33	33	27
Other OECD country projects	2	2	3	3
Non-OECD country projects	15	15	15	18
Non-OECD institutions	44	44	48	50
Domestic projects	44	44	45	46
Other non-OECD country projects	-	-	3	4
Total domestic	72	77	78	73
OECD to non-OECD	15	15	15	18
South–South flows	-	-	3	4

Source: Ecofys (2012) and IDFC (2013, 2014, 2015).

The geographic disposition of the green finance provided by IDFC members is summarized in table J-2. Virtually all of the green finance provided by non-OECD institutions is deployed domestically, and about 60% of the finance provided by OECD institutions is deployed domestically. OECD institutions have provided USD 15 billion of green finance to non-OECD countries each year, rising to USD 18 billion in 2014. Non-OECD institutions have provided USD 3–4 billion of green finance to other non-OECD countries in recent years.

The IDFC reports also provide a regional distribution of the finance provided. However, as about 75% of the finance provided is deployed domestically, that distribution effectively reflects the locations and relative sizes of its member institutions.

The main mitigation and adaptation actions supported by IDFC members are shown in table J-3. Renewable energy and energy efficiency receive most of the mitigation support, while water preservation is the dominant adaptation action.

Table J-4 shows the instruments used by IDFC member institutions to provide green finance. Approximately 95% of the finance consists of loans, but the mix of concessional and non-concessional loans shifts widely from year to year.

Table J.3: Main mitigation and adaptation measures supported by IDFC member institutions for 2011–2014 (billions of USD)

	2011	2012	2013	2014
Mitigation	74 (100%)	65 (100%)	70.5 (100%)	66 (100%)
Renewable energy	36 (49%)	24 (37%)	26 (37%)	20 (30%)
Energy efficiency	24 (32%)	15 (24%)	24(34%)	20 (30%)
Other	14 (19%)	26 (39%)	20.5 (29%)	26 (40%)
Adaptation	9 (100%)	14 (100%)	15.5 (100%)	18 (100%)
Water preservation	2 (17%)	12 (85%)	13 (83%)	14 (79%)
Agriculture, natural resources and ecosystem adaptation	4 (47%)	0.4 (3%)	0.5 (3%)	1 (5%)
Other	3 (34%)	1.6 (12%)	2.0 (14%)	3 (16%)

Source: Ecofys (2012) and IDFC (2013, 2014, 2015).

Table J.4: Instruments used by IDFC member institutions to provide green finance for 2012–2014

	2012		2013		2014	
	Amount (USD billion)	%	Amount (USD billion)	%	Amount (USD billion)	%
Concessional loans	63.9	71	52.3	78[a]	43.1	44
Non-concessional loans	25.2	28	11.4	17[a]	50.0	51
Grants	-	-	2.0	3[a]	2.9	3
Other	0.9	1	1.3	2[a]	2.0	2
Unknown	-	-	32.0	-	-	-
Total	90.0	100	99.0	100	98.0	100

Note: Similar data are not available for 2011. The 2011 IDFC report states that 95% of the finance consists of loans.

[a] For 2013, the instruments are not known for USD 32 billion of finance; the percentages are reported for the amounts for which the instruments are known.

Source: Ecofys (2012) and IDFC (2013, 2014, 2015).

Annex K: Developed country bilateral climate funds

Several OECD DAC members have established bilateral climate funds to deliver climate finance to developing countries. These funds are accounting mechanisms to track and publicize the country's international climate finance contributions. They are not distinct institutions, rather the funds are disbursed by established institutions such as the country's development agency. Virtually all of the resources come from the national government. Nearly all of the climate finance provided by these funds meets the DAC concessionality threshold and is included in the reports to the DAC. Data on these funds are provided in table K-1.

Limited data are available for 2013 and 2014. On the basis of this limited information, financial commitments by the four funds still operating are of the order of USD 1 billion per year. This is a small share of the over USD 23 billion of bilateral climate finance reported by DAC members for 2013 (table 2.3).

Table K.1: Bilateral assistance reported by developed country bilateral climate funds (millions of USD)

Bilateral Climate Funds	Country	Pledged	Deposited	Approvals		
				Through 2012	2013	2014
International Forest Carbon Initiative[a]	Australia	190	67	126	-	-
Global Climate Change Alliance	European Commission	326	326	260	53	34
International Climate Initiative	Germany	1082	1082	986	297	85
International Climate and Forest Initiative	Norway	1608	1608	305	-	-
International Climate Fund[b]	United Kingdom	6002	1318	1056	724	-

Source: ODI (May 2016).

[a] Now closed.
[b] Established for the period 1 April 2011 to 31 March 2016.

Annex L: Origin and destination of global climate finance as estimated by the Climate Policy Initiative

Table L.1: CPI estimates of 2011 global climate finance by origin and destination (billions of USD)

	Developed countries		Developing countries		Global
	Originated	Deployed	Originated	Deployed	
Originated and deployed domestically	124	124	121	121	245
Originated in one developed country and deployed in another	39	39	-	-	Originated in another country: 85
Originated in one developing country and deployed in another	-	-	10	10	
Originated in a developing country and deployed in a developed country	-	2	2	-	
Originated in a developed country and deployed in a developing country	34	-	-	34	
Total	197	166	132	165	331

Note: "Developed" countries are defined as OECD member countries and "developing" countries as not OECD members. The estimated range is USD 328–334 billion. For ease of exposition, CPI uses the median value of USD 331 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. Data relate to a mix of calendar and fiscal years. USD 1 billion has a trans-regional destination.

Source: Buchner et al. (2012).

Table L.2: CPI estimates of 2012 global climate finance by origin and destination (billions of USD)

	Developed countries		Developing countries		Global
	Originated	Deployed	Originated	Deployed	
Originated and deployed domestically	144	144	129	129	273
Originated in one developed country and deployed in another	32	32	-	-	Originated in another country: 86
Originated in one developing country and deployed in another	-	-	11	11	
Originated in a developing country and deployed in a developed country	-	1	1	-	
Originated in a developed country and deployed in a developing country	43	-	-	43	
Total	218	177	141	182	359

Note: "Developed" countries are defined as OECD member countries and "developing" countries as not OECD members. The estimated range is USD 356–363 billion. For ease of exposition, CPI uses the median value of USD 359 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. Data relate to a mix of calendar and fiscal years. USD 1 billion has a trans-regional destination.

Source: Buchner et al. (2013).

Table L.3: CPI estimates of 2013 global climate finance by origin and destination (billions of USD)

	Developed countries		Developing countries		Global
	Originated	Deployed	Originated	Deployed	
Originated and deployed domestically	130	130	123	123	253
Originated in one developed country and deployed in another	40	40	-	-	
Originated in one developing country and deployed in another	-	-	11	11	-
Originated in a developing country and deployed in a developed country	-	2	2	-	
Originated in a developed country and deployed in a developing country	36	-	-	36	
Total	206	172	136	170	342

Note: "Developed" countries are defined as OECD member countries and "developing" countries as not OECD members. The estimated range is USD 339–346 billion. For ease of exposition, CPI uses the median value of USD 342 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. USD 1 billion has an unallocated/trans-regional destination.

Source: Mazza et al. (2016).

Table L.4: CPI estimates of 2014 global climate finance by origin and destination (billions of USD)

	Developed countries		Developing countries		Global
	Originated	Deployed	Originated	Deployed	
Originated and deployed domestically	140	140	150	150	290
Originated in one developed country and deployed in another	43	43	-	-	
Originated in one developing country and deployed in another	-	-	10	10	-
Originated in a developing country and deployed in a developed country	-	2	2	-	
Originated in a developed country and deployed in a developing country	47	-	-	47	
Total	229	185	162	206	392

Note: "Developed" countries are defined as OECD member countries and "developing" countries as not OECD members. The estimated range is USD 387–397 billion. For ease of exposition, CPI uses the median value of USD 392 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. USD 1 billion has an unallocated/trans-regional destination.

Source: Mazza et al. (2016).

Annex M: Estimates of global investment in energy efficiency

Table M.1: Estimates of global investment in energy efficiency

Year	Amount (USD billion)	Description	Source
2010	200	Includes investments in energy efficiency plus combined heat and power, waste to energy and smart meters	BCC Research
2011	147–300	Based on surveys and interviews with public and private banks, using a leverage ratio for private capital where data were not available	IEA (2013)
2012	298[a] (124–712)	Includes investments for specific energy – using components of end-use technologies in transport, buildings and industry	Grubler, et al. (2012)
2012	365[a] (330–410)	Capital expenditures in the purchase of efficient equipment in transport, buildings and industry sectors	HSBC
2013	130	Additional expenditure to improve performance relative to 2012 average. Estimate based on investment cost, stock turnover and economic return for technologies covered by the IEA world energy model. In the new policies scenario, 60% of energy efficiency investment is in transport, 30% in buildings and 10% in industry	IEA (2014)
2014	90 (± 10%) 300[b]	Investments worldwide in energy efficiency in buildings	IEA (2015)

Note: As a result of revisions to its methodology, the IEA estimate of global energy efficiency investment for 2015 is expected to be substantially lower than the values for the earlier years presented in this table.

[a] Central estimate of the range in brackets.
[b] As buildings account for about 30% of the total energy efficiency investment, USD 90 billion for buildings corresponds to USD 300 billion for total energy efficiency investment.

Source: IEA (2014, table 4.1, p. 138) and IEA (2015, p. 16).

Annex N: Estimates of domestic public climate finance

Three types of data are available for domestic public climate finance: (1) estimates of the climate finance component of the national budget, (2) domestic climate finance provided by national development banks, and (3) commitments by national climate funds.

Estimates of the climate finance component of the national budget

Some Parties provide estimates on climate finance components of their national budget in their BURs. Examples of amounts reported in BURs are shown in Table N-1. India estimates annual expenditures for adaptation of USD 91.8 billion for FY 2013-14, of which slightly more than half is by state governments. Indonesia's domestic climate spending has risen rapidly in recent years to over USD 6 billion in 2014. Montenegro, Morocco, Namibia, Peru and South Africa report domestic public climate finance for various periods. Viet Nam's climate spending, estimated using the CPEIR methodology, is included in Table N-2 below. The annual climate related expenditures for the other seven countries amount to about USD 98 billion per year. The portion of that amount, if any, financed by foreign contributions is not specified.

Table N.1: Domestic Public Climate Finance as Reported in Biennial Update Reports (USD billion)

Country					
India (adaptation only)	**FY2009-10**	**FY2010-11**	**FY2011-12**	**Fy2012-13**	**FY2013-14**
National budget					32.75
State budgets					47.67
21 Central government schemes					11.38
Total					91.80
Indonesia		**2011**	**2012**	**2013**	**2014**
Adaptation		1.54	1.73	1.59	1.38
Mitigation		0.77	0.50	2.57	4.71
Supported activities		0.17	0.16	0.14	0.13
Total		2.49	2.40	4.30	6.21
Morocco	**2010**				
Mitigation	0.10				
Total	0.52				
	Annual data provided for 2005 through 2010. Aggregate amounts for the 6 years are USD 1.11 billion for mitigation and USD 3.04 billion for total climate finance.				
Ghana	0.82 billion for 2011-2014				
Montenegro	Contribution to projects reviewed is € 15 million; period is not specified				
Namibia	Four projects with government funding of USD 0.45 million				
Peru	Government contribution to projects listed in USD 55.726 million over 5 years				
South Africa	Domestic financial flows between 2000 and 2010 of USD 198.75 million				

Source: India, Figure 3.1; Indonesia, Figure 4.1; Montenegro, p. 78; Morocco, Table 28, Ghana, p.48, p. 70; Namibia, Table 5.2, p. 111; Peru, Table 16, p. 64; South Africa, Table 30, p. 117.

The CPEIR methodology has been used by UNDP and WB to estimate the share of the budget devoted to climate change for eleven developing countries for various years since 2007. The methodology categorizes each budget item as high, medium or low relevance for climate change and applies shares ranging from 0% to 100% to the item; typically, 75–100% for high-relevance, 26–74% for medium-relevance and 10–25% for low-relevance items.[8] The climate change amounts are then summed by category – adaptation, mitigation and other – and the total is expressed as a percentage of the overall budget.

Most CPEIR studies have been managed by foreign experts. UNDP is now providing capacity-building support to enable countries to track and report on climate finance. Cambodia is an example. Its first CPEIR, one of the first globally, covered the period 2009–2011, and required significant external support to develop the methodology and organize the first data collection. An update in 2014 expanded the scope of the review and implemented a marker for climate-relevant ODA projects in line with the CPEIR methodology. The 2015 update was prepared under the leadership of the Ministry of Economy and Finance with data collection and analysis support from other ministries and agencies. The methodology has been refined to reflect the latest information available on the climate relevance of different types of investments. The Ministry of Economy and Finance is committed to providing annual updates on Cambodia's public climate expenditure.

CPEIR estimates are presented in table N-2. The estimates cover a limited period for each country. For 2010 and 2011, the combined expenditures for nine countries ranged between USD 3.5 billion and 4.5 billion per year, of which about 30% was provided by international sources. For 2013 and 2014, inclusion of medium-relevance expenditures for China boosts the annual expenditures to almost USD 25 billion per year. Local government expenditures for energy efficiency and environmental protection in China were between USD 2.5 billion and 4.8 billion per year for 2010–2014.

Table N.2: Estimates of climate finance expenditures from national budgets using the CPEIR methodology

Country	Year	Climate expenditure (USD million)	Climate as a share of the budget (%)	Adaptation (USD million)	Mitigation (USD million)	Other (USD million)	Foreign contribution (USD million)
Bangladesh	2009–2010	1082	6.59	953	38	91	254
	2010–2011	1272	6.81	1120	46	105	240
	2011–2012	1154	5.31	1034	28	91	184
	2012–2013	1734	7.50	1513	84	137	308
	2013–2014	1813	6.36	1585	92	135	354
Cambodia	2009	92.9	3.26	88.84	3.04		70
	2010	111	3.46	105.04	5.56		84
	2011	103	2.90	97.47	5.09		57
	2012	122	3.11	116.10	6.19		79
	2013	160	3.33	152.15	7.88		114
	2014	212	4.12	207.69	4.12		159

8) UNDP (2015b).

Table N.2: Estimates of climate finance expenditures from national budgets using the CPEIR methodology (continued)

Country	Year	Climate expenditure (USD million)	Climate as a share of the budget (%)	Adaptation (USD million)	Mitigation (USD million)	Other (USD million)	Foreign contribution (USD million)
China	2010	1139			1139		
	2011	1216			1216		
	2012	1043			1043		
	2013	22627					
	2014	22625					
Indonesia	2008	151			151		
	2009	164	0.18		164		
	2010	300	0.30		300		
	2011	636	0.52		636		
	2012	426	0.29		426		
Nepal	2007–2008	139	5.73	103	36		64
	2008–2009	195	6.41	146	49		76
	2009–2010	254	6.49	197	57		139
	2010–2011	346	7.59	271	75		192
	2011–2012	324	7.18	242	83		181
Pakistan (federal)	2010–2011	192	7.57				
	2011–2012	199	6.52				
	2012–2013	197	5.78				
	2014–2014	243	6.22	48	101	38	
Philippines	2008	257	0.84	202	28	37	
	2009	352	1.08	247	60	17	
	2010	392	1.08	271	54	27	
	2011	589	1.46	395	94	28	
	2012	841	1.78	501	116	96	
	2013	954	1.68	479	192	38	

Table N.2: Estimates of climate finance expenditures from national budgets using the CPEIR methodology (continued)

Country	Year	Climate expenditure (USD million)	Climate as a share of the budget (%)	Adaptation (USD million)	Mitigation (USD million)	Other (USD million)	Foreign contribution (USD million)
Samoa	2007	16	9.80	12	1	3	4
	2008	23	10.10	18	2	3	9
	2009	29	11.70	21	5	3	13
	2010	46	16.90	34	10	1	27
	2011	55	17.00	46	8	1	32
	2012	45	14.00	35	7	2	24
Thailand	2009	1558	2.72	1097	358	103	
	2010	1415	2.64	912	310	194	
	2011	1937	2.72	1344	338	255	
Vanuatu	2008	17	11.51	17	0.022	0.38	
	2009	20	13.39	19	0.055	0.65	
	2010	21	13.23	20	0.5	0.46	
	2011	20	12.99	20	0.4	0.057	
	2012	22	13.39	22	0.1	0.063	
Viet Nam	2010	232		203	6	23	
	2011	184		163	1	21	
	2012	179		157	2	20	
	2013	206		183	8	14	

Notes:

Bangladesh: (i) The most up-to-date source of data is the 2014 climate fiscal framework, which updated the 2012 CPEIR.
(ii) The "other" category includes R&D spending with climate change relevance.
(iii) Foreign contribution figures were derived by applying the yearly foreign funding contribution percentage of public expenditures with climate dimension to yearly climate-relevant expenditure figures.
(iv) These values exclude both domestic and foreign funding that are off-budget.

Cambodia: (i) The most up-to-date source of data is the 2013–2014 CPEIR published in April 2016, which was conducted by the Ministry of Economy and Finance and the Cambodia Climate Change Alliance based in the Ministry of Environment.

China: (i) National expenditures for energy efficiency and environmental protection only for 2010–2012. Local government expenditures for energy efficiency and environmental protection were between USD 2.5 billion and 4.8 billion per year for 2010–2014.

Pakistan: (i) Estimates are available for capital and recurrent expenditures. Capital expenditures by year are: USD 133 million, 129 million, 134 million and 188 million. Recurrent expenditures by year are: USD 59 million, 70 million, 63 million and 56 million.
(ii) Amounts for adaptation, mitigation and "other" are capital expenditures only.

Philippines: (i) The components do not sum to the total.

Samoa: (i) The most up-to-date source of data is the 2012 CPEIR.
(ii) The "other" category includes capacity, awareness, information and regulations spending with climate change relevance.

Thailand: (i) The most up-to-date source of data is the 2012 CPEIR.
(ii) The "other" category includes R&D and capacity development spending with climate change relevance.
(iii) The expenditure analysis for the CPEIR did not cover foreign funding and domestic off-budget funding.

Vanuatu: (i) The most up-to-date source of data is the 2014 CPEIR.
(ii) The "other" category includes disaster risk reduction.
(iii) Foreign funding is included in the total figures presented, but the CPEIR data presentation does not currently allow a breakdown between domestically and foreign funded expenditures.

Source: CPEIR website (https://www.climatefinance-developmenteffectiveness.org/) and country reports for China, Philippines and Viet Nam.

Most of the climate spending in these developing countries is directed to adaptation. Climate expenditures as a share of the national budget are lowest (1–2%) in the Philippines and highest (over 10%) in Vanuatu and Samoa. Foreign contributions covered over half of the climate spending for Bangladesh, Nepal and Samoa.

To calculate the adjustment to the CPI global total, the CPEIR data for Indonesia in table N-2 are excluded because more comprehensive data are included in table N-1.[9] The domestic public finance of the other countries is adjusted to exclude the foreign contributions because they are already reflected in the CPI estimate. For 2013 and 2014, the combined annual expenditures, including local government spending in China, amount to approximately USD 25 billion per year net of foreign contributions.

The ODI has undertaken national climate finance analyses for Ethiopia, Ghana, Uganda and United Republic of Tanzania using essentially the same methodology.[10] This builds on earlier work that ODI carried out with UNDP in developing CPEIRs. The ODI estimates are presented in table N-3. ODI prefers four-year averages to avoid possible misinterpretation of annual fluctuations as trends. The annual spending for the four countries is about USD 1.1 billion mostly (almost 70%) for adaptation with at least USD 327 million funded by foreign contributions, so the domestic public finance of the four countries net of foreign contributions is less than USD 1 billion per year (recognizing the very different national circumstances across these four countries).

Table N.3: Estimates of climate finance expenditures from national budgets using the ODI methodology

Country	Year	Climate expenditure (USD million)	Climate as a share of the budget (%)	Adaptation (USD million)	Mitigation (USD million)	Both/other (USD million)	Foreign contribution (USD million)
Ethiopia	2008–2011	440	10.8	383	57		88
Ghana	2011–2014	276	2.3	188	61	28	
Uganda	2008–2011	25	0.9	15	10		2
United Republic of Tanzania	2009–2012	383	5.5	184	46	153	237
Total		1124		770	174	181	327

Note: Foreign share is based on the country's development budget for selected years during the period.
Source: ODI (April 2016).

ODI distinguishes between high-, medium- and low-relevance expenditures, as this is considered to provide insights into how climate change actions are funded. The high-/medium-/low-relevance split for the four countries, not shown in table N-3, suggests that in Ethiopia, climate change is recognized as a public spending priority and is being mainstreamed across sector spending. The national climate change strategy in Ghana is also starting to mainstream climate change spending. Climate change spending in the United Republic of Tanzania appears to be driven by on-budget donor support. And climate change as a policy concern has little impact on public spending in Uganda. A continuing challenge across all four countries is the way that international funding is reported on, with annual spending not defined.

GFLAC applies a similar methodology to estimate national government expenditures related to climate change. The methodology has been applied in seven Latin American countries.[11] The estimates are shown in table N-4. GFLAC also tracks the foreign climate finance provided by bilateral and multilateral entities, but believes that the information is not clear enough to track accurately how much of this international finance supports national government expenditures. In 2014, the domestic climate finance expenditures by the national governments of these seven countries was USD 2.9 billion.

9) Indonesia's climate finance spending has also been estimated for 2011 using the CPI landscape methodology. It estimated total spending at USD 955 million, 1.48% of the national budget.
10) A summary of the methodology can be found in Bird et al. (2016).
11) GFLAC (2015).

Table N.4: Estimates of climate finance expenditures from national budgets using the GFLAC methodology

Country	Year	Climate expenditure (USD million)	Climate as a share of the budget (%)	Adaptation (USD million)	Mitigation (USD million)
Argentina	2013	134	0.12		
	2014	119	0.11		
	2015	81	0.06		
	2016	139	0.09		
Bolivia	2014	252	0.89	3	236
	2015	258	0.80	4	201
Chile	2013	16	0.03	2	2
	2014	21	0.04	2	1
Guatemala	2014	191	2.45	142	41
	2015	233	2.94	203	22
Honduras	2014	174	1.89	1	172
	2015	184	2.15	8	172
Nicaragua	2014	23	1.04	12	10
	2015	26	1.13	19	7
Peru	2013	82	0.22		
	2014	112	0.28		

Note: Some expenditures are not easily classified as adaptation or mitigation, so the sum of those categories is often less than the total.

Source: GFLAC (2015, 2016), Climate finance landscape country reports for Argentina, Bolivia, Chile, Guatemala, Honduras, Nicaragua and Peru.

Estimates of domestic public climate finance for the European Commission, France, Germany and United States, based on three different methodologies, are available for recent years. These are presented in table N-5.

Table N.5: Estimates of climate finance expenditures inherent in developed country government budgets

Country	Year	Climate expenditure (USD million)	Climate as a share of the budget (%)	Adaptation (USD million)	Mitigation (USD million)	Both/other (USD million)	Foreign contribution (USD million)
CPI landscape methodology							
France[a]	2011	15017					
	2012	13368					
	2013	17392					
	2014	17514					
Germany	2010	1600					
Other studies							
European Commission	2014	23400					
United States	Fiscal year 2012	19781	0.56	88	16229	2506	958
	Fiscal year 2013	22598	0.66	95	19143	2509	851
	Fiscal year 2014	21408	0.61	105	17752	2658	893

[a] Includes direct spending by the central government, local governments and public agencies, subsidies to private project initiators by governments and public agencies, and concessional debt provided by Caisse des Dépôts and Banque publique d'investissement (BPI) France (French public financial institutions).

Source: For European Commission, Germany and United States, the 2014 BA, box II-2, and for France, I4CE – Institute for Climate Economics (April 2016).

For the three developed countries and the European Commission, domestic public climate change finance amounts to approximately USD 66 billion per annum, of which about USD 1 billion is international climate change assistance already captured in the CPI estimate of global total climate finance.

Domestic climate finance provided by national development banks

IDFC members report their green finance, mostly climate finance, commitments annually. Most of their commitments are domestic: USD 46 billion by developing (non-OECD) country institutions and USD 27 billion by developed (OECD) country institutions for 2014. Climate finance accounted for 87% of the green finance in 2014, so the domestic climate finance provided by these institutions was approximately USD 40 billion for developing countries and USD 23 billion for developed countries. The domestic climate finance provided by these institutions is already reflected in the CPI estimate of global total climate finance so it is not counted in the adjustment for domestic public climate finance.

Commitments by national climate funds

Several developing countries have established national climate funds to blend international climate finance with domestic public funds and private sector resources. Data for five funds operational in 2014 are provided in table N-6. Apart from the Bangladesh Climate Change Trust Fund, they are almost entirely funded by foreign contributions. At present, the domestically sourced climate finance provided by these funds is less than USD 100 million per year. This is expected to increase when the funds for the Philippines and Mexico are operational.

Table N.6: Developing country national climate funds (millions of USD)

	Pledged	Deposited	Foreign contribution	Approvals		
				Through 2012	2013	2014
Bangladesh, Climate Change Resilience Fund	180.8	130.2	180.8	151.5	5.5	–10.9
Bangladesh, Climate Change Trust Fund[a]	390.0	390.0				
Brazil, Amazon Fund	1 034	901.4	895.8	142.0	80.9	168.0
Guyana, REDD+ Investment Fund	207.1	69.8	69.8	14.3	10.9	6.3
Indonesia, Climate Change Trust Fund[b]	21	11	21	10.0	2.4	
Philippines, People's Survival Trust[c]						
Mexico Climate Change Fund[d]						
Rwanda, Green Fund (FONERWA)[e]	55.3		51.3			29.8

Source: Bangladesh Climate Change Resilience Fund, 2012, 2013 and 2014 Annual Reports and project list available at https://www.bccrf-bd.org (accessed 9 May 2016); Bangladesh Climate Change Trust Fund website at http://www.bcct.gov.bd (accessed 9 May 2016); Amazon Fund, Annual Report 2014, available at http://www.amazonfund.gov.br (accessed 9 May 2016); Guyana, REDD+ Investment Fund Trustee Reports for 31 December 2012, 31 December 2013 and 31 March 2015, available at http://www.guyanareddfund.org (accessed 9 May 2016); Indonesia, ITCCF Annual Report 2014 available at: http://icctf.or.id (accessed 9 May 2016) and financial data from ODI; Philippines, news available at http://psf.climate.gov.ph (accessed 9 May 2016); Mexico's BUR, Executive Summary, p. 24; Rwanda, FONERWA key achievement, available at http://www.fonerwa.org (accessed 9 May 2016).

[a] The Bangladesh Government allocated BDT 3,000 crore (USD 390 million) to the fund during the seven fiscal years beginning 2009–2010. As at December 2015, the fund had approved 405 projects with an estimated cost of BDT 2,431.250 crore (USD 316 million).
[b] Since 2009, the Indonesia Climate Change Trust Fund has focused on preparatory activities to become a self-managed national trust fund in 2014, with a limited number of projects and with UNDP as the interim fund manager.
[c] The Government of the Philippines announced that the Climate Change Office was ready to accept climate adaptation project proposals for funding under the People's Survival Fund, effective as at 28 October 2015. The People's Survival Fund will receive government funding of 1 billion Philippine pesos per year (USD 22 million).
[d] Mexico's Climate Change Fund did not receive its first contribution until after June 2014.
[e] An undated key achievement brochure lists 24 projects with commitments of USD 29.8 million, but also states that USD 37 million has been committed to 28 projects.

Domestic public climate finance summary

In summary, the disparate data available on domestic public finance suggest the aggregate amount not included in the CPI estimate is about USD 192 billion per year – USD 127 billion in developing countries and USD 65 billion in developed countries – comprised as follows:

Developing countries

- Domestic public finance reported in eight BURs, approximately USD 98 billion per year, mainly in India;
- Domestic public finance estimated for nine developing countries using the CPEIR methodology, USD 25 billion per year net of foreign contributions, mainly in China;
- Domestic public finance estimated for four African countries using the ODI methodology, less than USD 1 billion per year net of foreign contributions;
- Domestic public finance estimated for seven Latin American countries using the GFLAC methodology, about USD 2.9 billion per year;
- Domestic climate finance provided by developing country national climate funds, USD 0.1 billion per year because most of the money comes from foreign contributions.

Developed countries

- Domestic public finance estimated for three developed countries and the European Commission, approximately USD 65 billion per year net of international climate change assistance.

Annex 0: Characteristics of global climate finance as estimated by the Climate Policy Initiative

Table 0.1: CPI estimates of 2011 global climate finance characteristics

Source of capital and amount (USD billion)	Capital manager and amount (USD billion)	Financial instrument and amount (USD billion)	Recipient	Project location	Project
Governments 19	National DFIs 43	Grants 13	NA	Developed countries 193	Adaptation 14
Corporations USD 197	Bilateral DFIs 11	Low-cost debt 53		Developing countries 172	Renewables 312
Households 32	Direct public 19	Market rate debt 57			Energy efficiency 15
Capital markets 39	Multilateral DFIs and climate funds 23	Project equity 22			Transport 8
Public finance institutions 78	Commercial 39	Balance sheet finance 214			Other mitigation 15
	No capital manager 229	Carbon offset finance 5			
Total = 364	Total = 364	Total = 364	Total = 364	Total = 364	Total = 364

Note: The estimated range is USD 343–385 billion. For ease of exposition, CPI uses the median value of USD 364 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. The data relate to a mix of calendar and fiscal years. Due to a different scope compared to following landscape editions, data are not fully comparable. Recipients of 2011 climate finance were not estimated.

Source: Derived from Buchner et al. (2012).

Table 0.2: CPI estimates of 2012 global climate finance characteristics

Source of capital and amount (USD billion)	Capital manager and amount (USD billion)	Financial instrument and amount (USD billion)	Project location and amount (USD billion)	Project and amount (USD billion)
Governments 14	Bilateral finance institutions 22	Grants 11	Developed countries 177	Adaptation 22
Corporations 168	MDBs 38	Low-cost debt 69	Developing countries 182	Renewables 265
Households 33	National public 74	Market rate debt 70		Energy efficiency 32
Capital markets 22	Commercial 22	Project equity 11		Transport 19
Public finance institutions / capital markets 121	Climate funds 2	Balance sheet finance 198		Mitigation in agriculture and forestry 3
	No capital manager 201			Other mitigation 18
Total = 359	Total = 359	Total = 359	Total = 359	Total = 359

Note: The estimated range is USD 356–363 billion. For ease of exposition, CPI uses the median value of USD 359 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. Data relate to a mix of calendar and fiscal years. CPI does not use the terminology of "sources of capital" and "managers of capital", so the values in those columns are inferred from the data in the Buchner et al. report.

Source: Derived from Buchner et al. (2013).

Table 0.3: CPI estimates of 2013 global climate finance characteristics

Source of capital and amount (USD billion)	Capital manager and amount (USD billion)	Financial instrument and amount (USD billion)	Recipient and amount (USD billion)	Project location and amount (USD billion)	Project and amount (USD billion)
Governments 12	National DFIs 70	Grants 13	Private 200	Developed countries 172	Adaptation 27
Corporations 135	Bilateral DFIs 15	Low-cost debt 74	Public 47	Developing countries 169	Renewables 244
Households 40	Direct public 12	Market rate debt 74	Public/private 32	Unallocated 1	Energy efficiency 31
Capital markets 24	Multilateral DFIs and climate funds 47	Project equity 17	Unknown 63		Transport 17
Public finance institutions 132	Commercial 24	Balance sheet finance 164			Other mitigation 19
	No capital manager 175	Risk management 3 (not included in the total)			Dual purpose 4
Total = 342	Total = 342	Total = 342	Total = 342	Total = 342	Total = 342

Note: The estimated range is USD 339–346 billion. For ease of exposition, CPI uses the median value of USD 342 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. CPI shows "sources and managers" as a single group; hence, the values in the columns for "sources of capital" and "managers of capital" are inferred from the data in the Mazza et al. report.

Source: Derived from Mazza et al. (2016).

Table 0.4: CPI estimates of 2014 global climate finance characteristics (billions of USD)

Source of capital and amount (USD billion)	Capital manager and amount (USD billion)	Financial instrument and amount (USD billion)	Recipient and amount (USD billion)	Project location and amount (USD billion)	Project and amount (USD billion)
Governments 14	National DFIs 64	Grants 13	Private 275	Developed countries 185	Adaptation 27
Corporations 151	Bilateral DFIs 22	Low-cost debt 48	Public 52	Developing countries 206	Renewables 284
Households 41	Direct public 14	Market rate debt 125	Public/private 7	Unallocated 1	Energy efficiency 26
Capital markets 49	Multilateral DFIs and climate funds 50	Project equity 27	NGOs 1		Transport 22
Public finance institutions 137	Commercial 49	Balance sheet finance 177	Unknown 57		Other mitigation 29
	No capital manager USD 192	Risk management 2 (not included in the total)			Dual purpose 4
Total = 392	Total = 392	Total = 392	Total = 392	Total = 392	Total = 392

Note: The estimated range is USD 387–397 billion. For ease of exposition, CPI uses the median value of USD 392 billion. All of the values should be considered to have an unknown uncertainty range. Columns may not sum to the total due to rounding. CPI shows "sources and managers" as a single group; hence, the figures in the columns for "sources of capital" and "managers of capital" are inferred from the data in the Mazza et al. report.

Source: Derived from Mazza et al. (2016).

Annex P: Terms and conditions of finance offered by multilateral development banks

Figure P.1: Terms and conditions of finance offered by MDBs

MDB	Instrument	Maturity (years)	Grace period (years)	Interest and other features
IDA	Regular credit	38	6	No interest. 0.75 % service charge (Special Drawing Rights (SDR)).
	Blend	25	5	1.25% interest. 0.75 % service charge (SDR).
	Hard-term lending	25	5	1.08% interest. 0.75 % service charge (SDR).
IBRD	Flexible loan, variable and fixed spread and development policy loans	8 to 15/20	N/A	6-month Libor, plus contractual spread of 0.5%. Front-end and commitment fee of 0.25% each.
	Special Development Policy Loan	5 to 10	3 to 5	6-month Libor plus a minimum of 2%. Front-end fee of 1% of the principal loan.
ADB	Libor-based loans	Varies	N/A	Floating 6-month Libor rate; contractual spread and maturity premium fixed.
	Local currency loan	Varies	N/A	Floating or fixed rate, contractual spread and maturity premium fixed.
ADF	Group A (ADF-only): Project loans	32	8	1% during grace period; 1.5% beyond grace period. Equal amortisation; no commitment fee.
	Group A (ADF-only): Programme loans	40	8	1% during grace period; 1.5% beyond grace period. Equal amortisation; no commitment fee.
	Group B (Blend)	25	5	2%. Principal repayment at 2% per year for the first 10 years after the grace period and 4% per year thereafter; no commitment fee.
	Emergency assistance loans	40	10	1%. Principal repayment at 2% per year for the first 10 years after the grace period and 4% per year thereafter; no commitment fee.
AfDB	Loans	20	5	Interest rate variable and reflects the direct market cost of funds. Commitment charge on disbursement balance: 1%.
AfDF	Loans	30 to 40	5 to 10	None for Development Fund countries; 1% for blend, gap and graduating countries. Service charge commitment fee: 0.75% per annum on outstanding balance; 0.50% per annum on undisbursed amount.
	Technical assistance loans	50	10	None for Development Fund countries; 1% for blend, gap and graduating countries. Service charge commitment fee: 0.75% per annum on outstanding balance; 0.50% per annum on undisbursed amount.
EBRD	Loans	1 to 15	N/A	Fixed or floating rate.
IADB	Flexible financing facility	20 to 25	12.75 to 15.25	Libor-based.
	Development sustainability credit line	6	3	Libor-based.
IsDB	Concessional loans under ordinary capital resources	15 to 25	3 to 7	Service fee up to 1.5%.
	Islamic Solidarity Fund for development loans	15 to 30	3 to 10	No interest rate applied in compliance with Islamic Finance. Service fee varies from 0.75 to 2%.

Source: Faure et al. (2015). *Multilateral Development Banks: A Short Guide*. ODI: London. https://www.odi.org/sites/odi.org.uk/files/resource-documents/10650.pdf.

Abbreviations: ADF = African Development Fund, CABEI = Central American Bank for Economic Integration, CAF = Development Bank of Latin America, EADB = East African Development Bank, IADB = Inter-American Development Bank, IDA = International Development Association, IsDB = Islamic Development Bank, N/A = not applicable, PTA = Eastern and Southern African Trade and Development Bank.

- The terms and conditions for BOAD, CABEI, CAF, EADB and PTA are either not publicly available, or agreed on case-by-case bases. EIB also has to comply with the confidentiality requirements of private borrowers.
- The terms and conditions are very diverse and depend on the status of the borrowing country and the type of instrument. Terms can vary from a minimum maturity of five to 40 years, or a minimum grace period of between three and ten years. Interest rates are fixed for concessional windows (up to 2.81% for countries eligible in the blend window), but floating/variable for non-concessional windows (i.e. Libor+ contractual spread, but usually below 2% when the information has been published).

Annex Q: Additionality of climate finance

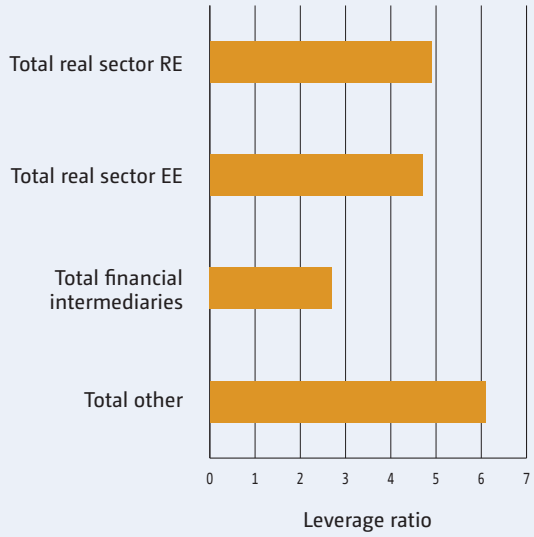
Article 4.3 of the Convention states that financial resources to support climate actions should be "new and additional". The additionality of fast-start finance was a particular consideration. At COP 16, Parties took note of the collective commitment by developed countries to provide "new and additional" resources approaching USD 30 billion for the period 2010–2012 (otherwise known as fast-start finance).[12] A review of the literature (Brown et al., 2010; Stadelmann et al., 2011; Nakhooda et al., 2014) suggests the following possible considerations for determining that the funds are additional:

(a) Only funds mobilized from new sources, such as a levy on emissions trading;
(b) Only funds delivered through new channels, such as the GCF;
(c) Only funds in excess of a 0.7% gross national income contribution to ODA;
(d) Only funds in excess of current ODA;
(e) Only funds in excess of ODA levels from a specified baseline year;
(f) Only funds in excess of the projected ODA calculated using a specified formula;
(g) Only a specified share of the increase in ODA;
(h) Only funds in excess of current climate finance;
(i) Only climate finance that is not reported as ODA.

12) Decision 1/CP.16, paragraph 95.

Annex R: Leverage ratios of climate finance

Figure R.1: Simple climate leverage ratios across IFC climate-related investments



Note: "Other" includes carbon finance guarantees, forestry and other "green" projects.

Source: Leverage in IFC's Climate-Related Investments: A Review of 9 Years of Investment Activity (Fiscal Years 2005–2013).

Abbreviations: EE = Energy Efficiency, RE = Renewable Energy.

Table R.1: Self-reported private leverage ratios for selected climate funds

Fund	Period	Climate finance (USD billion)	Expected private co-finance (USD billion)	Ratio	Source
CTF	As at September 2014	3.9	14	1:3.6	https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ctf_sar_nov2014_0.pdf
SREP	As at September 2014	0.163	0.121	1:0.7	https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/srep_sar_nov2014_0.pdf
PPCR	As at September 2014	0.832	<0.0083	Negligible	https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ppcr_sar_nov2014_0.pdf
FIP	As at September 2014	0.284	<0.0028	Negligible	https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/fip_sar_nov2014_0.pdf
GEF	2013–2014	0.514	0.66	1:1.3	https://www.thegef.org/gef/sites/thegef.org/files/documents/EN_GEF.C.49.Inf_.13_Mobilizing_Climate_Finance_from_the_Private_Sector.pdf
LDCF/SCCF	2013–2014	0.415	0.063	1:0.2	https://www.thegef.org/gef/sites/thegef.org/files/documents/EN_GEF.C.49.Inf_.13_Mobilizing_Climate_Finance_from_the_Private_Sector.pdf

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AF	Adaptation Fund
AFD	Agence Française de Développement
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
Annex I Party	Party included in Annex I to the Convention
Annex II Party	Party included in Annex II to the Convention
APA	Ad Hoc Working Group on the Paris Agreement
ASAP	Adaptation for Smallholder Agriculture Programme
BA	Biennial assessment
BNEF	Bloomberg New Energy Finance
BR	Biennial report
BR1	First biennial report
BR2	Second biennial report
BR3	Third biennial report
BUR	Biennial update report
CBI	Climate Bonds Initiative
CDM	Clean development mechanism
CFU	Climate Funds Update
CIF	Climate Investment Funds
COP	Conference of the Parties
CO_2	Carbon dioxide
CPEIR	Climate public expenditure and institutional review
CPI	Climate Policy Initiative
CRS	Creditor Reporting System
CTF	Common tabular format
DAC	Development Assistance Committee
DFI	Development finance institution
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
ERT	Expert review team
EU	European Union
FDI	Foreign direct investment
FIP	Forest Investment Program
FSB	Financial Stability Board
GCCA	Global Climate Change Alliance
GCF	Green Climate Fund
GEF	Global Environment Facility
GFLAC	Group for Climate Finance in Latin America and the Caribbean
GHG	Greenhouse gas
GICCC	Global Investor Coalition on Climate Change
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GTREI	Global Trends in Renewable Energy Investment
G7	Group of 7
G20	Group of 20
IADB	Inter-American Development Bank
IAR	International assessment and review
ICA	International consultation and analysis
IDFC	International Development Finance Club
IEA	International Energy Agency
IFC	International Finance Corporation
IFI	International financial institution
IMF	International Monetary Fund
INDC	Intended nationally determined contribution
IPCC	Intergovernmental Panel on Climate Change
KfW	Kreditanstalt für Wiederaufbau
LDC	Least developed country
LDCF	Least Developed Countries Fund
MDB	Multilateral development bank
MMR	Monitoring Mechanism Regulation
NAMA	Nationally appropriate mitigation actions
NC	National communication
NDB	New Development Bank

NeST	Network of Southern Think Tanks
NGO	Non-governmental organization
non-Annex I Party	Party not included in Annex I to the Convention
ODA	Official development assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OOF	Other official flows
OPIC	Overseas Private Investment Corporation
PPCR	Pilot Program for Climate Resilience
PRA	Prudential Regulatory Authority
R&D	Research and development
RC	Research collaborative on tracking private climate finance
REDD-plus	Reducing emissions from deforestation and forest degradation including conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks SBI (Subsidiary Body for Implementation)
SBSTA	Subsidiary Body for Scientific and Technological Advice
SCCF	Special Climate Change Fund
SCF	Standing Committee on Finance
SIDS	Small Island developing States
SREP	Scaling up Renewable Energy Program
TCFD	Task Force on Climate-related Financial Disclosures
TRR	Technical review report
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
UNPRI	United Nations Principles for Responsible Investment
WB	World Bank
WBCSD	World Business Council on Sustainable Development
WBG	World Bank Group
WRI	World Resources Institute

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